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Note du Président du Conseil de sécurité

Au paragraphe 2 de sa résolution 2627 (2022), le Conseil de sécurité a demandé au Groupe d'experts créé en application de la résolution 1874 (2009) de lui présenter un rapport de mi-mandat contenant ses conclusions et recommandations. Le Président communique donc ci-après le rapport émanant du Groupe d'experts (voir annexe).

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Annexe

Lettre datée du 2 septembre 2022, adressée au Président du Conseil de sécurité par le Groupe d'experts créé en application de la résolution 1874 (2009)

Le Groupe d'experts créé en application de la résolution 1874 (2009) du Conseil de sécurité a l'honneur de communiquer ci-joint, conformément au paragraphe 2 de la résolution 2627 (2022) du Conseil, le rapport de mi-mandat sur ses travaux.

Le rapport a été adressé le 3 août 2022 au Comité du Conseil de sécurité créé par la résolution 1718 (2006), qui l'a examiné le 26 août 2022.

Le Groupe d'experts vous serait reconnaissant de bien vouloir porter le texte de la présente lettre et du rapport à l'attention des membres du Conseil de sécurité et de le publier comme document du Conseil

Le Groupe d'experts créé en application
de la résolution 1874 (2009) du Conseil de sécurité

Pièce jointe

Lettre datée du 3 août 2022, adressée à la Présidente du Comité du Conseil de sécurité créé par la résolution 1718 (2006) par le Groupe d'experts créé en application de la résolution 1874 (2009)

Le Groupe d'experts créé en application de la résolution 1874 (2009) du Conseil de sécurité a l'honneur de communiquer ci-joint, conformément au paragraphe 2 de la résolution 2627 (2022), le rapport de mi-mandat sur ses travaux.

Le Groupe d'experts vous serait reconnaissant de bien vouloir porter le texte de la présente lettre et du rapport à l'attention des membres du Comité du Conseil de sécurité créé par la résolution 1718 (2006).

Le Groupe d'experts créé en application
de la résolution 1874 (2009) du Conseil de sécurité

Résumé

Durant la période considérée, la République populaire démocratique de Corée a procédé à des préparatifs sur son site d'essais nucléaires, sans pour autant mettre à l'essai un engin nucléaire. Au premier semestre de 2022, le pays a poursuivi l'accélération (qui avait débuté en septembre 2021) de son programme de missiles, procédant au tir de 31 missiles associant des technologies balistiques et de guidage, dont six essais de missile balistique intercontinental (MBI) et de deux missiles qu'elle a explicitement décrits comme des armes balistiques, en violation flagrante des sanctions imposées par l'Organisation des Nations Unies. La République populaire démocratique de Corée a également affirmé avoir fait avancer la mise au point « d'armes nucléaires tactiques ».

Un certain assouplissement du blocus imposé au pays, à la suite de la maladie à coronavirus (COVID-19) a donné lieu à quelques livraisons ferroviaires à travers la frontière au début de 2022. Une poussée épidémique de COVID-19 signalée dans le pays en avril et en mai a cependant entraîné un retour à la stricte répression des mouvements transfrontaliers.

Les importations illicites de pétrole et de charbon se sont poursuivies. Même si de nouvelles méthodes d'importations de pétrole ont été signalées au Groupe d'experts et de nouveaux navires ont fait l'objet d'une enquête, ces mêmes entités, réseaux et navires ont continué dans l'ensemble de contourner les sanctions sans entrave, en utilisant les mêmes méthodes et les mêmes lieux. L'offuscation des structures de propriété et l'usage détourné des systèmes d'identification automatique (AIS) se sont poursuivis, et la flotte de la République populaire démocratique de Corée a continué d'acquérir des navires.

D'après les enquêtes menées, le pays a poursuivi ses cyberactivités, deux grands piratages ayant été commis en 2022, dont au moins un attribué à des acteurs de la République populaire démocratique de Corée, qui a abouti au vol de cryptoactifs d'une valeur de centaines de millions de dollars É.-U. D'autres cyberactivités consistant à dérober des renseignements et des façons plus traditionnelles d'obtenir des informations et des matières à même de faire avancer des programmes interdits, notamment d'armes de destructive massive, se sont poursuivies.

Les organismes des Nations Unies font état d'une crise humanitaire persistante dans le pays, qui est probablement accentuée par l'épidémie de COVID-19. Il est extrêmement difficile pour tous, y compris pour le Groupe d'experts, d'évaluer l'étendue de la crise et le poids relatif des effets des sanctions imposées par l'ONU. Il est cependant indéniable que ces sanctions ont involontairement influé sur la situation humanitaire.

Le Groupe d'experts continue d'être reconnaissant aux États Membres qui l'aident à s'acquitter de son mandat et encouragent ceux qui en pourraient faire plus à suivre leur exemple.

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* Les annexes sont distribuées uniquement dans la langue de l'original et n'ont pas été revues par les services d'édition.

I. Introduction

1. Au paragraphe 2 de la résolution 2627 (2022), le Conseil de sécurité a demandé au Groupe d'experts créé en application de sa résolution 1874 (2009) de lui présenter un rapport de mi-mandat sur ses travaux contenant ses conclusions et recommandations. Le présent rapport couvre la période du 29 janvier au 27 juillet 2022.

II. Activités récentes liées au programme nucléaire et au programme de missiles balistiques

Programme nucléaire

2. La République populaire démocratique de Corée a continué de renforcer ses capacités de production de matières fissiles nucléaires au site de Yongbyon. Le Groupe d'experts a observé qu'en mars 2022, le pays avait repris les excavations à l'entrée du Tunnel 3 (ou Portail sud) au site d'essais nucléaires de Punggye-ri et reconstruit des bâtiments connexes qui avaient été démantelés en mai 2018. Le Directeur général de l'Agence internationale de l'énergie atomique a déclaré le 6 juin 2022 : « nous avons relevé des indices selon lesquels l'une des galeries d'accès a été rouverte, sans doute en prévision d'un essai nucléaire » (voir annexe 1).

3. Le Bureau politique du Comité central du Parti du travail de Corée a annoncé en janvier 2022 qu'il « examinerait promptement la question de la reprise de toutes les activités provisoirement suspendues », laissant entendre l'éventualité d'un redémarrage des essais de missiles nucléaires et de missiles balistiques intercontinentaux (MBI). Les activités dans la zone d'essais nucléaires de Punggye-ri ouvrent la voie à des essais nucléaires supplémentaires en vue de la mise au point d'armes nucléaires, un objectif qui avait été énoncé au Huitième Congrès du Parti du travail de Corée en janvier 2021 (voir annexe 2).

Zone d'essais de Punggye-ri (voir annexe 3)

4. La République populaire démocratique de Corée a rouvert ses infrastructures d'essais nucléaires, notamment le tunnel d'essais et les bâtiments annexes (voir fig. I à III), qui avaient été démolis en mai 2018. Le Groupe d'experts a observé de nouvelles activités d'excavation autour d'une entrée secondaire au Tunnel 3, qui semblait relativement intacte, même après le processus de démantèlement (voir fig. IV). L'analyse de l'imagerie satellite a montré une augmentation du nombre de traces de véhicules autour de cette entrée secondaire à compter de la mi-février 2022, suivie de l'édification, au début du mois de mars, d'un nouveau bâtiment contigu à l'entrée. Une pile de bois pouvant servir à la construction de la structure du tunnel a également été repérée à la même période[1]. Le Groupe d'experts a confirmé l'observation formulée par un groupe de réflexion au sujet d'une structure carrée semblant être une entrée de tunnel, qui est devenue visible à la fin du mois de mars[2]. Des tas de terre provenant du creusement du tunnel, autour de l'entrée, ont également été observés à cette même période[3].

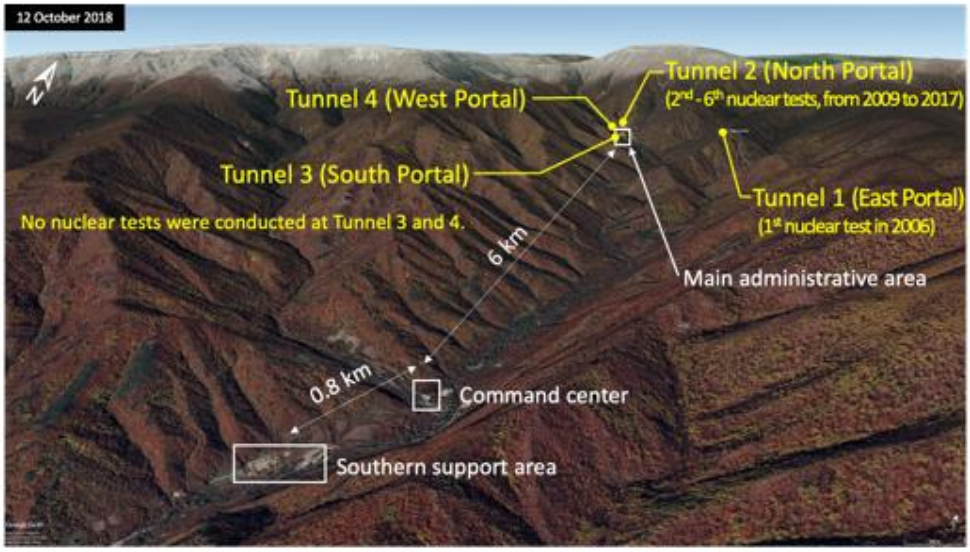
5. En avril et en mai 2022, une intensification de la construction de bâtiments annexes près de la nouvelle entrée du tunnel et dans la zone administrative principale

[1] D'après les renseignements fournis par un expert externe, consulté par le Groupe d'experts.
[2] Voir https://opennuclear.org/publication/developments-dprks-punggye-ri-nuclear-test-site-december-2021.
[3] Voir www.38north.org/2022/03/punggye-ri-nuclear-test-site-probably-spoil-at-the-south-portal.

a été observée. L'imagerie satellite révèle, depuis la fin du mois d'avril, possiblement des câbles qui seraient tendus de l'entrée du tunnel vers un compresseur et une station de pompage probables. Le Groupe d'experts et plusieurs experts qu'il a consultés estiment que les câbles auraient des usages polyvalents tels que la ventilation, l'électricité et la communication. Selon un État Membre, des essais de dispositifs de mise à feu d'engins nucléaires ont été détectés, bien que le Groupe d'experts n'ait pas réussi à en déterminer les dates et les lieux. Deux États Membres ont estimé au début du mois de juin que la préparation en vue d'essais nucléaires en était au stade ultime.

6. L'analyse du Groupe d'experts a corroboré les rapports faisant état d'activités relatives à la construction de routes, près du Tunnel 4 (ou Portail ouest) à la mi-juin 2022[4].

Figure I
Zone d'essais nucléaires dans le secteur de Punggye-ri (Tunnel 3, 41°16′35″N 129°05′18″E)



Source : Google Earth Pro, 12 octobre 2018.

[4] Voir https://beyondparallel.csis.org/new-activity-at-punggye-ri-tunnel-no-4.

Figure II
Gros plan des portails et de la principale zone administrative (41°16′41″N 129°05′16″E)

Source : Google Earth Pro, 12 octobre 2018.

Figure III
Image antérieure (mai 2018) et image récente du Tunnel 3 (41°16′35″N 129°05′18″E)

Source : Planet Labs, 31 mai 2018 et 17 mai 2022.

Figure IV
Démolition du Tunnel 3 le 24 mai 2018 (41°16′35″N 129°05′18″E)

Source : Planet Labs, 19 mai 2018 et 31 mai 2018 et Sky News.

Site de Yongbyon

7. Aucune activité importante n'a été observée par le Groupe d'experts au site du réacteur à eau légère malgré la construction, depuis mars 2022, de deux nouveaux bâtiments dans un secteur situé au sud du réacteur. La finalité des bâtiments n'est pas connue (voir annexe 4)[5].

8. Un État Membre a estimé que le réacteur de 5 MWe continuait d'opérer. L'imagerie satellite a montré un rejet continu d'eau de refroidissement provenant du réacteur, depuis juillet 2021[6]. Des véhicules, dont un camion bleu, de toute vraisemblance une citerne de dioxyde de carbone, ont été observés autour du réacteur (voir annexe 5).

9. Selon un État Membre, un retrait constant de matériaux de construction du site du réacteur de 50 MWe a été observé. L'imagerie satellite d'avril à juillet 2022 a montré que le toit d'un des bâtiments abritant le réacteur avait été retiré. Un groupe de réflexion a signalé en mai 2022 une construction « reliant un circuit de refroidissement secondaire du réacteur de 50 MWe »[7]. Le Groupe d'experts a confirmé cette activité, même s'il faudrait un suivi supplémentaire pour en évaluer l'objectif (voir annexe 6).

10. L'imagerie observée par le Groupe d'experts a montré, depuis mars 2022, des mouvements de véhicules sur les lieux du laboratoire radiochimique. Le Directeur général de l'Agence internationale de l'énergie atomique a déclaré le 6 juin 2022 disposer d'indications relatives au déroulement d'activités dans le laboratoire concordant avec un traitement de déchets ou de la maintenance[8]. Le Groupe d'experts a également observé de la fumée par intermittence depuis la centrale thermique, dont la signification demeure cependant floue (voir annexe 7)[9].

11. L'activité de construction à proximité de l'installation d'enrichissement par centrifugation de Yongbyon semble s'être achevée[10]. Des panaches de fumée ont été aperçus dans le bâtiment de production de dioxyde d'uranium d'avril à mai 2022, indiquant probablement une production constante de matières fissiles nucléaires (voir annexe 8).

Mine d'uranium et usine de concentration de Pyongsan

12. La mine et l'usine sont toujours opérationnelles. Le Groupe d'experts a observé un entassement plus grand de résidus dans l'une des mines et des déchets solides dans le bassin de réception de résidus situé au sud de l'usine de concentration. Des activités régulières de wagons ont été constatées à l'usine (voir annexe 9).

Autres sites

13. Le Groupe d'experts a observé des mouvements constants de véhicules autour de Kangson[11], une installation clandestine d'enrichissement d'uranium présumée, mais aucune autre activité importante n'y a été décelée (voir annexe 10). Il a observé des activités persistantes d'excavation dans deux vallées situées à quelque trois kilomètres à l'ouest et trois kilomètres au sud de la principale zone de stockage à

[5] S/2022/132, par. 3 et annexe 3.
[6] Ibid., par. 4 et annexe 4.
[7] Voir www.armscontrolwonk.com/archive/1215802/new-construction-at-yongbyon.
[8] Un expert externe consulté par le Groupe d'experts a estimé que les activités pouvaient se rapporter au traitement des déchets et à de la maintenance, et qu'il était improbable que des activités de retraitement aient été en cours en mars 2022.
[9] S/2021/777, par. 5 et annexe 5.
[10] S/2022/132, par. 7 et annexe 7.
[11] S/2021/777, par. 9 et annexe 10.

Yongdoktong, qui participerait au programme de militarisation nucléaire de la République populaire démocratique de Corée, notamment sur le plan du stockage d'armes nucléaires (voir annexe 11)[12].

Transfert immatériel de technologie et activités des universités de la République populaire démocratique de Corée

14. Le Groupe d'experts a poursuivi son enquête sur le transfert immatériel de technologie auquel participent des scientifiques de la République populaire démocratique de Corée dans des domaines d'activité particuliers visés au paragraphe 11 de la résolution 2321 (2016) du Conseil de sécurité. Un État Membre a informé le Groupe d'experts que des étudiants de la République populaire démocratique de Corée faisant des études à l'étranger avaient envoyé des informations à leur pays sur ordre d'organisations militaires et de départements gouvernementaux chargés de la science, de la technologie et de l'économie.

15. Le Groupe d'experts a continué d'enquêter sur les échanges ayant eu lieu entre l'Université de science et de technologie de Pyongyang et des universités étrangères[13]. Il a adressé des demandes à sept universités et instituts de recherche étrangers qui avaient accueilli depuis 2016 des étudiants de l'Université de science et de technologie de Pyongyang, à savoir un doctorant, des étudiants en maîtrise et des étudiants en études conjointes. Les recherches effectuées par deux étudiants dans une université du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, qui obtiendraient leur doctorat en 2023-2024, relevaient de « dispositions relatives à la recherche médicale ». Deux doctorants dans une université suédoise avaient achevé leurs cours de recherche sur les sciences de la vie en 2019 et 2020, respectivement. Concernant les étudiants se trouvant dans deux universités chinoises et un institut de recherche, la Chine a répondu qu'elle « exerçait un contrôle strict sur les cours pris par des élèves de la République populaire démocratique de Corée faisant des études dans le pays et prenait les mesures nécessaires pour veiller à préserver les domaines et renseignements sensibles visés par les résolutions » (voir annexe 12). Le Groupe d'experts attend des réponses des instituts restants.

16. Le Groupe d'experts a enquêté sur la possibilité d'échanges techniques entre, d'une part, l'Université de technologie Kim Chaek de la République populaire démocratique de Corée et, d'autre part, International Global Systems (M) Sdn. Bhd. et International Golden Services Sdn. Bhd. à Kuala Lumpur, qui semblent être des sociétés écrans de Pan Systems Pte. Ltd. (également connu sous le nom de Glocom)[14]. La Malaisie a déclaré que ces sociétés avaient cessé leurs activités en juillet 2011 et en février 2014 et avaient été dissoutes en janvier 2019 et en juin 2018, respectivement. Elle a également expliqué que ses « autorités n'avaient pas d'informations sur un quelconque échange technique éventuel entre [l'Université de technologie Kim Chaek] et [les sociétés], dans le cadre du programme nucléaire de [la République populaire démocratique de Corée] » et a confirmé « qu'aucun ressortissant [de la République populaire démocratique de Corée] ne vivait ou ne travaillait actuellement sur son sol ». Le Groupe d'experts attend un complément d'information au sujet des ressortissants de la République populaire démocratique de Corée qui ont travaillé pour ces sociétés (voir par. 108, sous « Embargos »).

[12] Ibid., par. 10 et annexe 11, S/2022/132, par. 12 et annexe 11.
[13] S/2022/132, par. 14 et annexes 13 à 16.
[14] Ibid., par. 15 et annexe 17.

Missiles balistiques

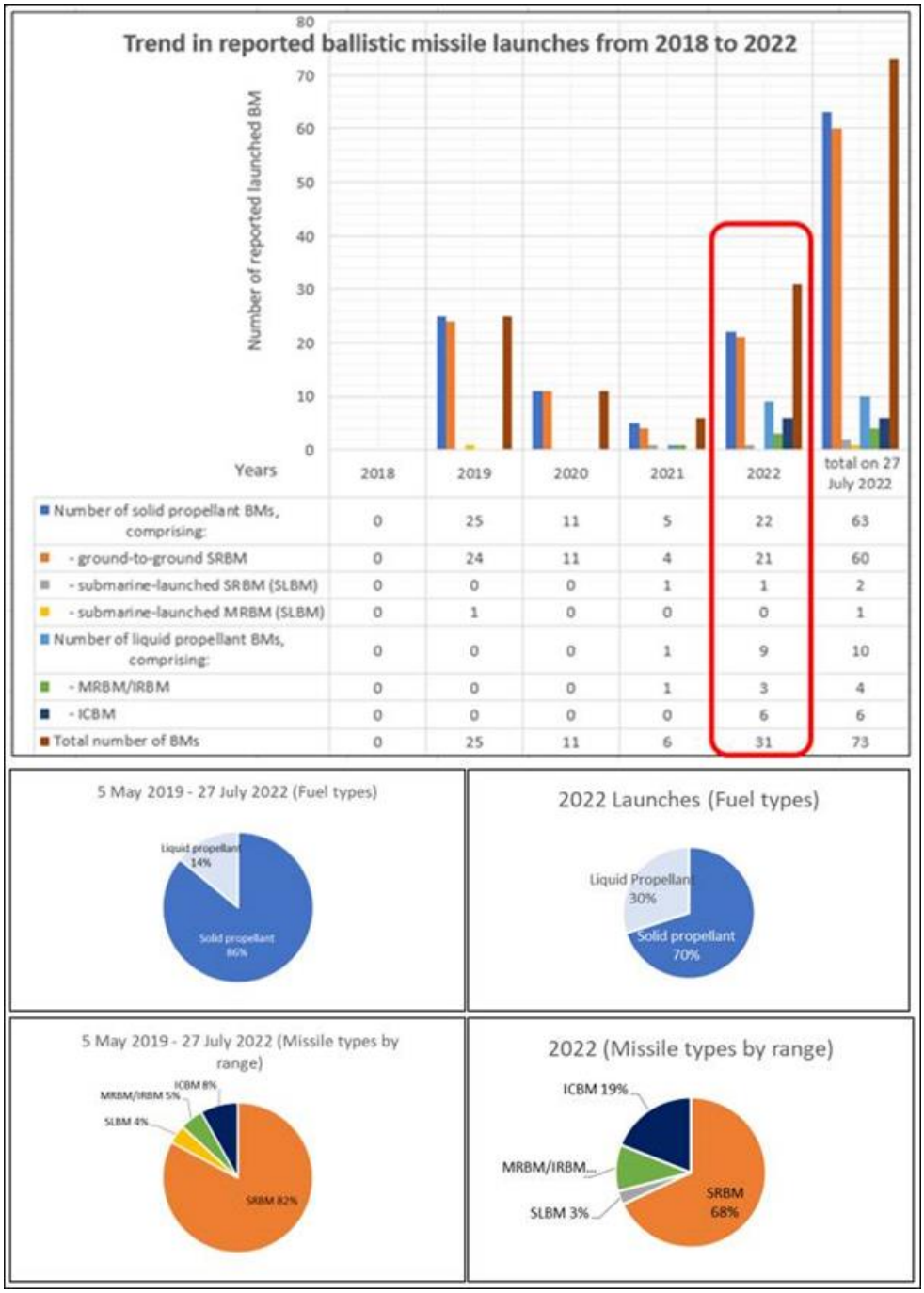
17. Le programme de missiles balistiques a continué de s'accélérer depuis le début de 2022[15,16], atteignant une intensité, une diversité et une capacité opérationnelle sans précédent, pour ce qui est des essais de missiles balistiques eux-mêmes et de la stratégie de communication de la République populaire démocratique de Corée y relative (voir fig. V à XVIII et tableau 1).

[15] Le rapport précédant allait jusqu'au 17 janvier (S/2022/132, par. 17).

[16] Deux experts estiment que les preuves demeurent insuffisantes pour établir la nature et la technologie ayant servi aux projectiles lancés par la République populaire démocratique de Corée, mentionnés dans le présent paragraphe.

Figure V

Tirs de missiles balistiques ou associant des technologies de missile balistique et de guidage, du 5 mai 2019 au 27 juillet 2022[17]



Source : le Groupe d'experts.

[17] Depuis 2018, 86 % des missiles balistiques mis à l'essai ont utilisé des propulseurs à poudre et 14 % des propulseurs à liquide. Parmi ces derniers, 82 % étaient des missiles balistiques à courte portée (SRBM), 4 % des missiles balistiques lancés par sous-marin (SLBM), 5 % des missiles balistiques à moyenne portée/missiles balistiques à portée intermédiaire et 8 % des missiles balistiques intercontinentaux (MBI) : quelque 90 % de tous les missiles balistiques à propergol liquide ont été lancés en 2022.

18. Les deux évolutions récentes les plus importantes, soulignées également par la République populaire démocratique de Corée, sont l'accélération rapide et visible du programme de missiles balistiques intercontinentaux[18] et la nouvelle orientation du programme de missiles balistiques à courte portée[19] dans la mise au point de capacités nucléaires tactiques opérationnelles, qu'elle revendique.

19. Cette nouvelle tendance cadre pleinement avec l'impulsion stratégique donnée aux programmes d'armes de la République populaire démocratique de Corée, soulignée dans l'allocution prononcée par Kim Jong Un au huitième Congrès du Parti du travail de Corée en janvier 2021[20], et la stratégie de communication démontrée au cours d'activités telles que le défilé militaire du 25 avril 2022 (voir par. 22 et fig. VII à XVIII) et la couverture médiatique du tir d'essai, le 24 mars, du missile balistique intercontinental (voir tableau 1 et annexe 17).

20. Selon les informations communiquées par plusieurs États Membres, le Groupe d'experts a répertorié les résultats opérationnels et technologiques particuliers suivants :

a) l'optimisation de l'état de préparation opérationnelle des systèmes de missiles à propulseur liquide ou à poudre (S/2022/132, par. 19 et 25 et annexes 20 et 21), au moyen de :

i) l'utilisation « d'ampoules » de propergol liquide ou de propulseurs à poudre dans les moteurs des missiles balistiques (voir annexes 14, 15, 18 et S/2022/132, par. 23 et 24 et annexes 22 et 24) ;

ii) l'augmentation de la diversification, de la mobilité et de la résilience des systèmes de missiles se servant de systèmes sur roues ou à chenilles ou de transporteur-érecteur-lanceur (TEL) sur wagons, ainsi que de sous-marins (voir annexes 14 et 20 et S/2022/132, par. 19, 20 et 22 et annexes 20 à 24) ;

iii) l'amélioration de l'efficacité des propulseurs à liquide comme ceux dérivés du RD-250[21, 22] ;

b) les innovations, notamment la mise à l'essai de nouveaux lanceurs tels que le missile balistique intercontinental Hwasong-17, super large (voir annexes 16, 16.1 et 17), dont les ogives plus larges laissent entendre un objectif opérationnel de déploiement de corps de rentrée multiple (ou de corps de rentrée à têtes multiples

[18] Voir annexe 13.1, tableau 1.

[19] Voir annexe 3.2, tableau 1 et Voice of Korea, 17 avril 2022, « le nouveau système d'arme tactique guidée, mis au point sous l'influence directe du Comité central du parti, revêt une grande importance pour ce qui est d'accroître radicalement la force de frappe des unités d'artillerie à longue portée sur le front et de renforcer l'efficacité des opérations nucléaires tactiques de la République populaire démocratique de Corée et de la diversification de sa puissance de feu… »

[20] Voir annexe 13.3. Les cinq objectifs militaires stratégiques sont en train d'être progressivement achevés (S/2022/132 par. 18).

[21] Le RD-250 est utilisé dans le missile balistique à portée intermédiaire Hwasong-12 (voir annexe 15), le missile hypersonique Hwasong-8, ainsi que dans les MBI Hwasong-14, Hwasong-15 et probablement Hwasong-17 (voir annexes 16, 17, 19 et 21 et S/2022/132, par. 20, fig. IV à VII, et annexes 20, 22 et 24).

[22] Selon un État Membre, qui a corroboré l'analyse du Groupe d'experts depuis 2017 (S/2022/132, fig. V et annexe 10, S/2021/211, annexe 10, et S/2018/171, par. 14 et 15), le propulseur à liquide du RD-250 a été montré à l'exposition « Légitime défense 2021 ». Il a été révélé publiquement au cours d'essais statiques au centre de lancement de satellite de Sohae en 2016/2017 et testé en vol comme demi-propulseur (poussée de 40 tonnes) doté d'une tuyère dans le Hwasong-12 et le Hwasong-14. Il a également servi de moteur d'appoint de 80 tonnes à tuyères doubles dans le MBI Hwasong-15. Le nouveau Hwasong-17 emploie deux moteurs RD-250 à quatre tuyères pouvant fournir la poussée requise au lancement d'un missile pesant plus de 110 tonnes.

indépendamment guidées)[23]. Les « planeurs hypersoniques » et un corps de rentrée manœuvrable, utilisant des propulseurs de missiles balistiques, exigent une maîtrise des sciences et de la technologie des matériaux, de la miniaturisation, de la transmission du signal et des systèmes de guidage[24]. Une telle maîtrise est indispensable concernant les nouveaux missiles balistiques à courte portée (voir annexe 14) et les nouveaux missiles balistiques « à très courte portée » (voir annexes 18 et 20) ;

c) l'amélioration de la cohérence de la dissuasion globale de la République populaire démocratique de Corée, comme l'a démontré la mise à l'essai déclarée des systèmes de lancement ainsi que de commandement et de contrôle d'un satellite de reconnaissance, dont les capacités pourraient contribuer aux capacités d'alerte et de reconnaissance optique et à la numérisation de la cartographie terrestre en vue de systèmes actualisés de guidage de missile (voir annexes 15, 16 et 16.1)[25].

21. La stratégie de communication de la République populaire démocratique de Corée relative à ses programmes de dissuasion et d'armes de destruction massive a été délibérée et assumée. Le pays a révélé ses nouvelles capacités à l'œuvre, revendiquant (faussement) le 25 mars 2022 le succès du lancement du puissant missile balistique intercontinental super large Hwasong-17 (voir annexes 16 et 17 et tableau 1, et S/2022/132, fig. IV) et faisant une démonstration du « planeur supersonique » Hwasong-8 (S/2022/132, par. 24 et fig. VI). La stratégie a indirectement révélé qu'une nouvelle infrastructure y était consacrée sur le site de Sil-li (voir annexe 17 et S/2020/840, par. 16), et a mis directement en relief le nouveau centre de contrôle de satellites de l'Administration nationale du développement aérospatial [National Aerospace Development Administration (KPe.029)], visée par les sanctions de l'ONU (voir annexes 16, 17 et 23.1).

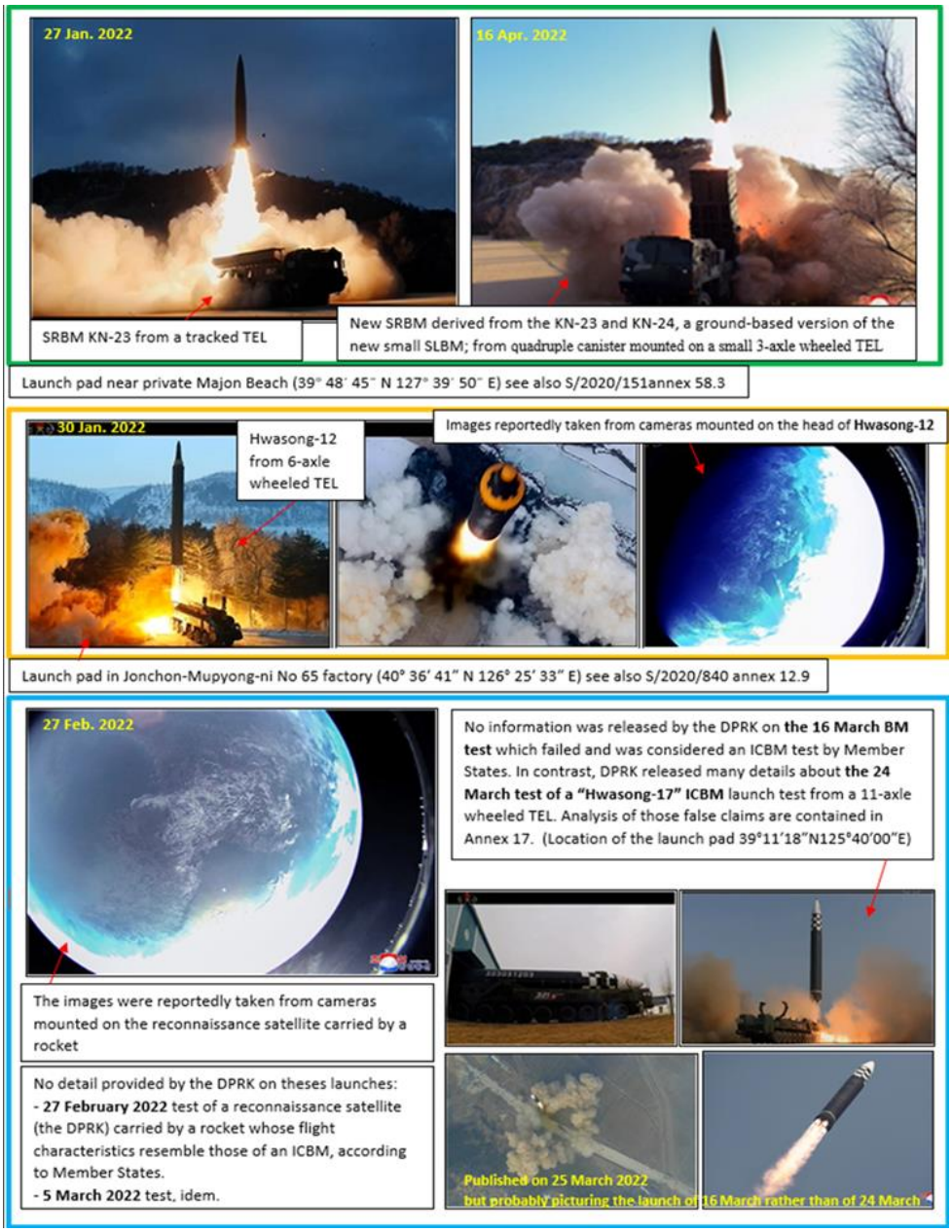
[23] S/2021/211, annexe 10.

[24] Potentiellement au moyen d'un transfert immatériel. Pour les rapports les plus récents du Groupe d'experts, voir S/2022/132, par. 13, 19, 20 et 22 et annexes 22 et 24.

[25] S/2022/132, par. 20, 24 et 25 et précédents rapports du Groupe d'experts.

Figure VI

Tirs d'essais de missiles balistiques le 27 et le 30 janvier, le 27 février, les 5, 16 et 24 mars et le 16 avril 2022. Après cette dernière date, la République populaire démocratique de Corée n'a diffusé aucune déclaration ou photographie sur les six essais suivants de missiles balistiques, du 4 mai au 5 juin 2022[26]



Source : Télévision centrale coréenne, 28 janvier 2022 (diffusion intégrale consultable au https://kcnawatch.org/kctv-archive/61f3f259b844b) ; Télévision centrale coréenne, 31 janvier 2022 (journal de 20 heures, consultable au https://kcnawatch.org/kctv-archive/61f7e740a9bbf) ; https://kcnawatch.org/newstream/1646039170-769328268/nada-academy-of-defence-science-conduct-important-test-for-developing-reconnaissance-satellite et Télévision centrale coréenne, 25 mars 2022, voir https://kcnawatch.org/kctv-archive/623dc62b7e18e.

[26] La République populaire démocratique de Corée a montré, lors d'essais précédents, qu'elle modifiait ou falsifiait des images photographiques, vraisemblablement à des fins de propagande.

22. Le défilé militaire du 25 avril 2022, marquant le quatre-vingt-dixième anniversaire de l'Armée populaire coréenne, a été minutieusement conçu pour étaler toute la gamme des systèmes de missiles balistiques, numérotés de façon à suggérer un déploiement en cours dans des unités opérationnelles[27]. À l'exception d'un nouveau missile balistique lancé par sous-marin (SLBM) (le plus grand à ce jour) de la série des Pukguksong, tous les systèmes d'armes montrés avaient été précédemment mis à l'essai.

Figure VII
Activités sur la réplique de la place Kim Il Sung à Pyongyang où se sont déroulés les exercices en vue du défilé militaire, révélant des mouvements de grands véhicules militaires, du 17 au 24 avril 2022. Des traces noires de grands camions et de TEL ont été observés autour de la zone, le 17 avril 2022, et tout particulièrement entre la gare ferroviaire, les entrepôts et la zone de l'exercice (39°01′10″N 125°51′26″E).

Source : Planet Labs, 17 avril 2022 à 1 h 56 UTC et 23 avril 2022 à 1 h 53 UTC.

23. Le missile balistique intercontinental Hwasong-17 (voir fig. VIII), présenté au défilé militaire du 25 avril 2022, a été dévoilé au défilé militaire du 10 octobre 2020, présenté à l'exposition de missiles le 11 octobre 2021 intitulée « Légitime défense 2021 » et déclaré comme ayant été mis à l'essai le 24 mars 2022 par la République populaire démocratique de Corée[28]. Selon plusieurs États Membres, la mise à l'essai de missiles balistiques intercontinentaux a repris le 27 février 2022, avec un premier

[27] Voir annexe 23.2.

[28] Des doutes subsistent quant à la nature de l'essai, ce jour-là ; d'après les analyses, les séquences de la Télévision centrale coréenne du tir d'essai d'un MBI le 24 mars, qui seraient celles d'un « Hwasong-17 », auraient intégré en fait des images du tir d'essai raté du MBI du 16 mars (voir annexe 17).

tir d'essai du Hwasong-17, suivi de quatre tirs d'essai d'un éventuel missile balistique intercontinental Hwasong-17 le 5 mars, le 16 mars (raté), le 4 mai et le 25 mai. Le « Hwasong-17 », dont il a été déclaré qu'il avait été mis à l'essai le 24 mars, était probablement un Hwasong-15 modernisé.

Figure VIII
Le MBI Hwasong-17 présenté au défilé militaire du 25 avril 2022 (39°01′12″N 125°45′07″E)[29]

ICBM Hwasong-17

- two-stage booster with liquid propellant engines (four nozzles may indicate the use of two DPRK versions of the twin-combustion chamber RD-250 engine)
- 11 axle wheeled TEL
- Presentation of 3 ICBM systems (possible that another one has been kept as a spare system)
- Last possible launch test on 25 May 2022 and first possible on 27 February 2022 (resulting in between 4 and 6 tests).
- Unveiled at the military parade on 10 October 2020 and presented at the missile exhibition "Self-Defence 2021" on 11 October 2021 and declared tested on 24 March 2022 by the DPRK
- Hwasong-17 ㅈ 08080436 on TEL 327 is an image of a Hwasong-17 from another parade
- Hwasong-17 ㅈ 03031203 on TEL 321 is an image of a Hwasong-17 from footage released on 26 March 2022 its TEL number 321 was also the TEL number used by the TEL of the Hwasong-17 number ㅈ 7220406 at the 10 October 2020 parade. (See https://kcnawatch.org/kctv-archive/623dc62b7e18e/)
- See S/2022/132 fig.4
- S/2021/777 para.17
- S/2021/211 para.17 Annex 10

Source : https://kcnawatch.org/kctv-archive/6267f67924e38 et https://kcnawatch.org/kctv-archive/6267f63d3465c[30].

[29] Voir annexe 23.2.1.

[30] Les mêmes sources ont été utilisées pour les figures suivantes VIII à XVIII.

Figure IX

Le MBI Hwasong-15 présenté au défilé militaire du 25 avril 2022[31]. Il a été déclaré comme ayant été mis à l'essai le 29 novembre 2017 et présenté à l'exposition « Légitime défense 2021 » le 11 octobre 2021, au défilé militaire du 10 octobre 2020 et avait été dévoilé précédemment au défilé militaire du 8 février 2018.

ICBM Hwasong-15

- two-stage booster with liquid propellant engines (two nozzles may indicate the use of one DPRK version of the twin-combustion chamber RD-250 engine)
- 9 axle wheeled TEL
- Presentation of 4 ICBM systems (possible that another one has been kept as a spare system),
- Last possible launch test on 24 March 2022 and first on 29 November 2017. (Resulting in between 1 and 3 tests)
- Declared tested on 29 November 2017 by the DPRK and unveiled at the military parade on 8 February 2018
- See S/2022/132 fig.5
- S/2021/211 para.22, fig.1
- S/2020/840 annex 11, Fig. 11-1,
- S/2020/151 para.194, annex 65-66,
- S/2019/171 para.173, annex 84-4,
- S/2018/171 para.1, 7-10, Tab.1, Fig. II

[31] Voir annexe 23.2.2.

Figure X

Le missile balistique à moyenne portée Hwasong-8 doté d'un éventuel planeur hypersonique, présenté au défilé militaire du 25 avril 2022[32]. Il a été déclaré comme ayant été mis à l'essai le 28 septembre 2021 et montré à l'exposition « Légitime défense 2021 » le 11 octobre 2021.

MRBM/IRBM Hwasong-8
with a possible **Hypersonic Glide Vehicle**
(Named "the hypersonic Hwasong-8 missile" by the DPRK**)**

- One stage booster (derived from Hwasong-12) with a liquid propellant engine using "missile fuel ampoule" (one nozzle may indicate the use of one DPRK version of the RD-250 engine and 4 additional vernier engines)
- 6 axle wheeled TEL
- Presentation of 6 MRBM systems (possible that another one has been kept as a spare system)
- Last possible launch test on 28 September 2021
- Declared tested on 28 September 2021 by the DPRK and unveiled at the missile exhibition "Self-Defence 2021" on 11 October 2021.
- See S/2022/132 para. 19-20, 23, tab.1, annex 22

[32] Voir annexe 23.2.3.

Figure XI

Le missile balistique à moyenne portée doté d'un éventuel corps de rentrée manœuvrable présenté au défilé militaire du 25 avril[33]. Selon plusieurs États Membres, les tirs d'essai antérieurs se seraient produits le 5 et le 11 janvier 2022, lorsqu'il avait été déclaré comme ayant été mis à l'essai en tant que « système de missile hypersonique ». Il avait été dévoilé précédemment à l'exposition « Légitime défense 2021 » le 11 octobre 2021.

MRBM/IRBM
with a possible **Maneuvrable Re-entry Vehicle (MaRV)**

(named "the *hypersonic missile weapon system*" by the DPRK)

- One stage booster (derived from Hwasong-12 but shorter) with a liquid propellant engine (one nozzle may indicate the use of one DPRK version of the RD-250 engine and 4 additional vernier engines)
- 6-axle wheeled TEL
- Presentation of 6 MRBM systems (possible that another one has been kept as a spare system)
- Declared tested on 5 and 11 January 2002 by the DPRK and unveiled at the missile exhibition "Self-Defence 2021" on 11 October 2021.
- See S/2022/132 para.24, fig.7, tab.1, annex 24

[33] Voir annexe 23.2.4.

Figure XII

Le SRBM modifié KN-23 présenté au défilé militaire du 25 avril 2022. Selon plusieurs États Membres, deux des tirs d'essai les plus récents auraient été effectués le 5 juin et le 25 mai 2022. Il a été dévoilé au défilé militaire du 14 janvier 2021, déclaré comme ayant été testé le 25 mars 2021 en tant que « nouveau type d'engin guidé tactique » et présenté à l'exposition « Légitime défense 2021 » le 11 octobre 2021.

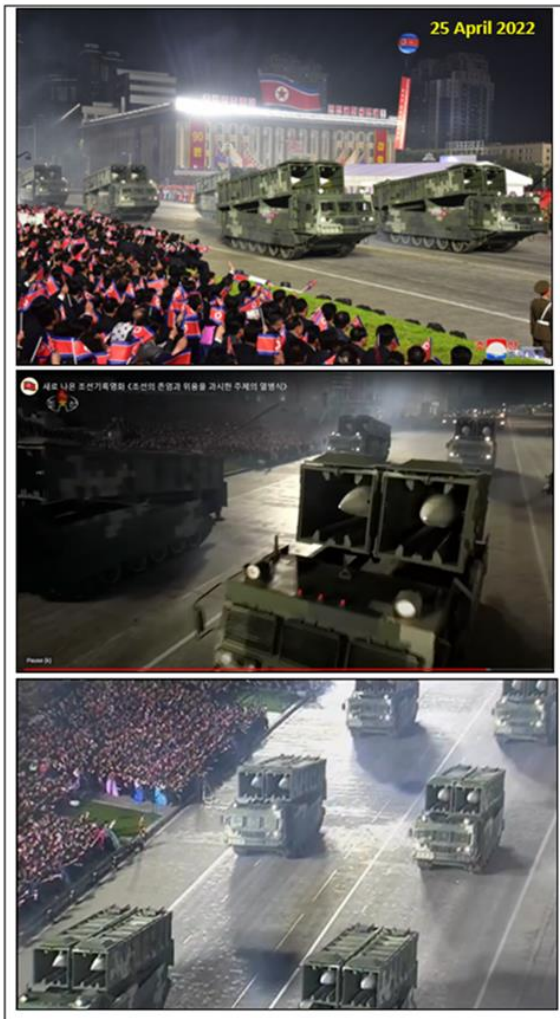
SRBM modified KN-23

(named "New-type tactical guided missiles" by the DPRK)

- with a solid propellant engine
- 5-axle wheeled TEL
- Presentation of 6 SRBM systems equipped with 2 launching pads, resulting in 12 missiles (possible one more system)
- Last possible launch tests on 5 June and 25 May 2022 and first on 25 March 2021. (Resulting in at least 3 tests)
- Unveiled at the military parade on 14 January 2021 and at the missile exhibition "Self-Defence 2021" on 11 October 2021.
- See S/2022/132 para.25, fig.8, tab.1, annex 24
- S/2021/777 para.16
- S/2021/211 para.20

Figure XIII

Le SRBM KN-24 présenté au défilé militaire du 25 avril 2022. Selon plusieurs États Membres, les deux tirs d'essai les plus récents auraient été effectués le 17 janvier et le 5 juin 2022. Il a été déclaré comme ayant été testé le 10 août 2019 et le 21 mars 2020 en tant que « nouvelle arme » et « engin guidé tactique » et présenté à l'exposition « Légitime défense 2021 » le 11 octobre 2021 et lors des défilés militaires du 10 octobre 2020 et du 14 janvier 2021.



SRBM KN-24

(named *"Tactical guided weapon"* by the DPRK)

- with a solid propellant engine
- caterpillar tracked TEL
- Presentation of 6 SRBM systems equipped with 2 launching square-form canister, resulting in 12 missiles (possible one more system)
- Last possible launch tests on 5 June and 17 January first on 10 August 2019. (Resulting in at least 5 tests)
- Unveiled at the 10 August 2019 test and presented at the military parades on 10 October 2020, 14 January 2021 and at the missile exhibition "Self-Defence 2021" on 11 October 2021.
- See S/2022/132 para.25, fig.10, tab.1, annex 21, fig.21-4
- S/2021/211 fig.1, annex 12
- S/2020/840 para.11, tab.1, annex 7
- S/2020/151 para.194, tab.3, annex 59

Figure XIV

Le SRBM KN-23 présenté au défilé militaire du 25 avril 2022. Selon plusieurs États Membres, trois de ses tirs d'essai les plus récents auraient été effectués le 14 janvier, le 27 janvier et le 5 juin 2022. Il a été déclaré comme ayant été testé le 4 mai 2019 en tant qu'« engin guidé tactique » et présenté lors des défilés militaires du 10 octobre 2020 et du 14 janvier 2021 et à l'exposition « Légitime défense 2021 » le 11 octobre 2021[34].

SRBM KN-23

- with a solid propellant engine
- 4-axle wheeled TEL
- Presentation of 8 SRBM systems equipped with 2 launching pad, resulting in 16 missiles (possible one more system)
- Last possible launch tests on 5 June, 14 and 27 January 2022, first on 4 May 2019. (Resulting in at least 10 tests)
- Unveiled at the 4 May 2019 test and presented at the military parades on 10 October 2020, 14 January 2021 and at the missile exhibition "Self-Defence 2021" on 11 October 2021.
- See S/2022/132 para.25, fig.10, tab.1, annex 21, fig.21-4
- S/2021/211 fig.1, annex 12
- S/2020/840 para.11, tab.1, annex 7
- S/2020/151 para.194, tab.3, annex 58.1

[34] Selon plusieurs États Membres, ce système de SRBM a en commun un certain nombre d'éléments de conception et de performance avec le système Iskander (S/2020/151, annexes 58 et 59).

Figure XV

Le SRBM présenté au défilé militaire du 25 avril 2022. Selon plusieurs États Membres, deux des tirs d'essai les plus récents auraient été effectués le 16 avril et le 5 juin 2022. Il dérive probablement des SRBM KN-23 et KN-24 et ressemble au nouveau petit SLBM présenté à l'exposition « Légitime défense 2021 » le 11 octobre 2021 (voir fig. XVII). Il a été déclaré comme ayant été testé le 16 avril 2022 en tant que « nouveau type d'engin guidé tactique … conçu pour accroître l'efficacité de l'opération nucléaire tactique ».

New small SRBM probably derived from the SRBMs KN-23 and KN-24, it resembled the new small SLBM)

- with a solid propellant engine
- 3-axle wheeled TEL
- Presentation of 6 SRBM systems equipped with 4 launching square-form canister, resulting in theoretically 24 missiles (possible one more system)
- Last possible launch tests on 5 June first on 16 April 2022. (Resulting in at least 1 test)
- Unveiled at the 16 April test and presented at this military parade on 25 April 2022.

Figure XVI

Le missile balistique à propergol solide le plus grand, vraisemblablement un SLBM (sans doute un « Pukguksong-6 ») présenté au défilé militaire du 25 avril 2022. Il est probablement dérivé du SLBM Pukguksong-5, présenté à l'exposition « Légitime défense 2021 » le 11 octobre 2021.

New largest SLBM possible Pukguksong-6 derived from Pukguksong-5

- with a solid propellant engine
- (3+3)-axle wheeled tractor-trailers
- Presentation of 4 SLBM transported on trailer (possible one more system)
- Not yet tested
- Unveiled at this military parade on 25 April 2022

Figure XVII

Le nouveau petit missile balistique à propergol solide, probablement un SLBM, présenté au défilé militaire du 25 avril 2022. Il est probablement dérivé des SRBM KN-23 et KN-24 (voir fig. XV). Selon plusieurs États Membres, deux des tirs d'essai les plus récents auraient été effectués le 9 octobre 2021 et le 7 mai 2022 lorsqu'il a été déclaré comme ayant été testé en tant que « nouveau type de missile balistique lancé par sous-marin ». Il a été dévoilé à l'exposition « Légitime défense 2021 » le 11 octobre 2021.

New smaller SLBM resembled the new small SRBM derived from SRBMs KN-23 and KN-24

- with a solid propellant engine
- 4-axle wheeled truck
- Presentation of 8 SLBM transported on truck (possible one more system)
- Last possible launch tests on 7 May 2022 first on 19 October 2021. (Resulting in at least 2 test)
- Unveiled at the missile exhibition "Self-Defence 2021" on 11 October 2021.
- See S/2022/132 para.24 figure 7

Figure XVIII

Le SRBM KN-25 présenté au défilé militaire du 25 avril. Selon plusieurs États Membres, deux des tirs d'essai possibles les plus récents ont été effectués le 12 mai et le 5 juin 2022. Déclaré comme ayant été testé le 24 août 2019 en tant que « lance-roquettes multiples super large », il a été présenté lors des défilés militaires du 10 octobre 2020 et du 14 janvier 2021 et à l'exposition « Légitime défense 2021 » le 11 octobre 2021.

KN-25 Super-large multiple rocket launcher

- with a solid propellant engine
- 4-axle wheeled TEL
- Presentation of 9 SRBM systems equipped with 4 cylindrical launch canisters, resulting in 36 visible missiles (possible one more system)
- Last possible launch tests on 5 June and 12 May 2022, first on 24 August 2019. (Resulting in at least 9 tests)
- Unveiled at the 24 August 2019 test and presented at the military parades on 10 October 2020, 14 January 2021 and at the missile exhibition "Self-Defence 2021" on 11 October 2021.
- See S/2022/132 para.25, fig.11, tab.1, annex 21, fig.21-4
- S/2021/211 para. 20, fig.3, 4, annex 12
- S/2020/840 para.11, tab.1, annex 7
- S/2020/151 para.194, tab.3, annex 59
- See S/2020/151 para.194, Tab.3, annex 59

24. On trouvera dans les annexes des détails techniques supplémentaires sur 16 tirs d'essai de missiles balistiques, qui se sont déroulés du 27 janvier au 27 juillet 2022. Ils comprenaient six missiles balistiques intercontinentaux (dont l'un a échoué le 16 mars) (voir annexes 16, 17, 19 et 21), un missile balistique à portée intermédiaire (voir annexe 15), un nouveau petit missile balistique lancé par sous-marin (voir annexe 20) et 17 missiles balistiques à courte portée (voir annexes 14, 18 et 22), démontrant une intensification extrême du programme de missiles balistiques à ce jour en 2022 (voir tableau 1 et annexe 23.1). Le Groupe d'experts avait rendu compte

des tirs d'essai de missiles balistiques effectués entre le 15 septembre 2021 et le 17 janvier 2022 dans son précédent rapport[35].

25. La République populaire démocratique de Corée a continué par ailleurs d'adapter ses infrastructures de production industrielle comme le chantier naval de Sinpo Sud[36].

[35] S/2022/132, annexes 21 à 24.

[36] Activités menées dans ce secteur et dans les bases relatives au programme de missiles balistiques : le chantier naval de Sinpo Sud (40°01′20″N 128°09′47″E), février-juin 2022. Voir annexe 20.

Tableau 1

Récapitulatif des tirs de missiles balistiques ou de missiles associant des technologies balistiques et de guidage et à propergol liquide et solide, effectués par la République populaire démocratique de Corée au 27 juillet 2022 (voir annexe 23.1, tableau 23 pour de plus amples détails)

Essais (tous) dans l'année	*Essais de missile balistique à propergol solide ou liquide depuis 2018*	*Essais de missile balistique à propergol solide ou liquide dans l'année*	*Date et heure (locale)*	*Type présumé*	*Nombre de missiles*	*Site de lancement présumé*	*Distance parcourue présumée (en km)*	*Sommet présumé de la trajectoire (en km)*	*Observations*	*Classification de l'Agence centrale de presse coréenne*[37]
17	28	8	2022	– Missiles balistiques à propergol solide, tirés entre 2019 et le 5 juin 2022	63					
				– En 2022 à ce jour	22					
	10	9	2022	– Missiles balistiques à propergol liquide, tirés entre 2019 et le 25 mai 2022	10					
				– En 2022 à ce jour : (3 missiles balistiques à portée intermédiaire et 6 MBI)	9					
5e	23e	3e	Le 27 janvier 2022 à 08 h 00 et 08 h 05	– un SRBM (KN-23) – propulseur à propergol solide – TEL à 4 essieux	2	Depuis le secteur de Hamhung (39°48′45″N 127°39′50″E)	190	20	– niveau d'essais opérationnels – intervalle entre les tirs : 5 minutes – trajectoire très abaissée	« Engin guidé tactique sol-sol »[38]
6e	4e	3e	Le 30 janvier 2022 à 07 h 52	– le missile balistique à portée intermédiaire Hwasong-12 – propulseur à propergol liquide – TEL à 6 essieux	1	Depuis la même aire de lancement que pour le Hwasong-14 tiré le 28 juillet 2017 à Muphyong-ri (comté de Jonchon)	800 ou 790	2 000	– trajectoire plongeante et vol le plus long de missile balistique depuis 2017 – en phase d'utilisation	Tir d'essai du missile balistique sol-sol à portée intermédiaire et à longue portée de type Hwasong-12[39]

[37] Pour un complément d'information sur cette colonne et d'autres, voir annexe 23.1.

[38] *Rodong Sinmun*, 28 janvier 2022.

[39] Agence centrale de presse coréenne et *Rodong Sinmun*, 31 janvier 2022.

Essais (tous) dans l'année	*Essais de missile balistique à propergol solide ou liquide depuis 2018*	*Essais de missile balistique à propergol solide ou liquide dans l'année*	*Date et heure (locale)*	*Type présumé*	*Nombre de missiles*	*Site de lancement présumé*	*Distance parcourue présumée (en km)*	*Sommet présumé de la trajectoire (en km)*	*Observations*	*Classification de l'Agence centrale de presse coréenne*[37]
						(40°36′41″N 126°25′33″E)			concrète et de production (Agence centrale de presse coréenne, 31 janvier 2022)	
7e	5e	4e	Le 27 février 2022 à 07 h 52 ou 07 h 51	– un nouveau MBI, sans doute le Hwasong-17 – propulseur à propergol liquide – probablement un TEL à 11 essieux	1	Depuis le secteur de l'aéroport international de Pyongyang Sunan (39°13′17″N 125°40′17″E)	300 ou 320	600 ou 620	– trajectoire plongeante – seule image de l'Agence centrale de presse coréenne prise du lanceur. Objectif probable : tester les fonctions d'un satellite de reconnaissance. Or les vecteurs servant au lancement de satellites recourent à la même technologie que celle pour un tir de missile balistique[40]	« [l'Administration nationale du développement aérospatial] et l'Académie des sciences de la défense ont effectué un essai important dimanche, conformément au plan visant à mettre au point un satellite de reconnaissance »[41]

[40] Par exemple les technologies de séparation des propulseurs à plusieurs étages, le contrôle de l'altitude et le contrôle du guidage. Selon des États Membres, le programme spatial pourrait également aider à améliorer les capacités des MBI de la République populaire démocratique de Corée. Voir annexe 23.1, rang du 27 février 2022.

[41] Rodong *Sinmun*, 28 février 2022.

Essais (tous) dans l'année	*Essais de missile balistique à propergol solide ou liquide depuis 2018*	*Essais de missile balistique à propergol solide ou liquide dans l'année*	*Date et heure (locale)*	*Type présumé*	*Nombre de missiles*	*Site de lancement présumé*	*Distance parcourue présumée (en km)*	*Sommet présumé de la trajectoire (en km)*	*Observations*	*Classification de l'Agence centrale de presse coréenne*[37]
8e	6e	5e	Le 5 mars 2022 à 08 h 52 ou 08 h 47	– un nouveau MBI, probablement le Hwasong-17 – propulseur à propergol liquide – probablement un TEL à 11 essieux	1	Depuis le secteur de l'aéroport international de Pyongyang Sunan (39°13′17″N 125°40′18″E)	270 ou 300	560 ou 550	– trajectoire plongeante – aucune image de l'Agence centrale de presse coréenne et même objectif que celui du tir d'essai du 28 février	Nouveau tir d'essai important en vue de la mise au point d'un satellite de reconnaissance[42]
9e	7e	5e	Le 16 mars 2022 à 09 h 30	– le nouveau MBI Hwasong-17 – propulseur à propergol liquide – TEL à 11 essieux	1	Depuis le secteur de l'aéroport international de Pyongyang Sunan (39°11′18″N 125°40′00″E) – le « Centre d'appui au missile balistique Sil-li » (39°10′54″N 125°39′49″E) (S/2020/840, par. 16) est clairement présenté comme impliqué dans le programme de missiles balistiques	Raté	Raté	– échec du tir d'essai du MBI qui a explosé à une altitude de moins de 20 km – le missile balistique testé le 16 mars 2022 est le MBI Hwasong-17 qui avait été présenté par la Télévision centrale coréenne le 25 mars en tant que MBI testé le 24 mars	Pas de déclaration ou d'information de la République populaire démocratique de Corée (première absence de déclaration en 2022)

[42] Agence centrale de presse coréenne et *Rodong Sinmun*, 6 mars 2022.

Essais (tous) dans l'année	*Essais de missile balistique à propergol solide ou liquide depuis 2018*	*Essais de missile balistique à propergol solide ou liquide dans l'année*	*Date et heure (locale)*	*Type présumé*	*Nombre de missiles*	*Site de lancement présumé*	*Distance parcourue présumée (en km)*	*Sommet présumé de la trajectoire (en km)*	*Observations*	*Classification de l'Agence centrale de presse coréenne*[37]
–	–	–	Le 20 mars 2022 à 7 h 20[43]							Pas de déclaration
10e	8e	7e	Le 24 mars 2022 à 14 h 34	– un MBI, probablement un Hwasong-15 modifié, mais qualifié de Hwasong-17 par la République populaire démocratique de Corée – propulseur à propergol liquide – probablement un TEL à 9 ou à 11 essieux	1	Depuis le secteur de l'aéroport international de Pyongyang Sunan (39°11′19″N 125°40′01″E)	1080 ou 1100	6200 ou 6000	Les données enregistrées et analysées sont considérées comme étant les plus consistantes à ce jour, concernant la capacité du MBI de parcourir plus de 15 000 km. On estime cependant qu'il s'agit d'un Hwasong-15 modifié	« Hwasongpho-17, un nouveau type de missile balistique intercontinental des forces stratégiques de la [République populaire démocratique de Corée] »[44]

[43] Selon un État Membre, un lance-roquettes multiples à propulseur à propergol solide et quatre roquettes tirées en une heure du secteur de la province du Pyongan du Sud, en direction de la côte ouest. D'après NK News (20 mars 2022), il s'agirait de lance-roquettes multiples KN-09 (240 mm, 300 mm).

[44] Agence centrale de presse coréenne, 25 mars 2022.

Essais (tous) dans l'année	*Essais de missile balistique à propergol solide ou liquide depuis 2018*	*Essais de missile balistique à propergol solide ou liquide dans l'année*	*Date et heure (locale)*	*Type présumé*	*Nombre de missiles*	*Site de lancement présumé*	*Distance parcourue présumée (en km)*	*Sommet présumé de la trajectoire (en km)*	*Observations*	*Classification de l'Agence centrale de presse coréenne*[37]
11e	24e	4e	Le 16 avril 2022 à 17 h 50 et 18 h 11	Un nouveau SRBM dérivé du KN-23 et du KN-24 mais plus petit, répertorié comme une version sol-sol du nouveau petit SLBM lancé le19 octobre 2022 – conteneur quadruple monté sur un TEL à trois essieux	2	Depuis la plage de Majon près de la résidence de Kim Jong Un à Chakto-dong, comme pour les tirs d'essai du SRBM le 27 janvier 2022 et le 10 août 2019 (39°48′45″N 127°39′50″E)	110	25	– la première fois que la République populaire démocratique de Corée a présenté un SRBM comme un vecteur d'arme nucléaire tactique – vitesse maximale : Mach 4 – temps de vol : 60 secondes – intervalle entre les tirs : 21 minutes – probablement un niveau d'essais opérationnels	« Nouveau type d'engin guidé tactique »… renforçant l'efficacité des opérations nucléaires tactiques »…[45]
12e	9e	8e	Le 4 mai 2022 à 12 h 03 ou 12 h 02	– un MBI, peut-être un Hwasong-15 ou un Hwasong-17 – propulseur à propergol liquide	1	Depuis le secteur de l'aéroport international de Pyongyang Sunan (39°13′14″N 125°39′55″E)	470 ou 500	780 ou 800	– vitesse maximale : Mach 11, environ 13 600 km/h, vol de 21 minutes – lancé en-deçà de sa pleine capacité et suivant une trajectoire typique plutôt que plongeante	Pas de déclaration ou d'information de la République populaire démocratique de Corée (pour la deuxième fois en 2022)

[45] Voice of Korea, 17 avril 2022.

Essais (tous) dans l'année	*Essais de missile balistique à propergol solide ou liquide depuis 2018*	*Essais de missile balistique à propergol solide ou liquide dans l'année*	*Date et heure (locale)*	*Type présumé*	*Nombre de missiles*	*Site de lancement présumé*	*Distance parcourue présumée (en km)*	*Sommet présumé de la trajectoire (en km)*	*Observations*	*Classification de l'Agence centrale de presse coréenne*[37]
13e	25e	5e	Le 7 mai 2022 à 14 h 07 ou 14 h 06	– un nouveau SLBM ou SRBM dérivé du KN-23 ou KN-24 – comparable au nouveau petit SLBM testé le 19 octobre 2021 et présenté lors de défilés militaires	1	Depuis un sous-marin ou une barge de banc d'essai submersible situé en mer, au large de la région de Sinpo	600	60 ou 50	– un vol de moins de 18 minutes – trajectoire irrégulière – lancé peut-être à partir du « 8.24 Yongung SSBA » – 3e essai de SLBM depuis 2018	Pas de déclaration ou d'information de la République populaire démocratique de Corée (pour la troisième fois en 2022)
14e	26e	6e	Le 12 mai 2022 à 18 h 29 ou 18 h 28	– un SRBM, probablement le KN-25 (lance-roquettes multiples super large)	3	Depuis le secteur de l'aéroport international de Pyongyang Sunan	360 ou 350	90 ou 100	– vitesse maximale : Mach 5 – niveau d'essais opérationnels – intervalles entre les tirs : presque simultanés – la trajectoire tendue est à confirmer	Pas de déclaration ou d'information de la République populaire démocratique de Corée (pour la quatrième fois en 2022)
15e	10e	9e	Le 25 mai 2022 à 06 h 00 ou 05 h 59	– un MBI, vraisemblablement un Hwasong-17 – propulseur à propergol liquide	1[46]	Depuis le secteur de l'aéroport international de Pyongyang Sunan (39°13′14″N 125°39′55″E)	360 ou 300	540 ou 550	– premier tir simultané de missiles balistiques à propergol liquide et à propergol solide – tir d'essai visant peut-être à évaluer l'association opérationnelle	Pas de déclaration ou d'information de la République populaire démocratique de Corée (pour la cinquième fois en 2022)

[46] Voir annexe 21.

Essais (tous) dans l'année	*Essais de missile balistique à propergol solide ou liquide depuis 2018*	*Essais de missile balistique à propergol solide ou liquide dans l'année*	*Date et heure (locale)*	*Type présumé*	*Nombre de missiles*	*Site de lancement présumé*	*Distance parcourue présumée (en km)*	*Sommet présumé de la trajectoire (en km)*	*Observations*	*Classification de l'Agence centrale de presse coréenne*[37]
16e	27e	7e	Le 25 mai 2022 à 06 h 37 06 h 42	– un SRBM, vraisemblablement un KN-23 modifié	2	Depuis le secteur de l'aéroport international de Pyongyang Sunan vers l'est et amerrissage	inconnu/ 760 ou 750	20 et 60 ou 50	– l'un a disparu après un éventuel échec ou un vol irrégulier, du fait d'une trajectoire peut-être tendue	Pas de déclaration ou d'information de la République populaire démocratique de Corée (pour la sixième fois en 2022)
17e	28e	8e	Le 5 juin 2022 à 9 h 06, 9 h 10, 9 h 15, 9 h 24, 9 h 30, 9 h 41	– un SRBM, 4 types différents de SRBM (probablement les KN-23, KN-24, KN-25 et le nouveau KN-23 modifié). Deux des huit missiles ont parcouru de courtes distances à très basse altitude (durée et données de vol à confirmer)	4x2	Depuis quatre lieux différents, de la côte ouest à la côte est, ainsi que de Sunan (Kaechon) (39°45′11″N 125°54′02″E), Dongchang-ri, Hamhung, vers l'est et amerrissage	110 à 670	25 à 90	– vitesse maximale : Mach 3 à Mach 6 – première association simultanée de portées d'une telle diversité et de missiles en si grand nombre – possibilité d'un entraînement opérationnel au lancement de SRBM de diverses portées et capacités de frappe, en se servant des tactiques de l'ex-Union soviétique	Pas de déclaration ou d'information de la République populaire démocratique de Corée (pour la septième fois en 2022)

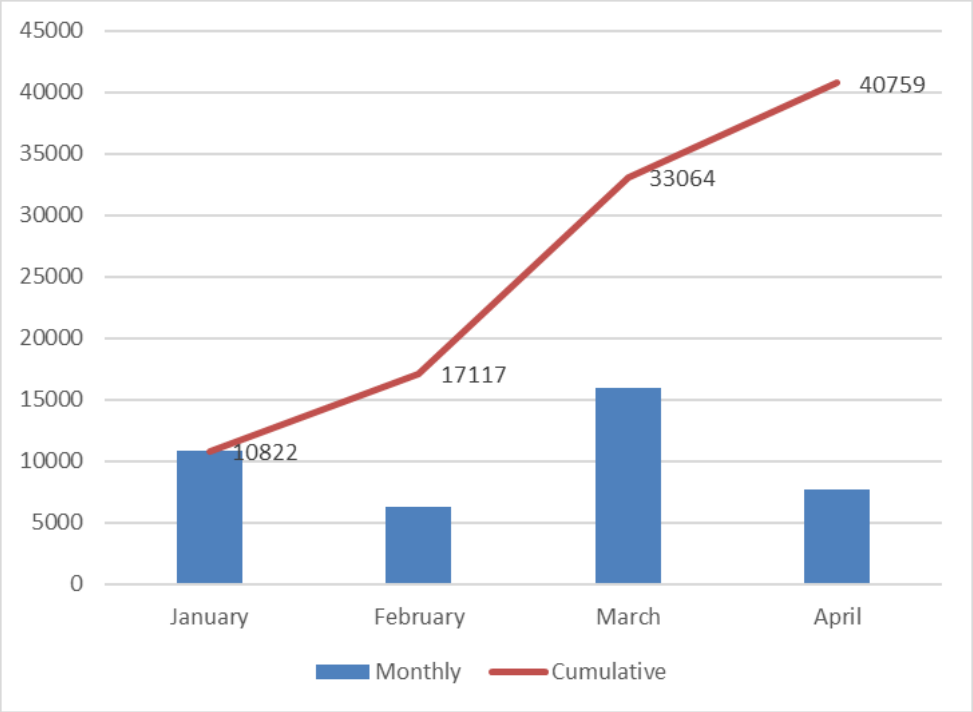
III. Sanctions sectorielles et maritimes[47]

Importations de pétrole

Produits pétroliers raffinés

26. Au 27 juillet 2022, 8,15 % du volume maximum annuel autorisé de 500 000 barils[48] en produits pétroliers raffinés avaient été officiellement signalés par un État Membre au Comité du Conseil de sécurité créé par la résolution 1718 (2006) (voir tableau 2).

Tableau 2
Cargaisons déclarées de produits pétroliers raffinés à la République populaire démocratique de Corée, de janvier à avril 2022
(En nombre de barils)



Source : www.un.org/securitycouncil/fr/sanctions/1718/supply-sale-or-transfer-of-all-refined-petroleum et le Groupe d'experts.

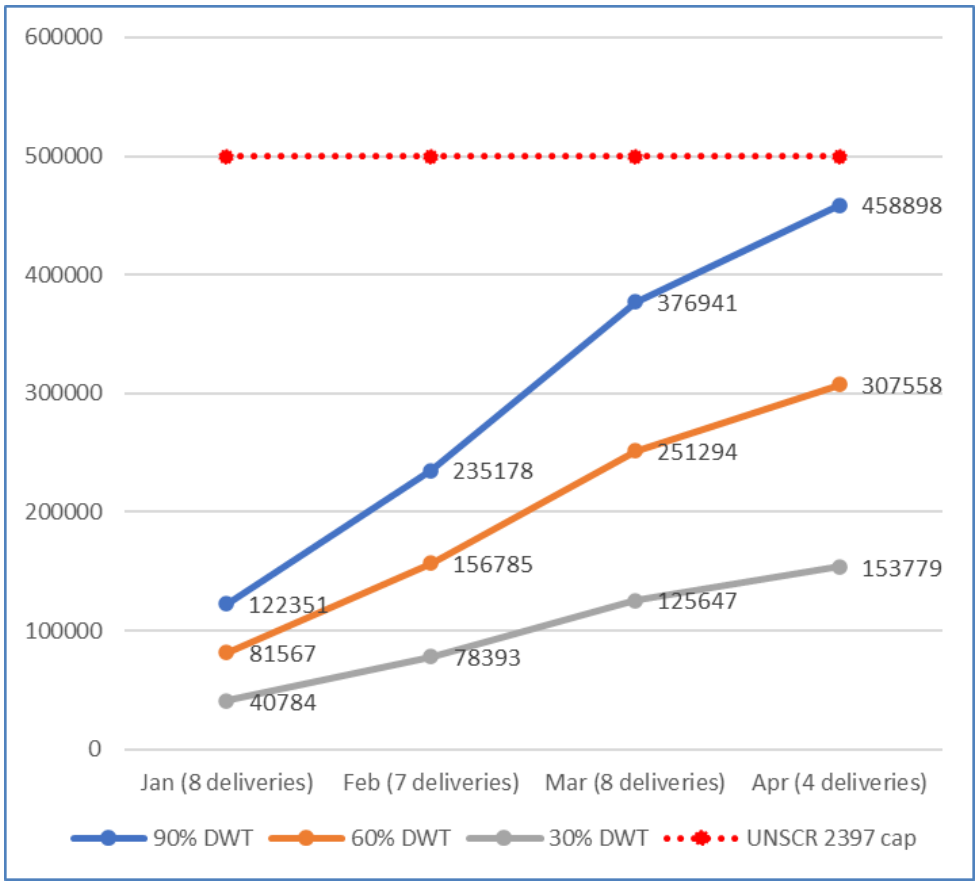
27. Un État Membre a fourni l'imagerie satellite de 16 pétroliers immatriculés en République populaire démocratique de Corée, qui ont effectué 27 livraisons de produits pétroliers raffinés aux installations pétrolières de Nampo de janvier à avril 2022. Cet État Membre estime que pas moins de 458 898 barils de produits pétroliers raffinés avaient été livrés à Nampo au 30 avril (voir tableau 3), sur la base d'une

[47] Tous les renseignements, notamment les informations connexes comme le pavillon et la propriété du navire, figurant dans la présente section, et les annexes qui les accompagnent, ont été vérifiés en juillet 2022. Toutes les dates sont saisies en heure d'hiver de New York, en temps local ou en temps universel coordonné (UTC), selon la source des données d'origine. Les encadrés noirs indiquent des informations expurgées.

[48] Résolution 2397 (2017) du Conseil de sécurité, par. 5.

capacité de chargement maximale de 90 % du tonnage de port en lourd de chaque navire (voir annexe 24).

Tableau 3
Estimations tirées de l'observation des livraisons de produits pétroliers raffinés, Nampo, de janvier à avril 2022 (en barils)



Source : un État Membre, le Groupe d'experts.

Abréviation : DWT = tonnage de poids en lourd.

28. L'imagerie de l'État Membre indique que plusieurs navires auraient apparemment déchargé leurs cargaisons à Nampo, auraient emprunté la porte d'écluse pour sortir et seraient rapidement retournés avec une deuxième cargaison à décharger. Le *Pu Ryong* a déchargé une cargaison le 3 mars et à nouveau le 11 mars ; le *Song Won* a déchargé une cargaison le 3 mars et à nouveau le 14 mars. Le Groupe d'experts estime que les pétroliers de la République populaire démocratique de Corée ne sont pas tous contraints de se mettre en quarantaine du fait de la maladie à coronavirus (COVID-19) et que des transferts de navire à navire visant à recouvrer les produits s'effectueraient à proximité de Nampo.

29. Le Groupe d'experts n'est actuellement pas en mesure de faire la distinction entre les livraisons de produits pétroliers raffinés licites, signalées au Comité, et les livraisons illicites. Il se peut que des produits pétroliers livrés par les navires, dont on voit les photographies à l'annexe 24, aient été signalés au Comité.

30. Le Groupe d'experts a écrit[49] à la Chine pour lui demander des noms et des détails sur la propriété et la gestion des navires ayant participé aux expéditions licites, ainsi que sur les ports et les dates de chargement et de livraison[50]. La Chine a répondu qu'elle informait le Comité de ses exportations de produits pétroliers raffinés, que ses entreprises n'effectuaient pas d'opérations avec des entités visées par les sanctions, et que le pays attachait une grande importance à la protection des données relatives aux parties participant au commerce international. La réponse intégrale de la Chine figure à l'annexe 25.

Réaménagement de navires de charge visant à accroître les importations de pétrole raffiné

31. Si les livraisons non signalées de produits pétroliers raffinés se sont poursuivies, le nombre de pétroliers livrant du pétrole dans les ports de la République populaire démocratique de Corée a été plus faible que les années précédentes[51]. Malgré cette tendance à la baisse, associée aux mesures de quarantaine en cours, aux strictes mesures de surveillance imposées par des États Membres et à la diminution des échanges commerciaux, due à la pandémie de COVID-19, les prix des produits pétroliers raffinés dans le pays sont demeurés relativement stables.

32. Cette tendance pourrait s'expliquer par les modifications apportées illégalement par la République populaire démocratique de Corée dans une partie de ses navires de charge, de manière à transporter des produits pétroliers, comme l'indiquent les informations préliminaires communiquées par un État Membre.

33. Selon l'État Membre, deux méthodes ont été utilisées :

a) Méthode 1 : la cale à cargaison et les ballasts sont transformés en multiples réservoirs de pétrole, tandis que du béton est installé au fond du navire pour en maintenir l'équilibre ;

b) Méthode 2 : seuls les ballasts sont utilisés ; ils sont lavés et ensuite chargés de produits pétroliers. La cargaison sert à maintenir l'équilibre du navire.

34. Le Groupe d'experts enquête sur ces informations. Ces méthodes permettraient d'accroître la capacité de se procurer du pétrole réaffiné et devront être prises en compte, au moment d'analyser les chiffres, qui se restreignent normalement aux livraisons de navires petroliers (voir par. 27 à 30).

Modes de comportement des navires suspects

Baie de Corée et eaux territoriales de la République populaire démocratique de Corée comme zones de transferts de navire à navire

35. Des transferts illicites entre des navires et des pétroliers de la République populaire démocratique de Corée continuent de se dérouler dans la zone économique exclusive de ce pays[52]. Depuis décembre 2021, le Groupe d'experts a également observé des transferts entre des navires de charge autour de l'île de Ch'o-do (초도), à 50 kilomètres au sud-ouest de Nampo. Quelques-uns de ces transferts se produisent

[49] S/2022/132, par. 35.

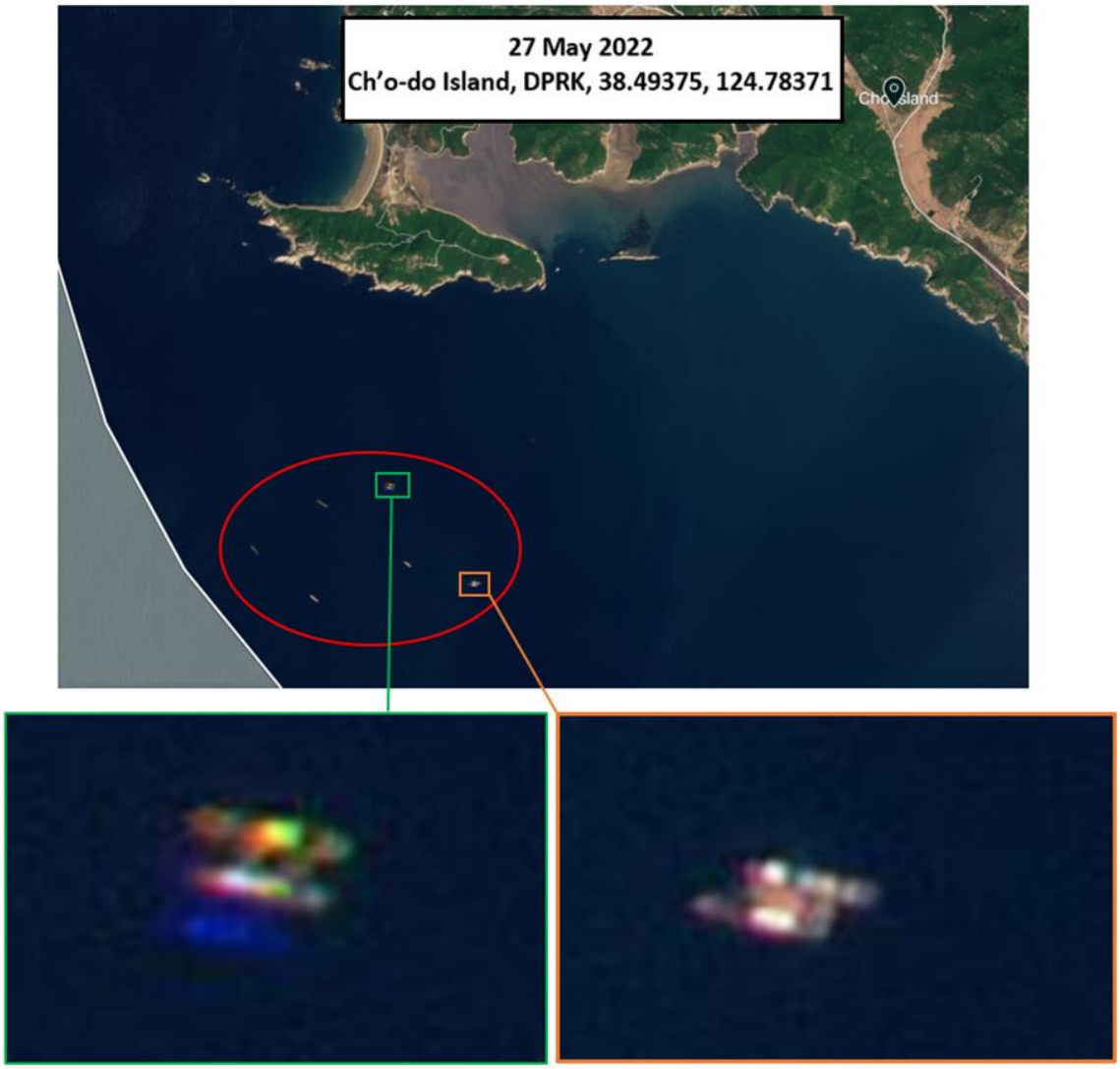
[50] Au paragraphe 5 de sa résolution 2397 (2017), le Conseil de sécurité a établi la quantité maximale de 500 000 barils, « à condition que l'État Membre notifie au Comité tous les 30 jours le volume de produits pétroliers raffinés fourni, vendu ou transféré à la [République populaire démocratique de Corée], ainsi que les informations concernant toutes les parties à la transaction ».

[51] S/2022/132, par. 33 et 34 et annexe 31, et annexes pertinentes des précédents rapports du Groupe d'experts sur les quantités calculées de pétrole raffiné licites et illicites importées par la République populaire démocratique de Corée.

[52] S/2022/132, par. 40 et 41.

en configurations de trois navires. Des navires de différentes tailles y ont été observés, ainsi que des pontons-grues[53] servant au transfert des cargaisons. La plupart de ces transbordements en mer semblent s'effectuer à l'ouest de l'île de Ch'o-do et bon nombre ont eu lieu en mai 2022 (voir fig. XIX et annexe 26).

Figure XIX
Imagerie satellite d'un transbordement entre des navires de charge, en février et en mai 2022



Source : Panel Labs, annoté par le Groupe d'experts.

36. Le Groupe d'experts note que ces transferts entre navires de charge dans les eaux territoriales de la République populaire démocratique de Corée constituent une nouvelle méthode de contournement des sanctions, en réponse peut-être à un certain nombre de facteurs tels que la nécessité d'éviter le contrôle des actifs, le respect des règlements liés à la COVID-19 et de la mise en quarantaine des bateaux et

[53] S/2020/840, par.48, annexe 26 et recommandation 9 relative à l'utilisation de pontons-grues.

l'impossibilité pour bon nombre de navires destinés au transport de marchandises de la République populaire démocratique de Corée d'entrer dans des ports étrangers.

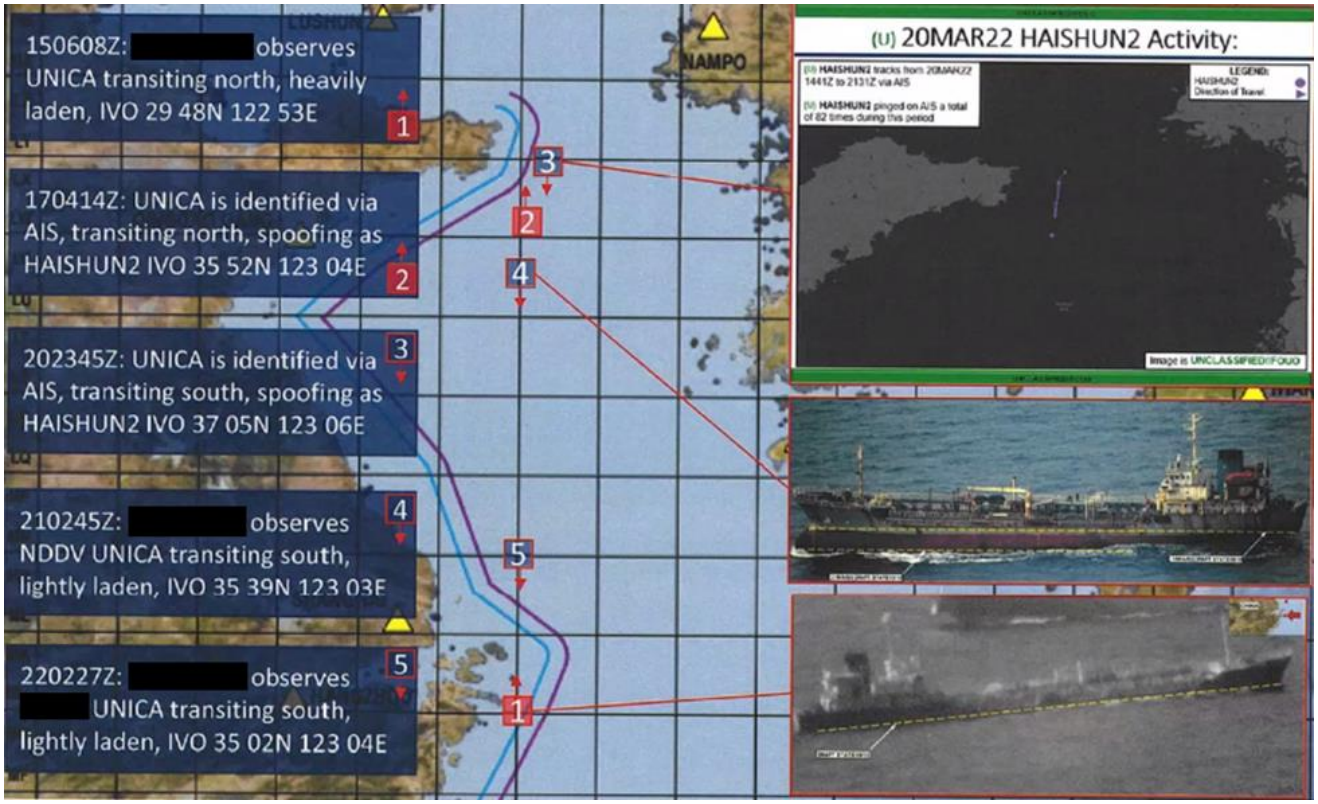
Autres eaux concernées

37. Le Groupe d'experts a continué de surveiller les activités des navires associés à des transferts de pétrole à la République populaire démocratique de Corée, dont le *New Konk* (numéro Organisation maritime internationale (OMI) d'identification du navire 9036387) et l'*Unica* (numéro OMI : 8514306)[54]. Ces navires de « livraison directe », terme utilisé pour décrire les pétroliers n'appartenant pas à la République populaire démocratique de Corée, qui ont livré du pétrole dans les ports du pays avant la pandémie de COVID-19, ont continué de contrevenir aux résolutions du Conseil de sécurité.

38. On voit dans des photographies fournies par des États Membres l'itinéraire suivi par l'*Unica* en mars 2022 pour livrer du pétrole raffiné destiné à la République populaire démocratique de Corée : il était lourdement chargé au moment de naviguer en direction du nord et lège à son retour, direction sud (voir fig. XX).

[54] S/2022/132, par. 42 à 73 et annexes 35 à 48, S/2022/777, S/2021/211, S/2021/840, S/2021/840/Corr.1 et S/2020/151.

Figure XX
Activité de l'*Unica* (en tant que *Haishun2)*, du 15 au 22 mars 2022



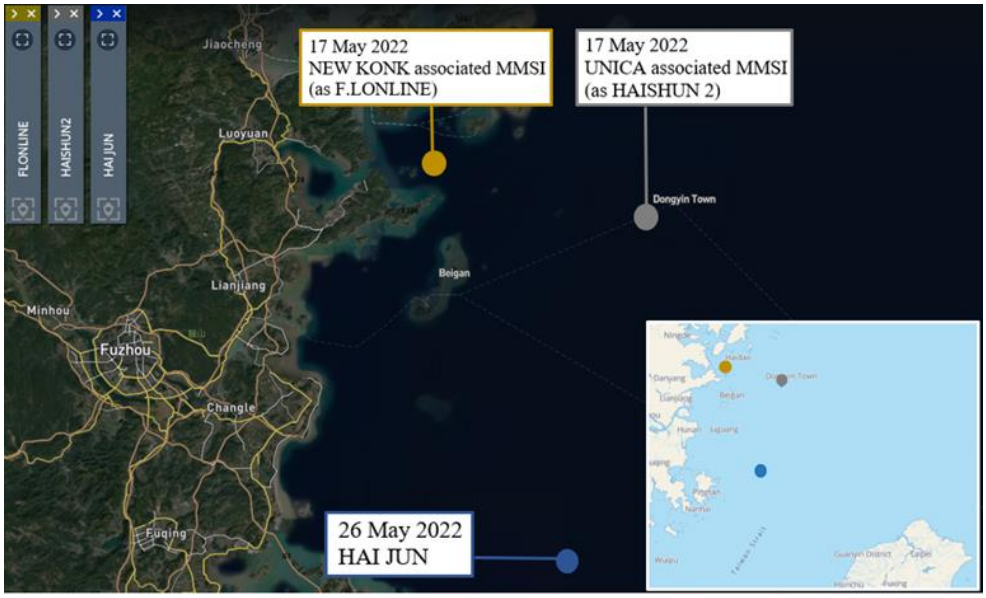
TMO M/V UNICA was observed not reporting on AIS. UNICA was observed with a draft state of 03/10. Vessel last observed on 15MAR22 approx. 341nm south of current location with assessed draft state of 09/10 (indicated at point 1 - map inset)

Source : un État Membre

39. En mai 2022, le *New Konk* et l'*Unica* ont été observés sur une plateforme maritime[55] transmettant des identifiants frauduleux du système d'identification automatique (AIS) en tant que *F.Lonline* (numéro d'identification de station maritime mobile (MMSI) : 31216200) et *Haishung2* (numéro MMSI : 457400047), respectivement[56], près de l'île de Dongyin et la baie de Sansha (voir fig. XXI). Le Groupe d'experts avait signalé précédemment ces eaux comme des lieux où des navires suspects s'attardaient[57].

40. L'*Hai Jun* battant pavillon togolais (numéro OMI : 9054896 ; numéro MMSI : 671244100), un navire faisant office d'intermédiaire, sur lequel enquête le Groupe d'experts dans le cadre d'un transfert en chaîne de pétrole raffiné, destiné à la République populaire démocratique de Corée[58], a transmis un signal dans le secteur au bout de quelques jours (voir fig. XXI et annexe 27). Le 26 mai 2022, le *Xiang Shun* qui battait à l'époque pavillon mongol (numéro OMI : 9153800) (voir par. 47 à 50), a été enregistré comme quittant le port de Taichung et se rendant dans le secteur du détroit de Taiwan, où des transmissions des systèmes AIS du *Hai Jun* et de l'*Unica* ont été également enregistrées (voir fig. XXII). Un État Membre estime que le *Hai Jun* opère exclusivement depuis 2019 comme pétrolier intermédiaire, transférant des cargaisons de pétrole depuis d'autres pétroliers à des navires de « livraison directe ». Le Groupe d'experts continue d'enquêter sur les réseaux qui ont organisé les livraisons antérieures du *Hai Jun*.

Figure XXI
Navires suspects autour de l'île de Dongyin et dans la baie de Sansha, du 17 au 26 mai 2022



Source : Windward[59], annoté par le Groupe d'experts.

[55] Windward, une plateforme de bases de données maritimes, s'aidant de l'intelligence artificielle.
[56] S/2022/132, tableau 3 et annexe 39a.
[57] S/2022/132, par. 49 et 52, et annexes 34, 39, 41 et 42 et S/2021/777, par. 50 et annexe 33a.
[58] S/2022/132, par. 53 à 58 et annexe 42. Ruicheng (HK) Shipping Co. Ltd est toujours inscrit comme le propriétaire et l'exploitant du navire, selon les dossiers de l'Organisation internationale maritime (OIM).
[59] Sauf indication contraire, toutes les dates et les horaires mentionnés sur la plateforme de Windward sont en heure d'hiver de New York et en UTC, concernant les captures d'imagerie satellite.

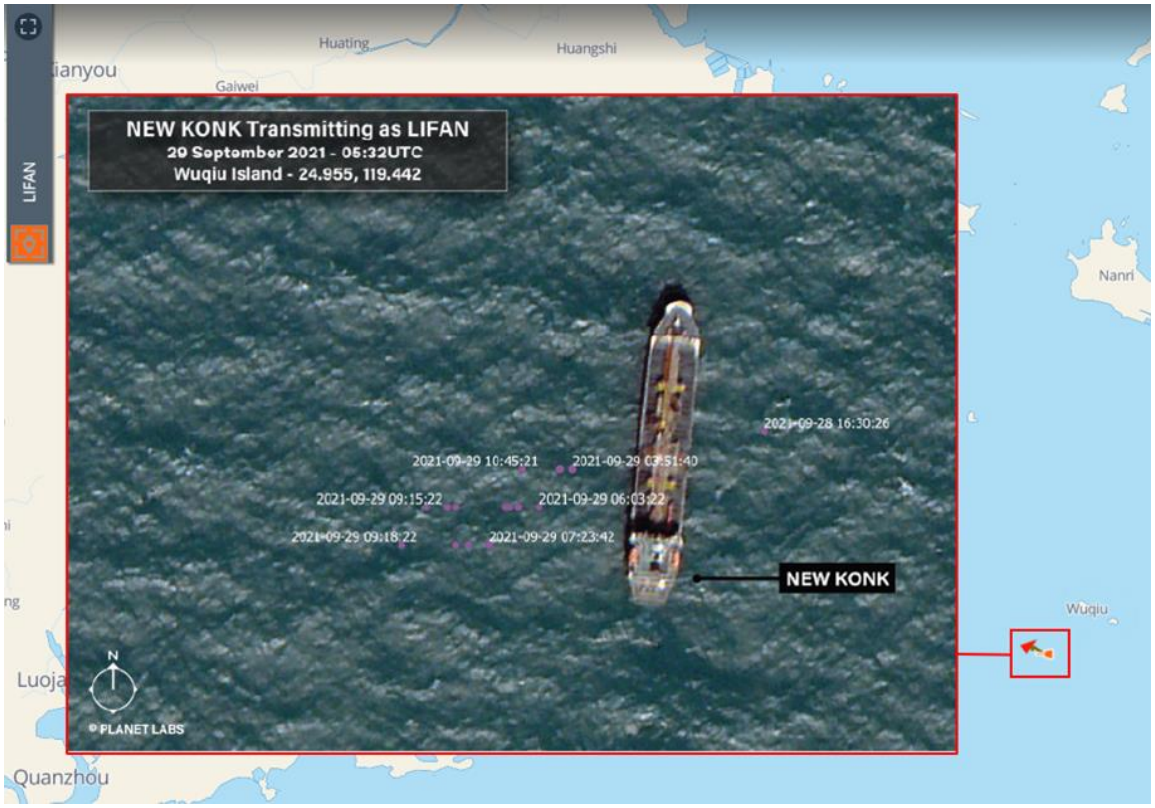
Figure XXII
Navires suspects près d'une zone de transferts entre navires, du 17 au 27 mai 2022

Source : Windward, annoté par le Groupe d'experts.

41. Par ailleurs, en septembre 2021, le *New Konk*, transmettant en tant que *Lifan*, a usurpé le numéro MMSI 312360000, précédemment attribué au pétrolier *Leo* enregistré au Belize (numéro OMI : 9066473) près de l'île de Wuqiu (voir fig. XXIII). Les enquêtes du Groupe d'experts ont indiqué que le *New Konk* avait également utilisé au moins un numéro MMSI associé au Belize (voir fig. XXIV) ainsi que deux numéros MMSI associés à la Sierra Leone, en 2021 et en 2022, pour mener ses activités illicites. Le Groupe d'experts a écrit à l'exploitant du *Leo,* la société Sinar Cemerlang Marine Sdn Bhd., immatriculée en Malaisie, qui a répondu que le *Leo* ne relevait plus de sa gestion, durant la période indiquée, et a fait suivre une lettre d'annulation indiquant que le navire avait été rayé du registre bélizien d'immatriculation du pavillon, le 26 août 2021 « du fait qu'il était enregistré en Guinée équatoriale tout en étant, à titre provisoire, immatriculé au Belize ». Le Groupe d'experts note que l'information relative à la radiation du navire du registre n'a pas été actualisée de manière opportune[60] et qu'aucun document n'indique que le *Leo* bat pavillon équato-guinéen. L'utilisation par le *New Konk* du numéro MMSI du *Leo*, au moment où il était en train d'être radié du registre bélizien, doit être examinée plus avant. Le Groupe d'experts attend une réponse du Belize sur le *Leo* (voir annexes 28.1 et 28.2 pour de plus amples détails).

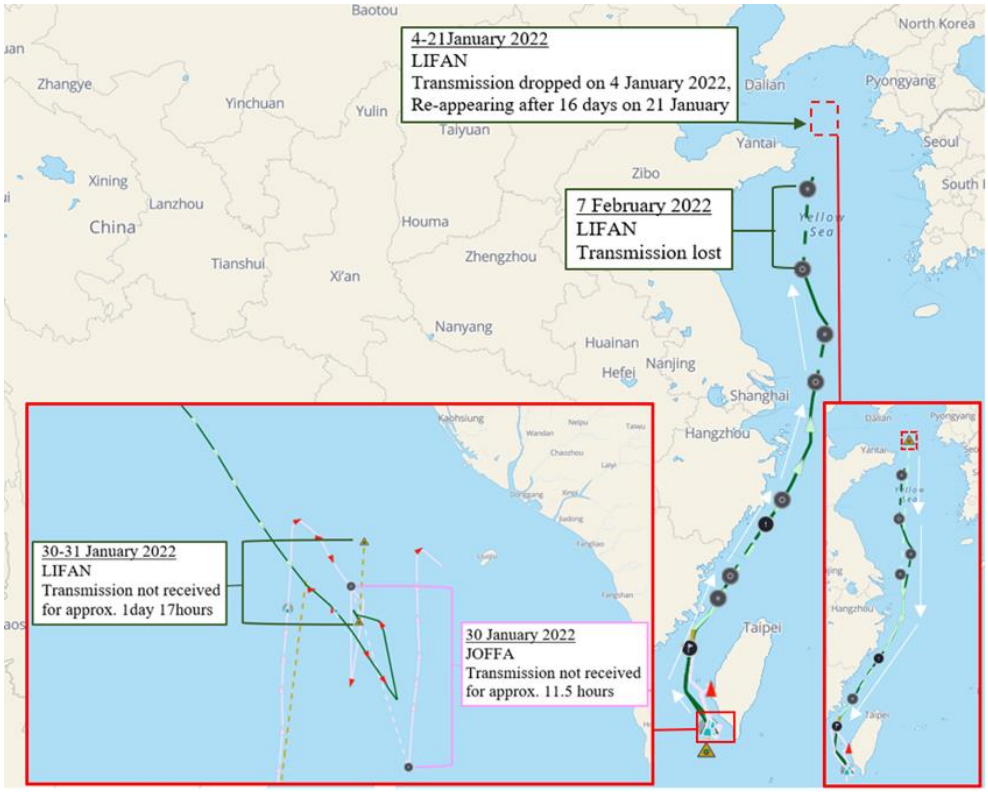
[60] La mise à jour relative au statut du pavillon bélizien du navire avait été postdatée, selon les dossiers de l'OIM.

Figure XXIII
Le *New Konk* en tant que *Lifan* (numéro MMSI : 312360000), le 29 septembre 2021



Source : Windward, annoté par le Groupe d'experts ; image en médaillon, État Membre.

Figure XXIV
Le *New Konk* utilisant un numéro MMSI différent du « *Lifan* » (312360680), janvier 2022



Source : Windward, annoté par le Groupe d'experts.

42. Le 30 juin 2022, l'imagerie satellite a montré les mêmes navires dans la baie de Sansha, dont le *Diamond 8* (numéro OMI : 9132612). Les navires transmettaient sur les mêmes numéros MMSI relevés à la figure XXI, tandis que le *Diamond 8* transmettait un numéro MMSI appartenant au *Shun Li* (numéro OMI : 8514435), enregistré comme ayant été mis au rebut en juin 2021[61]. Le *Shun Li* partageait également le même numéro MMSI recyclé, associée à la Mongolie qui appartenait à un autre pétrolier, enregistré comme ayant été démantelé durant cette même période. Le détenteur de l'attestation de conformité de ce dernier était You Young Ship Management and Consultant Co. Ltd. (宥暘船舶管理顧問有限公司). On trouvera de plus amples détails dans les sections pertinentes ci-après sur le *Xiang Shun* (numéro OMI : 9153800) et le *Hong Hu* (numéro OMI : 9125293) concernant You Young Ship. L'enquête se poursuit.

[61] Dossiers de l'OIM.

Figure XXV
Navires suspects dans la baie de Sansha le 30 juin 2022

Source : un État Membre.

Transferts de pétrole en cascade

43. La République populaire démocratique de Corée a continué de se procurer du pétrole au moyen de transbordements en cascade, faisant appel à plusieurs pétroliers qui recourent régulièrement à des tactiques de dissimulation pour éviter toute détection. Elles permettent aux navires de continuer de violer les dispositions du paragraphe 5 de la résolution 2397 (2017) du Conseil de sécurité qui interdit la fourniture, la vente ou le transfert directs ou indirects au pays de tous produits pétroliers raffinés à moins que le Comité n'en ait été notifié, conformément aux exigences énoncées dans la résolution.

44. La méthode utilisée, déjà répertoriée, associe des navires-mères, des pétroliers intermédiaires et des pétroliers de « livraisons directes » de la République populaire démocratique de Corée[62]. Le Groupe d'experts a recensé d'autres navires suspects, d'après des modes de comportement semblables à celui du *Sky Venus* (numéro OMI : 9168257)[63] (voir également la section ci-après sur les sociétés de facilitation et les annexes 32.1 à 32.6). Ces indicateurs comprennent une manipulation du système d'identification automatique, le recours à de multiples bâtiments participant à des transferts entre navires et des déplacements vers des secteurs où des bateaux suspects s'attardent ou mènent des opérations de navire à navire, tels que la baie de Sansha,

[62] S/2022/132, par. 68 à 73.
[63] Ibid., par. 54 à 57 et 64 à 72, et annexes 37 à 42 et 48.

l'île de Dongyin, le détroit de Taiwan et la zone économique exclusive de la République populaire démocratique de Corée.

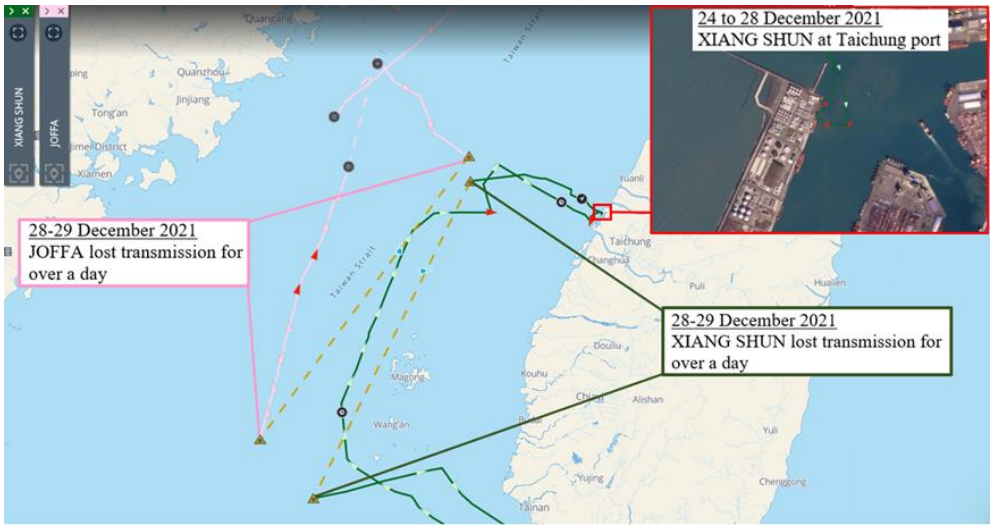
45. Tout comme le *Sunward*[64] et le *Sky Venus*[65], le *Xiang Shun* (numéro OMI : 9153800) qui battait pavillon mongol à l'époque (voir les enquêtes aux annexes 29.1 et 29.2) et le *Hong Hu* qui battait pavillon palaosien (numéro OMI : 9125293) (voir les enquêtes aux annexes 30.1 et 30.2) ont servi de navires-mères, chargeant du pétrole raffiné au port de Taichung en décembre 2021. Ils ont ensuite retrouvé à maintes reprises, dans le détroit de Taiwan, le *Joffa* qui battait à l'époque pavillon sierra-léonais (numéro OMI : 8513405). Le *New Konk* et l'*Unica*, qui voguaient sous des identités frauduleuses, ont émis des signaux dans les parages de ces navires-mères, avant que tous ces navires ne cessent de transmettre, au moyen de leurs systèmes AIS. Ceux du *New Konk* et de l'*Unica* ont recommencé à transmettre lorsque les navires ont pris la direction de la zone économique exclusive de la République populaire démocratique de Corée, puis ont cessé de le faire pendant un certain laps de temps (voir fig. XXVI).

Mise au rebut de navires compromis

46. Tout comme le *Sunward*, le *Joffa* et le *Xiang Shun* sont arrivés dans un chantier naval de démolition au Bangladesh en avril et en juin 2022, respectivement, pour y être démantelés, après avoir trempé dans des transferts de pétrole illicites. Le Groupe d'experts note une nouvelle tendance, à savoir des navires généralement vieillissants, participant au contournement des sanctions, qui sont détruits, après avoir été démasqués.

Figure XXVI
Scénarimage du *Xiang Shun–Joffa–New Kon* (en tant que *Lifan*)–*Un Hung*, de décembre 2021 à janvier 2022

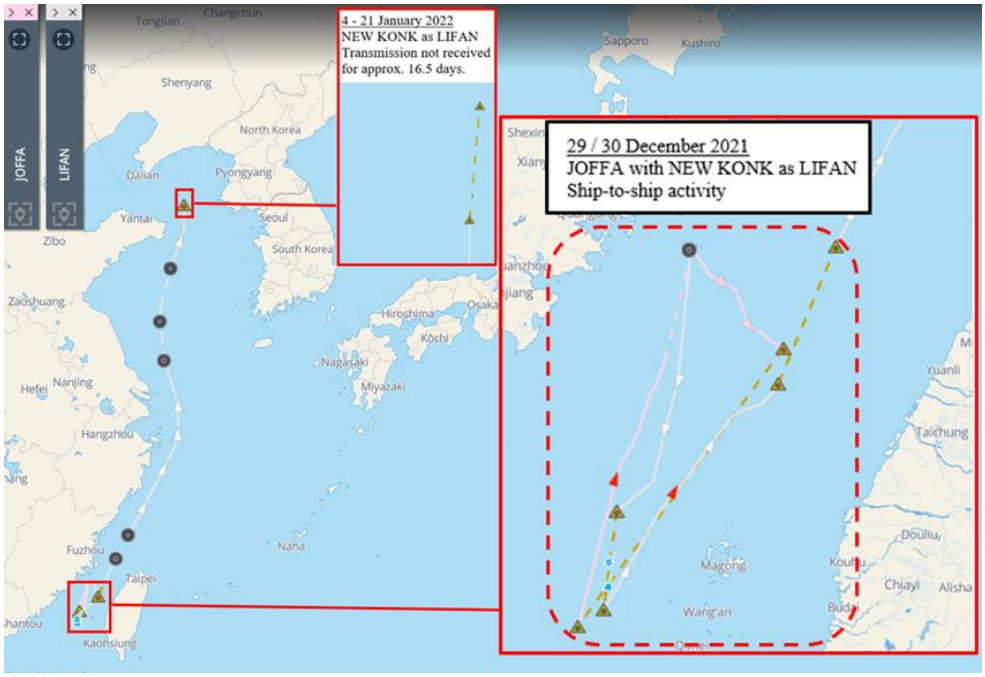
***Xiang Shun* et *Joffa*[66], les 28 et 29 décembre 2021**



Source : Windward, annoté par le Groupe d'experts.

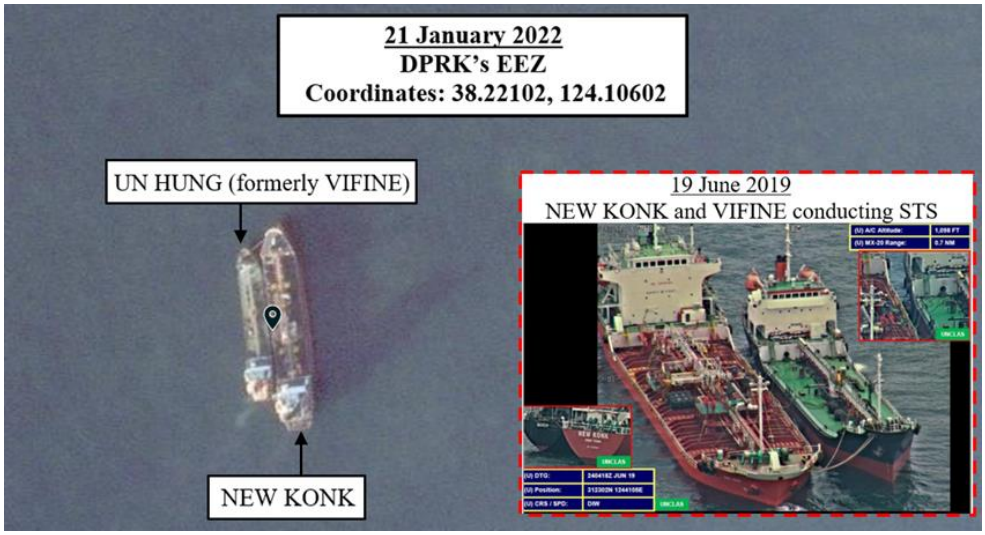
[64] Ce navire a été mis au rebut.
[65] S/2022/132, par. 64 à 73 et annexe 48.
[66] Ibid., annexe 40 et S/2021/777, annexe 33b, sur la liste des navires suspects.

Le *Joffa* et *New Konk* (transmettant en tant que *Lifan*), les 29 et 30 décembre 2021



Source : Windward, annoté par le Groupe d'experts.

Le *New Konk* et l'*Un Hung*, le 21 janvier 2022



Source : imagerie satellite : Planet Labs, annoté par le Groupe d'experts ; photographie en médaillon, État Membre (S/2022/151, par. 32, fig. VI).

Liens de propriété

47. La comparaison de documents provenant de diverses sources a montré que le propriétaire déclaré du *Xiang Shun,* Vantage Point Enterprise Ltd., constitué aux Seychelles, partageait le même numéro de téléphone que You Young Ship, société

établie à Kaohsiung, également gestionnaire du navire et exploitante du *Hong Hu* (numéro OMI : 9125293), un navire-mère sur lequel avait enquêté le Groupe d'experts, qui avait participé à des transferts suspects en cascade faisant intervenir le *Joffa* et l'*Unica*.

48. Le Groupe d'experts a écrit à la Mongolie, aux Palaos, aux Seychelles, à You Young Ship, à Vantage Point Enterprise Ltd. et à Fortune Maker Internation Ltd. au sujet du *Xiang Shun* et du *Hong Hu*. You Young Ship, qui fait office de gestionnaire technique des deux pétroliers, a répondu qu'il n'était pas responsable des opérations commerciales ou des chargements mais « a rappelé aux propriétaires des navires et au capitaine qu'ils devaient éviter de procéder à des échanges commerciaux dans les secteurs visés par des sanctions ». Il a également « demandé au capitaine de s'assurer que le navire de commerce n'appartenait pas à un pays tombant sous le coup de sanctions ». Aucune information n'a été fournie par la société au sujet du propriétaire déclaré, inscrit sous le nom de You Young Ship.

49. Le Groupe d'experts a également noté des décalages dans les informations fournies par la société, recoupées avec celles recueillies de première main[67], et l'analyse qu'il avait effectuée des transferts de navire à navire conduits par le *Hong Hu*.

50. Au sujet des longs intervalles dans les signaux transmis par l'AIS des deux navires, durant les périodes d'enquête, la société a indiqué que pour ce qui était du *Xiang Shun*, « les informations saisies dans l'AIS recouvraient deux mois ». Le rapport de service obtenu par le Groupe d'experts indiquait : « AIS-Pas de fonction d'enregistrement de la position GPS » et « Ne peut enregistrer que pendant une période limitée (sic) en marche/arrêt ». Le Groupe d'experts note que si la référence faite au problème de l'AIS remontait à 2019, le rapport était signé et daté d'août 2021. Concernant le *Hong Hu*, la société a indiqué : « nous avons appris par le capitaine qu'un faible signal pouvait perturber la transmission de l'AIS ou que lui-même pouvait le désactiver en haute mer pour telle ou telle raison ». On trouvera de plus amples détails et des réponses aux annexes 29.1, 29.2, 30.1 et 30.2.

Camouflage physique

51. La République populaire démocratique de Corée et les navires suspects continuent de modifier leur apparence physique et leurs identifiants, presque certainement pour masquer leur identité et entraver les possibilités de collecte d'information par des tiers. La manipulation par les navires de leur profil AIS complique toute surveillance dans les bases de données maritimes. On trouvera à l'annexe 31 l'exemple du pétrolier *Sin Phyong 5* battant pavillon de la République populaire démocratique de Corée (numéro OMI : 8865121), qui opacifie son identité physique pour obtenir des chargements illicites.

Sociétés de facilitation

Cheng Chiun Shipping

52. Le *Sky Venus* (qui navigue actuellement sous le nom de *Jan Victoria*) a été radié du registre de la Sierra Leone le 24 juin 2022. Dès la réception de la demande du Groupe d'experts, les Palaos, qui étaient le registre d'immatriculation du pavillon du *Sky Venus*, en ont radié le navire, après l'ouverture d'une enquête. On trouvera des détails sur les enquêtes menées par le Groupe d'experts sur le *Jan Victoria*, anciennement *Sky Venus*, aux annexes 32.1 à 32.6.

[67] Document confidentiel conservé dans les dossiers du Groupe d'experts.

53. Le Groupe d'experts a également poursuivi ses enquêtes sur le propriétaire du navire, Cheng Chiun Shipping Agency Co., Ltd. (程群船務代理有限公司) et ses associés[68], lequel n'a pas donné suite à ce jour à toutes les demandes d'information. D'après les données et les documents disponibles, le Groupe d'experts a toutefois repéré plusieurs incohérences dans les réponses de Cheng Chiun Shipping. On trouvera une analyse détaillée aux annexes 33.1 à 33.4. Deux exemples sont présentés ci-après.

Représentation incohérente des informations concernant le *Sky Venus*

54. En réponse à la demande du Groupe d'experts, Cheng Chiun Shipping a affirmé avoir établi des « filiales » distinctes pour gérer ses liens « de fournisseur à clients » (voir fig. XXVIIa). Les enquêtes du Groupe d'experts avaient auparavant établi une propriété et des intérêts communs à ces entités prétendument distinctes (à l'intérieur des tirets jaunes) (voir fig. XXVIIb).

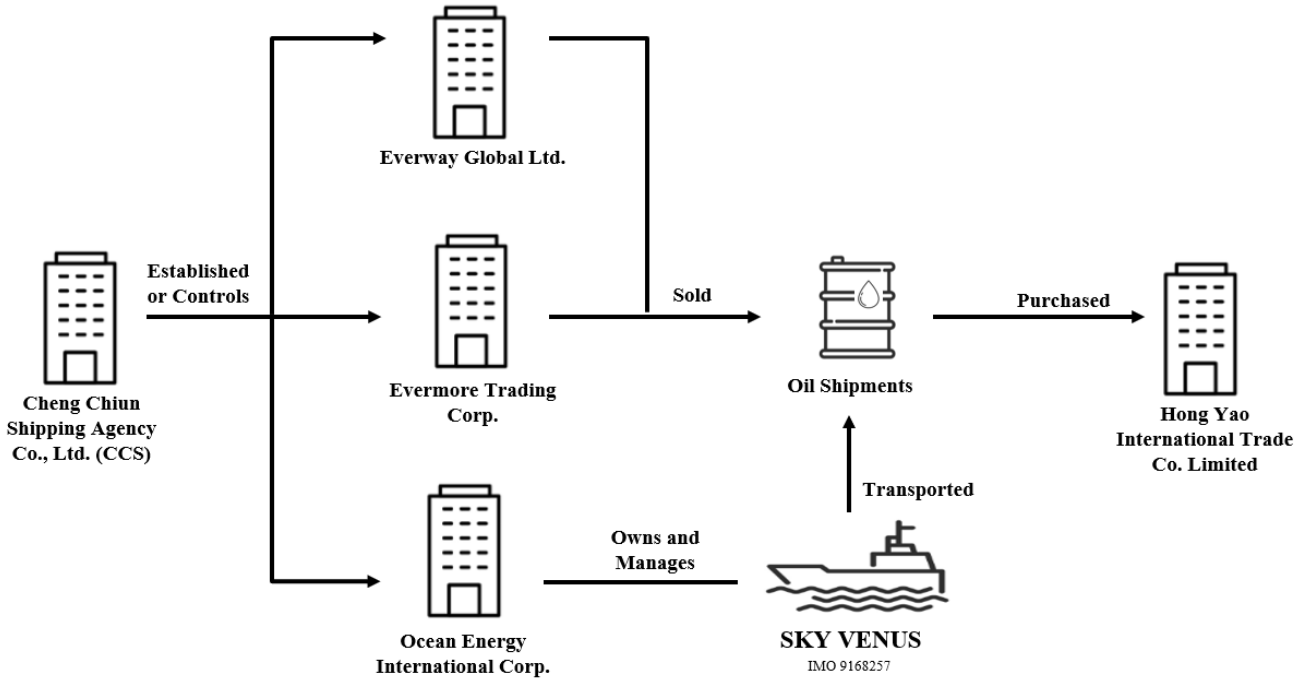
Figure XXVIIa
Exemple de diagramme logique sur les liens de la chaîne d'approvisionnement en pétrole, expliquée par Cheng Chiun Shipping

Source : Cheng Chiun Shipping, annoté par le Groupe d'experts.

[a] D'après les informations du Groupe d'experts, diverses sociétés écrans ont été établies derrière la société de commerce, l'agent maritime et le propriétaire déclaré du navire.

[68] S/2022/132, par. 64 à 73 et annexe 48.

Figure XXVIIb
Les connexions entre les secteurs



Source : le Groupe d'experts.

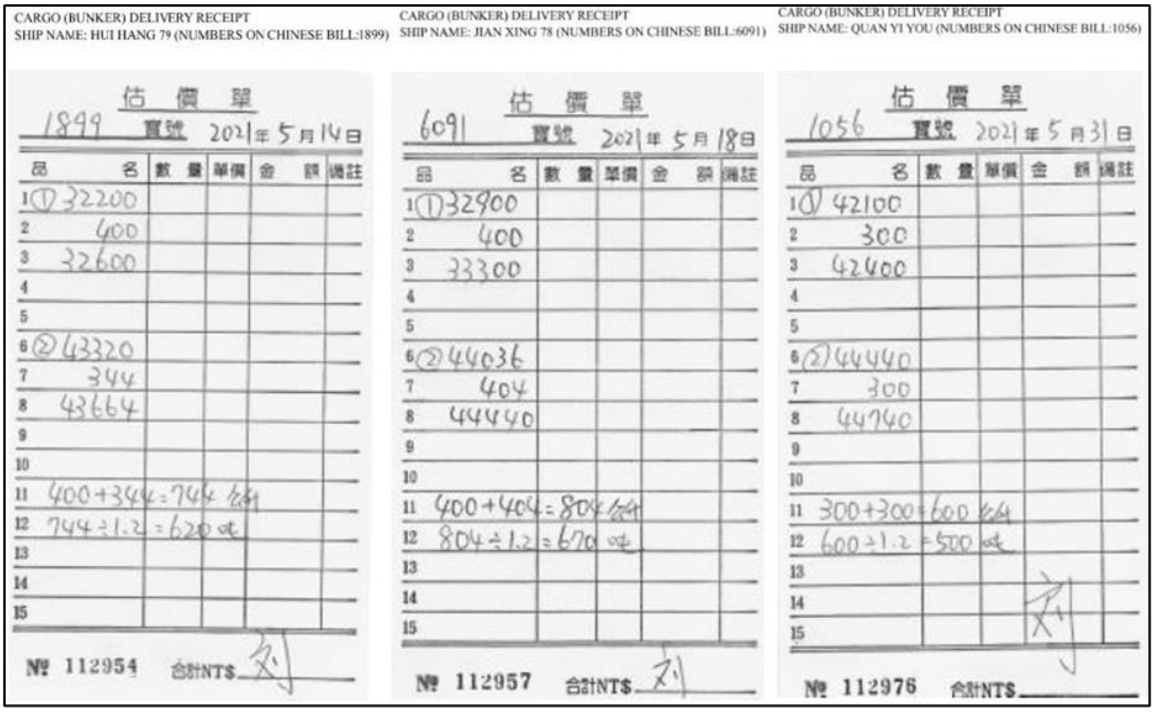
55. Cheng Chiun Shipping n'a pas fourni au départ d'informations d'identification concernant les navires qui auraient reçu du pétrole du *Sky Venus*, déclarant que ces navires receveurs obscurcissaient toujours les identifiants physiques. Le Groupe d'experts a toutefois obtenu des informations d'une partie tierce, selon lesquelles Cheng Chiun Shipping disposait en fait d'identifiants relatifs aux trois navires qui auraient chargé du pétrole à partir du *Sky Venus*, qu'il ne lui a pas transmises. Un État Membre a signalé que des navires plus petits servaient à transférer des cargaisons de pétrole vers des pétroliers de la République populaire démocratique de Corée. Cheng Chiun Shipping a confirmé par la suite les identités des trois navires receveurs, que le Groupe d'experts a communiquées dans la lettre qu'il a adressée par la suite (voir tableau 4 et fig. XXVIII).

Tableau 4
Informations enregistrées par les navires receveurs[a]

Navire-mère	*Date de déchargement au navire receveur*	*Navire receveur (transfert de navire à navire)*	*Récépissé de livraison de la cargaison (soute)*
Sky Venus (numéro OMI : 9168257)	14 mai 2021	*Hui Hang 97*	620 tonnes transférées
	17 mai 2021	*Jian Xing 78*	670 tonnes transférées
	30 mai 2021	*Quan Yi You 02*[69]	500 tonnes transférées

[a] Information selon Cheng Chiun Shipping ; tableau établi par le Groupe d'experts.

Figure XXVIII
Récépissés de livraison de la cargaison (soute)


CARGO (BUNKER) DELIVERY RECEIPT
SHIP NAME: HUI HANG 79 (NUMBERS ON CHINESE BILL:1899)
估價單
1899 寶號 2021年5月14日
品名 數量 單價 金額 備註
1 ① 32200
2 400
3 32600
6 ② 43320
7 344
8 43664
11 400+344=744 kg
12 744÷1.2=620 ㎏
№ 112954 合計NT$

CARGO (BUNKER) DELIVERY RECEIPT
SHIP NAME: JIAN XING 78 (NUMBERS ON CHINESE BILL:6091)
估價單
6091 寶號 2021年5月18日
品名 數量 單價 金額 備註
1 ① 32900
2 400
3 33300
6 ② 44036
7 404
8 44440
11 400+404=804 kg
12 804÷1.2=670 ㎏
№ 112957 合計NT$

CARGO (BUNKER) DELIVERY RECEIPT
SHIP NAME: QUAN YI YOU (NUMBERS ON CHINESE BILL:1056)
估價單
1056 寶號 2021年5月31日
品名 數量 單價 金額 備註
1 ① 42100
2 300
3 42400
6 ② 44440
7 300
8 44740
11 300+300=600 kg
12 600÷1.2=500 ㎏
№ 112976 合計NT$

Source : le Groupe d'experts.

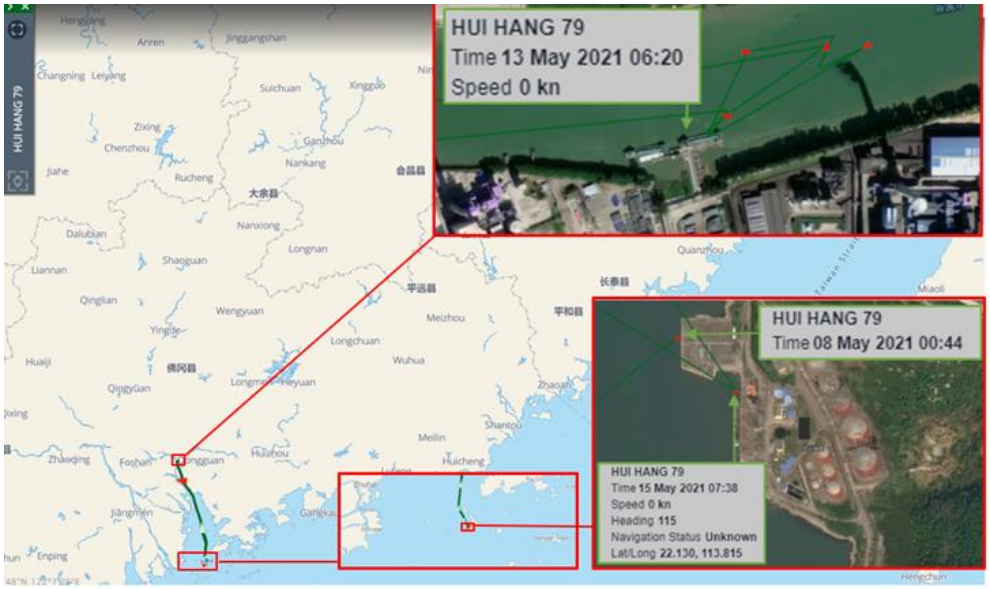
56. Le Groupe d'experts note que les récépissés de livraison de la soute comportent très peu d'informations, comparés à d'autres récépissés du même type. Il a cherché, en vain, à joindre M. Liu et la société Hong Yao International Trading Co., Limited (弘耀國際貿易有限公司) établie à Hong Kong, l'acheteur et le particulier qui, d'après Cheng Chiun Shipping, auraient cité les navires receveurs. Cheng Chiun Shipping n'a pas donné suite aux demandes faites par le Groupe d'experts concernant d'autres coordonnées qui permettraient de joindre M. Liu.

[69] Alors que sur le récépissé de la cargaison, le nom du petit navire destinataire était cité comme étant le *Quan Yi You*, la lettre de Cheng Chiun Shipping indiquait que le nom complet du navire était le *Quan Yi You 02*.

Délais de livraison inconstants, concernant les navires receveurs

57. Les informations de suivi de l'AIS montrent que les petits navires receveurs, répertoriés comme des cabotiers chinois, d'après les données de surveillance maritime, ne se trouvaient pas à proximité du *Sky Venus* aux dates des transferts entre navires, fournies par Cheng Chiun Shipping, et n'étaient donc pas à même d'avoir procédé auxdits transferts (voir fig. XXIX à XXXI)[70].

Figure XXIX
Le *Hui Hang 79* opérant dans les eaux intérieures, du 8 au 15 mai 2021. Date déclarée du transfert de navire à navire avec le *Sky Venus* : le 14 mai 2021.

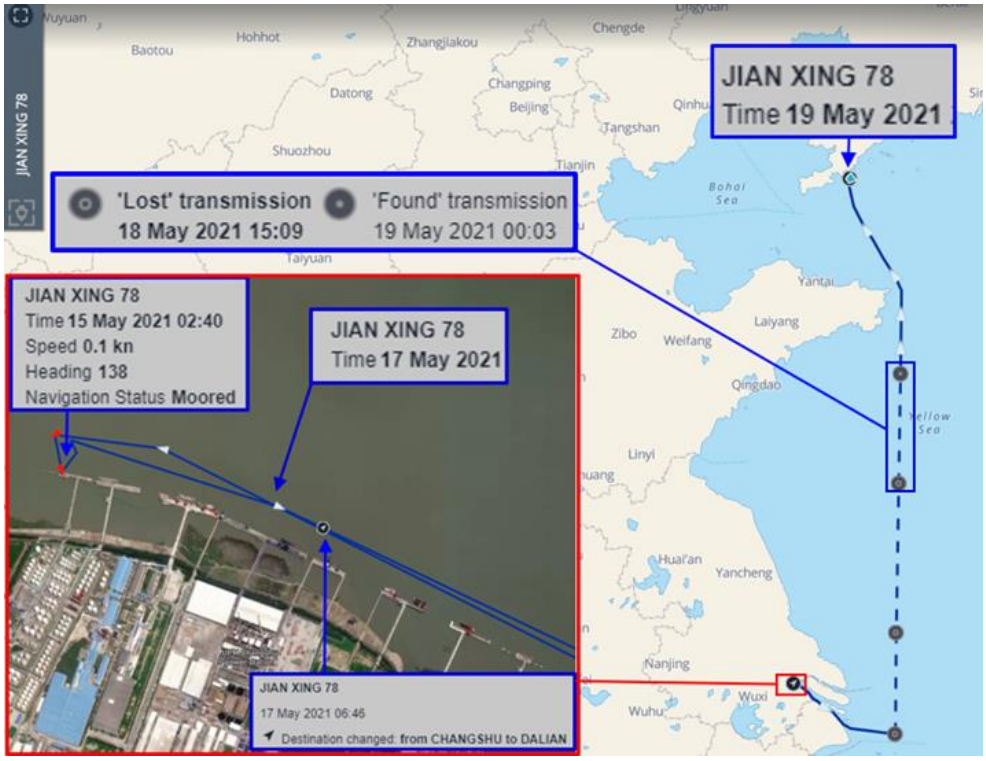


Source : Windward, annoté par le Groupe d'experts ; image en médaillon (fournie à titre indicatif).

[70] Selon le propriétaire, la zone de commerce du *Sky Venus* se confinait aux coordonnées fournies (23-26˚N, 119-121˚E). Le *Sky Venus* aurait également enregistré une baisse de l'AIS du 9 au 19 mai 2022.

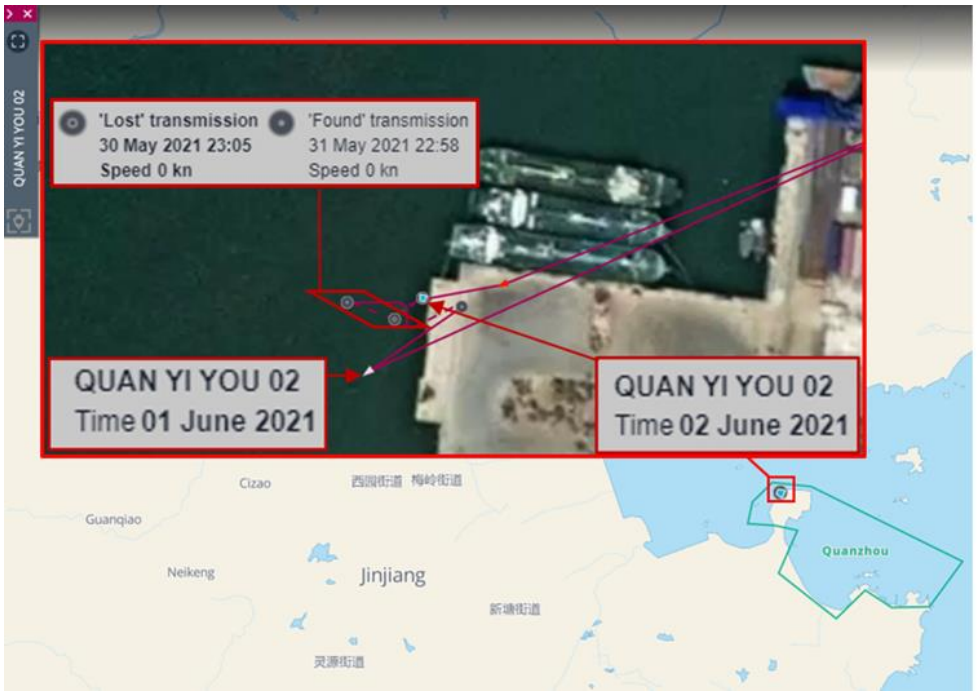
Figure XXX

Le *Jian Xing 78* dans la zone portuaire de Changshu, du 15 au 19 mai 2021. Date déclarée du transfert de navire à navire avec le *Sky Venus :* le 17 mai 2021



Source : Windward, annoté par le Groupe d'experts ; image en médaillon (fournie à titre indicatif).

Figure XXXI
Le *Quan Yi You 02* dans la zone portuaire de Quanzhou, du 30 mai au 2 juin 2021. Date déclarée du transfert de navire à navire avec le *Sky Venus* : le 31 mai 2021.



Source : Windward, annoté par le Groupe d'experts ; image en médaillon (fournie à titre indicatif).

58. Cheng Chiun Shipping a continué de nier toute implication dans des activités de contournement des sanctions. Le propriétaire a indiqué : « Mes échanges avaient lieu… dans le détroit de Taiwan. Mon partenaire commercial est M. Liu, un ressortissant chinois de la Hong Yao Company établie à Hong Kong. Les navires receveurs de pétrole étaient des bateaux de pêche ou de navigation intérieure. Aucun navire receveur inscrit sur la liste de personnes à surveiller (ou sur la liste relative aux sanctions) ne se trouvait parmi eux. Je n'ai violé aucune loi ». Cheng Chiun Shipping n'a pas précisé son rôle, dans le cadre des transbordements de cargaisons de pétrole en cascade, reconstitués par le Groupe d'experts.

59. Après avoir revu les informations, les données et les documents pertinents, dont ceux présentés par la société, le Groupe d'experts estime que Cheng Chiun Shipping n'a pas pu ou voulu corroborer bon nombre de ses affirmations. Elle n'a pas pris de mesures de diligence raisonnable pour vérifier les identités de ses clients et veiller à ce que les livraisons de cargaisons de pétrole ne soient pas destinées à la République populaire démocratique de Corée. Son laxisme, pour ce qui est d'accepter des navires receveurs anonymes, a ainsi facilité des activités illicites, dont le contournement des sanctions.

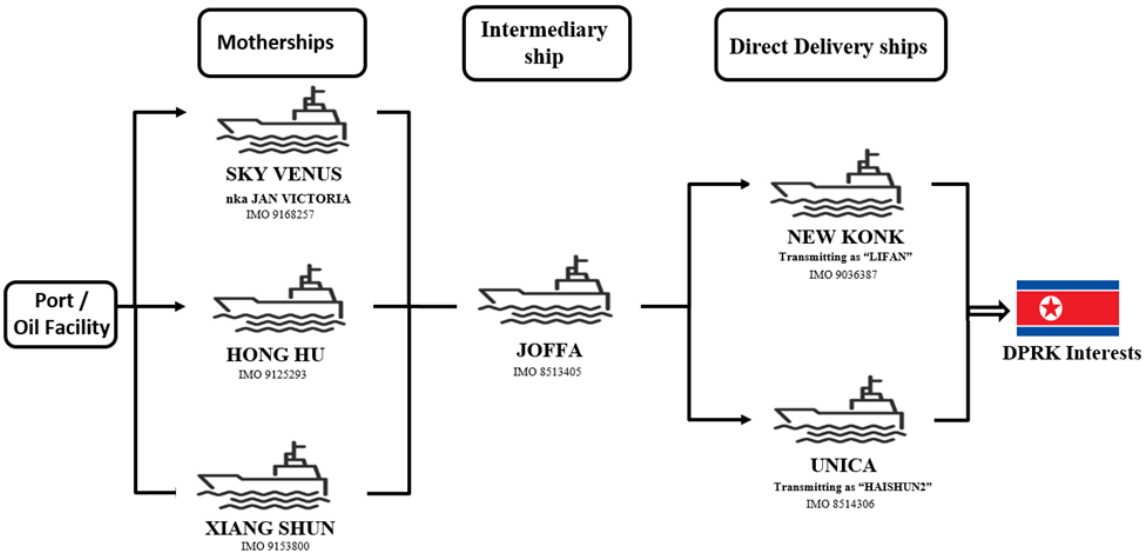
60. Un État Membre a estimé que Cheng Chiun Shipping avait maintes fois facilité le transfert de « centaines de milliers de barils de pétrole raffiné à la [République populaire démocratique de Corée] par son réseau de sociétés écrans ». Ces transferts à la République populaire démocratique de Corée, effectués au moyen de transbordements en cascade de navire à navire, étaient « menés en connaissance de cause » et les membres du personnel de la société « savaient que les transferts de produits pétroliers étaient destinés à la [République populaire démocratique de Corée] ».

61. Un État Membre estime que Hong Yao International a joué un rôle dans la coordination des transferts de cargaison de pétrole entre Cheng Chiun Shipping, ses bateaux receveurs plus petits et des navires « de livraison directe ». Le Groupe d'experts continue d'enquêter.

Nuwanni et les navires suspects associés

62. Les enquêtes du Groupe d'experts ont révélé que le *Joffa*, avant d'être mis au rebut, faisait office de navire intermédiaire, chargeant du pétrole à partir des navires-mères *Sky Venus* (actuellement le *Jan Victoria*), le *Xiang Shun* et le *Hong Hu*, au cours d'une chaîne de transferts de navire à navire (voir fig. XXXII). Le *Joffa* a ensuite entrepris de retrouver les pétroliers de « livraison directe » *New Konk* (en tant que *Lifan*) et l'*Unica* (en tant que *Haiphun 2*) en 2021 et 2022 (voir annexe 34). Avant ces transferts, le *Joffa* avait visité des chantiers navals le long du fleuve Baima, dont Fujian Yihe Shipbuilding Industry Co. Ltd. (福建省易和船舶重工有限责任公司), ayant fait l'objet d'une enquête en association avec des pétroliers de service qui menaient des activités passibles de sanctions[71]. Après s'être attardé sur la Baima d'avril à décembre 2021, le *Joffa* a retrouvé le *Sky Venus* autour du 3 décembre 2021. Comme navire intermédiaire commun, il a aidé au transfert de cargaisons de pétrole illicites de navires-mères aux navires de « livraison directe » connus *New Konk* et *Unica*, ce qui laisse fortement entendre une coordination parmi ces transferts.

Figure XXXII
Exemple de navires ayant participé aux transferts de pétrole en cascade



Source : Le Groupe d'experts.

63. Le *Joffa* est un navire qui intéresse[72] depuis un moment le Groupe d'experts, dont les enquêtes sur les sociétés propriétaires et gestionnaires du navire ont montré que, comme d'autres navires suspects, celle du *Joffa,* la Joffa Trade International Co. Ltd., immatriculée à Hong Kong, avait également enregistré une adresse de secrétariat

[71] S/2022/132, par. 47 à 53 et 60 à 63 et annexes 35 et 39.
[72] Ibid., annexe 40 et S/2021/777, annexe 33b, sur la liste des navires suspects.

général[73] fournissant des services en la matière à d'autres entités faisant l'objet d'enquêtes, dont le propriétaire déclaré du *New Konk*.

64. Le *Joffa* a cité en 2019 Nuwanni International Ship Management Co. Ltd. (紐縵日國際船舶管理有限公司) enregistré à Hong-Kong comme son ancien directeur technique. Le Groupe d'experts avait indiqué précédemment que Nuwanni avait joué un rôle similaire concernant d'autres navires de « livraison directe »[74]. Elle aurait été dissoute en juillet 2019[75], mais les enquêtes du Groupe d'experts indiquent que la personne citée comme le seul directeur technique et actionnaire de Nuwanni était probablement un prête-nom[76]. Cela cadre avec d'autres enquêtes du Groupe d'experts qui ont montré que les directeurs et actionnaires enregistrés comme propriétaires du navire, cités sur les registres du commerce, n'en étaient pas les vrais propriétaires.

65. Le Groupe d'experts a écrit à l'État du pavillon du *Joffa* (la Sierra Leone), à l'Union Bureau of Shipping établi à Dalian[77] (qui avait assuré les services d'enregistrement pour Joffa Trade et Nuwanni) et à la Chine au sujet du ressortissant chinois cité comme directeur de Joffa Trade sur les registres du commerce de Hong Kong. La Chine a répondu que Joffa Trade ne participait pas à des activités liées à la République populaire démocratique de Corée, que le *Joffa* n'avait pas d'escales enregistrées sur son sol et qu'elle ne disposait pas d'information sur un commerce de produits pétroliers raffinés illicites qu'il mènerait de navire à navire. On trouvera les réponses intégrales de la Chine, dans chaque cas, dans les annexes 34 à 41. L'Union Bureau of Shipping et la Sierra Leone n'ont toujours pas répondu.

66. Le Groupe d'experts poursuit ses enquêtes sur les transferts en cascade de cargaisons de pétrole, destinés à la République populaire démocratique de Corée.

Navires retenus, dépavillonnés ou acquis

Navire retenu

67. Le Groupe d'experts a obtenu des informations de l'État Membre qui avait saisi le *Billions No. 18* (numéro OMI : 9191773), visé par les sanctions, qui naviguait à l'époque sous le nom de *Shun Fa,* battant pavillon mongol[78]. Des preuves photographiques et documentaires de l'identité réelle du navire ont été fournies, dont des échantillons, montrés à la figure XXXIII.

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[73] Salle 502C, 5e étage, immeuble commercial Ho King, 2-16 rue Fa Yuen, Mong Kok, Kowloon, Hong Kong.

[74] Nuwanni servait de directeur technique au *New Konk* et de l'*Unica*. Voir également S/2022/132, annexe 38, citant le réseau d'entités liées, associées aux pétroliers de « livraison directe ».

[75] Registre du commerce de Hong Kong.

[76] D'après des informations postées dans des médias sociaux, une personne portant le même nom et détenant la même nationalité s'est liée d'amitié avec des membres de l'équipage qui ont travaillé à bord de l'un des navires-mères susmentionnés. Cette information figure dans les dossiers conservés par le Groupe d'experts.

[77] L'Union Bureau of Shipping a fourni des services à bon nombre de navires ayant mené des activités visées par les sanctions dont le *Gold Star* (numéro OMI : 9146247) et aux pétroliers de « livraison directe » suivants : *Hokong, Unica, Subblic, Vifine* (actuellement *Un Hung*) et *New Konk* (voir S/2021/777, annexe 35a.

[78] S/2021/777, par. 35 à 41 et annexe 29.

Figure XXXIII
Plaque du numéro OMI fabriqué de toutes pièces et gilets de sauvetage[79] à bord du *Shun Fa*

Source : un État Membre

68. Les premières enquêtes du Groupe d'experts sur le propriétaire du *Billions No. 18* ont révélé une chaîne de transferts, à la suite de sa désignation, le 28 décembre 2017, le dernier propriétaire étant un certain M. Wang, travaillant pour Joy Wealthy Trading Limited. Selon l'État Membre qui a opéré la saisie, après l'établissement d'un premier contact avec M. Wang, ce dernier a rompu toute communication. Comme il se trouvait dans une autre juridiction, le capitaine du navire (qui détenait une autre nationalité) a dû agir comme mandataire. À la demande des créditeurs, le navire sera mis aux enchères et son équipage rapatrié, conformément à la procédure juridique interne.

[79] Les gilets de sauvetage portaient le nom *Golden Yuki*, nom originel du *Billions No. 18*.

Navire destiné au transport de marchandises, au pavillon indéterminé, à la porte d'écluse de Nampo

69. Un navire chargé de marchandises, *l'An Hai 6* (numéro OMI : 8355786) se trouvait à l'extérieur de la porte d'écluse de Nampo à la mi-juin 2022. Le Groupe d'experts a correspondu avec les États Membres et les homologues concernés. Le registre d'immatriculation du pavillon de Nioué a confirmé que le navire devait effectuer un dernier voyage et être livré, préalablement à sa propre vente, avant d'être radié des registres le 23 mai 2022, à l'issue de la notification de son arrivée à destination d'un pays tiers, après avoir effectué dans l'intervalle deux escales requises, notamment pour la relève de l'équipage.

70. Selon un État Membre, *l'An Hai 6* se trouvait dans le secteur de son port d'ancrage en vue d'une relève de l'équipage, entre le 16 et le 18 mai 2022, la moitié de l'équipage ayant débarqué. Aucune cargaison n'a été chargée ou déchargée.

71. Le Groupe d'experts note que la surveillance de l'AIS indique que le navire n'est pas arrivé dans le pays tiers où il devait se rendre.

72. Dans son précédent rapport, le Groupe d'experts avait cité d'autres navires, que la République populaire démocratique de Corée avait obtenus, qui avaient été transférés également au moyen de voyages à livraison unique[80], exploitant probablement le peu de certifications à fournir. Les enquêtes se poursuivent.

Navires acquis par la République populaire démocratique de Corée

73. La République populaire démocratique de Corée a continué d'acquérir des navires de charge et des pétroliers, durant la période de la COVID-19, au moyen d'un procédé de transition, en violation du paragraphe 14 de la résolution 2397 (2017) du Conseil de sécurité. Les navires cités dans le tableau 5 ont été officiellement ajoutés à sa flotte depuis 2020.

Tableau 5
Navires en transit officiellement enregistrés, battant pavillon de la République populaire démocratique de Corée, 2020-2022[a] (voir également annexe 35)

	Numéro OMI	Nom du navire	Type	Tonnage de port en lourd	Précédemment cité dans les rapports du Groupe d'experts ?
			Année 2022		
1	9125308	*Chol Bong San* 1 (ex-*Ocean Sky*)	Pétrolier	5 807	Oui (S/2021/777)
			Année 2021		
2	8356120	*Tae Dong Mun 2* (ex-*Jiang Peng 337*)	Navire de charge	2 790	Non
			Année 2020		
3	8865121	*Sin Phyong 5* (ex-*Woo Jeong*)	Pétrolier	3 295	Oui (S/2022/132, S/2021/777)
4	9016430	*Su Ryong San* (ex-*CJK Osaka*)	Navire de charge	4 519	Oui (S/2022/132)

[80] Le *Pu Zhou* (numéro OMI : 8605727), le *Rui Ki Star* (numéro OMI : 9010058) et l'*Ocean Sky* (numéro OMI : 9125308).

	Numéro OMI	Nom du navire	Type	Tonnage de port en lourd	Précédemment cité dans les rapports du Groupe d'experts ?
5	8602763	*Tae Phyong 2* (ex-*Miing Zhou 6*)	Navire de charge	26 013	Oui (S/2022/132, S/2021/777, S/2021/211)
6	8651178	*Mu Pho* (ex-*Double Lucky*)	Navire de charge	2 980	Non
7	9045962	*Un Hung* (ex-*Vifine*)	Pétrolier	1 978	Oui (S/2022/132, S/2021/777, S/2020/151)
8	9340257	*Kang Hung* (ex-*Sun Miracle*)	Navire de charge	3 800	Oui (S/2022/132)
9	9340271	*Ra Son 6* (ex-*Sun Hunchun*)	Navire de charge	3 800	Oui (S/2021/777)
10	7636638	*Xin Hai* (ex-*Wol Bong San*)	Pétrolier	4 969	Oui (S/2021/777, S/2021/211)
11	9011399	*Tae Dong Mun* (ex-*Pole Star 1*)	Navire de charge	5 137	Oui (S/2021/211)
12	9162318	*To Myong* (ex-*Ri Hong*)	Navire de charge	8 773	Oui (S/2022/132, S/2021/211, S/2020/840)
13	9018751	*Tae Phyong* (ex-*Great Wenshan*)	Navire de charge	26 369	Oui (S/2021/211, S/2020/840)
14	9020003	*Puk Dae Bong* (ex-*Hua Fu*)	Navire de charge	10 030	Oui (S/2019/171 et S/2019/171/Corr.1)

Source : le Groupe d'experts. Informations sur les navires obtenues des dossiers de S&P Global et de l'OIM[81].

[a] Bon nombre de ces navires sur lesquels le Groupe d'experts a enquêté auraient vogué sous d'anciens pavillons, alors qu'ils menaient des activités les rendant passibles de sanctions. On trouvera dans le tableau les dates officielles auxquelles les navires sont (souvent rétroactivement) passés sous pavillon de la République populaire démocratique de Corée.

Le Heng Xing

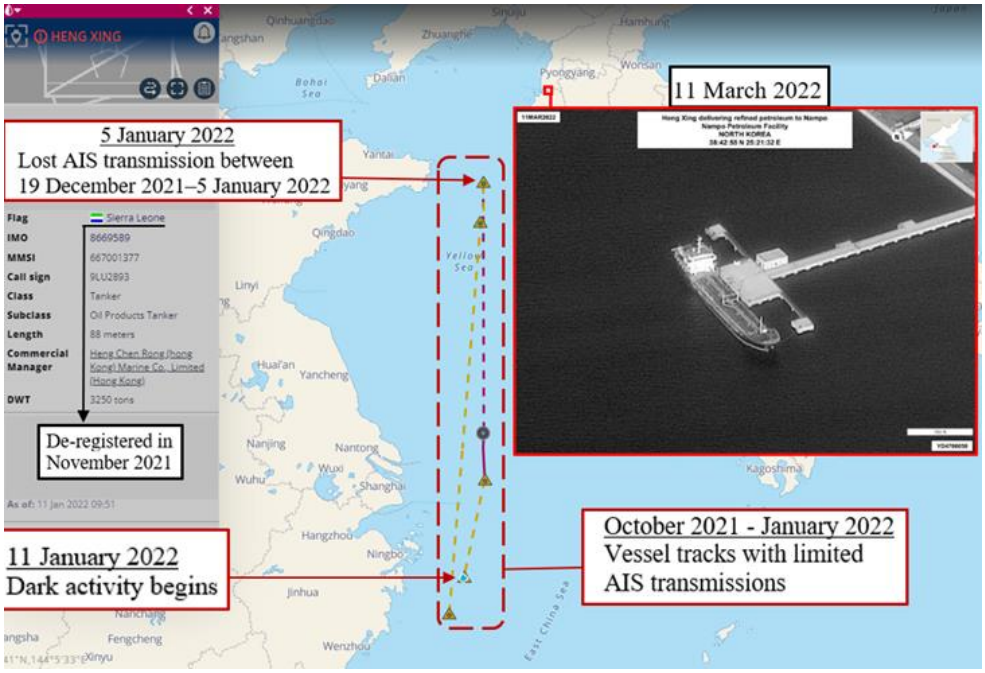
74. L'imagerie satellite a dévoilé le *Heng Xing* (numéro OMI : 8669589), un pétrolier précédemment enregistré en Sierra Leone sur lequel avait enquêté le Groupe d'experts[82], au nouveau terminal pétrolier de Nampo en mars 2022 (voir fig. XXXIV). Tout en étant radié du registre d'immatriculation du pavillon de la Sierra Leone en novembre 2021, le *Heng Xing* continuait de naviguer dans les eaux internationales. Le Groupe d'experts estime qu'il a été probablement transféré à la République populaire démocratique de Corée[83]. Avant son arrivée à Nampo, il a été observé au deuxième semestre de 2021 dans un chantier naval chinois suspect, où il est resté pendant au moins trois mois. Le Groupe d'experts a continué d'enquêter sur Heng Chen Rong (Hong Kong) Marine Co. Limited (恒晨榮(香港)海運有限公司), le propriétaire déclaré et gestionnaire, qui partage le même secrétariat général que d'autres navires suspects.

[81] Consulté en mai 2022.

[82] S/2019/171, note de bas de page 12 et annexe 6.

[83] Actuellement cité comme étant à pavillon indéterminé, selon les dossiers de l'OIM. Le Groupe d'experts note qu'aucun navire battant pavillon étranger n'a accosté dans des ports de la République populaire démocratique de Corée, du fait des restrictions liées à la COVID-19.

Figure XXXIV
Le *Heng Xing* au port de Nampo, le 11 mars 2022



Source : Windward, annoté par le Groupe d'experts ; image en médaillon, un État Membre.

75. Le Groupe d'experts a écrit à la société Heng Cheng Rong, à la Sierra Leone et à la Chine au sujet du ressortissant chinois cité comme directeur de Heng Chen Rong dans le registre de commerce de Hong Kong et dans les renseignements relatifs aux bénéficiaires effectifs de la société. La Sierra Leone a communiqué les documents demandés. La Chine a répondu que Heng Chen Rong ne participait pas à des activités liées à la République populaire démocratique de Corée, que le *Heng Xing* n'avait pas d'escales enregistrées sur son territoire et qu'elle ne disposait pas d'informations sur le commerce illicite de produits pétroliers raffinés transférés de navire à navire. Heng Chen Rong n'a pas encore répondu. Voir annexes 36.1 et 36.2.

Exportations maritimes de la République populaire démocratique de Corée

Exportations de charbon par les navires de la République populaire démocratique de Corée

76. Le Groupe d'experts ne dispose pas de données permettant de quantifier le volume de charbon exporté par la République populaire démocratique de Corée en violation du paragraphe 8 de la résolution 2371 (2017) au cours de la période considérée. Des navires de charge de ce pays ont néanmoins été observés dans des bases de données maritimes en train de continuer d'émettre sur des identifiants frauduleux, leurs transmissions étant très faibles, voire inexistantes, dans des eaux connues pour être des lieux fréquents d'exportation de charbon illicite en provenance de la République populaire démocratique de Corée.

77. Selon les enquêtes du Groupe d'experts, l'information communiquée par un État Membre et les renseignements obtenus à partir de sources en accès libre, des navires de la République populaire démocratique de Corée ont continué de décharger du charbon dans les eaux territoriales chinoises durant la période considérée. Tandis que le Groupe d'experts avait indiqué précédemment que Ningbo-Zhoushan était une zone fréquentée par des navires de la République populaire démocratique de Corée pour

décharger du charbon au moyen de transferts de bateau à bateau, des navires de ce pays ont également déchargé leur charbon dans d'autres eaux territoriales chinoises, dont la zone d'ancrage de Huanghua, Bo Hai et Lianyungang[84].

Ningbo-Zhoushan

78. Le *Hoe Ryong* battant pavillon de la République populaire démocratique de Corée (numéro OMI : 9041552) et le *Thae Song 8* (numéro OMI : 9003653), sur lesquels le Groupe d'experts avait précédemment enquêté[85], ont déchargé leur cargaison de charbon au moyen de transferts de navire à navire, dans les eaux de Ningbo-Zhoushan. Le *Hoe Ryong* venant de la République populaire démocratique de Corée s'y est rendu le 3 février, alors que le *Thae Song 8* y a été enregistré au 21 février. Après avoir déchargé leur cargaison de charbon, les deux navires ont mouillé au large de Shidao en mars. Tandis que le *Hoe Ryong* a été aperçu à Nampo, le *Thae Song 8* a accosté au port de Yantai, le 10 avril, afin de charger une cargaison en sac avant de retourner à Nampo (voir fig. XXXV et XXXVI). Le *Thae Song 8* a fait au moins un nouveau voyage, pour décharger du charbon en janvier 2022 (voir annexe 37).

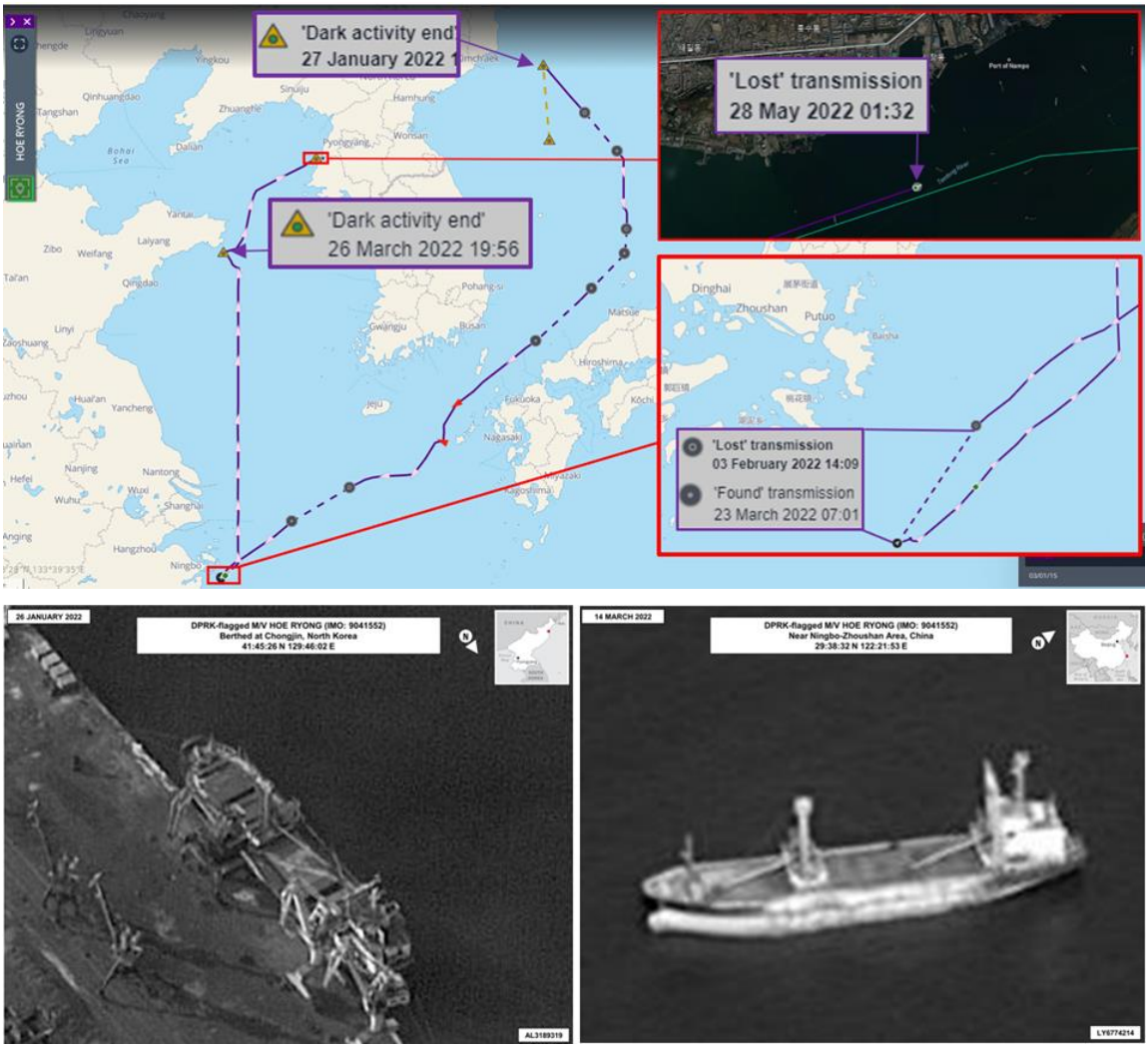
[84] Deux experts estiment que le présent paragraphe doit être confirmé par d'autres éléments.

[85] Pour le *Hoe Ryong*, voir S/2022/132, annexe 55. Pour le *Thae Song 8*, voir S/2021/777, annexe 46.

Figure XXXV

Le *Hoe Ryo*ng battant pavillon de la République populaire démocratique de Corée, exportant du charbon dans les eaux du Ningbo-Zhoushan, mars 2022

Chongjin-Ningbo-Zhoushan-Shidao-Nampo



Source : Windward, annoté par le Groupe d'experts ; imagerie satellite : Planet Labs et un État Membre.

Figure XXXVI
Le *Thae Song 8* battant pavillon de la République populaire démocratique de Corée exportant du charbon dans les eaux du Ningbo-Zhoushan et recueillant une cargaison en sac à Yantai, février-avril 2022

Ningbo-Zhoushan-Shidao-Yantai

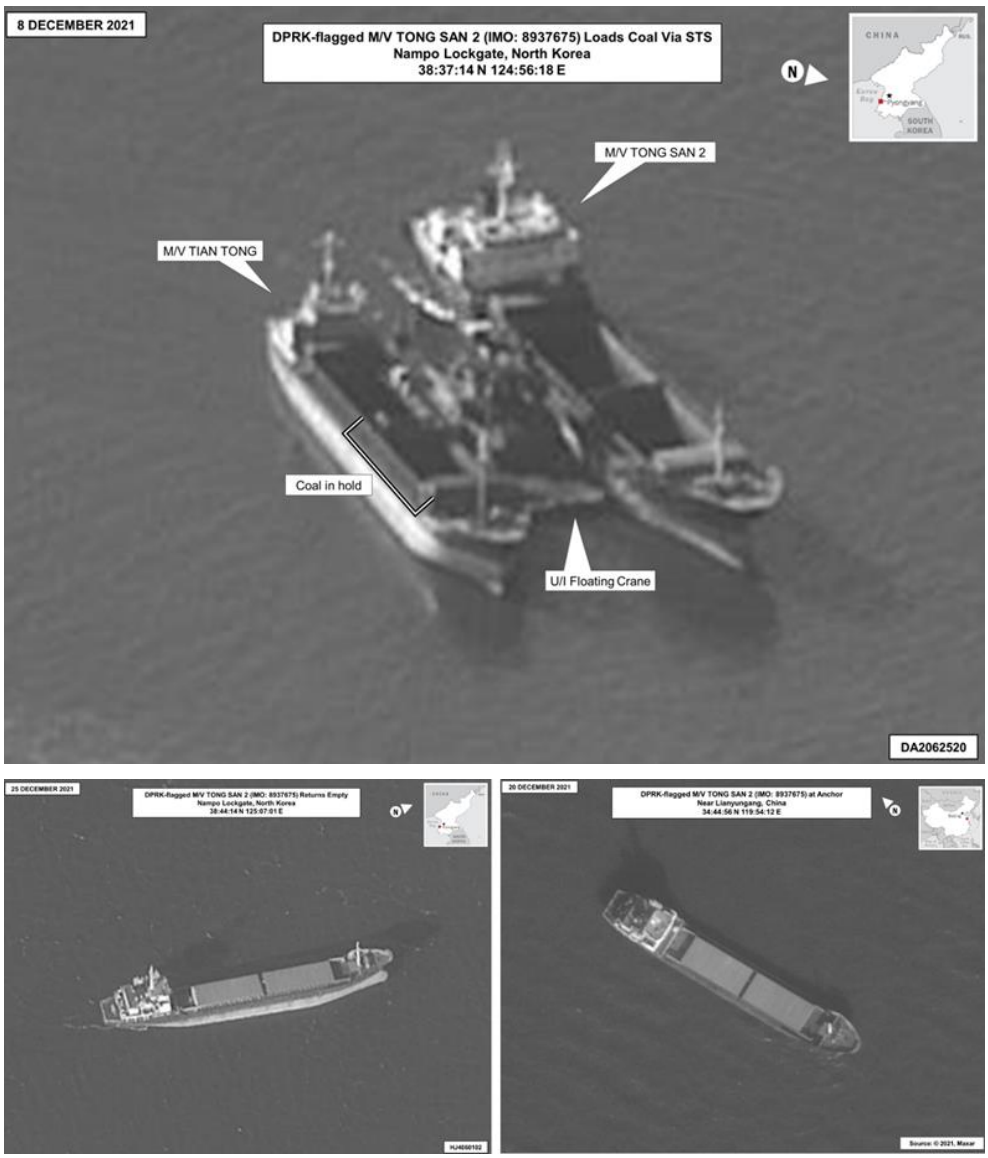
Source : Windward, annoté par le Groupe d'experts ; imagerie satellite : Planet Labs et un État Membre.

Lianyungang

79. Selon un État Membre, le *Tong San 2* battant pavillon de la République populaire démocratique de Corée (numéro OMI : 8937675) et le *Ryong Rim* (numéro OMI : 8018912) ont déchargé du charbon en provenance de la République populaire démocratique de Corée près de Lianyungang en décembre 2021 et de janvier à février 2022, respectivement. En 2020, le Groupe d'experts a signalé la présence de bon nombre de navires de la République populaire démocratique de Corée qui déchargeaient du charbon au moyen de transferts de navire à navire, avec des bateaux

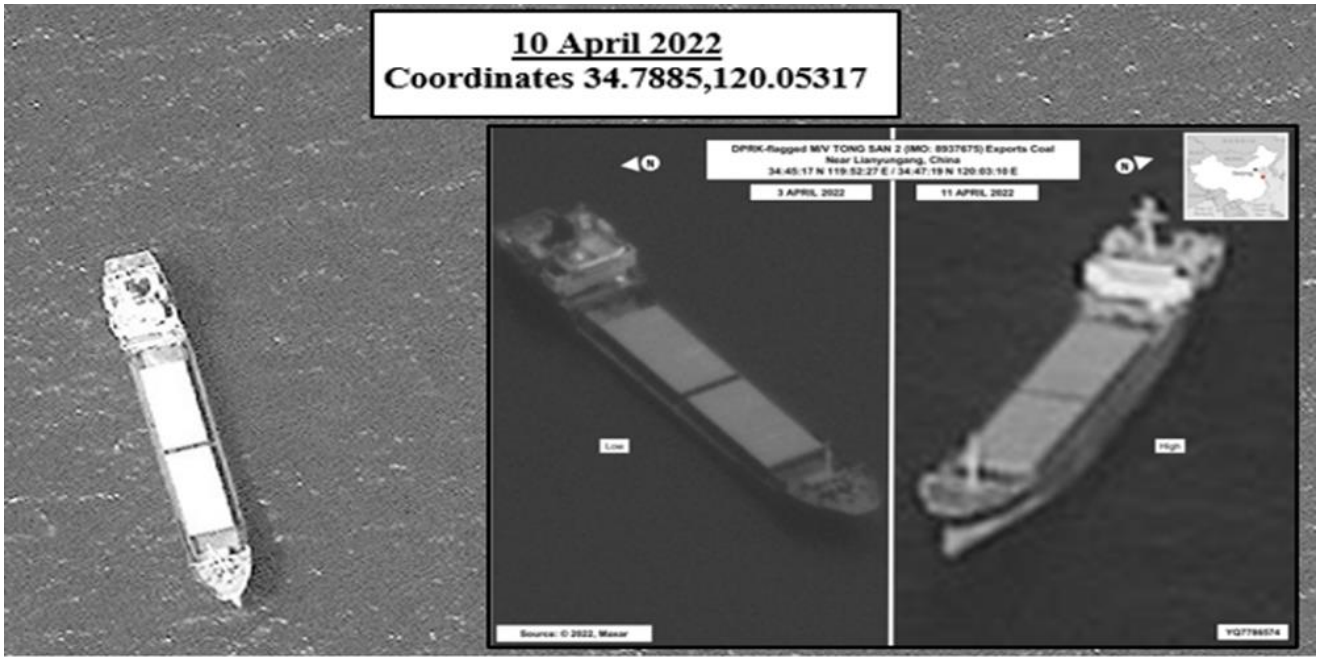
nationaux[86]. Le *Tong San 2* avait regagné les eaux de Lianyungang au 10 avril 2022, exportant du charbon (voir fig. XXXVIIa et XXXVIIb). Voir également annexe 38 pour le scénarimage du *Ryong Rim*.

Figure XXXVIIa
Exportations de charbon du *Tong San 2* battant pavillon de la République populaire démocratique de Corée à Lianyungang, du 8 au 25 décembre 2021



[86] S/2020/151, par. 67 à 70

Figure XXXVIIb
Le *Tong San 2*, avril 2022



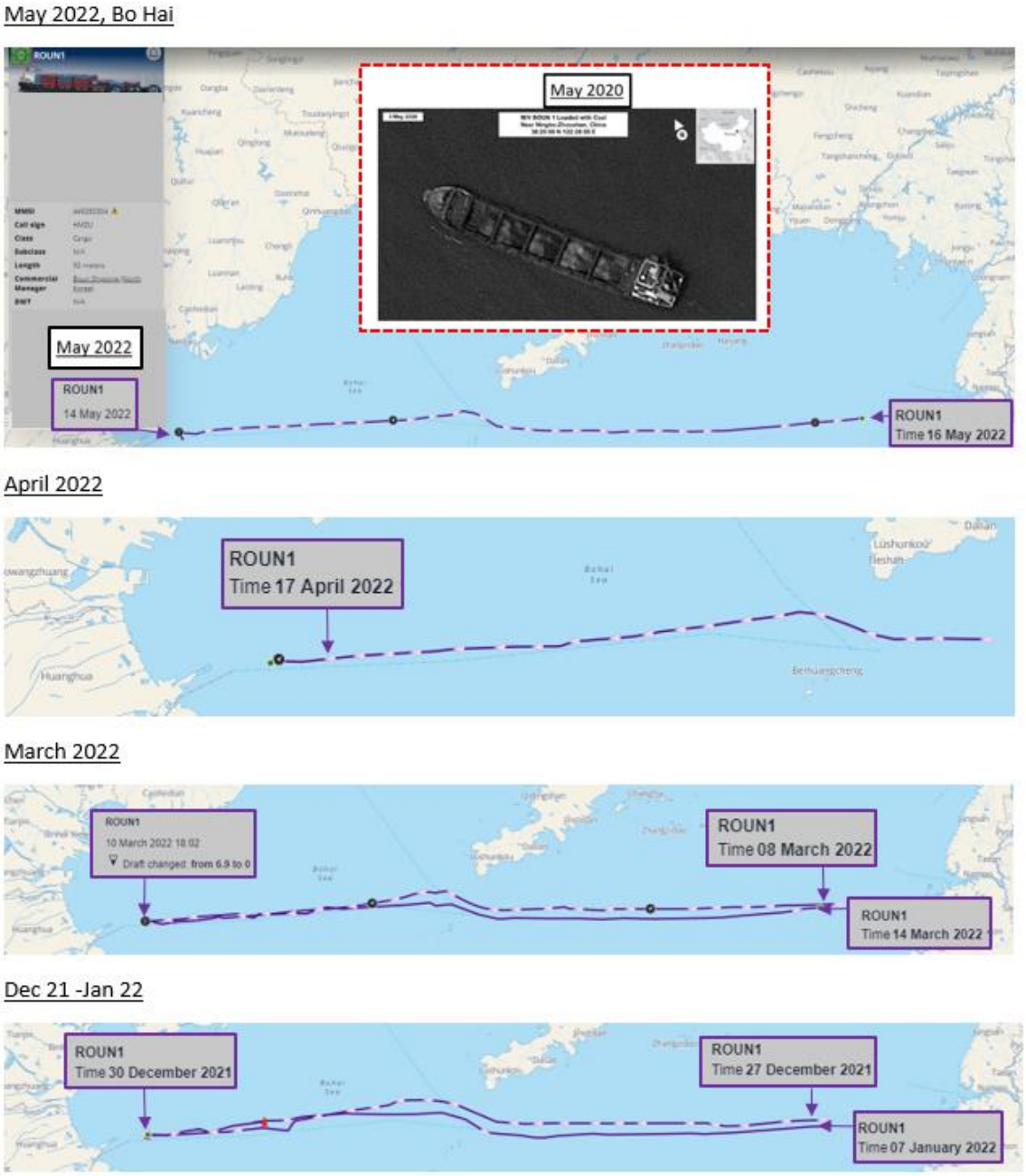
Source : Maxar Technologies, annoté par le Groupe d'experts ; image en médaillon, État Membre.

Bo Hai

80. De décembre 2021 à juin 2022, le *Boun 1* battant pavillon de la République populaire démocratique de Corée (numéro OMI : 9045986)[87] a vogué maintes fois entre Nampo et les eaux au large du port de Huanghua à Bo Hai (voir fig. XXXVIII). Il avait exporté du charbon en provenance de la République populaire démocratique de Corée dans les eaux territoriales chinoises en mai 2020. Le 5 octobre 2021, il a été observé sur une imagerie satellite avec d'autres navires battant pavillon de la République populaire démocratique de Corée, dont le *Tong San 2* (voir par. 79), dans les eaux du Ningbo-Zhoushan, en train d'exporter du charbon (voir annexe 39)[88].

[87] Le *Boun 1* a également transmis un faux numéro MMSI, naviguant en tant que « *Roun 1* ».
[88] S/2022/132, annexe 56 et fig. 56.

Figure XXXVIII
Historique des voyages du *Boun 1* battant pavillon de la République populaire démocratique de Corée (naviguant en tant que « *Roun 1* ») à Bo Hai, de décembre 2021 à mai 2022



Source : Windward, annoté par le Groupe d'experts ; imagerie satellite en médaillon, État Membre (le *Boun 1* dans les eaux du Ningbo-Zhoushan le 3 mai 2020).

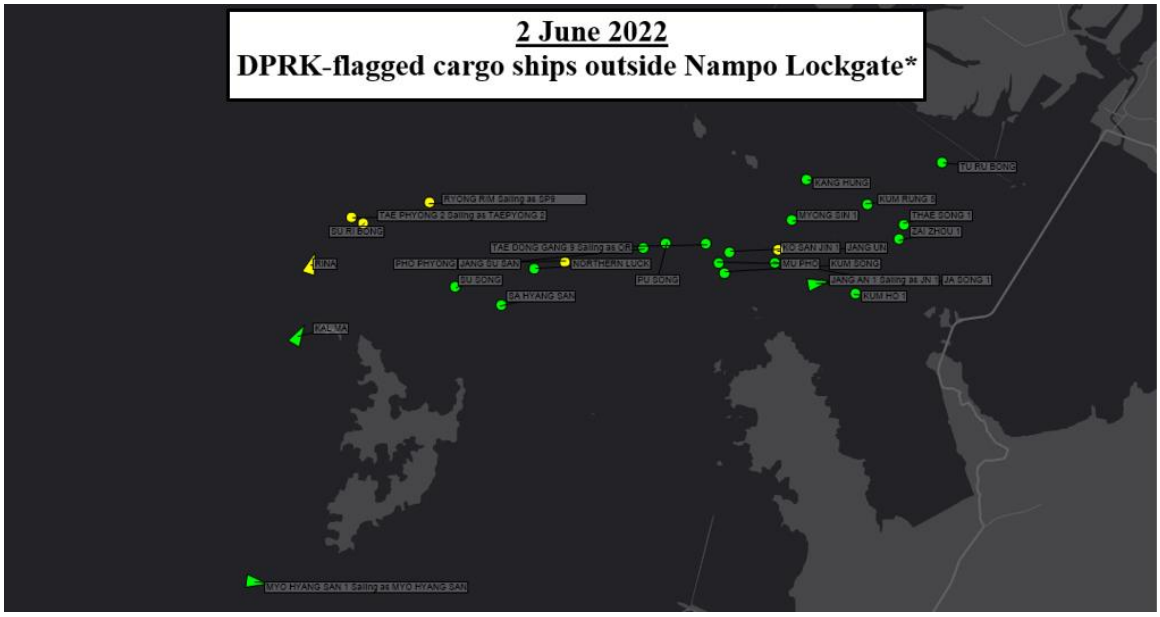
81. Le Groupe d'experts a interrogé la Chine au sujet des activités de nombreux navires de la République populaire démocratique de Corée sur le plan de l'exportation de charbon et a fait notamment des demandes détaillées sur les cargaisons, les entités impliquées (notamment les navires receveurs et acheteurs de charbon) et les mesures prises par les autorités portuaires.

82. La Chine a répliqué qu'aucune escale n'avait été enregistrée sur son territoire en 2022 en ce qui concernait le *Hoe Ryong* et que ses « autorités avaient détecté ce navire en mer de Chine orientale mais n'avaient recensé aucune activité contrevenant aux résolutions du Conseil de sécurité ». Quant au *Thae Song 8*, « le navire venant du port de Nampo était entré à vide au port de Yantai en avril 2022 et en était reparti chargé d'urée pendant le même mois ». Pour ce qui était du *Tong San 2*, aucune escale n'avait été enregistrée en Chine depuis 2021. Le *Boun 1* n'avait, lui non plus, fait aucune escale enregistrée en Chine depuis 2021 : « aucune preuve d'activité liée au transport de charbon n'a été collectée ».

83. Le Groupe d'experts a également demandé à la Chine si des navires de charge de la République populaire démocratique de Corée signalés au barrage de la mer de l'Ouest[89] (voir fig. XXXIX) et dans une section le long du fleuve Taedong entre décembre 2021 et le 2 juin 2022 avaient transité par les eaux territoriales ou les ports chinois et fait l'objet d'une enquête pour avoir participé à des activités contrevenant aux résolutions pertinentes du Conseil de sécurité. La Chine a répondu : « … le *Hoe Ryong* et le *Ryo Myong* figurent sur la liste de l'annexe 3 à la résolution 2270 (2016) du Conseil de sécurité en tant qu'avoirs de l'entité désignée Ocean Maritime Management. La Chine a toujours eu comme politique de ne pas autoriser les navires visés par des sanctions à faire escale dans ses ports et à mener des activités illégales dans ses eaux territoriales. Pour ce qui est des 48 autres navires, … aucun port d'escale n'a été enregistré pour certains d'entre eux en 2021 et 2022 et ceux qui ont fait escale dans des ports du pays n'ont chargé que des produits de première nécessité ».

84. On trouvera à l'annexe 40 des détails d'enquêtes menées sur d'autres navires de la République populaire démocratique de Corée ayant exporté du charbon.

Figure XXXIX
Navires de charge battant pavillon de la République populaire démocratique de Corée à l'extérieur de la porte d'écluse de Nampo, 2 juin 2022



Source : S&P Global, annoté par le Groupe d'experts.

[a] Selon les transmissions de l'AIS.

[89] Liste comportant les noms d'une cinquantaine de navires.

85. Le navire de charge désigné battant pavillon de la République populaire démocratique de Corée, le *Ji Nam San* (numéro OMI : 9114555) a été signalé par un État Membre comme ayant usurpé l'identité du *Hope 1* au moment où il exportait son charbon dans les eaux du Ningbo-Zhoushan entre octobre et novembre 2021 (voir annexe 41). Le Groupe d'experts relève qu'à part la transmission d'une fausse identité qui pourrait susciter des doutes, des différences physiques comme la longueur du navire diffusée auraient pu être observées à proximité. La Chine a répliqué : « Aucune escale n'a été enregistrée en Chine concernant le *Ji Nam San* (*Hope 1*) depuis 2021... ce navire a été aperçu en mer de Chine orientale mais aucune activité contrevenant aux résolutions du Conseil de sécurité n'a été détectée ».

Recommandations

86. Compte tenu de la poursuite des activités recensées de contournement des sanctions et de violation, le Groupe d'experts réaffirme que bon nombre de recommandations liées à la question maritime, figurant dans ses précédents rapports, demeurent pertinentes. On trouvera ci-après des recommandations supplémentaires.

Réaménagement de navires transportant illicitement des cargaisons de pétrole

87. **Le Groupe d'experts recommande que les autorités maritimes des États Membres soient sensibilisées à la pratique trompeuse de la République populaire démocratique de Corée consistant à réaménager ses navires de charge en vue de transporter du pétrole raffiné et mènent les inspections nécessaires lorsque les navires de charge de ce pays font escale dans leurs ports ou zones portuaires[90]. Les acteurs maritimes concernés devraient prendre les mesures de prévention appropriées pour parer à tout achat éventuel illicite de pétrole de telle manière.**

88. **Le Groupe d'experts recommande que les États Membres fassent connaître cette pratique trompeuse auprès des chantiers de radoub et des courtiers maritimes associés et les préviennent du risque de les voir jouer un rôle de facilitation, si ces navires de charge venaient à être exportés en République populaire démocratique de Corée.**

Falsification de l'identité d'un navire et manipulation du système d'identification automatique

89. **Le Groupe d'experts recommande que les États Membres et les registres des navires intègrent dans leurs circulaires des informations se rapportant aux cas détectés de blanchiment ou de falsification de l'identité des navires et de veiller à les diffuser largement. Elles devraient comprendre :**

- **les identifiants de navires inscrits dans leur registre qui ont transmis des identités de dissimulation ;**
- **les identifiants de navires inscrits dans leur registre qui pourraient avoir été exploités par d'autres navires ;**
- **les noms des navires inscrits qui ont transmis des identifiants frauduleux.**

90. **Le Groupe d'experts recommande que les États du pavillon se dotent des moyens nécessaires pour répertorier l'utilisation frauduleuse suspectée de numéros MMSI, ouvrent une enquête à ce sujet et en communiquent les résultats aux autres autorités maritimes, ainsi qu'à lui-même.**

[90] Le Groupe d'experts a signalé par exemple à maintes occasions que des navires de la République populaire démocratique de Corée faisaient des escales dans des ports ou des zones portuaires, notamment pour charger des fournitures humanitaires.

Acquisition de navires par la République populaire démocratique de Corée

91. **Le Groupe d'experts recommande que les registres des navires, en cas de trajets à livraison unique, mettent en place des contrôles relatifs à une surveillance totale de l'AIS, des inspections des navires, pour veiller à la conformité aux conditions restreintes de navigation, et des contrôles de vérification supplémentaires sur la livraison du navire au destinataire.**

92. **Le Groupe d'experts recommande que les États Membres encouragent les vendeurs à vérifier les informations, y compris mais sans s'y limiter, la destination finale et les utilisateurs finals (propriétaire et affréteur) du navire, l'identité du ou des courtiers connexes et les registres des opérations antérieures.**

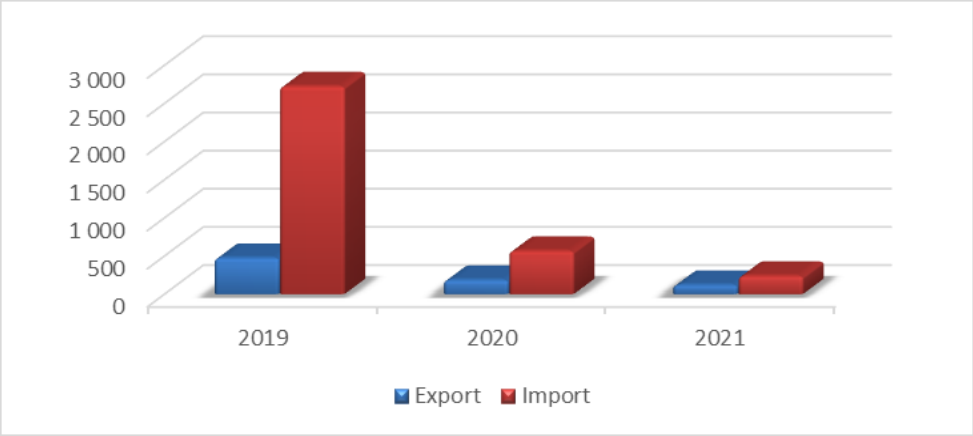
93. **Le Groupe d'experts recommande que les États Membres encouragent les vendeurs à obtenir des acheteurs une déclaration de confirmation au moment de la vente du navire, garantissant que le navire ne sera en aucun cas transféré à la République populaire démocratique de Corée ou à quiconque affilié à ce pays, que l'acheteur ne facilitera en aucun cas des violations des sanctions commises par la République populaire démocratique de Corée, dont il portera la responsabilité, si pareil cas se présente.**

94. **Le Groupe d'experts recommande que les États Membres encouragent les vendeurs, les acheteurs et les courtiers à rendre compte à leurs autorités respectives, à la suite d'un transfert de navire, au cas où une information relative à une violation éventuelle des résolutions du Conseil de sécurité venait à être révélée.**

Statistiques du commerce et questions douanières

95. Malgré une certaine reprise des échanges limités de la République populaire démocratique de Corée avec l'étranger à compter de juin 2021[91], le volume global des échanges commerciaux du pays pour 2021 a encore diminué par rapport aux années précédentes. Les importations totales enregistrées en 2021 se sont chiffrées à quelque 241,4 millions de dollars, soit environ 42 % du chiffre de 2020, et les exportations totales à 122,2 millions de dollars, soit environ 65 % du montant de 2020 (voir fig. XL).

Figure XL
République populaire démocratique de Corée, commerce enregistré, 2019-2021
(En millions de dollars des États-Unis)



Source : Trade Map du Centre du commerce international, consulté le 30 juin 2022.

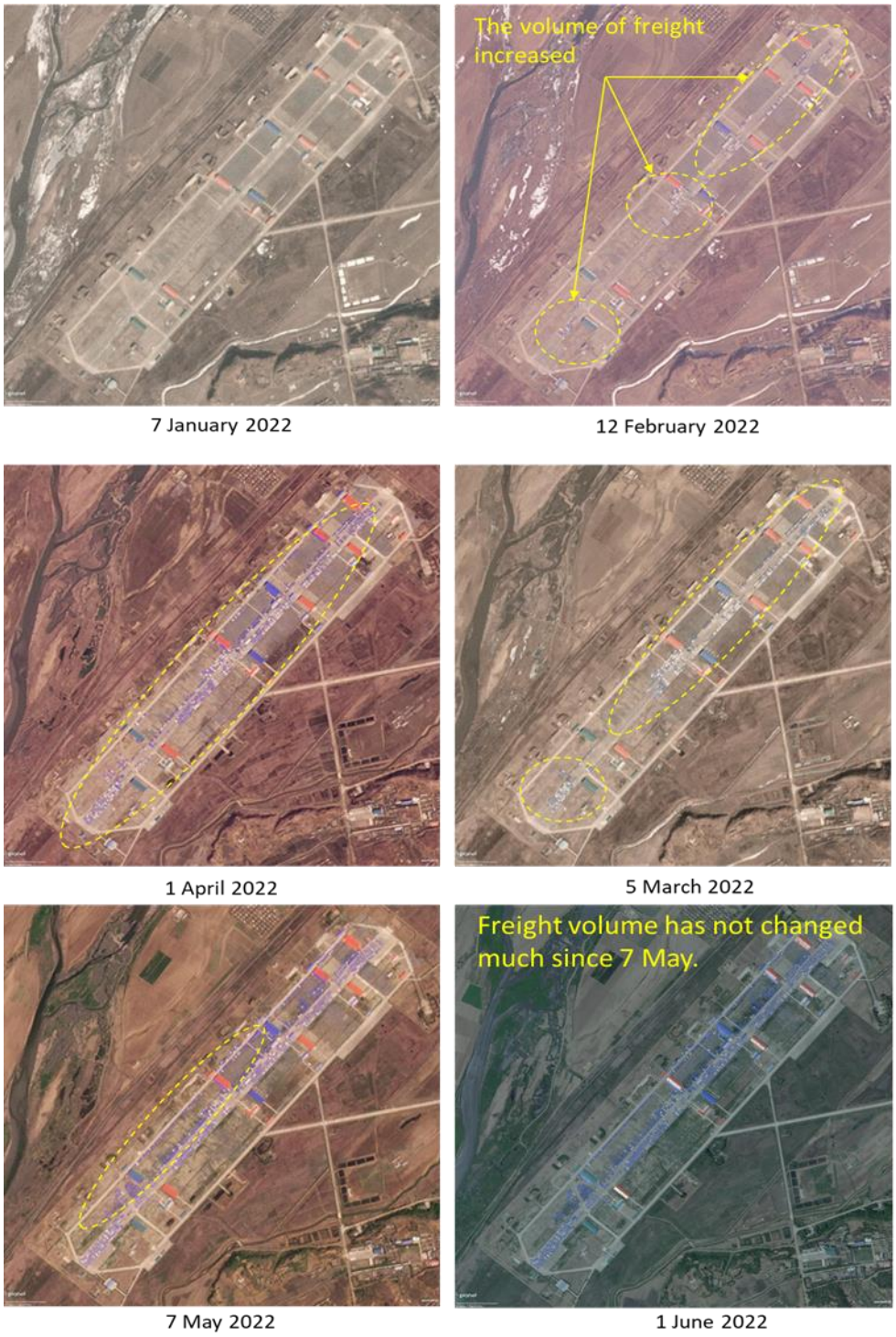
[91] S/2022/132, par. 121 et fig. XLIII.

96. D'après les statistiques en accès libre, les trois premiers produits déclarés exportés par la République populaire démocratique de Corée en 2021 étaient les combustibles minéraux et les huiles minérales [code 27 du Système harmonisé (SH)], le fer et l'acier (code SH 72) et les machines et équipements électriques (code SH 85) (voir annexe 42). Les trois premiers produits déclarés importés par le pays étaient le plastique (code SH 39), le caoutchouc (code SH 40) et les engrais (code SH 31). Ces chiffres relatifs au volume des échanges sont toutefois constitués à partir des registres douaniers des pays partenaires commerciaux et, dans certains cas, saisis de manière erronée (voir par. 102). Par conséquent, le transfert réel de marchandises à travers la frontière serait plus faible. Ces statistiques ne recouvrent pas celles exportées et importées illicitement par la République populaire démocratique de Corée comme le charbon et le pétrole raffiné (voir par. 27 à 34 et 76 à 85). Le Groupe d'expert a revu quelques procédures judiciaires chinoises relatives à la condamnation de personnes impliquées dans des importations illégales de charbon en provenance de la République populaire démocratique de Corée (voir annexe 43).

97. En janvier 2022, le trafic ferroviaire de marchandises entre Dandong (Chine) et Sinuiju (République populaire démocratique de Corée) a repris[92]. Des conteneurs ont été fournis au centre de désinfection d'Uiju à des fins de quarantaine, où la plupart d'entre eux (plusieurs centaines) se trouvaient encore en juillet 2022 (voir fig. XLI).

[92] Ibid., par. 122

Figure XLI
Conteneurs se trouvant dans la zone de décontamination de l'aérodrome d'Uiju, au centre de l'aérodrome (40°09′08″N 124°29′58″E)



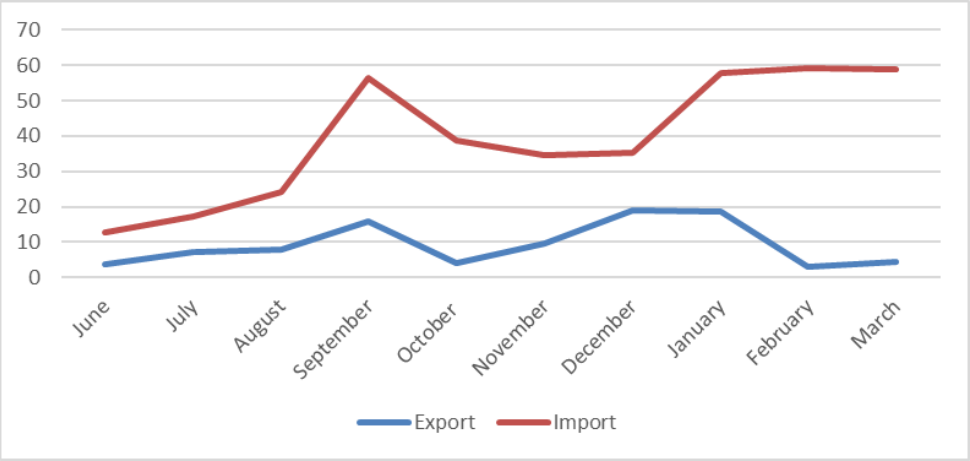
Source : Planet Lab.

98. Selon les statistiques disponibles, le volume global des échanges de la République populaire démocratique de Corée a légèrement augmenté sur une base

mensuelle au premier trimestre de 2022 (voir fig. XLII), au moment de la reprise du trafic ferroviaire de marchandises entre Dandong et Shinuiju. Ce trafic de fret ferroviaire a toutefois été suspendu à la fin du mois d'avril du fait de la COVID-19[93], ce qui a entraîné une baisse d'environ 80 % du volume des échanges d'avril à mai et en juin 2022.

Figure XLII
Statistiques du commerce, République populaire démocratique de Corée, juin 2021-mars 2022 (par mois)

(En millions de dollars des États-Unis)



Source : Trade map du Centre du commerce international, consulté le 30 juin 2022.

99. Le Groupe d'experts a poursuivi son analyse des exportations et des importations interdites, effectuées par la République populaire démocratique de Corée, et le présent rapport couvre principalement la période allant d'octobre 2021 à mars 2022[94].

100. D'après les dossiers du Centre du commerce international relatifs aux données commerciales nationales, dont certaines semblent relever de catégories visées par les sanctions, le Groupe d'experts a demandé à 24 États Membres des informations sur les opérations menées avec la République populaire démocratique de Corée, ainsi que des détails sur tout cas de refus de dédouanement ou de saisie d'articles à destination ou en provenance de ce pays[95]. On trouvera à l'annexe 44 la liste des articles à code SH soumis à des restrictions, utilisée par le Groupe d'experts pour surveiller l'application de l'interdiction sectorielle.

101. Le Groupe d'experts a également continué de demander des informations aux autorités douanières des États Membres sur l'application concrète des obligations que leur imposent les sanctions, telle que l'exigence d'inspecter toutes les cargaisons en provenance et à destination de la République populaire démocratique de Corée, de saisir les articles interdits trouvés lors des inspections et de les neutraliser.

[93] Voir www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/2511_665403/202204/t20220429_10680765.html.

[94] Les statistiques globales du commerce de la République populaire démocratique de Corée disponibles au 30 juin 2022 couvrent la période allant jusqu'au mois de mars 2022.

[95] Selon les statistiques disponibles, 46 États Membres ont signalé des échanges commerciaux avec la République populaire démocratique de Corée dont 24 comprenaient des échanges relatifs à des produits restreints relevant du code SH.

102. Quelques États Membres ont indiqué qu'aucune activité commerciale n'avait été enregistrée avec la République populaire démocratique de Corée au dernier trimestre de 2021 et au premier trimestre de 2022, et ont cité l'utilisation erronée des codes de pays, c'est-à-dire la saisie du code de pays de la République populaire démocratique de Corée (KP) au lieu du celui de la République de Corée (KR), le véritable partenaire commercial. D'autres ont déclaré que les opérations avaient été conformes aux sanctions imposées par l'ONU[96]. Quelques États Membres ont évoqué les résultats de l'enquête sur d'éventuels cas de non-respect. On trouvera aux annexes 45 et 46 des données de comparaison, démontrant des écarts entre les statistiques commerciales internationales et les données nationales.

103. Le Groupe d'experts attend des réponses de bon nombre d'États Membres et note que certains continuent d'avoir du mal à établir s'il s'agit, dans certains cas, d'articles dont le transfert à destination ou en provenance de la République populaire démocratique de Corée est interdit.

Recommandations

104. **Le Groupe d'experts recommande que des mesures appropriées soient prises par l'Organisation internationale de normalisation et par les États Membres pour empêcher l'utilisation erronée des codes de pays concernant la République populaire démocratique de Corée et la République de Corée (KP et KR, respectivement).**

105. **Le Groupe d'experts recommande que les États Membres rationalisent leurs listes de contrôle des exportations et des importations, en s'appuyant sur la liste informelle des produits interdits (voir annexe 44).**

106. **Le Groupe d'experts recommande que les autorités douanières des États Membres utilisent la liste susmentionnée pour informer les agents commerciaux se trouvant dans leurs juridictions à des fins de diligence raisonnable, en particulier lorsqu'ils ont affaire à de tels produits à proximité de juridictions soumises à sanctions.**

107. **Le Groupe d'experts recommande, concernant les États Membres qui ont besoin d'assistance sur la question de l'interdiction sectorielle, que le Comité envisage une action de sensibilisation à des fins d'information.**

IV. Embargos, entités et personnes désignées et travailleurs à l'étranger

Embargos

Global Communications (Glocom)

108. Au vu des éléments de preuve relatifs à la persistance des activités en ligne de Glocom, le Groupe d'experts a demandé à la Malaisie une mise à jour des mesures particulières prises par ses autorités concernant Glocom et ses associés, ces dernières années[97]. Elle a répondu : « les autorités nationales confirment que Global Communications (Glocom) n'a jamais opéré en Malaisie » (voir annexe 47).

[96] S/2022/132, par. 127 à 129.
[97] Voir paragraphe 17.

Sri Lanka

109. Selon un article paru dans les médias[98], un Ministre srilankais a admis en février 2022 avoir acheté des armes à la République populaire démocratique de Corée durant la guerre civile sri-lankaise de 1983-2009. Le Groupe d'experts a demandé des précisions au Sri Lanka sur cet article mais n'a pas encore reçu de réponse, bien que le Ministre sri-lankais des affaires étrangères ait catégoriquement réfuté l'article[99].

Application de l'interdiction relative aux articles de luxe

110. Pendant la période considérée, l'importation de biens de consommation, y compris d'articles de luxe, est demeurée très faible, du fait de la fermeture des frontières. À la suite de la reprise partielle des livraisons de marchandises par voie ferroviaire en janvier 2022, les biens de consommation importés ont néanmoins refait leur apparition dans les boutiques d'articles payables en devises étrangères et dans certains marchés, quoiqu'à des prix très élevés (un kilogramme de café coûtant de 900 à 950 dollars).

111. Le Groupe d'experts a enquêté sur un article paru dans les médias concernant l'utilisation en République populaire démocratique de Corée de caméras de marque Canon et Nikon de luxe, par des photojournalistes professionnels. Le Groupe d'experts a communiqué les numéros de série d'une vingtaine de ces appareils aux fabricants, qui ont confirmé le détail des ventes effectuées par des revendeurs et points de vente au détail locaux à des acheteurs en Chine, aux Émirats arabes unis, au Japon, à Singapour et en Thaïlande. Une des caméras avait été exposée dans une vitrine et une autre servait de modèle d'inspection dans une usine de fabrication ; il s'est avéré que ni l'une ni l'autre n'avait été éliminée de manière appropriée par les entreprises de cession locales concernées. Pour plus de détails, se reporter aux annexes 48 et 49.

112. Selon un rapport paru dans les médias, de hauts responsables en République populaire démocratique de Corée se sont servis d'une voiture Pajero de marque Mitsubishi, un modèle qui aurait été construit entre 2015 et 2021 (voir fig. XLIII). Des analystes indépendants ont estimé qu'il s'agissait vraisemblablement d'une « édition pour collectionneur » de luxe ou encore de l'édition « V97 ». La voiture a d'abord été aperçue à la Télévision centrale coréenne le 8 mars 2020 et par la suite le 25 mars 2020 dans des séquences sur cette même chaîne, stationnée près d'un site de lancement de missiles balistiques intercontinentaux, à l'intérieur d'une usine de missiles près de l'aéroport international de Pyongyang. Elle a été aperçue de nouveau dans une photographie de groupe avec le dirigeant Kim Jong Un, le 31 mars 2022. Mitsubishi Motors Corporation a déclaré au Groupe d'experts : les véhicules sur la photographie « ont été fabriqués dans notre usine japonaise après [l'exercice] 2014 » et ce modèle « est un produit que nous vendons depuis le Japon vers la région de l'Asie du Nord et du Moyen-Orient ». L'enquête se poursuit.

[98] Voir www.nknews.org/2022/02/top-sri-lankan-official-admits-to-arms-deal-with-north-korea-then-backtracks/?t=1652198644870.

[99] Voir https://mfa.gov.lk/fm-north-korea.

Figure XLIII
Photographies du modèle Pajero de marque Mitsubishi en République populaire démocratique de Corée

Source : Télévision centrale coréenne, Groupe d'experts.

113. Des analystes indépendants ont aperçu et identifié des utilitaires sportifs, blindés et modifiés, de modèle Pajero de marque Mitsubishi, au cours de défilés militaires en République populaire démocratique de Corée en octobre 2020 et en janvier 2021 (voir fig. XLIV). Le fabricant a souligné : « Nous n'avons pas pour politique d'entreprendre l'assemblage de véhicules à des fins militaires et aucun véhicule n'a jamais été modifié à des fins militaires, comme celui que l'on voit dans la photographie. De plus, notre contrat avec les distributeurs interdit la vente, la modification ou l'emploi de nos véhicules à des fins militaires ou d'atteinte à l'ordre international ».

Figure XLIV
Photographies de l'utilitaire sportif Pajero de marque Mitsubishi, modifié à des fins militaires

Source : NK News.

114. Le Groupe d'experts a enquêté sur un article paru dans les médias[100] sur une société singapourienne ayant violé l'interdiction relative aux articles de luxe par la fourniture de vins et de spiritueux à la République populaire démocratique de Corée. Il a obtenu des informations d'un État Membre selon lesquelles la société « 123 Holdings Pte. Ltd. », enregistrée à Singapour, avait été accusée en mai 2022 par une cour singapourienne d'avoir fourni du whisky, du cognac et des vins de marque à la République populaire démocratique de Corée via la Chine en 2016-2017. Cinq livraisons au moins avaient été effectuées, d'un montant de 720 000 dollars singapouriens environ. Le Groupe d'experts suit cette affaire.

115. À la demande du Groupe d'experts, le Japon a fourni un complément d'informations sur l'affaire de la saisie d'une carte mémoire SD en juin 2021 (voir annexe 50).

116. Le Groupe d'experts attend une réponse de Steinway Musical Instruments Inc. au sujet d'un grand piano à queue en République populaire démocratique de Corée (voir S/2022/132, par. 148).

Recommandations

117. **Le Groupe d'experts recommande à nouveau que les États Membres envisagent d'actualiser leurs listes de contrôle des exportations pour qu'elles cadrent avec la liste des articles de luxe interdits, d'une manière qui soit compatible avec les objectifs des résolutions 1718 (2006), 1874 (2009), 2094 (2013), 2270 (2016) et 2321 (2016) du Conseil de sécurité, en évitant d'en élargir inutilement le champ d'application, afin de ne pas restreindre la**

[100] Voir www.todayonline.com/singapore/beverage-exporter-charged-illegally-exporting-pokka-drinks-worth-s340000-north-korea-1907286.

fourniture de marchandises autorisées à la population civile et d'éviter les conséquences humanitaires, une fois que les échanges auront repris.

118. **Le Groupe d'experts recommande de nouveau que les États Membres encouragent leurs entreprises et ressortissants qui exportent des articles de luxe à intégrer une disposition contractuelle visant à empêcher toute revente à la République populaire démocratique de Corée.**

Korea Mining Development Trading Corporation (Kpe.001)

119. Le Groupe d'experts a obtenu des informations d'un État Membre au sujet de liens persistants entre la Guinée équatoriale et la société Korea Mining Development Trading Corporation de la République populaire démocratique de Corée, qui est inscrite sur la liste de l'ONU depuis le début de 2022[101]. Le Groupe d'experts a de nouveau écrit à la Guinée équatoriale et attend toujours sa réponse.

Green Pine Associated Corporation (KPe.010)

120. Selon un État Membre, Green Pine Associated Corporation (également connue sous le nom de Saeng Pil Trading Corporation, précédemment dénommée Paeksan Associated Corporation et Taedonggang Technical Associated Corporation) a changé son nom en 2019 à Jihyang Associated Corporation [également appelée Jihyang Technology Trade Company et Jihyang Trading Corporation (지향기술무역회사)] lorsqu'elle commerce avec l'étranger, afin d'éviter tout contrôle et de contourner les sanctions de l'ONU.

Département de l'industrie des munitions (KPe.028)

121. Selon les informations fournies par un État Membre, des informaticiens de la République populaire démocratique de Corée liés au Département de l'industrie des munitions ont touché des devises étrangères au moyen de la vente d'applications de piratage par hameçonnage vocal[102] et de la mise en opération de multiples serveurs et adresses de protocole Internet à l'étranger[103, 104].

122. En juillet 2020, quatre ressortissants de la République de Corée ont été arrêtés par les autorités à Tianjin (Chine) et extradés en République de Corée[105]. L'un d'entre eux a témoigné que des groupes criminels avaient acheté à un informaticien de la République populaire démocratique de Corée les données personnelles de ressortissants de ce pays ainsi que des applications de piratage par hameçonnage vocal. L'analyse du serveur utilisé par le groupe d'hameçonnage vocal a révélé des termes linguistiques employés uniquement en République populaire démocratique de Corée[106]. Au début de 2022, l'État Membre a obtenu un manuel relatif à une application de piratage et une présentation vidéo de ses fonctionnalités (voir annexe

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[101] S/2022/132, par. 152.

[102] L'hameçonnage vocal se sert d'appels téléphoniques à des fins d'hameçonnage, au moyen de l'utilisation de protocoles de Voix sur IP, afin d'usurper l'identité de l'appelant, en se faisant passer pour des organisations légitimes, afin de leurrer les victimes désignées. Voir www.law.cornell.edu/wex/phishing.

[103] Le Département de l'industrie des munitions a directement fait passer en Chine des informaticiens de la République populaire démocratique de Corée dans le passé. Voir S/2021/211, par. 124, S/2020/840, par. 106 à 111 et annexe 47, et S/2020/151, par. 120 à 125.

[104] Selon les autorités de cet État Membre, le montant des pertes à la suite de cet hameçonnage vocal a été estimé à quelque 635 millions de dollars.

[105] http://world.people.com.cn/n1/2021/0410/c1002-32074728.html.

[106] Ces termes comprennent des termes comme « Bat-um Jon-hwa(받음 전화) » et « Kol-um Jon-hwa » (걸음 전화) qui signifient littéralement « appel entrants » et « appels sortants ».

51). La personne figurant sur la vidéo a été identifiée comme Song Rim[107], un employé de la « Biryugang Overseas Technology Cooperation Company (비류강해외기술협조사) », directement liée à « Hapjanggang Trading Corporation (합장강무역회사) » et relevant du Département de l'industrie des roquettes de la République populaire démocratique de Corée (로케트공업부)[108], qui fait partie du Département des munitions de l'industrie[109]. L'enquête se poursuit.

Bureau général de reconnaissance (KPe.031)

123. Des cyberattaques persistantes auraient continué d'être menées par des auteurs de cybermenaces de la République populaire démocratique de Corée (Kimsuky, le groupe Lazarus, BlueNoroff et Stonefly)[110] relevant du Bureau général de reconnaissance[111]. Ils s'en prennent à des personnes pour solliciter de manière frauduleuse des informations pertinentes présentant un intérêt pour la République populaire démocratique de Corée et tirer des revenus de manière illicite, tout en contournant les effets des sanctions.

124. Une firme de cybersécurité a signalé que le groupe Kimsuky[112] s'était servi du logiciel malveillant « xRAT (Quasar RAT-based open-source RAT) ») et d'autres fichiers Word et PDF camouflés pour hameçonner des victimes. La même firme a découvert en avril 2022 que le groupe Lazarus avait propagé le logiciel malveillant « NukeSped »[113] en exploitant une faille dans l'utilitaire de journalisation Java, Log4j. Dans un autre cas, il a été constaté que 47 instituts et entreprises, notamment de la défense, avaient été infectés par un nouveau logiciel malveillant distribué par le groupe Lazarus au premier trimestre de 2022. Ces comportements malveillants, tels que l'exécution, par une entité extérieure, de commandes arbitraires dans les systèmes de ces organisations découleraient d'un procédé INITECH (inisafecrosswebexsvc.exe), infecté par un type malveillant de logiciel appelé « SCSKAppLink.dll »[114, 115].

125. Le Groupe d'experts a obtenu des informations selon lesquelles une campagne du groupe Lazarus en janvier 2022 avait visé bon nombre d'organisations des secteurs de la chimie et de l'informatique afin d'obtenir des informations brevetées ou confidentielles, de manière à faire avancer les intérêts de la République populaire démocratique de Corée dans ces domaines. D'après le rapport d'une firme de cybersécurité[116], cela s'inscrivait dans le prolongement de l'opération « Dream

[107] Voir annexe 52 pour des informations précises sur cet informaticien de la République populaire démocratique de Corée.

[108] Ces deux entités ont été rajoutées en avril 2022 à la liste relative aux sanctions du Bureau du contrôle des avoirs étrangers du Département du trésor des États-Unis. Voir https://home.treasury.gov/policy-issues/financial-sanctions/recent-actions/20220401.

[109] S/2022/132, par. 30 et annexe 30.

[110] Les noms figurant dans cette section concernant les acteurs de cybermenaces et leurs campagnes sont largement employés dans le secteur de la cybersécurité.

[111] Voir S/2020/840, annexe 48, concernant les rôles du Bureau général de reconnaissance et d'autres organisations au cours des cyberopérations de la République populaire démocratique de Corée.

[112] Voir annexe 53.1 concernant les cyberattaques de Kimsuky à l'aide du logiciel malveillant « KONNI ».

[113] « NukeSped » est un logiciel malveillant à porte dérobée qui peut entraîner diverses activités mal intentionnées à la suite de commandes exécutées à partir d'un domaine contrôlé par un assaillant à distance.

[114] Le même type de logiciel malveillant a été recensé par une autre firme de cybersécurité lorsque le groupe Lazarus a attaqué le secteur chimique. Voir par. 125.

[115] Voir annexe 53.2 pour les liens vers ces rapports.

[116] Voir https://symantec-enterprise-blogs.security.com/blogs/threat-intelligence/lazarus-dream-job-chemical.

Job »[117] du groupe Lazarus qui consistait à appâter d'éventuelles victimes à l'aide de fausses promesses d'emploi pour les amener à cliquer sur des liens ou des pièces jointes permettant d'installer un logiciel malveillant. Il a été rapporté par la même firme que Stonefly[118, 119] avait délaissé les attaques de déni de service distribué contre des entités gouvernementales au profit d'opérations d'espionnage visant des cibles de grande valeur. En février 2022, Stonefly a lancé une cyberattaque contre une entreprise d'ingénierie dans les secteurs énergétique et militaire, et un État Membre a informé le Groupe d'experts que des enquêtes étaient en cours, pour confirmer si des violations de données importantes s'étaient produites.

126. Un État Membre a informé le Groupe d'experts que la République populaire démocratique de Corée avait recouru à des logiciels rançonneurs pour engranger des recettes[120]. Selon une firme de cybersécurité[121], le pays s'est servi de temps à autre de logiciels rançonneurs tels que le VHD, qui a fait son apparition au mois de mars 2020. Par ailleurs, plusieurs nouveaux types de logiciels rançonneurs ont été répertoriés, comme BEAF, PXJ, ZZZZ et ChiChi, dont la majorité ont des similitudes de code avec le logiciel rançonneur VHD attribué à BlueNoroff (encore appelé APT38).

127. D'après une autre société de cybersécurité, le groupe Lazarus a distribué une version « troyanisée » d'un portefeuille DeFi Wallet pour le stockage de cryptoactifs d'utilisateurs et d'investisseurs[122]. BlueNoroff, qui s'était fait connaître à la suite de son cybercambriolage de la Banque centrale du Bangladesh en 2016, a délaissé les « attaques contre les banques et les serveurs connectés au réseau SWIFT pour se concentrer uniquement sur les sociétés de cryptomonnaies comme source principale des revenus obtenus illégalement par le groupe ». Sa campagne « Snatchcrypto »[123] en est une illustration : elle visait des sociétés s'occupant de cryptomonnaies et de contrats intelligents dans le monde entier. Le Groupe d'experts n'est pas encore en mesure de confirmer si les campagnes de ces groupes ont réussi à dégager des recettes illicites au profit de la République populaire démocratique de Corée, mais ces types de campagnes vont vraisemblablement se poursuivre[124].

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[117] S/2021/211, par. 126 et note de bas de page 107.

[118] Voir https://symantec-enterprise-blogs.security.com/blogs/threat-intelligence/stonefly-north-korea-espionage.

[119] Selon une firme de cybersécurité, « Stonefly se spécialiserait dans l'organisation d'attaques très sélectives contre des cibles susceptibles de fournir des renseignements pour aider des secteurs d'importance stratégique tels que l'énergie, l'aérospatiale et l'équipement militaire. Pratiquement toutes les technologies auxquelles il semble s'intéresser ont des usages tant militaires que civils et certaines pourraient avoir des applications dans la mise au point d'armements avancés.

[120] Le 6 juillet 2022, le Gouvernement des États-Unis (le Federal Bureau of Investigation, l'Agence de cybersécurité et de sécurité des infrastructures et le Département du trésor) a, dans une notice conjointe sur la cybersécurité, prévenu qu'une variante du logiciel rançonneur appelée « Maui Ransomware » était utilisée dans une campagne gérée par des auteurs de cybermenaces de la République populaire démocratique de Corée depuis mai 2021, visant principalement des organisations dans le secteur des soins de santé et de la santé publique. Voir www.cisa.gov/uscert/sites/default/files/publications/aa22-187a-north-korean%20state-sponsored-cyber-actors-use-maui-ransomware-to-target-the-hph-sector.pdf.

[121] Voir www.trellix.com/en-us/about/newsroom/stories/threat-labs/the-hermit-kingdoms-ransomware-play.html.

[122] Voir https://securelist.com/lazarus-trojanized-defi-app/106195.

[123] Voir https://securelist.com/the-bluenoroff-cryptocurrency-hunt-is-still-on/105488.

[124] La mise en place réussie d'un logiciel rançonneur ou l'utilisation de la collecte de données d'identification pour tirer des revenus illicites constitueraient une violation des sanctions financières dont le paragraphe 11 de la résolution 2094 (2013) du Conseil de sécurité. Voir par. 146 à 149 sur les vols de cryptomonnaies par la République populaire démocratique de Corée.

Ministère des forces armées populaires (KPe.054)

Département 53

128. Un État Membre a signalé que le Département 53 (ou Bureau 53) du Ministère des forces armées populaires de la République populaire démocratique de Corée, inscrit sur la liste de l'ONU, est une entité qui fait le commerce des armes, dont le siège est à Pyongyang. Depuis au moins la période allant de 2019 à 2021 (et probablement avant et après), la section du Département 53 en Fédération de Russie a été chargée de l'achat de paliers à roulement, des composants electroniques et de communication provenant de ce pays, au profit de la République populaire démocratique de Corée. Jusqu'à la fin de 2021 (et probablement avant), le Département 53 a également contribué directement à bon nombre de projets de construction au Congo, auxquels ont probablement participé des travailleurs de la République populaire démocratique de Corée. Ils comprennent de nombreux hôpitaux (à Brazzaville et à Songolo) et des complexes résidentiels (à Kindele, Bacongo et Uenze) (voir par. 138).

129. Selon l'État Membre, le Département 53 a des filiales et des sociétés écrans et a désigné des représentants à l'étranger dans plusieurs pays. Le Groupe d'experts a demandé des détails et des clarifications à la Chine, au Congo, à la Fédération de Russie, au Mozambique, à la République arabe syrienne et à la République-Unie de Tanzanie concernant les informations susmentionnées.

130. La Fédération de Russie a répondu qu'il n'existait pas d'unités accréditées du Ministère des forces armées populaires chargées du commerce des armes sur son sol et que les personnes citées étaient des diplomates. La République arabe syrienne a répondu qu'aucune coopération militaire n'avait été établie entre elle et la République populaire démocratique de Corée. La Chine a répondu qu'elle n'avait trouvé aucune preuve d'activités liées à un commerce d'armes illicite. Pour les réponses intégrales, se reporter aux annexes 54 à 56. Le Groupe d'experts attend d'autres réponses.

Haegumgang Trading Corporation

131. Il s'agit d'une entité de la République populaire démocratique de Corée qui s'occupe du commerce des armes et relève du Ministère des forces armées populaires. Selon un État Membre, la société prévoyait en juin 2021 de négocier la vente de matériel militaire d'une valeur de 3,5 millions de dollars au Nigéria. Le Groupe d'experts attend la réponse du Nigéria. L'enquête se poursuit.

Travailleurs à l'étranger

132. Le Groupe d'experts poursuit ses enquêtes sur les ressortissants de la République populaire démocratique de Corée qui perçoivent des revenus à l'étranger (travailleurs à l'étranger). Selon l'information fournie par un État Membre, des ressortissants de la République populaire démocratique de Corée étaient employés en Afrique, en Asie, en Fédération de Russie et au Moyen-Orient en 2021 dans les domaines de l'informatique[125], de la coopération médicale, de la construction et de la restauration, en contravention du paragraphe 8 de la résolution 2397 (2017) du Conseil de sécurité. Les fermetures de frontière dues à la COVID-19 continuent

[125] Concernant les informaticiens de la République populaire démocratique de Corée, le Gouvernement des États-Unis a émis en mai 2022 des directives décrivant les efforts faits par ce pays pour envoyer ses informaticiens dans des sociétés du monde entier, afin d'obtenir un accès privilégié servant parfois à faciliter des cyberintrusions. On y trouve des indicateurs visant à aider les sociétés à repérer ces informaticiens et diverses mesures de protection y sont recommandées. Voir https://home.treasury.gov/system/files/126/20220516_dprk_it_worker_advisory.pdf et https://home.treasury.gov/system/files/126/20220516_dprk_it_worker_fact_sheet.pdf.

d'empêcher les États Membres de rapatrier les ressortissants de la République populaire démocratique de Corée de leur territoire.

133. Le Groupe d'experts a obtenu une liste des ressortissants de la République populaire démocratique de Corée qui avaient quitté le territoire d'un État Membre à la fin de décembre 2019 mais a constaté que certains n'étaient pas parvenus à leur destination déclarée ou dans les pays de transit déclarés, après leur départ. Les enquêtes se poursuivent.

Algérie

134. Un État Membre a signalé que la société Namgang Construction General Corporation de la République populaire démocratique de Corée avait établi un contrat avec une société dans un pays tiers pour permettre à des travailleurs de la République populaire démocratique de Corée de travailler dans des chantiers de construction en Algérie de juin à juillet 2021. L'Algérie a répondu au Groupe d'experts que cette société de la République populaire démocratique de Corée « n'apparaissait pas dans ses registres officiels » (voir annexe 57).

Cambodge

135. Le Groupe d'experts continue d'enquêter sur les ressortissants de la République populaire démocratique de Corée qui travaillent au Cambodge. Au moins deux entités de la République populaire démocratique de Corée, Keochakrey Trading Co. Ltd. et SCNK (Cambodge) Co. Ltd., ont continué d'y mener des activités, même après leur radiation des registres par les autorités cambodgiennes en décembre 2019[126]. L'entité s'est servie des informations relatives à une société dissoute, remplaçant les sections pertinentes de l'adresse et du pays (voir annexe 58). Le Cambodge a informé le Groupe d'experts que les deux entités avaient été rayées des registres en février 2022 et a fourni des informations sur les ressortissants de la République populaire démocratique de Corée qui travaillaient pour elles. L'enquête se poursuit.

Congo

136. Selon un État Membre, le Korea Moranbong Medical Cooperation Center a demandé au Congo de proroger les visas de travail de plusieurs médecins de la République populaire démocratique de Corée qui exerçaient leur profession au Congo en mars 2021 (voir annexe 59). Le Groupe d'experts n'a pas encore reçu de réponse du Congo.

Côte d'Ivoire

137. Un État Membre a signalé que Korea Moranbong Medical Cooperation Center avait établi avec des centres médicaux en Côte d'Ivoire des contrats concernant le recrutement de médecins de la République populaire démocratique de Corée en juin et juillet 2019 (voir annexe 60). Le Groupe d'experts attend une réponse de la Côte d'Ivoire.

République démocratique populaire lao

138. En juillet 2020, la République démocratique populaire lao a indiqué au Groupe d'experts qu'aucune entreprise laotienne n'employait de travailleurs de la République populaire démocratique de Corée, alors qu'un État Membre avait indiqué qu'une équipe de travailleurs de ce pays associés à Lao-Toshyo IT Service Company Ltd.

[126] S/2020/151, par. 139 et annexe 38.

continuaient d'y travailler. La République démocratique populaire lao n'a pas encore fourni de réponse au sujet de ces travailleurs (voir annexe 61).

Fédération de Russie

139. Un média local russe a signalé que la société russe « SZ'Rybovodstroi »[127] employait des ressortissants de la République populaire démocratique de Corée sur le chantier de construction d'un complexe résidentiel à Ioujno-Sakhalinsk. Il était indiqué dans le rapport que les travaux de construction étaient liés à un complexe d'appartements, qui avaient commencé à la fin de 2019 et devaient se terminer au premier semestre de 2022 (voir annexe 62). La Fédération de Russie a répondu ne pas disposer d'informations sur l'emploi par la société de travailleurs de la République populaire démocratique de Corée. Se reporter à l'annexe 63 pour la réponse intégrale.

140. Selon un État Membre, la société d'informatique de la République populaire démocratique de Corée, Pyongyang Kwangmyong Information Technology Corporation (평양광명정보기술사)[128], était active à Vladivostok et employait des ressortissants russes pour créer des comptes informatiques et fournir des services bancaires en 2021 et en 2022, en échange d'une part des revenus des informaticiens de la République populaire démocratique de Corée. D'autres activités comprenaient la tenue de comptes sur une plateforme pour des travailleurs indépendants appelée « Upwork » (www.upwork.com) et la facilitation des vérifications à distance associées à l'utilisation des comptes, la réception de paiements au profit d'informaticiens de la République populaire démocratique de Corée dans les comptes bancaires de ressortissants russes et la recherche de possibilités d'emploi concernant des informaticiens de la République populaire démocratique de Corée. La Fédération de Russie a répondu que la société n'était pas enregistrée localement et qu'il n'existait pas de données sur des personnes participant à ses activités. On trouvera la réponse intégrale à l'annexe 63.

Togo

141. Selon un État Membre, des médecins de la République populaire démocratique de Corée travaillant au Togo ont participé à la création de coentreprises avec plusieurs entités établies au Togo. Des églises évangéliques au Togo ont également invité des médecins de la République populaire démocratique de Corée dans le pays (voir annexe 64). Le Groupe d'experts n'a pas encore reçu de réponse du Togo.

Émirats arabes unis

142. Selon un autre État Membre, un ressortissant de la République populaire démocratique de Corée, Oh Chung Song (오충성, date de naissance : le 27 février 1989), qui résidait à l'époque à Doubaï a créé un compte sur la plateforme « Upwork » et déclaré une fausse nationalité. Se servant de la plateforme, il aurait développé et fourni des programmes d'informatique à diverses sociétés, afin de toucher des devises étrangères. En décembre 2021, un employé a découvert qu'Oh avait camouflé sa nationalité et, par conséquent, lui et d'autres informaticiens de la République populaire démocratique de Corée travaillant avec lui sont immédiatement partis pour la République démocratique populaire lao, craignant de faire l'objet d'une enquête de

[127] ООО « СЗ "РЫБОВОДСТРОЙ », INN 650103952031.

[128] D'après le site Web de la Russian Association of Computer and Information Technology Enterprises, cette société avait précédemment (en août 2014) offert à des sociétés russes la possibilité de recruter des informaticiens de la République populaire démocratique de Corée au moyen de l'envoi de documents décrivant les capacités de ses experts en informatique.

la part des autorités émiriennes. Le Groupe d'experts n'a pas encore reçu de réponse des États Membres concernés ou d'« Upwork ».

Viet Nam

143. Le Viet Nam a répondu à la question du Groupe d'experts au sujet du restaurant « Koryo » qui avait poursuivi ses activités à Hanoï[129], disant que « les travailleurs [de la République populaire démocratique de Corée] au Viet Nam qui n'avaient pas été rapatriés se sont vu accorder des visas temporaires d'un mois pour prolonger leur séjour au Viet Nam du fait de la pandémie de COVID-19 ». Le Viet Nam a expliqué qu'il ne délivrait plus de permis de travail et que « sans aide de leur pays, ils se trouvaient dans une situation difficile » et que les activités du restaurant « visaient uniquement à maintenir des conditions de vie minimum des employés restants [de la République populaire démocratique de Corée] à des fins humanitaires ».

144. Le Viet Nam a également expliqué que « les peintures accrochées aux murs dans le restaurant Koryo l'étaient uniquement à des fins de décoration. Rien ne prouvait la vente, par les employés du restaurant, d'œuvres d'art du studio artistique Mansudae ».

V. Financement

145. Au cours de la période considérée, les enquêtes financières du Groupe d'experts ont porté sur les cyberactivités de la République populaire démocratique de Corée, tandis que les enquêtes financières antérieures suivaient leur cours[130].

Génération illicite de revenus au moyen de cyberactivités

146. Les cyberattaques visant des plateformes d'échange et des sociétés de cryptomonnaies ont continué[131], devenant plus complexes et rendant plus ardue toute surveillance des fonds volés. L'absence de mécanismes mondiaux de règlementation, régissant les cryptomonnaies, a aggravé le problème.

147. À la fin de mars 2022, le réseau Ronin, une chaîne latérale liée à Ethereum (ETH) utilisée dans le jeu de jetons non fongibles[132] Axie Infinity[133] a été piraté, et 173 600 pièces d'éthers et des USD Coin d'une valeur de 25,5 millions de dollars[134][135] ont été dérobés. Des bulletins d'information du réseau[136] ont indiqué que les pirates avaient accédé à cinq des neuf nœuds validateurs, dont celui d'une partie tierce, géré par une organisation autonome décentralisée[137]. Tous les dépôts et retraits du pont

[129] S/2022/132, par. 178, annexe 84.
[130] S/2022/132, par. 181 et S/2021/777, par. 159 à 164.
[131] S/2022/132, par. 182 à 184.
[132] Les jetons non fongibles sont des « jetons numériques sur une chaîne de blocs, représentant chacun un élément unique en son genre, comme une œuvre d'art numérique, une pièce particulière dans un jeu, des cartes de collection rares ou tout autre actif numérique ou physique distinct ». Voir https://chain.link/education/nfts.
[133] Sky Mavis, une société de technologie établie au Vietnam, a développé Axie Infinity et le réseau Ronin.
[134] Du fait des variations dans la valeur en dollar des États-Unis des cryptomonnaies, ces derniers mois, le Groupe d'experts décrit le montant volé en cryptomonnaies. Voir www.reuters.com/technology/crypto-crash-threatens-north-koreas-stolen-funds-it-ramps-up-weapons-tests-2022-06-28/.
[135] Voir https://therecord.media/more-than-625-million-stolen-in-defi-hack-of-ronin-network/.
[136] Voir https://roninblockchain.substack.com/p/community-alert-ronin-validators?s=w.
[137] Sky Mavis, le développeur du jeu Axie Infinity, a exclu des failles techniques comme étant la cause principale du piratage et mentionné qu'il s'agissait « d'ingénierie sociale associée à une erreur humaine ».

Ronin ont été interrompus, quelques heures après la découverte[138], en attendant l'ouverture d'une enquête. Plusieurs entreprises d'analyse de données ont remonté la trace des fonds volés, dont certains avaient fait l'objet d'un « échange de pièces » sur des bourses décentralisées et envoyés à des services de mélange de monnaies[139]. À la mi-avril, le Federal Bureau of Investigation des États-Unis a attribué le piratage de Ronin au groupe Lazarus[140] et le Département du trésor des États-Unis a sanctionné les adresses du portefeuille ETH qui étaient liées au vol[141]. En mai, les autorités américaines ont imposé des sanctions à Blender, un mélangeur de cryptomonnaies auquel avait recouru la République populaire démocratique de Corée pour blanchir les cryptomonnaies volées. C'était la première fois qu'une société de mixage de cryptomonnaies était sanctionnée[142]. Le pont Ronin a rouvert le 28 juin et la société apporte son concours aux services de répression des infractions, afin de récupérer pleinement ces fonds[143].

148. Selon de nombreuses sources[144], le pont Horizon de la chaîne de blocs Harmony[145] qui relie les bitcoin, le réseau ETH et Binance Chain, a été mis en péril lors d'une cyberattaque très semblable le 23 juin 2022, au cours de laquelle de multiples opérations ont été lancées pour dérober divers types d'altcoins. Harmony a déclaré dans un tweet que son équipe avait trouvé « des éléments de preuve, indiquant que des clefs privées avaient été compromises » et « des fonds volés du côté Ethereum du pont ». Le pirate aurait mis en danger deux des cinq portefeuilles multi-signatures[146]. Les actifs volés ont été acheminés vers différents portefeuilles au moyen du protocole d'échange décentralisé Uniswap en vue d'un « échange de pièces » estimé à 85 800 ETH. Le 27 juin, Harmony a fourni des informations actualisées indiquant que les pirates avaient commencé à transférer des fonds au moyen du mélangeur Tornado Cash. Le 29 juin, compte tenu de la forte ressemblance avec des cryptopiratages antérieurs, dont celui de Ronin, une société d'analyse de la chaîne de blocs a identifié le groupe Lazarus comme le principal suspect[147]. L'enquête se poursuit.

149. Les évaluations des deux incidents n'ont révélé aucune faille technique, ce qui dénote probablement une erreur humaine, à la suite de l'ingénierie sociale déployée par les pirates. Dans les deux cas, des « pièces ont été échangées », de manière décentralisée et des mélangeurs utilisés au cours du processus de blanchiment. La communication d'informations au sujet des deux incidents a permis aux agences de

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[138] Une intrusion faite dans le réseau Ronin le 23 mars n'a été découverte que le 29 mars.

[139] Voir www.elliptic.co/blog/540-million-stolen-from-the-ronin-defi-bridge et https://medium.com/@danajwright/the-ronin-heist-c675b7b75efe.

[140] Voir www.fbi.gov/news/press-releases/press-releases/fbi-statement-on-attribution-of-malicious-cyber-activity-posed-by-the-democratic-peoples-republic-of-korea.

[141] Voir https://home.treasury.gov/policy-issues/financial-sanctions/recent-actions/20220414 et https://home.treasury.gov/policy-issues/financial-sanctions/recent-actions/20220422.

[142] Voir https://home.treasury.gov/news/press-releases/jy0768.

[143] Voir https://roninblockchain.substack.com/p/the-ronin-bridge-is-open-.

[144] Voir https://medium.com/harmony-one/harmonys-horizon-bridge-hack-1e8d283b6d66 et https://hub.elliptic.co/analysis/over-1-billion-stolen-from-bridges-so-far-in-2022-as-harmony-s-horizon-bridge-becomes-latest-victim-in-100-million-hack.

[145] La chaîne de blocs Harmony a été créée par la firme d'investissement en chaînes de blocs, Harmony One.

[146] Tout comme pour le piratage de Ronin, Harmony a annoncé n'avoir aucune preuve de la violation du code des contrats intelligents ou d'une quelconque faille dans la plateforme d'Horizon.

[147] Voir https://hub.elliptic.co/analysis/the-100-million-horizon-hack-following-the-trail-through-tornado-cash-to-north-korea.

répression des infractions[148] et aux firmes d'analyse des chaînes de blocs d'intervenir promptement, ce qui a favorisé une meilleure récupération des fonds volés.

150. La firme d'analyse de chaînes de blocs Chainalysis a analysé les tactiques, les techniques et les procédures utilisées par des cyberacteurs de la République populaire démocratique de Corée, tout particulièrement le groupe Lazarus. On trouvera cette analyse à l'annexe 65, portant sur l'accès (les méthodes utilisées pour obtenir le contrôle des infrastructures des victimes), l'offuscation (l'échange de pièces d'une chaîne de bloc à une autre et l'utilisation de mélangeurs) et la liquidation (le transfert des cryptomonnaies en monnaie fiduciaire).

151. Les cyberacteurs de la République populaire démocratique de Corée utilisent de plus en plus des biens non fongibles comme moyen d'engendrer des revenus ou de blanchir de l'argent. Les analystes en cryptomonnaies craignent une expansion de l'utilisation de ce mécanisme, en partie car il en est l'un des moins réglementés[149]. Selon un État Membre, depuis la fin de 2021, plusieurs incidents liés à des biens non fongibles générés par la République populaire démocratique de Corée se sont produits en divers lieux. Les enquêtes se poursuivent.

Recommandations

152. Des activités attribuées à des cyberacteurs affiliés à la République populaire démocratique de Corée ont entraîné le vol de cryptoactifs d'une valeur de plusieurs centaines millions de dollars des États-Unis au cours de la période considérée. Le Groupe d'experts estime que ces acteurs continueront d'exploiter tout lien faible dans la chaîne de blocs et parmi les prestataires de services liés aux actifs virtuels si des mesures règlementaires ne sont pas mises en place.

153. **Le Groupe d'experts recommande que les États Membres conseillent aux acteurs nationaux concernés, notamment aux institutions financières, aux entreprises et aux services liés aux actifs virtuels, de préparer des matériaux d'enseignement, de consultation, de formation et d'échange d'information appropriés à l'intention des membres du personnel, à tous les niveaux, des hauts cadres aux vacataires.**

154. **Le Groupe d'experts recommande que les organismes des États Membres, ainsi que les institutions financières, les entreprises et les services liés aux actifs virtuels consacrent l'attention nécessaire au renforcement de la cyberhygiène en exigeant de tous les usagers qui cherchent à accéder à un échange de cybermonnaies l'établissement d'un seuil par défaut plus élevé, comme une authentification à deux facteurs[150].**

155. **Le Groupe d'experts recommande que toute entité subissant une cyberattaque contacte dans les meilleurs délais les autorités juridiques concernées pour signaler l'incident, fasse une annonce publique et se concerte avec les organismes compétents, notamment les firmes d'analyse des chaînes de blocs, afin d'augmenter les perspectives de récupérer une partie des actifs volés.**

156. **Le Groupe d'experts recommande que les États Membres envisagent des lois ou établissent des directives à l'intention des cybersociétés pour faire**

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[148] Le 19 juillet 2022, le Département du Trésor des États-Unis a annoncé que « par la voie d'un signalement rapide et de la coopération d'une victime », que « les procureurs avaient perturbé les activités d'un groupe parrainé par l'État nord-coréen qui utilisait un logiciel rançonneur dit « Maui » et avaient saisi un montant d'environ 500 000 dollars qui avaient servi au versement de rançons. Voir annexe 66.

[149] Voir www.eisneramper.com/non-fungible-tokens-money-laundering-flvs-blog-0821.

[150] Cet acte renforce la sécurité et constitue une bonne pratique des acteurs du secteur privé (voir www.cnas.org/publications/reports/following-the-crypto).

appliquer des protocoles « connaître son client », et resserrer les procédures relatives à l'enregistrement des prestataires de services liés aux actifs virtuels[151].

157. **Le Groupe d'experts recommande que les États Membres resserrent la coopération, facilitent le dialogue et renforcent l'échange d'informations, afin d'écarter la menace croissante de la cybercriminalité, sur les plans financier et du renseignement[152].**

158. **Le Groupe d'experts recommande que les États Membres appliquent dès que possible les directives du Groupe d'action financière sur les actifs virtuels, qui visent à prévenir le financement de la prolifération des armes de destruction massive, en imposant des exigences en matière de lutte contre le blanchiment d'argent et le terrorisme concernant ces actifs et les prestataires de services liés aux actifs virtuels[153].**

VI. Effets involontaires[154] des sanctions[155]

159. Au paragraphe 25 de la résolution 2397 (2017), le Conseil de sécurité a réaffirmé que les sanctions de l'ONU étaient censées être sans conséquences humanitaires négatives pour la population civile de la République populaire démocratique de Corée.

Conséquences possibles humanitaires

160. Le Groupe d'experts a demandé des informations à un certain nombre d'États Membres (voir annexe 68) au sujet des effets involontaires des sanctions sur les civils en République populaire démocratique de Corée. Les réponses ont été très variées. Certains États Membres pensent que l'effet cumulé des sanctions est considérable, et d'autres estiment qu'elles n'ont pas d'effet important. Le Groupe d'experts a mené de nouveau une enquête (voir annexe 69) sur une quarantaine d'organismes des Nations Unies et d'organisations non gouvernementales d'aide, qui ont exercé des activités en République populaire démocratique de Corée. On trouvera les réponses à l'annexe 70.

161. Le Groupe d'experts estime que la République populaire démocratique de Corée fait face une crise humanitaire à long terme qui va en se dégradant, comme en témoignent la non-satisfaction des besoins humains fondamentaux, l'incapacité des principaux organismes humanitaires internationaux de fournir une assistance en raison de la fermeture de toutes les frontières depuis 2020 et l'épidémie récente de COVID-19 dans le pays. Ces facteurs ont touché de manière disproportionnée l'accès

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[151] Selon les autorités coréennes, les actes de cyberpiratage en République de Corée ont diminué après l'entrée en vigueur en mars 2021 de la loi sur le signalement et l'exploitation d'informations précises sur les opérations financières, qui exige de tous les prestataires de services liés aux actifs virtuels de revoir leurs exigences en matière de lutte contre le blanchiment d'argent et le financement du terrorisme et de s'enregistrer auprès des régulateurs financiers avant d'entamer une quelconque activité. Voir www.coinfirm.com/blog/south-korea-crypto-regulations.

[152] Un bon exemple est le groupe de travail sur les logiciels rançonneurs États-Unis-République de Corée, établi en septembre 2021.

[153] Voir annexe 67.

[154] Deux experts émettent des objections concernant l'intitulé de la présente section, soulignant qu'il devrait être conforme au libellé de la résolution du Conseil de sécurité (« conséquences » négatives des sanctions), car l'omission de ce terme pourrait avoir pour effet de compliquer l'exposé des motifs et la qualification des éléments de preuve crédibles ; ils proposent l'emploi de ce libellé dans le rapport du Groupe d'experts et dans sa correspondance.

[155] Deux experts notent l'incapacité du Groupe d'experts de parvenir à un consensus sur les conséquences humanitaires des sanctions de l'ONU et déplorent l'absence d'analyse de la question dans le présent rapport.

des femmes, des enfants et d'autres groupes vulnérables à de la nourriture et à des soins de santé suffisants[156].

162. Les organismes des Nations Unies notent qu'en 2022, plus de 11 millions de personnes en République populaire démocratique de Corée sont dans le besoin (contre un peu plus de 10 millions en 2019), tandis que 5 millions n'ont pas accès à l'eau, à l'assainissement et à l'hygiène et plus de 41 % d'entre elles sont sous-alimentées : le pays a le quatrième taux de malnutrition le plus élevé au monde[157].

163. Bien qu'il soit difficile de le dire avec précision, le Groupe d'experts avait précédemment conclu qu'il ne faisait guère de doute que les sanctions de l'ONU avaient influé de manière involontaire sur la situation humanitaire et le droit au développement, même si l'influence relative des sanctions avait probablement diminué en 2020[158].

164. Tout en s'attachant à analyser l'influence des sanctions de l'ONU, le Groupe d'experts note que la situation humanitaire déplorable en République populaire démocratique de Corée résulte probablement d'un certain nombre de facteurs tels que le manque de ressources et de capitaux, la faible productivité, la priorisation de l'industrie lourde et des besoins militaires, qui éclipsent le secteur de la consommation, le processus décisionnel propre à la République populaire démocratique de Corée, la faillite du système de planification centralisé, la fréquence des calamités naturelles, l'autarcie, le manque de recettes d'exportation et d'importation, la fermeture des frontières du fait de la COVID-19 ainsi que l'impact des sanctions.

165. Il est difficile d'évaluer les effets directs sur la situation humanitaire de l'épidémie de COVID-19 (qualifiée en République populaire démocratique de Corée de « fièvre »), qui aurait commencé dans le pays en avril 2022. Elle aurait touché en juillet quelque 25 % de la population, mais très peu de cas mortels ont été signalés (certaines sources suspectent néanmoins une sous-évaluation des cas).

166. Avant la pandémie, le système médical en République populaire démocratique de Corée était déjà dans un piètre état, du fait d'un certain nombre de facteurs (voir par. 164) et le pays importait des produits médicaux en petites quantités (voir annexe 71), principalement par les filiales d'aide. Il est difficile de dissocier l'effet des sanctions de l'ONU de ces autres facteurs. Le Groupe d'expert a calculé qu'en 2020 et en 2021, avec la fermeture des frontières, les importations de produits médicaux de la République populaire démocratique de Corée liés à la COVID-19 se chiffraient à quelque 1,87 dollar par personne[159].

167. L'épidémie de COVID-19 semble avoir eu un effet limité sur l'économie, notamment sur le prix des aliments. Les prix du riz et du maïs ont continué d'augmenter en juillet, alors qu'ils baissent habituellement après la période de soudure[160, 161]. Une crise de grande ampleur ne semble pas s'être produite cependant. Des personnes se trouvant en République populaire démocratique de Corée attestent

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[156] Voir www.unicef.org/globalinsight/reports/sanctions-and-their-impact-children et https://koreapeacenow.org/wp-content/uploads/2019/10/human-costs-and-gendered-impact-of-sanctions-on-north-korea.pdf.

[157] Voir www.fao.org/documents/card/en/c/cc0639en et https://news.un.org/en/story/2019/05/1037831.

[158] S/2022/132, par. 188.

[159] Ce chiffre est calculé en fonction de la population de la République populaire démocratique de Corée et des données de l'ITC sur les importations du pays liées à la COVID-19 (voir annexe 71).

[160] Voir www.dailynk.com/english/recent-spike-rice-corn-prices-make-things-even-more-difficult-ordinary-north-koreans.

[161] Voir www.asiapress.org/rimjin-gang/2022/07/society-economy/market-research-2.

que le virus, bien que très contagieux, est d'une variété qui, dans la plupart des cas, ne provoque que quelques jours de fièvre et de toux[162].

Conséquences possibles sur les opérations d'assistance humanitaire

168. Dans l'ensemble, les livraisons d'aide humanitaire au cours de la période considérée ont peu changé ; le Comité a accordé 4 nouvelles dérogations et 13 prolongations de l'aide humanitaire. Selon des sources de l'ONU, 90 % des cargaisons humanitaires destinées au pays restent stockées à la frontière. Un certain nombre de conteneurs de fournitures médicales et humanitaires ont été livrés par voie ferroviaire en avril 2022 et mis en quarantaine pendant trois mois dans l'installation de désinfection d'Uiju (voir par. 97 et fig. XLI). D'après des articles parus dans les média à la mi-mai, trois avions-cargos de la République populaire démocratique de Corée ont livré des fournitures médicales de l'étranger, liées à l'épidémie de COVID-19 dans le pays. Certains conteneurs, acheminés en 2021, ont été déchargés à la fin du printemps 2022[163]. La plupart des organisations n'ont pas repris les efforts de mise en œuvre et de surveillance, bien que certaines maintiennent une présence, au moyen du personnel recruté localement et des télécommunications.

169. Comme indiqué dans leurs réponses dans l'enquête menée par le Groupe d'experts, les organisations humanitaires ne sont pas optimistes quant à la possibilité de reprendre leurs opérations en République populaire démocratique de Corée, même en cas de réouverture des frontières. La longueur des procédures de dérogation nécessaires, le désengagement face aux risques, l'hésitation des donateurs et en particulier l'absence de réseau bancaire continuent d'être des problèmes majeurs[164].

170. Parmi les suggestions faites par les organisations lors de l'enquête :

a) l'octroi de dérogations permanentes aux organisations humanitaires ;

b) la préparation de « lettres d'approbation » par le Comité ou par le Conseil de sécurité pour faciliter l'application d'une dérogation ;

c) la préparation de directives, concernant les dérogations, qui seraient publiées et accessibles en coréen, notamment en nord-coréen et en anglais ;

d) un programme de dérogation concernant des exportations choisies faisant actuellement l'objet de sanctions, dont les bénéfices pourraient servir à financer des fournitures humanitaires.

Recommandations

171. **Le Groupe d'experts recommande de nouveau que le Comité envisage des contacts plus actifs avec la société civile sur le plan de la fourniture d'une assistance humanitaire à la République populaire démocratique de Corée, pour**

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[162] Une organisation non gouvernementale suggère cependant : « même si le nombre de cas a baissé réellement, la [République populaire démocratique de Corée] est encore exposée à une résurgence de la maladie. Les experts publics ont noté que le système de soins de santé du pays n'était pas équipé pour faire face à une épidémie de COVID-19.

[163] S/2022/132, par. 191.

[164] Le Groupe d'experts a été informé qu'en tant que solution provisoire ponctuelle à ce problème, l'ONU avait conclu un accord avec le Gouvernement de la République populaire démocratique de Corée en vue du transfert d'un montant au moyen du compte de la Mission permanente de la République populaire démocratique de Corée, permettant au Gouvernement de créditer les comptes détenus par des organismes des Nations Unies en République populaire démocratique de Corée, sans créer de relation bancaire correspondante avec une banque de ce pays. L'argent servira uniquement à des activités d'assistance humanitaire, conformément à l'exception relative au gel des actifs imposée à une banque de la République populaire démocratique de Corée.

aider à justifier ses futures prises de décision et à mieux comprendre la situation humanitaire.

172. **Le Groupe d'experts note les dispositions récentes concernant le transfert de fonds à des organismes humanitaires des Nations Unies en République populaire démocratique de Corée (voir note de bas de page 164) mais réaffirme l'urgence de rétablir un réseau bancaire plus durable.**

173. **Le Groupe d'experts apprécie les exposés semestriels faits par les organismes compétents des Nations Unies sur les effets involontaires des sanctions et recommande que le Comité poursuive cette pratique.**

174. **Le Groupe d'experts recommande que le Conseil de sécurité continue de se pencher sur les questions et les procédures qui sont à même d'atténuer les éventuels conséquences négatives involontaires des sanctions sur la population civile de la République populaire démocratique de Corée et sur les opérations d'aide humanitaire, pour aider la population vulnérable du pays et surmonter les conséquences de la pandémie de COVID-19.**

175. **Le Groupe d'experts recommande que le Comité et d'autres parties prenantes concernées envisagent l'idée d'obtenir des dérogations concernant des exportations choisies, faisant actuellement l'objet de sanctions, dont les bénéfices pourraient servir à financer des fournitures humanitaires.**

VII. Rapports nationaux de mise en œuvre

État de la situation concernant les rapports des États Membres sur l'application des résolutions pertinentes

176. Au 27 juillet 2022, 66 États Membres avaient présenté des rapports sur l'application du paragraphe 8 de la résolution 2397 (2017), 81 sur celle du paragraphe 17 de la résolution 2397 (2017), 95 sur celle de la résolution 2375 (2017), 90 sur celle du paragraphe 17 de la résolution 2371 (2017), 107 sur celle de la résolution 2321 (2016) et 115 sur celle de la résolution 2270 (2016). Le Groupe d'experts note que le nombre d'États Membres qui n'ont pas établi de rapport sur la résolution 2397 (2017) (127) demeure important.

VIII. Recommandations

177. Pour une liste intégrée des recommandations, voir l'annexe 72.

Annex 1: Excerpt of IAEA Director General's Introductory Statement to the Board of Governors (6 June 2022)

At the Nuclear Test Site at Punggye-ri we have observed indications that one of the adits has been reopened, possibly in preparation for a nuclear test. The conduct of a nuclear test would contravene UN Security Council resolutions and would be a cause for serious concern.

At the Yongbyon site, activities are continuing. There are ongoing indications consistent with the operation of the 5MW(e) reactor. There are indications of activity at the Radiochemical Laboratory that are consistent with those observed during possible waste treatment or maintenance activities in the past. A roof has been installed on the annex to the reported Centrifuge Enrichment Facility, so the annex is now externally complete. Near the light water reactor (LWR), we have observed that the new building that had been under construction since April 2021 has been completed, and construction has started on two adjacent buildings. At the 50MW(e) reactor, construction of which stopped in 1994, we have observed the dismantling of buildings and the removal of some material, likely for re-use in other construction projects. There are ongoing indications of activities at the Kangson complex and the Pyongsan Mine and Concentration Plant.

The continuation of the DPRK's nuclear programme is a clear violation of relevant UN Security Council resolutions and is deeply regrettable. I call upon the DPRK to comply fully with its obligations under relevant UN Security Council resolutions, to cooperate promptly with the Agency in the full and effective implementation of its NPT Safeguards Agreement and to resolve all outstanding issues, especially those that have arisen during the absence of Agency inspectors from the country. The Agency continues to maintain its enhanced readiness to play its essential role in verifying the DPRK's nuclear programme.

Source: IAEA, IAEA Director General's Introductory Statement to the Board of Governors (6 June 2022) https://www.iaea.org/newscenter/statements/iaea-director-generals-introductory-statement-to-the-board-of-governors-6-june-2022 (Accessed on 1 July 2022).

Annex 2: KCNA reporting of Kim Jong Un's January 2021 speech at 8th Party Congress (excerpt related to nuclear and military developments)

Great Programme for Struggle Leading Korean-style Socialist Construction to Fresh Victory on Report Made by Supreme Leader Kim Jong Un at Eighth Congress of WPK

Date: 09/01/2021 | Source: Minju Choson KCNA

The report detailed the historic course of masterminding a great revolutionary turn for possessing the completely new nuclear capabilities aimed at attaining the goal of modernization of the nuclear force.

Under the direct guidance of the Party Central Committee, intermediate-range and intercontinental ballistic rockets of Hwasongpho series and submarine-launched and ground-based ballistic rockets of Pukkuksong series were manufactured in our own style to meet their unique operational missions. This gave a clearer description of the status of our state as a nuclear weapons state and enabled it to bolster its powerful and reliable strategic deterrent for coping with any threat by providing a perfect nuclear shield.

In the period under review the already accumulated nuclear technology developed to such a high degree as to <u>miniaturize, lighten and standardize nuclear weapons and to make them tactical ones and to complete the development of a super-large hydrogen bomb</u>. By succeeding in the test-fire of ICBM Hwasongpho-15 on November 29, 2017, the Party Central Committee declared with pride to the world the accomplishment of the historic cause of building the national nuclear force and the cause of building a rocket power.

The report reviewed the fact that new cutting-edge weapon systems were developed in the sector of national defence science one after another to cope with the enemy's desperate arms buildup, thus making our state's superiority in military technology an irreversible one and putting its war deterrent and capability of fighting a war on the highest level.

The national defence science sector developed the super-large MLRS, a super-power attack weapon the world's weaponry field had never known, and <u>proceeded to develop ultra-modern tactical nuclear weapons including new-type tactical rockets and intermediate-range cruise missiles</u> whose conventional warheads are the most powerful in the world.

<u>I</u>t is necessary to develop the nuclear technology to a higher level and <u>make nuclear weapons smaller and lighter for more tactical uses. This will make it possible to develop tactical nuclear weapons to be used as various means according to the purposes of operational duty and targets of strike in modern warfare, and continuously push ahead with the production of super-sized nuclear warheads</u>. In this way we will be able to thoroughly contain, control and handle on our own initiative various military threats on the Korean peninsula, which are inevitably accompanied the nuclear threat.

Source: Minju Choson KCNA (in bold and underlined by the Panel).

Annex 3: Activities at Punggye-ri nuclear test site (41° 16′ 35″ N 129° 05′ 18″ E)

Background

The DPRK has conducted six nuclear tests in Punggye-ri test site since October 2006. The first nuclear test was conducted at Tunnel 1 (East portal) and the subsequent five tests were held at Tunnel 2 (North portal) between May 2009 and September 2017. Tunnel 3 (South portal) and Tunnel 4 (West portal) have not been used for any nuclear weapons test and Tunnel 3 appears to have two entrances, primary and secondary.

In April 2018, in connection with the US-DPRK Summit in Singapore, Kim Jong Un said "***no nuclear test and intermediate-range and inter-continental ballistic rocket test-fire are necessary for the DPRK now…the mission of the northern nuclear test ground has thus come to an end***" and announced that the DPRK will dismantle the nuclear test site during the Third Plenary Meeting of the Seventh Central Committee of the Workers' Party of Korea. [1]

On 24 May 2018, following the announcement, the DPRK held a ceremony for the dismantling of the Punggye-ri nuclear test site inviting foreign journalists, but without international inspectors. DPRK demolished all tunnels including Tunnel 2, Tunnel 3 and Tunnel 4, except for Tunnel 1, which had been already abandoned by DPRK. [2]

In January 2022, DPRK announced that they would "***reconsider in an overall scale the trust-building measures…and to promptly examine the issue of restarting all temporally-suspended activities***", during the Political Bureau of the Central Committee of the Workers' Party of Korea.[3] The announcement appears to imply the resumption of ICBM and nuclear tests.

This annex shows the following activities at the nuclear test site by the Panel's satellite imagery analysis.

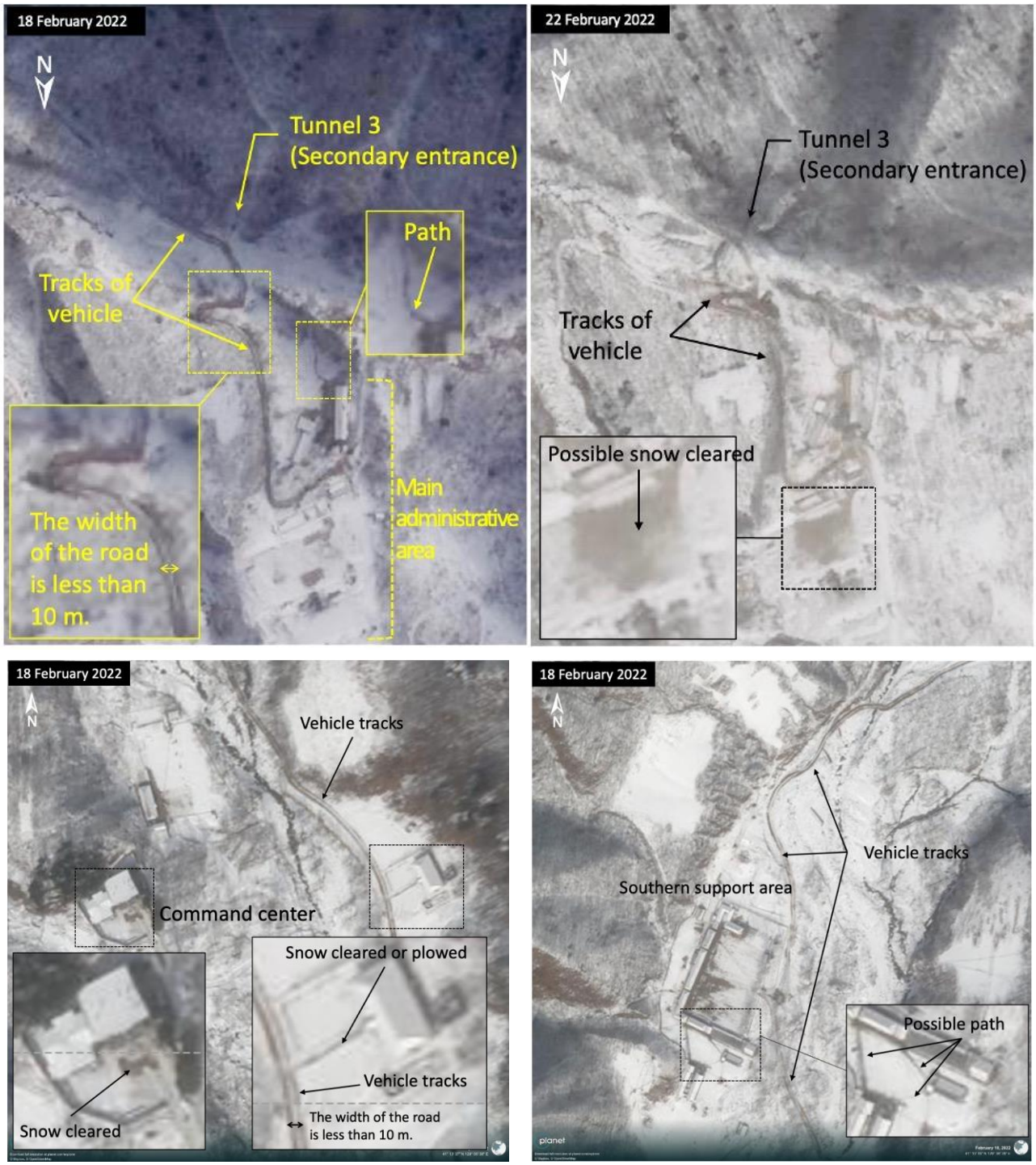
Annex 3.1 Increased tracks of the vehicles across Punggye-ri test site
Annex 3.2 Construction of a new building at Tunnel 3
Annex 3.3 Observation of structure or possible entrance to Tunnel 3
Annex 3.4 Piles of soil from excavation at Tunnel 3
Annex 3.5 Road leveling and stream bed reconstruction at Tunnel 3
Annex 3.6 Increased construction of new buildings at Tunnel 3
Annex 3.7 Cables at the newly developed entrance to Tunnel 3
Annex 3.8 Renovation of the main administrative area
Annex 3.9 Several vehicles' activities
Annex 3.10 New activities near Tunnel 4

[1] Third Plenary Meeting of Seventh C.C., WPK Held in Presence of Kim Jong Un (21/04/2018), https://kcnawatch.org/newstream/1528032553-97436392/third-plenary-meeting-of-seventh-c-c-wpk-held-in-presence-of-kim-jong-un/?t=1657409180710.

[2] CNN reporters who had witnessed the destruction of the site reported that the DPRK officials told them that the Tunnel 1 had been already shut down. See CNN, North Korea Blows Up Tunnels at the Punggye-ri Nuclear Test Site, 25 May 25 2018; Katshuhisa Furukawa, "Developments at the DPRK's Punggye-Ri Nuclear Weapon since December 2021", *Open Nuclear Network*, 28 March 2022, https://oneearthfuture.org/file/2857/download?token=lnoDS97H.

[3] 6th Political Bureau Meeting of 8th C.C., WPK Held (20/01/2022), https://kcnawatch.org/newstream/1642631520-928202842/6th-political-bureau-meeting-of-8th-c-c-wpk-held.

Annex 3.1: Increased tracks of the vehicles across Punggye-ri test site (Tunnel 3, Command center, Southern support area)

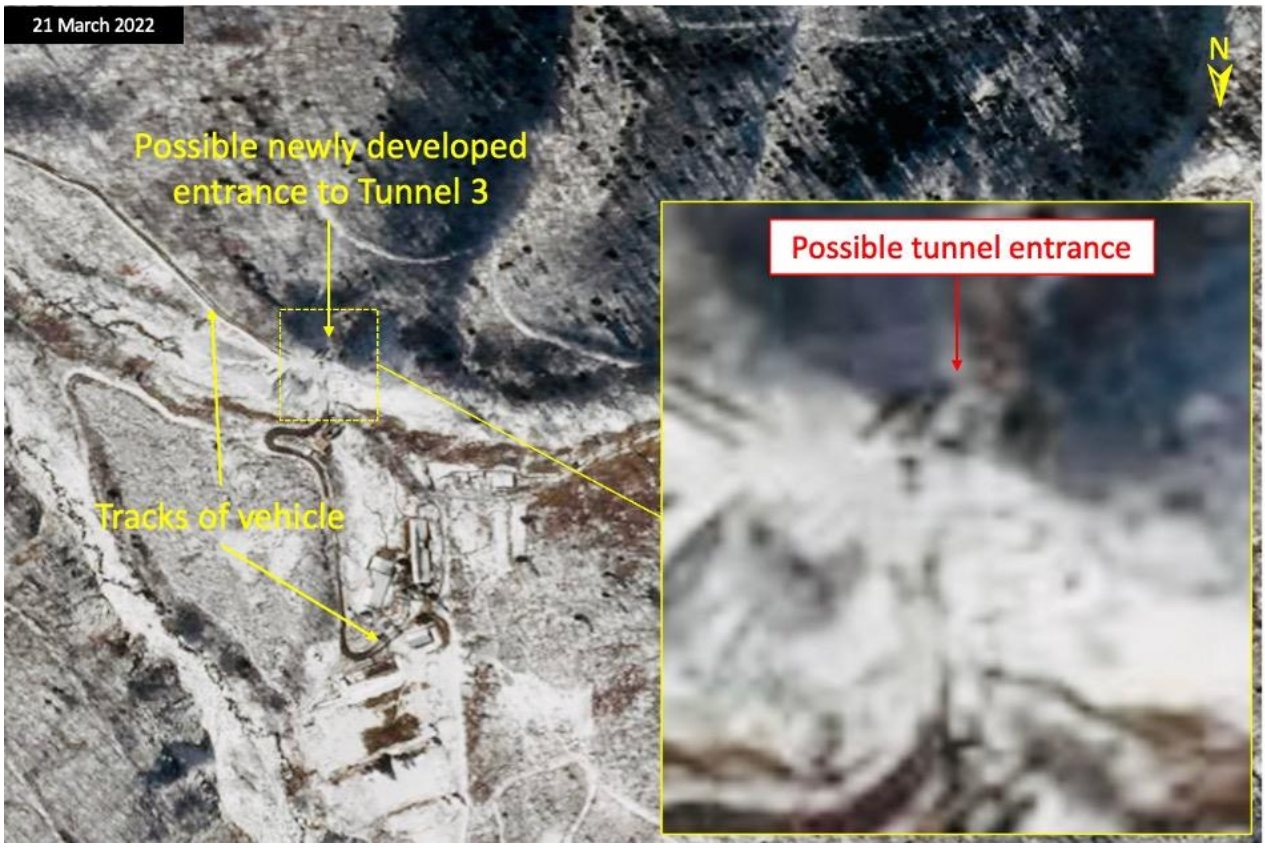


Source: Planet Labs Inc., 18 February 2022, 22 February 2022.

Annex 3.2: Construction of a new building at Tunnel 3

Source: Planet Labs Inc., 22 February 2022, 6 March 2022.

Annex 3.3: Observation of structure or possible entrance to Tunnel 3



Source: Planet Labs Inc., 21 March 2022.

Annex 3.4: Piles of soil from excavation at Tunnel 3

Source: Planet Labs Inc., 31 March 2022.

Annex 3.5: Road leveling and stream bed reconstruction at Tunnel 3

Source: Planet Labs Inc., 3 April 2022, 25 April 2022; Google Earth Pro, 4 May 2022.

Annex 3.6: Increased construction of new buildings at Tunnel 3

Source: Planet Labs Inc., 6 April 2022, 11 April 2022, 25 April 2022, 17 May 2022.

Annex 3.7: Cables at the newly developed entrance to Tunnel 3

Source: Google Earth Pro, 4 May 2022.

Annex 3.8: Renovation of the main administrative area

Source: Planet Labs Inc., 6 March 2022, 9 March 2022, 25 April 2022, 18 May 2022, 29 June 2022.

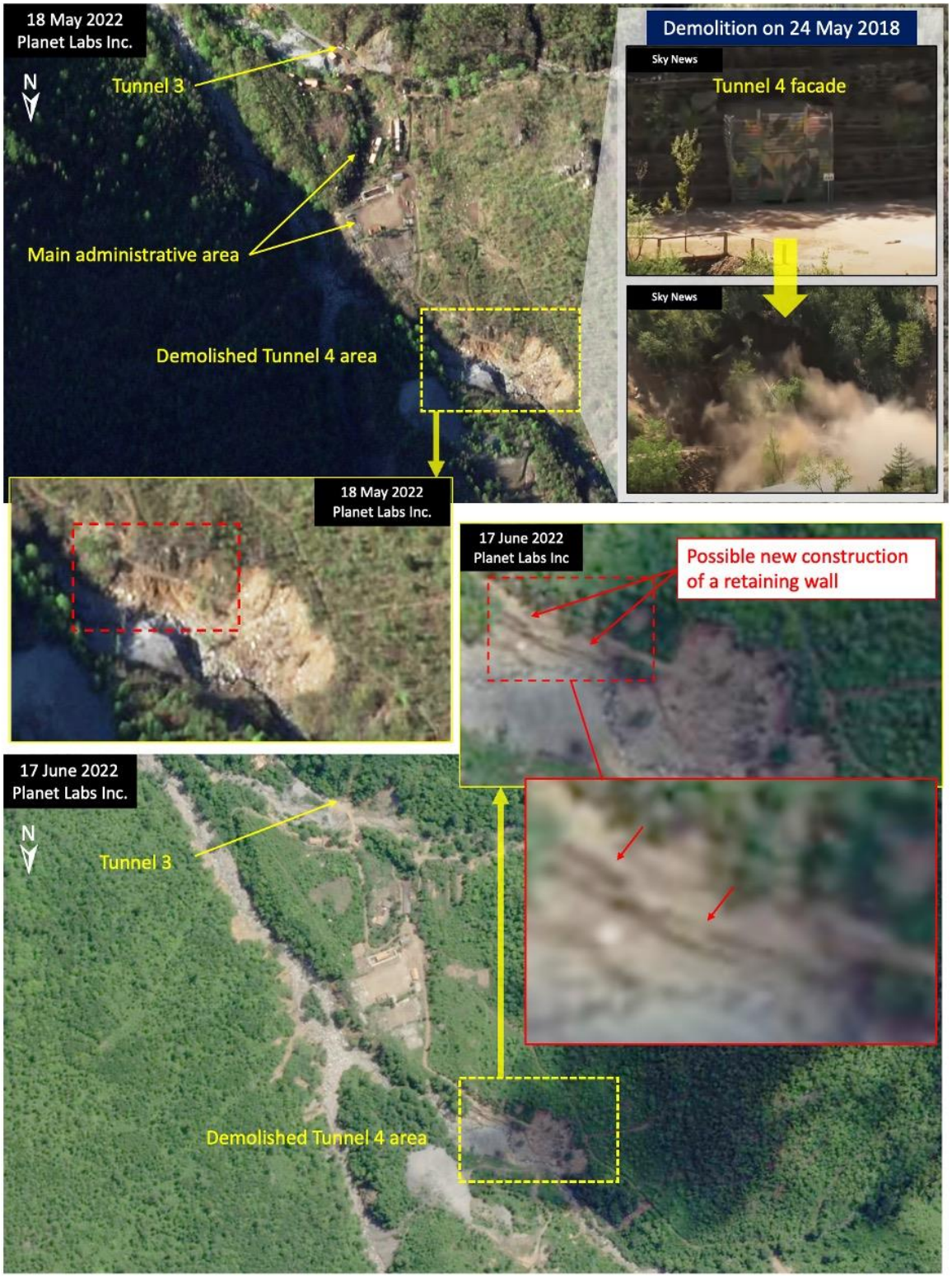
Annex 3.9: Several vehicles' activities

Source: Planet Labs Inc., 5 April 2022, 6 April 2022.

Source: Planet Labs Inc., 9 May 2022, 10 May 2022.

Source: Planet Labs Inc., 4 May 2022.

Annex 3.10: New activities near Tunnel 4



Source: Planet Labs Inc., 18 May 2022, 17 June 2022; Sky News.

Annex 4: Construction activities in the southern area of the LWR (39°47′39″N125°45′18″E)

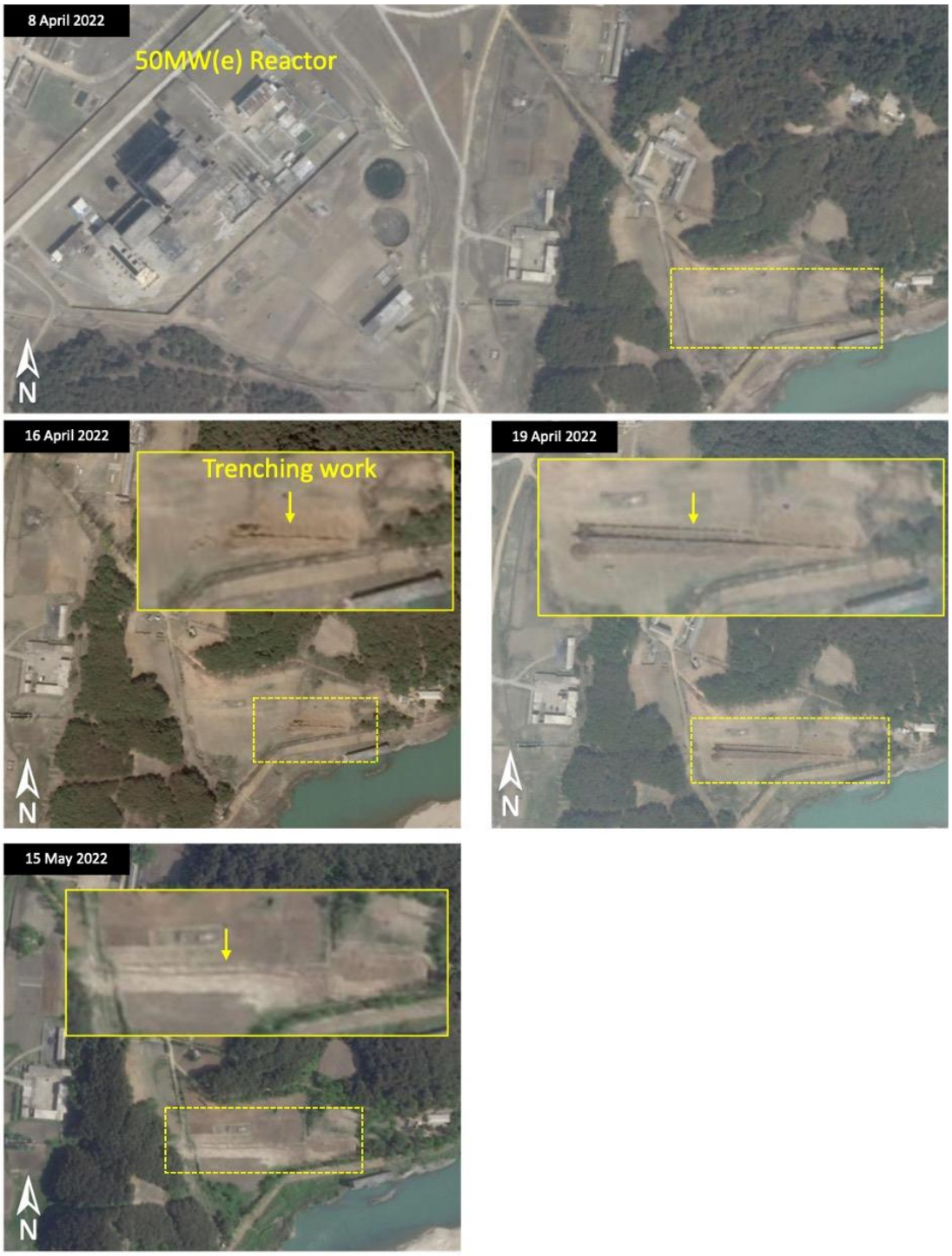
Source: Planet Labs Inc., 3 March 2022, 8 April 2022, 16 April 2022, 28 May 2022, 5 July 2022.

Annex 5: Vehicle activities and cooling water discharge at 5MW(e) reactor (39°47′51″N125°45′20″E)

Source: Planet Labs Inc., 6 April 2022, 27 April 2022, 28 May 2022.

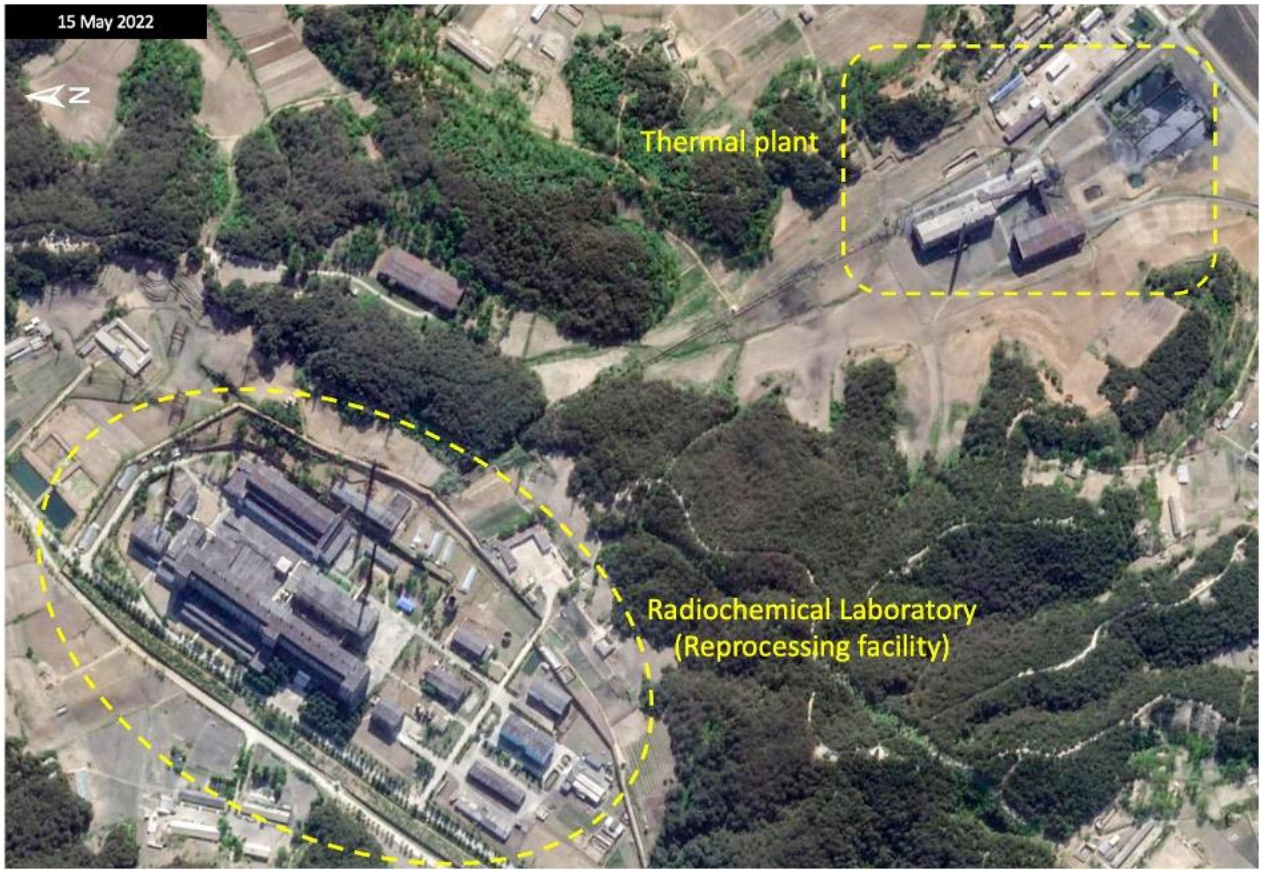
Annex 6: 50MW(e) reactor (39°47′20″N125°45′46″E)

Source: Planet Labs Inc., 8 April 2022, 15 May 2022, 5 July 2022.



Source: Planet Labs Inc., 8 April 2022, 16 April 2022, 19 April 2022, 15 May 2022.

Annex 7: Radiochemical Laboratory and Coal-fired thermal plant (39°46′50″N125°45′08″E, 39°46′33″N125°45′27″E)

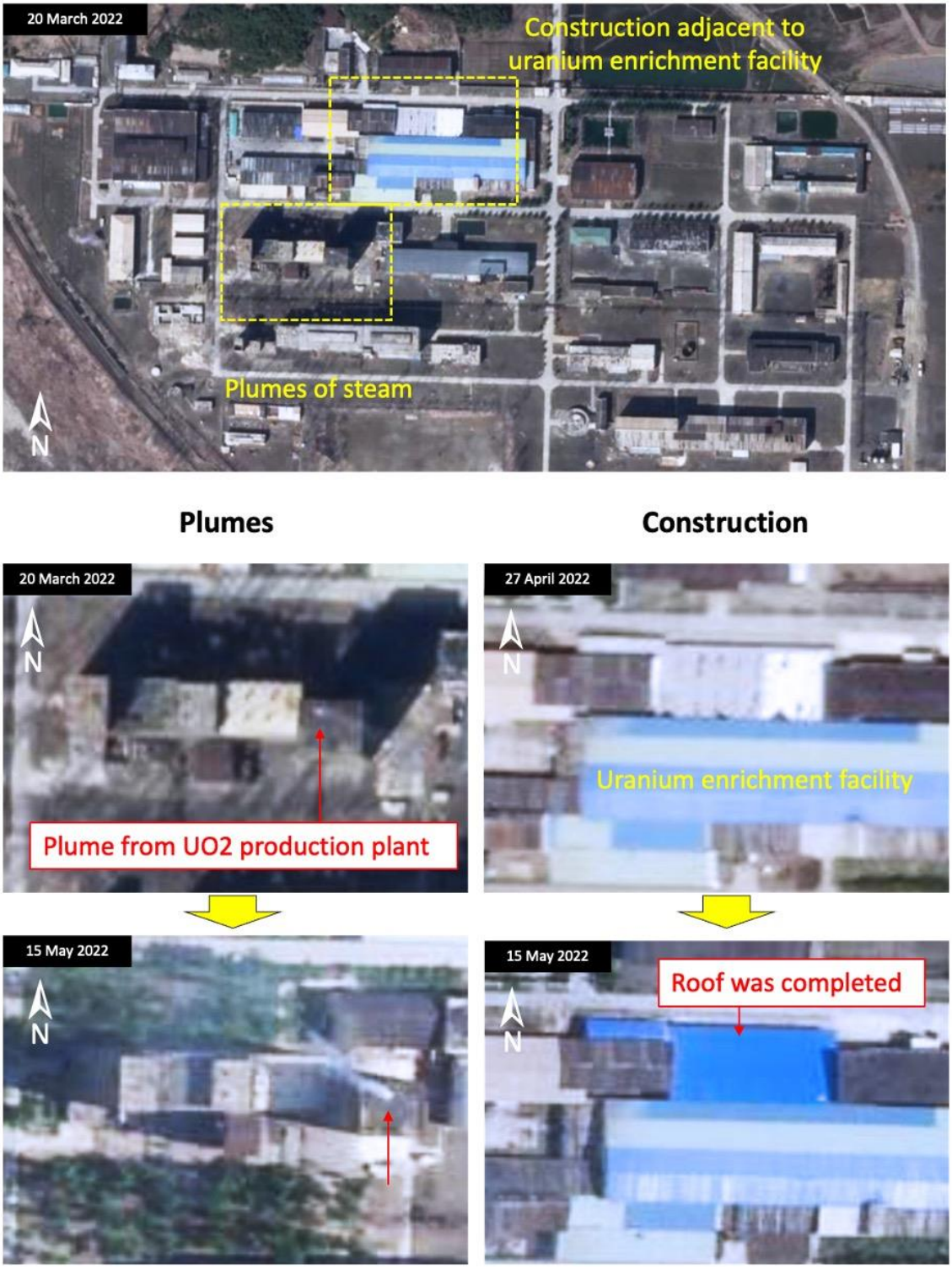


Source: Planet Labs Inc., 15 May 2022.

Source: Google Earth Pro, 9 May 2022; Planet Labs Inc., 5 July 2022.

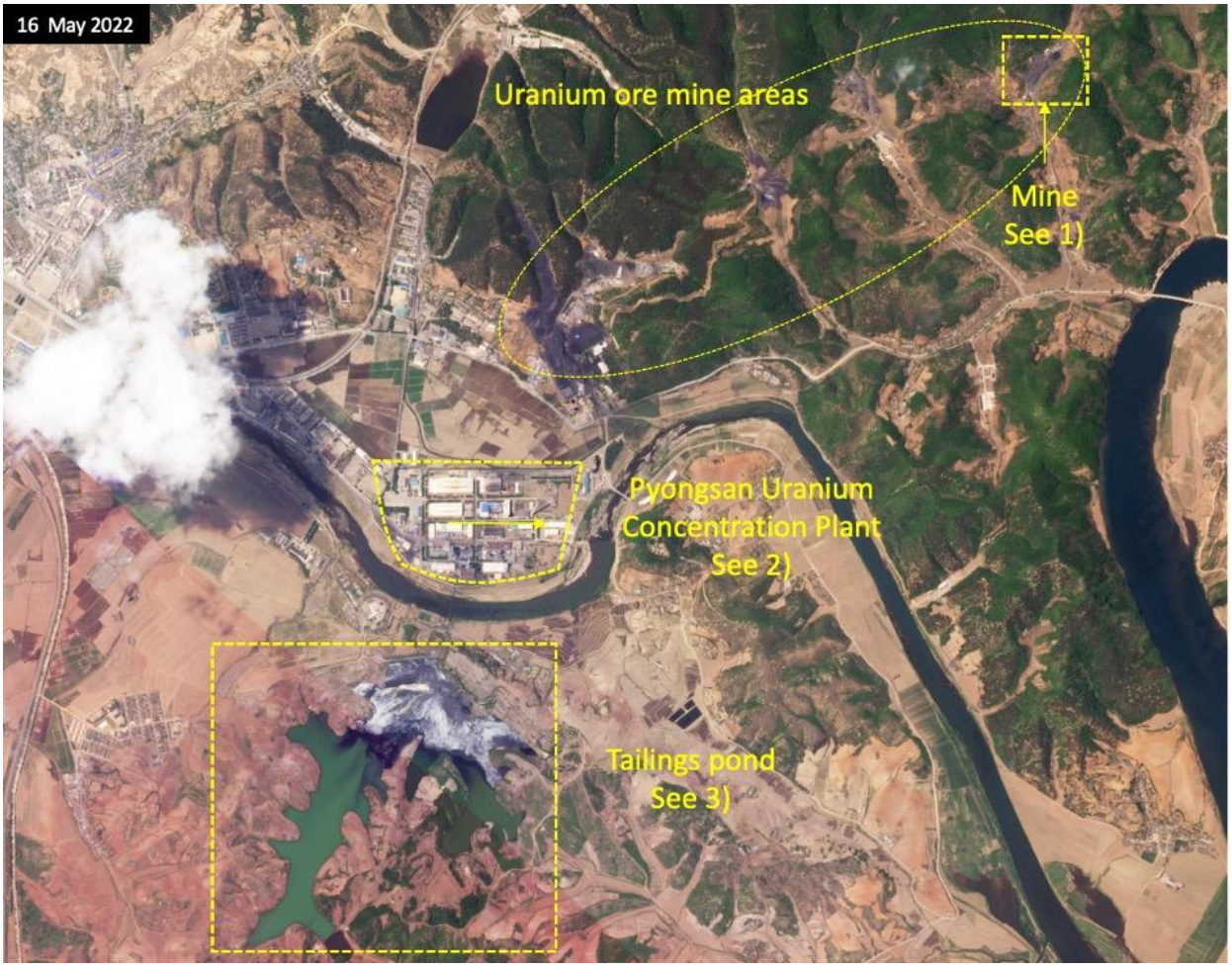
Source: Planet Labs Inc., 3 March 2022, 28 May 2022.

Annex 8: Activities at the Yongbyon Centrifuge Facility (39°46′15″N125°44′57″E)



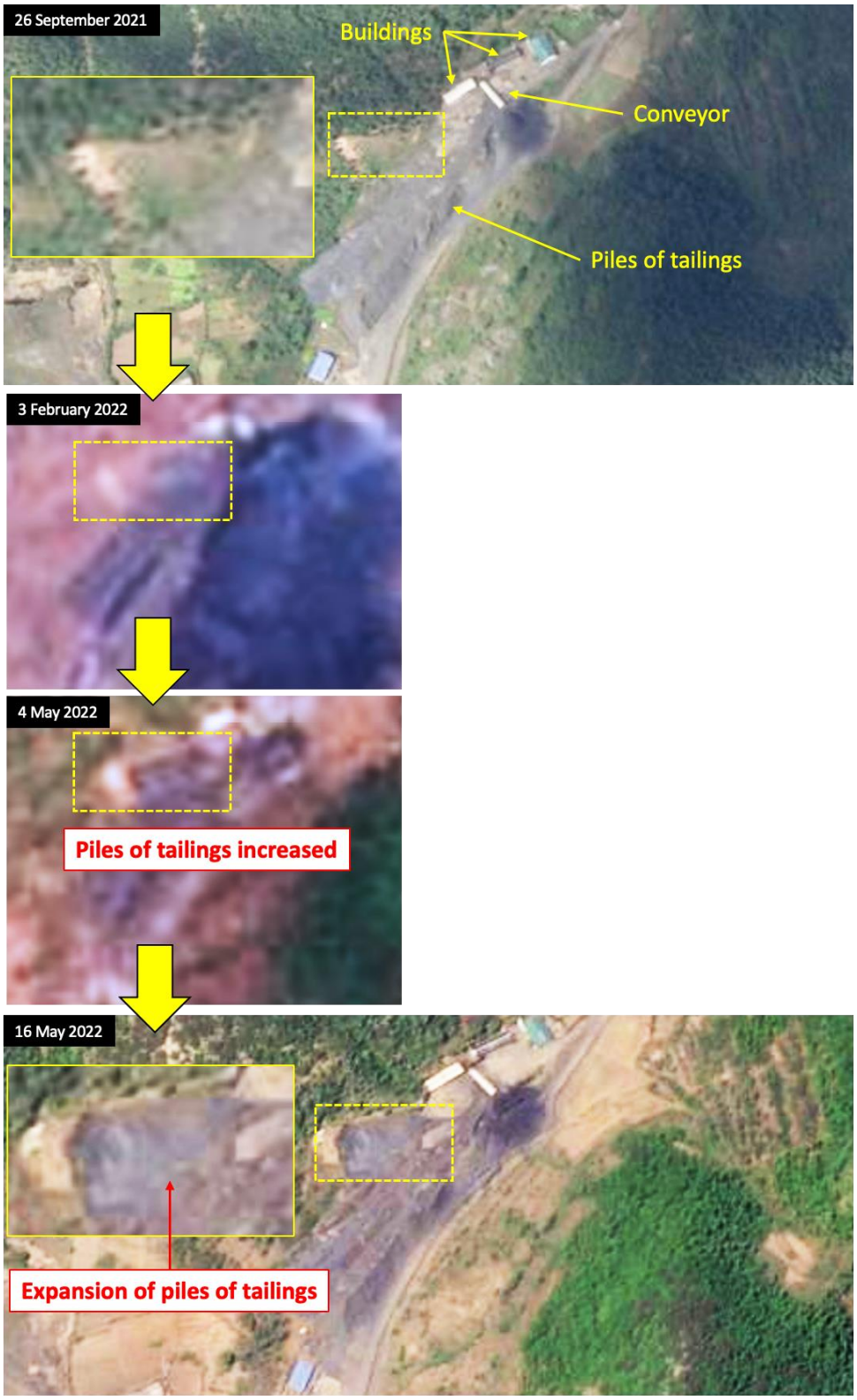
Source: Planet Labs Inc., 20 March 2022, 27 April 2022, 15 May 2022.

Annex 9: Activities at Pyongsan Uranium Mine and Concentration Plant (Location of the possible yellowcake production building at 38°19′04″N126°25′54″E)



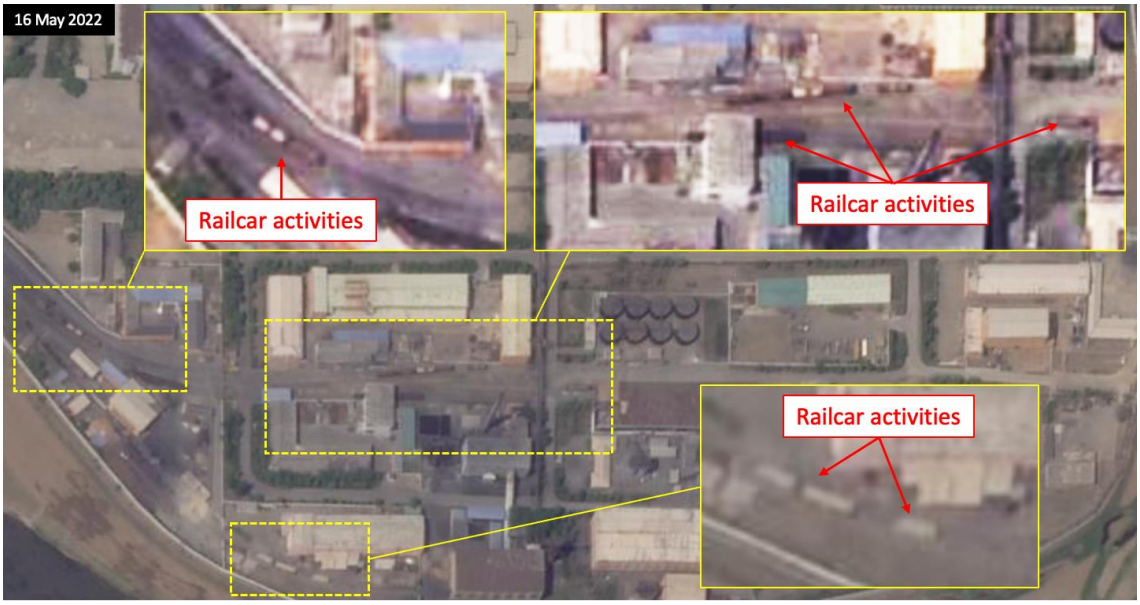
Source: Planet Labs Inc., 16 May 2022.

1) Expansion of the piles of tailings at the mine (38° 19′ 58″ N 126° 27′ 21″ E)



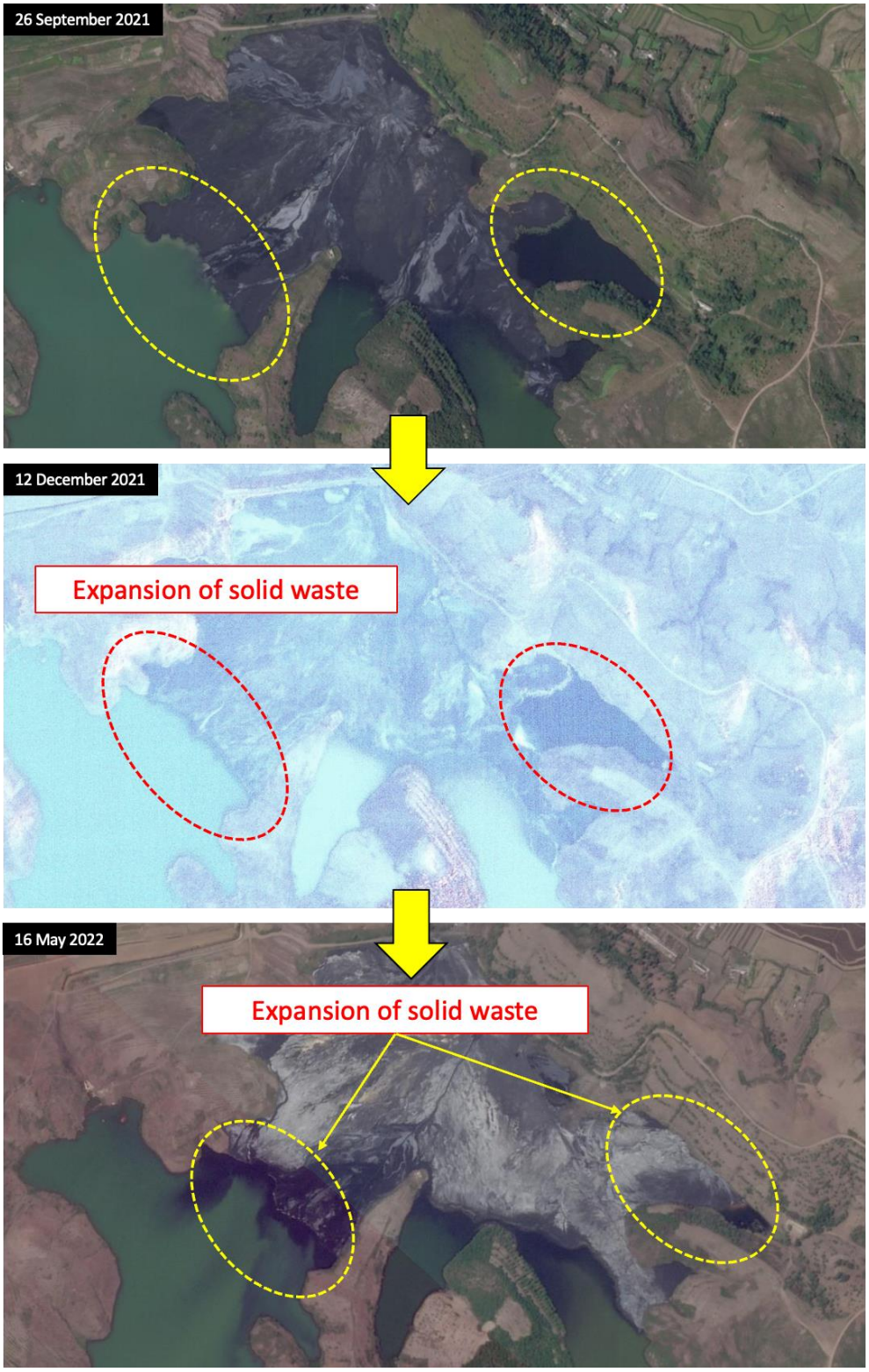
Source: Planet Labs Inc., 26 September 2021, 3 February 2022, 4 May 2022, 16 May 2022.

2) Railcar activities at Pyongsan Uranium Concentration Plant (38° 19′ 03″ N 126° 25′ 55″ E)



Source: Planet Labs Inc., 16 May 2022, 21 May 2022.

3) Tailings pond of Pyongsan Uranium Concentration Plant (38° 18′ 40″ N 126° 25′ 46″ E)

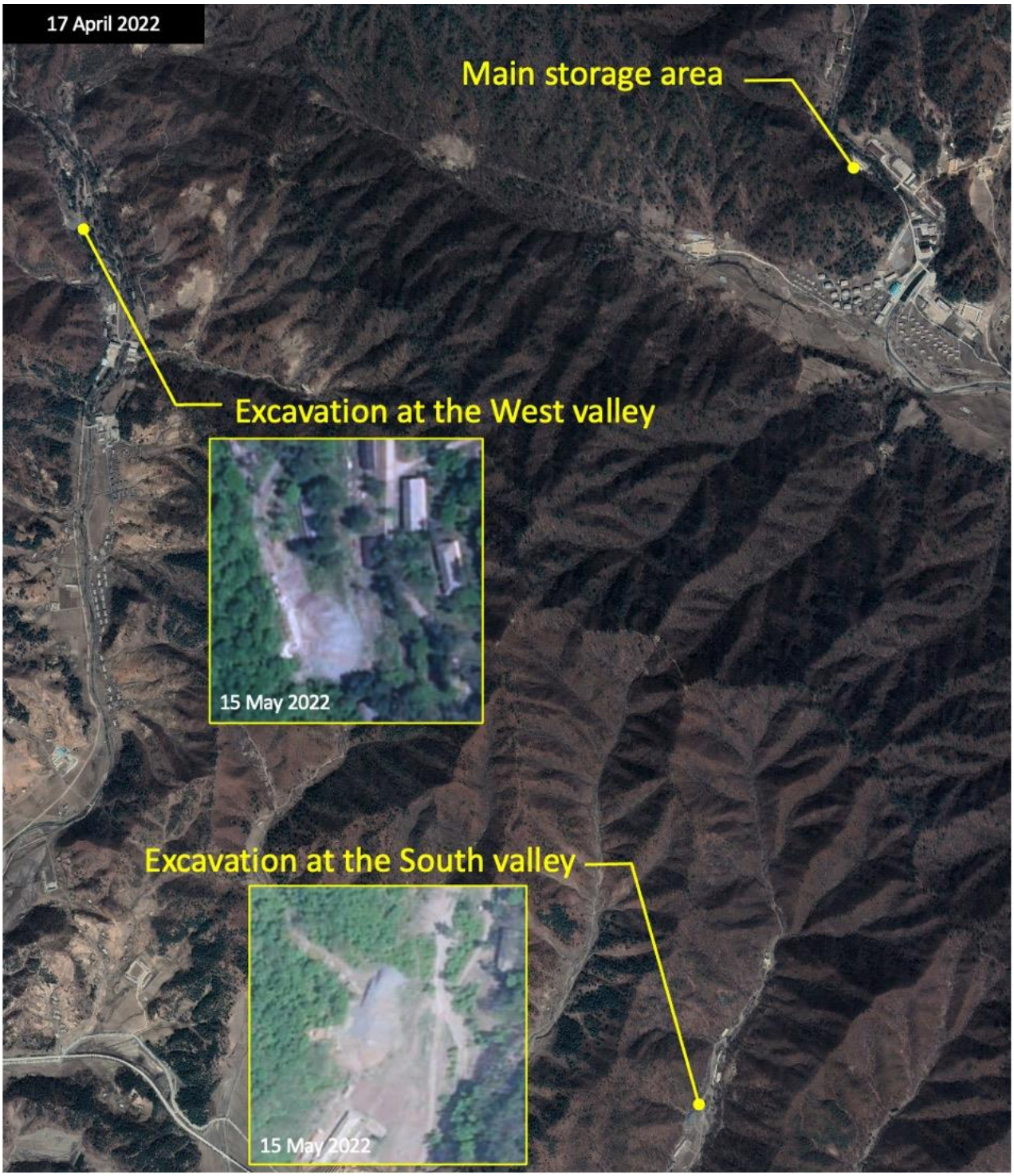


Source: Planet Labs Inc., 26 September 2021, 12 December 2021, 16 May 2022.

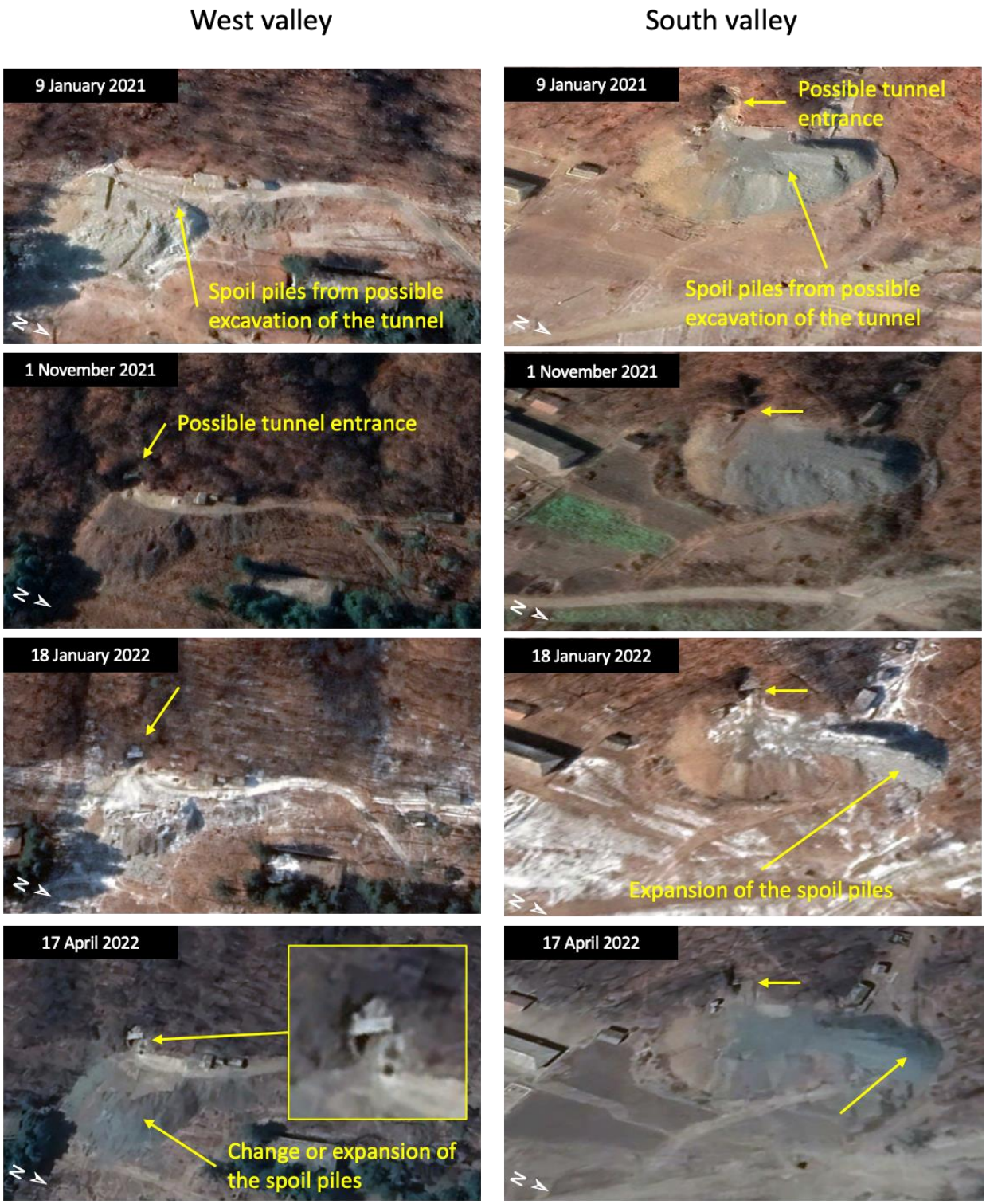
Annex 10: Activities at Kangson (38° 57′ 26″ N 125° 36′ 43″ E)

Source: Planet Labs Inc., 6 March 2022, 3 April 2022, 21 May 2022.

Annex 11: Activities at Yongdoktong (40°00′01″N125°18′02″E, 40°01′45″N125°16′29″E)



Source: Google Earth Pro, 17 April 2022; Planet Labs Inc., 15 May 2022.



Source: Google Earth Pro, 9 January 2021, 1 November 2021, 18 January 2022, 17 April 2022.

Annex 12: Replies on Academic Exchanges with PUST

1) United Kingdom

A University in the UK replied that two students were registered in doctoral degrees in woman's and Reproductive Health and plant sciences, which were scheduled to end in 2023-2024. The University explained that both students were studying anticancer mechanisms and essential oils to suppress fungal pathogens respectively and their research topics fell within the provisions for medical research. They had been subject to review under ATAS (Academic Technology Approval System) which was required by the UK government policy as part of immigration requirements before being granted the right to study in the University (see figure 12-1).

2) Sweden

A University in Sweden replied that two students were admitted in Ph.D. courses on 30 June 2015 and 20 August 2015 and finished their courses on 5 September 2019 and 28 January 2020, respectively. Both have received funding from Erasmus Mundus Action 2 project LOTUS+. Prior to the Ph.D. studies, one student received a Master's degree at the University and the other obtained a Master's degree in genetics at PUST (see figure 12-1).

3) China

China replied to Panel's enquiries on following academic exchanges (see figure 12-3).

Research Institute 'A'

Student name	Period	Degree
XXXXXXXXX	December 2015 – September 2016	Joint Research in Agriculture and Life Science
XXXXXXXX	December 2015 – September 2016	Joint Research in Agriculture and Life Science

University 'B'

Student name	Period	Degree
XXXXXXXX XXXXXXXXX	August 2016 – June 2020	Master in Agriculture and Life Science
XXXXXXX XXXXXXX	September 2019 – present	Master in Agriculture and Life Science

University 'C'

Student name	Period	Degree
XXXXXXXXX XXXXXXXXXXX	October 2017 – October 2019	Joint Research in Agriculture and Life Science
XXXXXXXX XXXXXXXXXX	October 2019 – present	Ph.D. in Agriculture and Life Science

Figure 12-1: Reply from a University in UK

The Vice-Chancellor
[redacted]

[redacted]

Panel of Experts established pursuant to Security Council resolution 1874
United Nations Headquarters
New York, NY 10017
USA

19 May 2022

Dear Sirs,

RE: Pyongyang University of Science and Technology

I am writing in response to your letter dated 9th May 2022, reference: S/AC.49/2022/PE/OC.022, seeking details about students registered for study at [redacted].

There were four questions raised and these are addressed individually below:

(i) Have the named students from PUST participated in graduate studies at [redacted]?

I can confirm that the two named students are registered for postgraduate research study at the [redacted] as follows:

[redacted] – DPhil Women's and Reproductive Health, [redacted] Department of W&RH[1].

[redacted] – DPhil Plant Sciences, Department of Plant Sciences[2].

Both are scheduled to finish their studies in 2023-24.

(ii) How many PUST students or academics have studied at, or visited, the University since 2016?
(iii) Are there other DPRK students or academics currently studying or involved in research at the University?

Our records indicate that these are the only North Korean students who have been accepted for study at [redacted]. They both commenced study in 2019 and were the first from North Korea to do so.

Our central records do not show any North Korean academic as having been a visitor at the University, or to be currently visiting.

(iv) Information on any preventive measures taken by the University to determine that any scientific or technical studies undertaken by any DPRK students or academics would not

[1] [redacted]
[2] [redacted]

2 [redacted]

contribute to the DPRK's proliferation-sensitive nuclear activities, ballistic missile-related or other WMD programmes.

The two students currently studying at the [redacted] were subject to additional review under the ATAS (Academic Technology Approval System), as required by UK government policy set by the FCDO, as part of immigration requirements before being granted the right to study in the UK at [redacted]. The ATAS[1] process provides a high level of government clearance for the research to proceed taking due account of potential applicability to matters of a sensitive nature.

The specific research topics for these two students would, we believe, fall within the provisions for medical research. [redacted] is studying anticancer mechanisms and [redacted] is researching essential oils that are the most effective to suppress fungal pathogens.

I hope that the information provided in this response adequately addresses the concerns raised by the Panel of Experts in this area. However, if any other information is required or further questions arise please contact the Registrar [redacted]

Yours sincerely,

[redacted]
VC's Executive Officer (Policy & Governance)

[1] The Academic Technology Approval Scheme (ATAS) applies to all international students and researchers (apart from exempt nationalities) who are subject to UK immigration control and are intending to study or research at postgraduate level in certain sensitive subjects. Academic Technology Approval Scheme (ATAS) - GOV.UK (www.gov.uk)

Source: The Panel.

Figure 12-2: Reply from a University in Sweden

Response from [redacted] University on Communication #26, UN Panel of Experts, Reference: S/AC.49/2022/PE/OC.26

1) Any confirmation of the information in Annex 1; have these named students from PUST participated in graduate studies of any sort at [redacted] University?

[redacted] was admitted as a PhD student on 2015-06-30 with a scholarship funding from the Erasmus Mundus Action 2 project LOTUS+.
Prior to that he had obtained a Master's degree within Natural Sciences at [redacted] University. He was active within the Department of Medical Biochemistry and Micro Biology and finished his PhD on 2019-09-05. The titel of the thesis was: [redacted]

[redacted] was admitted as a PhD student on 2015-08-20 with a scholarship funding from the Erasmus Mundus Action 2 project LOTUS+. Prior to that he had obtained a Master's degree within genetics at PUST as well as free standing courses at [redacted]. He finished his PhD on 2020-01-28. The title of the thesis was: [redacted]

2) Information on the current status of any academic exchange between [redacted] University and PUST. How many PUST students or academics have studied at or visited the University since 2016?

The academic exchange ended in 2014 (when Erasmus Mundus project LOTIS+ was terminated). No records of any number of students or visits carried out.

3) Are there other DPRK students or academics currently studying or involved in research at the University, which could be considered as falling under the paragraph 11 of the resolution 2321 (2016) mentioned above? If so, please provide names, any academic affiliation in DPRK, course and thesis titles, the period of affiliation with the University and details about these individuals' source(s) of income whilst in Sweden, including sponsorship or scholarships (if applicable);

No records of nationality available.
No agreements of academic exchange reported.

4) Information on any preventive measures taken by the University to determine that any scientific or technical studies undertaken by any DPRK students or academics would not contribute to the DPRK's proliferation-sensitive nuclear activities, ballistic missile-related or other WMD programmes.

[redacted] University observes the Swedish law and security regulations. Matters in need of review are handled by the university's Division for Security.

Source: The Panel.

Figure 12-3: Reply from China

7. Academic exchange (OC. 27-30)

China has always been strictly implementing the relevant provisions of the Security Council resolutions related to academic exchanges. China performs strict control over the courses for the DPRK students studying in China, and takes necessary measures to ensure that the sensitive areas and information prohibited by the resolutions are untouched. If there is any conclusive evidence showing the DPRK students collecting sensitive technical information, please kindly provide it to the Chinese side for necessary investigation.

5

It should be pointed out that the Chinese Mission to the United Nations is the only appropriate channel the Panel should engage with when doing such investigations. The Panel should refrain from sending letters to them directly.

Source: The Panel.

Annex 13:

13.1. KCNA reporting on Kim Jong Un watching test-firing of new-type tactical guided weapon
13.2. KCNA reporting on Kim Jong Un *giving a written order to conduct the test-launch of Hwasongpho-17* (Hwasong-17) and
13.3. KCNA reporting on Kim Jong Un's January speech at 8th Party Congress (excerpt related to military developments)

Annex 13.1:

President of State Affairs Kim Jong Un watches test-firing of new-type tactical guided weapon

Date: 17/04/2022 | Source: Voice of Korea (EN) |

The respected Kim Jong Un, General Secretary of the Workers' Party of Korea, President of the State Affairs of the Democratic People's Republic of Korea and Supreme Commander of the Armed Forces of the DPRK, watched the test-firing of a new-type tactical guided weapon.

He was accompanied by Kim Jong Sik, Deputy Department Director of the Central Committee of the WPK.

The test-firing was seen by commanding personnel of the Ministry of National Defence of the DPRK and the commanders of the large combined units of the Korean People's Army.

The new-type tactical guided weapon system developed under the special concern of the Party Central Committee is of great significance in radically increasing the fire striking power of the long-range artillery units on the front and strengthening the effectiveness of tactical nuclear operation of the DPRK and diversification of the firepower task.

The test-firing proved successful.

Kim Jong Un highly estimated the successes made one after another by the defence science research institutions in attaining the pivotal goals for war deterrent advanced at the Eighth Congress of the WPK and warmly congratulated them in the name of the Party Central Committee.

Clarifying the future plan of the Party Central Committee for increasing the defence capabilities, he gave important instructions on further strengthening the defence capacity and nuclear combat forces of the country.

Source: KCNA available at https://kcnawatch.org/newstream/1650142847-935725828/president-of-state-affairs-kim-jong-un-watches-test-firing-of-new-type-tactical-guided-weapon/?t=1658076183497.

Annex 13.2:

Respected Comrade Kim Jong Un Issues Order for Test-launch of New Type ICBM

Date: 25/03/2022 | Source: KCNA.kp (En) |

Pyongyang, March 25 (KCNA) -- Kim Jong Un, general secretary of the Workers' Party of Korea, president of the State Affairs of the Democratic People's Republic of Korea (DPRK) and supreme commander of the armed forces of the DPRK, gave a written order to conduct the test-launch of Hwasongpho-17, a new type intercontinental ballistic missile of the DPRK strategic forces, on March 23, Juche 111 (2022)[4]. - www.kcna.kp (Juche111.3.25.) -

Source : KCNA available at https://kcnawatch.org/newstream/1648159663-278086617/respected-comrade-kim-jong-un-issues-order-for-test-launch-of-new-type-icbm/?t=1663712750438

Annex 13.3:

KCNA reporting of Kim Jong Un's January speech at 8th Party Congress (excerpt related to military developments)

Great Programme for Struggle Leading Korean-style Socialist Construction to Fresh Victory On Report Made by Supreme Leader Kim Jong Un at Eighth Congress of WPK

Date: 09/01/2021 | Source: Minju Choson KCNA

The report detailed the historic course of masterminding a great revolutionary turn ***for possessing the completely new nuclear capabilities aimed at attaining the goal of modernization of the nuclear force.***

Under the direct guidance of the Party Central Committee, ***intermediate-range and intercontinental ballistic rockets of Hwasongpho series and submarine-launched and ground-based ballistic rockets of Pukkuksong series were manufactured in our own style*** *to meet their unique operational missions. This gave a clearer description of the status of our state as a nuclear weapons state and enabled it to bolster its powerful and reliable strategic deterrent for coping with any threat by providing a perfect nuclear shield.*

In the period under review ***the already accumulated nuclear technology developed to such a high degree as to miniaturize, lighten and standardize nuclear weapons and to make them tactical ones and to complete the development of a super-large hydrogen bomb****. By succeeding in the test-fire of ICBM Hwasongpho-15 on November 29, 2017, the Party Central Committee declared with pride to the world the accomplishment of the historic cause of building the national nuclear force and the cause of building a rocket power.*

The great cause of building the national nuclear force, which was impossible to achieve even in 20 to 30 years in terms of existing formula, ***was accomplished four years after the line of simultaneously promoting economic construction and nuclear buildup was set forth and one year after the Seventh***

[4] Underlining by the Panel.

Congress of the Party. *This is a miracle unprecedented in history and the exploit of greatest significance in the history of the Korean nation the Seventh Central Committee performed for the Party and revolution, the country and people and posterity.*

The Party Central Committee achieved new great victories by vigorously leading the struggle for upgrading the nuclear force even after the great historic November event in 2017.

Recalling that the Party Central Committee decided ***to develop a global strike rocket with more powerful warheads and an improved warhead control system*** *and carried out this historic task by relying on the patriotism and loyalty of national defence scientists, the report affirmed that the new-type gigantic rocket on an 11-axis self-propelled launcher displayed during the military parade in celebration of the 75th founding anniversary of the Party fully demonstrated the ultra-modernity and great striking capability of our nuclear force.*

The accomplishment of the great cause of building the national nuclear force and its continued development constitute a victory of the organizational and leadership abilities of the Party Central Committee headed by Kim Jong Un and a great victory of the national defence scientists and all other Koreans who waged a death-defying struggle with an indomitable faith in independence and valiant spirit.

The report reviewed the fact that ***new cutting-edge weapon systems were developed in the sector of national defence science*** *one after another to cope with the enemy's desperate arms buildup, thus making our state's superiority in military technology an irreversible one and putting its war deterrent and capability of fighting a war on the highest level.*

The national defence science sector ***developed the super-large MLRS,*** *a super-power attack weapon the world's weaponry field had never known, and proceeded to* ***develop ultra-modern tactical nuclear weapons*** *including* ***new-type tactical rockets*** *and* ***intermediate-range cruise missiles*** *whose conventional warheads are the most powerful in the world.*

This enabled us to gain a reliable edge in military technology.

National defence scientists and workers in the munitions industry properly set the orientation of developing main tank of our style following the world's development trends and have begun to enter a new track of development while upgrading production processes. They also ***achieved such successes as developing world-class anti-air rocket complex,*** *self-propelled gun howitzer and anti-armour weapons.*

The report also noted that in the period under review the sector of national defence scientific research was conducting research into ***perfecting the guidance technology for multi-warhead rocket*** *at the final stage, finished research into* ***developing warheads of different combat missions including the hypersonic gliding flight warheads for new-type ballistic rockets*** *and was making preparations for their test manufacture.*

The report made public with pride that the standard of the goal ***in the modernization of medium-sized submarine was set correctly*** *and it was remodelled experimentally to open up a bright prospect for remarkably enhancing the existing subsurface operational capabilities of our navy****, that the design of new nuclear-powered submarine was researched*** *and was in the stage of final examination and the designing of various electronic weapons, unmanned striking equipment, means of reconnaissance and detection and military reconnaissance satellite were completed, and that other achievements were*

made in national defence research of gigantic significance in developing the People's Army into a powerful one with the strongest military muscle in the world.

The report evaluated that the bold leap forward brought about in the national defence science and munitions industry made sure that the country ranked high in the world in terms of defence capabilities and, at the same time, it was of great significance in realizing the strategic plan of the Party Central Committee for developing the overall Korean revolution.

The report said that a great advance was made in the work of turning the People's Army into elite forces in the period under review.

Source: KCNA (emphasis in bold by the Panel), available at https://kcnawatch.org/newstream/1610502377-14004652/great-programme-for-struggle-leading-korean-style-socialist-construction-to-fresh-victory/?t=1665001072714.

Annex 14: 27 January 2022 (local time): two missiles combining ballistic and guidance technology launched from the area of Hamhung towards the sea in an easterly direction, impacting an uninhabited island.

On 27 January 2022, the DPRK conducted mobile test launches of two solid-propellant short-range missiles combining ballistic missile and guidance technology. As was the case for previous test launches, they were conducted without any forewarning and constituted a safety hazard for vessels and aircraft in the relevant areas. The missiles were successively launched, the first at around 08:00 and the second at around 08:05 (local time) from 4-axle wheeled TELs in the area of Hamhung. The possible launch pad location (39° 48′ 45″ N 127° 39′ 50″ E) was the same as that used for the SRBM launch test on 10 August 2019 (see S/2020/151, table 3 and annex 58.3). According to a Member State, the missiles were launched in an easterly direction on a depressed trajectory. Both missiles flew about 190 km, with a maximum altitude of 20 km, before impacting the uninhabited Al-som Island (40° 38′ 51″ N 129° 32′ 56″ E), the likely target[5] (see figure 14.1 and annex 23 on solid propellant BM launch tests since 2018).

The missiles tested appear to have been the **SRBM KN-23**, previously displayed at the "Self-Defence 2021" exhibition on 11 October 2021[6] and presented and tested several times since 2019.[7] On 28 January, the weapon was described by the DPRK as a *"Surface to surface tactical guided missile"* [8](see after figure 14.3 the article published by KCNA, Rodong Sinmun on 28 January 2022).

The reported flight performance of the missiles tested is consistent with images published by the DPRK in KCTV, Rodong Sinmun and KCNA on 28 January 2022 (figures 14.2, 14.3).

[5] The target Al-som island is consistent with the KCNA picture and with the calculated range between launch pad and island of around 190 km. See also KCTV, 28 January 2022, full broadcast available at https://kcnawatch.org/kctv-archive/61f3f259b844b/ and KCTV, 28 January 2022, 8pm bulletin, available at https://kcnawatch.org/kctv-archive/61f3f2996afaa/. The subsequent findings of NKPRO and IISS on 8 February 2022 available at https://www.nknews.org/pro/kim-jong-uns-private-beach-used-to-launch-missiles-last-month-analysis/?t=1659885202557 are consistent with this analysis.

[6] See annex 23.1 and S/2022/132, figure IX.

[7] See S/2021/211, annex 12; S/2020/151, para. 194, table 3 and annexes 58-1 and 59-1

[8] *Source:* Rodong Sinmun and KCNA, 28 January 2022. "*The Academy of Defense Science of the Democratic People's Republic of Korea conducted the test-fire for updating long-range cruise missile system and the test-fire for confirming the power of conventional warhead for surface-to-surface tactical guided missile on Tuesday and Thursday respectively,".* The Panel has previously noted that the report of the Eighth Congress of the Workers' Party of Korea, held in January 2021, declared that DPRK would pursue the development of tactical nuclear weapons (see S/2021/211, para.18, and S/2021/777, annex 18-1). See also annex 13.

At the time of the test, Kim Jong Un was near the area of the launch test sites[9] inspecting both a munitions factory in the area of Hamhung[10] (accompanied by his sister Kim Yo-jong, Jo Yong-won and Kim Jong Sik[11]) (figure 14.2), and an infrastructure project that will transform the military airfield at Ryonpho (39°47'23.27"N 127°32'9.36"E) into a vegetable greenhouse farm.[12]

The launches were overseen by officials of the Department of the Munitions Industry of the Central Committee of the Workers' Party of Korea (KPe. 028) and leading officials of the Academy of Defence Science (KPe.021).[13]

Around that time, Kim Jong Un was reportedly in the vicinity of Hamhung inspecting a site for the Ryonpho vegetable greenhouse farm (39°47'23.27"N 127°32'9.36"E) as well as a possible missile factory the "February 11th Plant of the Ryongsong machine complex" (39°55′10″N127°39′09″E). The launch pads of the SRBM (27 January 2022, 39°48′45″N127°39′50″E) and LRCM (25 January 2022, 39°49'1.84"N127°40'3.27"E) were located on two contiguous beaches close to Kim Jong Un's reported mansion (at the private Majon Beach, see figures 14.1, 14.2, 14.3) and close to the point from which he had observed the SRBM KN-24 launch test on 10 August 2019 (39°48'22.67"N 127°39'46.00"E, see S/2020/151, annex 58.3). It is possible that Kim Jong Un attended these launches. [14]

9 It appears through the analysis of KCTV images that the launch test site of a long-range cruise missile (LRCM) (figure II) on 25 January (with a flight time of 126 minutes and a range of 1500 km flight, the LRCM appears to be similar to the LRCM tested on 12 September 2021) was located on the Chakto-long beach (39°48'59.62"N 127°40'2.57"E) approximately only 500 m north of the SRBM test site on 27 January 2022 (see previous footnote).

10 Judging from the shape of the facility only a part of the munitions factory is located in an underground gallery. The shape of the facility resembles a long, wide, windowless tunnel covered by a vaulted ceiling. According to expert analysis (NKNEWS, https://www.nknews.org/2022/01/kim-visits-major-weapon-factory-orders-military-base-turned-into-veggie-farm/?t=1661720911999, and MIIS - Arms Control Wonk, https://twitter.com/ArmsControlWonk/status/1486894952424607749) the factory is likely to be the "February 11th Plant of the Ryongsong Machine complex" (39° 55′ 10″ N 127° 39′ 09″ E), visited by Kim Jung Un several times since 2013. The photographs of previous factory visits published by KCNA are comparable to those published on 28 January 2022. The large flow-forming machine and other equipment seen in the photographs could be used to make alloy missile bodies such as those for SRBMs (see figure 14.2).
Such an underground facility might also be located 9 km to the northwest, in the mountain between the location 39° 57′ 13″ N 127° 32′ 49″ E and the Chemical Material Institute (CMI) where the missile casing engines are produced (39° 57′ 30″ N 127° 33′ 33″ E, see S/2019/691, annex 32, and S/2019/171, annex 84.5). The SRBM and cruise missile launch sites on 30 January (39° 48′ 45″ N 127° 39′ 50″ E, see figures 14.1 and 14.2 and S/2020/151, table 3 and annex 58.3), the future greenhouse farm (39°47'23.27"N 127°32'9.36"E) and the munitions factory are located in close proximity (see figure 14.2).

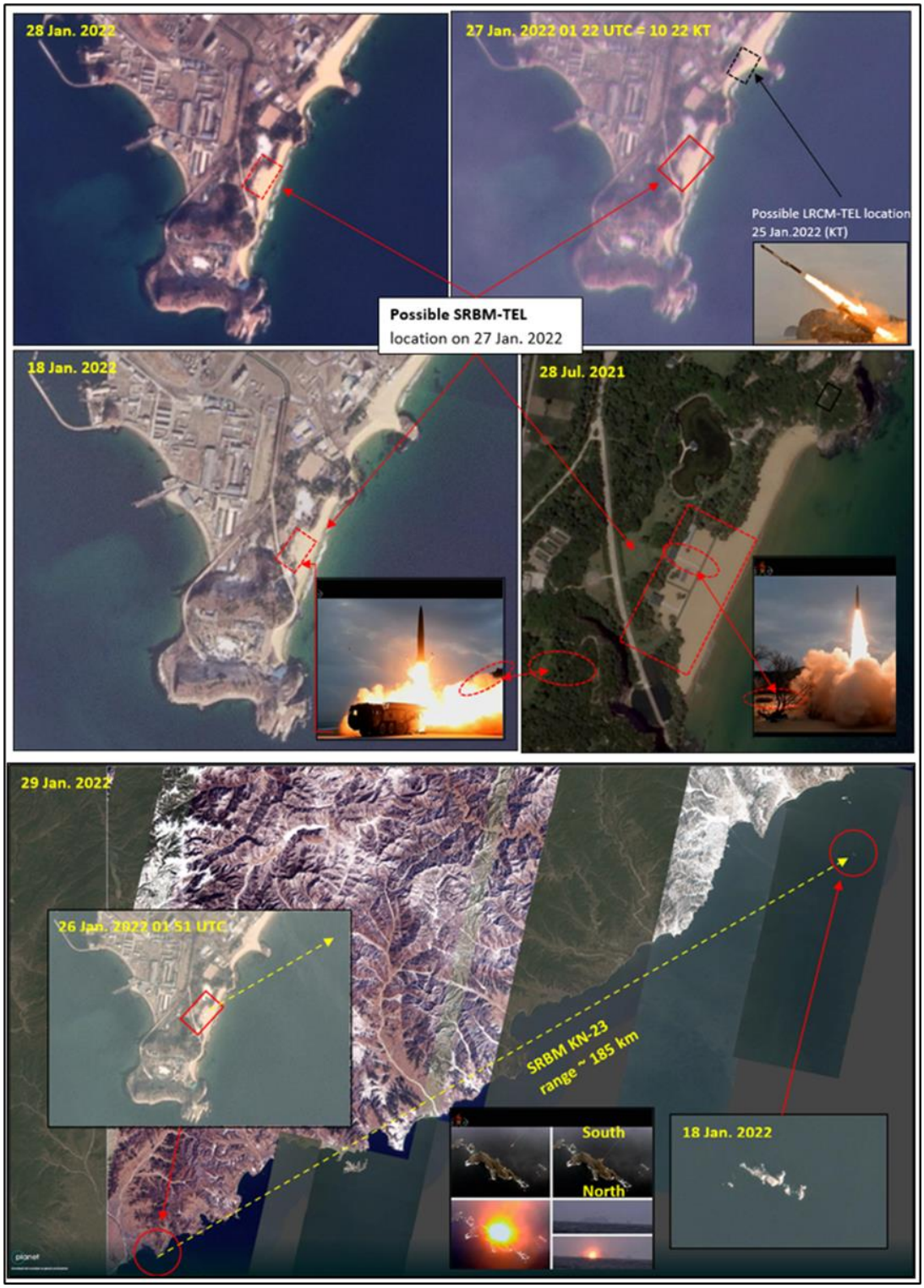
11 Jo Yong Won, member of the Presidium of the Political Bureau. See S/2022/132, table 1, and KCNA, 12 January 2022. Kim Jong Sik, the Deputy Department Director of the Party's military industry department (see figure 14.3)

12 See KCTV full broadcast, 28 January 2022, at https://kcnawatch.org/kctv-archive/61f3f259b844b/; the Ryonpo airfield was used as a KN-25 launch site on 28 November 2019 (see S/2020/151, para. 194, table 3)

13 Listed as KPe.021, the Academy of National Defence Science controls a network of overseas front companies tasked with collecting technical and scientific information in support of DPRK's WMD programmes.

14 Two experts objected to this sentence, believing that the reports of the Panel are not for hypothetical political statements.

Figure 14.1: Launch tests of two SRBM KN-23 on 27 January 2022 (and LRCM on 25 January)



Source: Planet Labs Inc. 28 January 2022, 01 38 UTC; 27 January 2022, 01 22 UTC; 26 January 2022, 01 51 21 UTC; 18 January 2022, 02 53 01 UTC; Google Earth, 9 February 2020; KCNA, 28 January 2022, Full broadcast https://kcnawatch.org/kctv-archive/61f3f259b844b/.

Figure 14.2: The SRBM and cruise missile launch sites on 25 and 27 January (39° 48′ 45″ N 127° 39′ 50″ E, see figure 14.1 above and S/2020/151, table 3 and annex 58.3), the future greenhouse farm (39°47'23.27"N 127°32'9.36"E) and the possible munition factory (February 11th Plant of the Ryongsong machine complex and CMI) are in close proximity

Source: Planet Labs Inc. 29 January 2022, 05 05 UTC ; and Google Earth, 9 February 2020; 8 June 2020; 21 and 27 August 2021; KCNA: 28 January 2022, Full broadcast https://kcnawatch.org/kctv-archive/61f3f259b844b/ ; https://kcnawatch.org/?t=1651179716109.

Figure 14.3: An article in Rodong Sinmun on 28 January 2022, published by KCNA, reporting the statement of the Academy of Defence Science on both the test of a long-range cruise missile system on 25 January (two LRCMs flying 152 minutes to hit the target island 1800km away) and the test to confirm "*the power of conventional warhead of surface-to surface tactical guided missile*" on 27 January 2022

Jan. 28, Juche 111 (2022) Friday 로 동 신 문 www.rodong.rep.kp

Academy of Defence Science Conducts Important Weapons Tests

The Academy of Defence Science of the Democratic People's Republic of Korea conducted the test-fire for updating long-range cruise missile system and the test-fire for confirming the power of conventional warhead of surface-to-surface tactical guided missile on Tuesday and Thursday respectively.

Officials of the Department of the Munitions Industry of the Central Committee of the Workers' Party of Korea and leading officials of the Academy of Defence Science guided the important weapon tests in field.

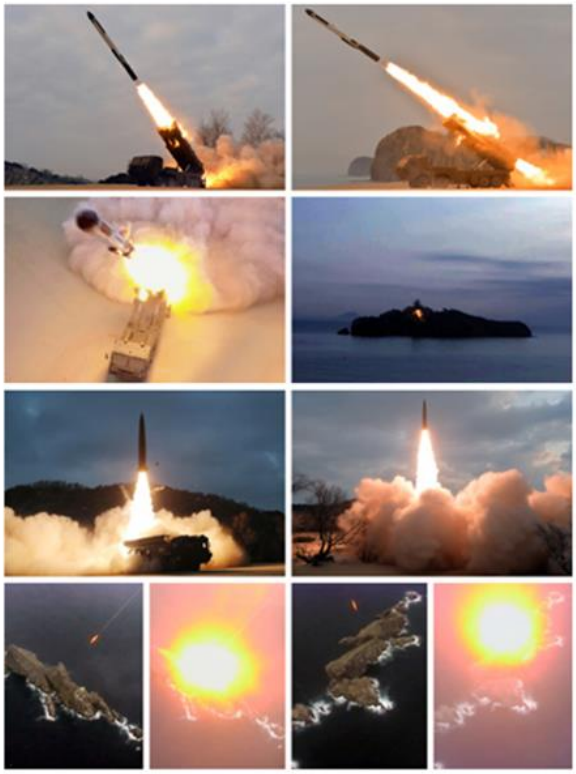
In the test-fire for updating the long-range cruise missile system conducted on Tuesday, two long-range cruise missiles flew for 9 137s along the flight trajectory over the East Sea of Korea to hit the target island 1 800 km away.

The practical combat performance of the long-range cruise missile system would hold a reliable share in boosting the war deterrence of the country.

In the test-fire for confirming the power of conventional warhead of surface-to-surface tactical guided missile conducted on Thursday, two tactical guided missiles precisely hit the target island, proving that the explosive power of the conventional warhead complied with the design requirements.

The Academy of Defence Science clarified that the missile warhead institute under it will keep developing powerful warheads capable of performing combat function and mission.

The results of the successful test-fires of the weapon systems were reported to the WPK Central Committee to be highly appreciated.



Source: Via NK PRO / WATCH: KCNA Rodong Sinmun, 28 January 2022, available at https://kcnawatch.org/newstream/1643322805-368795958/academy-of-defence-science-conducts-important-weapons-tests/.

Annex 15: 30 January 2022 (local time): an IRBM (named Hwasong-12 by the DPRK) launched in an easterly direction from the area of Mupyong-ri in Jonchon county

On 30 January 2022, the DPRK conducted a test launch of a ballistic missile stating that "*evaluation test-fire of **Hwasong-12** ground-to-ground **intermediate- and long-range ballistic missile** was conducted on January 30 under a plan of the Academy of Defence Science, the Second Economy Commission and other institutions concerned"* (figure 15.2, the article in Rodong Sinmun on 31 January 2022 published by KCNA). As with previous test launches, the test was conducted without any forewarning and constituted a safety hazard for vessels and aircraft in the relevant areas. According to two Member States, the missile was launched at 07:52 (local time), from the Mupyong-ri (aka Jonchon) area in Jagang Province in an easterly direction. Launched on a lofted trajectory with a maximum altitude of 2000 km, the ballistic missile flew around 800 km before impacting waters off DPRK's east coast (annex 23, on liquid propellant BM launch tests since 2018). According to KCNA photographs (figure 15.1), the missile was launched from a 6-axle TEL (see S/2021/211, para. 20 and figure I).

The missile appeared to be one of the systems displayed at the "Self-Defence 2021" exhibition on 11 October 2021.[15] As demonstrated in KCNA pictures of the launch, both the shroud and the main missile body (that of a single-stage liquid-fuelled missile) closely resembled the single-stage IRBM Hwasong-12 (aka KN-17, figure XX3.1), last tested on 29 August and 15 September 2017.[16] The burnt gas had the characteristic of an elongated plume-like shape and colours of the combustion of a liquid propellant (orange and yellow colours, see S/2017/150, para.36).[17] At the time of the test, this missile had the longest potential range of any missile tested since 2017 (annex 23) .

According to the DPRK this launch test was an operational trial that "*confirmed the accuracy, safety and operational effectiveness of the Hwasong 12 weapon system under production… it was organised by the Academy of Defence Science (ADS), the Second Economic Committee, and other institutions."* The DPRK stated *"that the Hwasong-12 is meant to serve as a medium-long range strategic ballistic missile with a range of 3,000 – 4,000 km capable of reaching Guam*".[18]

Member States confirmed the many similarities identified between this missile and the Hwasong-12, including its similar size and an engine system based on the DPRK version of the RD-250 engine. [19]

The launch was under the responsibility of the Academy of Defence Science (KPe.021) and the Second Economy Committee (KPe.032)

[15] See S/2022/132, figure VII

[16] Hwasong-12 was successfully tested on 29 August and 15 September 2017. See S/2021/777, para.26; S/2019/171, para.174; S/2018/171, paras.7, 12; S/2017/742, paras.7-13.

[17] According to Jane's Intelligence Review "*North-Korea test multiple long-range missile systems*" available at https://customer.janes.com/Janes/Display/BSP_8038-JIR*,"the published launch photo shows a flame and exhaust colour consistent with hypergolic propellant combination of unsymmetrical dimethylhydrazine (UDMH) and nitrogen tetroxide (NTO), as well as a reddish cloud that is typical for nitrogen-based propellants at engine ignition"*

[18] See KCNA Pyongyang Times, 31 January 2022. On 14 August 2017 KCNA reported that "*the military was… carefully examining the operational plan for making an enveloping fire at the areas around Guam" … "The military plans to attack Guam "through simultaneous fire of four **Hwasong-12** intermediate-range strategic ballistic rocket*".", available at https://www.nknews.org/2017/08/kim-jong-un-briefed-on-guam-attack-plan-at-strategic-force-command-kcna/?t=1654210722275

[19] The maximum length of the IRBM Hwasong-12 is around 17.4 m, its diameter around 1.65 m and its engine derived from the RD-250 (S/2022/132, figure V and annex 20; S/2021/211, annex 10; S/2018/171, paras.14-16). Its range was estimated at 4,500 km with a 500kg warhead (see CSIS "Missile defense project", available at https://missilethreat.csis.org/missile/hwasong-12/ and Jane's Defence Weekly, 31 January 2022, available https://customer.janes.com/Janes/Display/BSP_12569-JDW)

Figure 15.1: Launch test of a Hwasong-12 IRBM on 30 January 2022 from same location as the 28 July 2017 launch test of a Hwasong-14, at Mupyong-Jonchon 65 factory (40° 36′ 41″ N 126° 25′ 33″ E)

Source: KCTV 31 January 2022 – 8 PM Bulletin https://kcnawatch.org/kctv-archive/61f7e740a9bbf/; Planet Labs Inc. 30 January 2022, 02 20 UTC (= 11h20 Local time); 9 September 2021, 00 47 UTC.

Figure 15.2: Articles and pictures from Rodong Sinmun on 31 January 2022 published by KCNA, reporting the statement that "*the evaluation test-fire of Hwasong 12-type ground-to-ground intermediate- and long-range ballistic missile was conducted*"

KCNA Rodong Sinmun (En)

Test-fire of Hwasong 12-type Ground-to-ground Intermediate- and Long-range Ballistic Missile Held

Date: 31/01/2022 | Source: Rodong Sinmun (En) | Read original version at source

The evaluation test-fire of Hwasong 12-type ground-to-ground intermediate- and long-range ballistic missile was conducted Sunday under a plan of the **Academy of Defence Science, the Second Economy Commission** and other institutions concerned.

The test-fire was aimed to selectively evaluate the missile being produced and deployed and to verify the overall accuracy of the weapon system.

It was conducted by the highest-angle launch system from the northwestern part of the country toward the waters of the East Sea of Korea in consideration of the security of neighboring countries.

The Academy made public the earth image data taken from space by a camera installed at the missile warhead.

It confirmed the accuracy, security and effectiveness of the operation of the Hwasong 12-type weapon system under production.

Rodong Sinmun

*Source:*https://kcnawatch.org/newstream/1643600436-694045929/test-fire-of-hwasong-12-type-ground-to-ground-intermediate-and-long-range-ballistic-missile-held/?t=1651424928305; Picture: https://kcnawatch.org/#gallery-7; *emphasis in bold by the Panel.*

Annex 16: 27 February 2022 and 5 March 2022 (local time): two suborbital projectile launchers using ballistic missile technology (with the flight features of a powerful ballistic missile) were launched in an easterly direction from the Sunan area. The DPRK stated that the test launches were intended to test the functions of a reconnaissance satellite

On 27 February 2022, the DPRK conducted a ballistic missile launch, identified as possibly the new ICBM Hwasong-17, according to Member States. KCNA only released a photograph of the earth taken from the missile. As was the case for previous test launches, it was conducted without any forewarning and constituted a safety hazard for vessels and aircraft in the relevant areas. The missile was launched at around 07:52 (local time)[20] from the Pyongyang Sunan International Airport area in an easterly direction (see figure 16.1). According to Member States the flight distance was 300 km with a maximum altitude of 620 km. (see annex 23.1)

On 5 March 2022, the DPRK conducted a similar ballistic missile launch, again identified as possibly the new ICBM Hwasong-17, according to Member States. KCNA did not release any photographs or detail of this test. As was the case for previous test launches, it was conducted without any forewarning and constituted a safety hazard for vessels and aircraft in the relevant areas. The missile was launched at around 08:52 (local time) from the Pyongyang Sunan International Airport area in an easterly direction (see figure 16.1). According to Member States the flight distance was between 270 and 300 km with a maximum altitude between 550 and 560 km. (see annex 23.1)

Media reporting of Member State analyses as well as the Member State information provided to the Panel concluded that the DPRK had tested in these two launches a relatively new large intercontinental ballistic missile system,[21] possibly the untested ICBM Hwasong-17.[22] A Member State assesses that the ICBMs were equipped with RD-250 liquid propellant engines for the first stage. Two Member States assess that they may have been launched in order to verify some function before conducting a launch test at the maximum range of the missile.[23]

Regarding the apparent new momentum of DPRK's space programme represented by these launches, a Member State assesses that the programme could also facilitate the improvement of DPRK's ICBM capabilities. [24]

[20] Time 07:51 was also recorded by another Member State.

[21] Due to the thermal signature of the engines, Member States evaluated the missiles to have been the new ICBM Hwasong-17 shown at the October 2020 Military parade (S/2020/840, para.17).

[22] - Reuters, 11 March 2022, available at https://www.reuters.com/world/china/us-imposes-new-north-korea-related-sanctions-after-missile-launches-2022-03-11/
- NK News, 14 March 2022, available at https://www.nknews.org/2022/03/us-and-chinese-officials-discuss-north-koreas-latest-projectile-launches/
- a Members State statement on 11 March 2022, available at https://www.mod.go.jp/j/press/news/2022/03/11d.html

[23] According to a Member State, if the 28 February and 5 March missiles had been launched on a normal ballistic trajectory, the estimated range would have been over 1,000 km. Given this assumption, the range was extremely short for an ICBM-class ballistic missile. In general terms, however, it is technically feasible to control the range to some extent by adjusting the launch thrust and angle of missiles. A Member State assesses that the delivery system could have failed partially or that the test could have been aimed at testing a Post Boost Vehicle equipment, aimed at putting satellites into orbit or at developing MIRV capabilities.

[24] According to the Member State,

Conversely, DPRK will continue to develop its genuine space capabilities based on its ICBM technologies, in particular the RD-250 booster.

Both launches were under the responsibility of the National Aerospace Development Administration (NADA, KPe. 029) and the Academy of Defence Science (KPe.021).

"- Suborbital flight tests are not common for a space programme and could point to a dual objective;
- Recent launches could also have been used to test technologies useful for a MIRV capacity;
- It is considered likely that the DPRK may soon transform one of its ICBMs (Hwasong-14, Hwasong-15 or Hwasong-17) which have shown propulsive maturity based on the RD-250 boosters into a space launch vehicle, consequently replacing its Unha SLV used in all its most recent space launches. As such, it would constitute yet another violation of UNSCRs.

Figure16.1: Possible location of the two ICBM launch tests on 27 February (39° 13′ 17″ N 125° 40′ 17″ E) and 5 March 2022 (39° 13′ 17″ N 125° 40′ 18″ E)

Source: Planet Labs Inc 24 February, 02 19 UTC; 27 February, 02 02 UTC; 2 March, 01 30 UTC; 3 March, 0129 UTC; 5 March, 01 49 UTC; 5 March, 02 16 UTC.

Annex 16.1: On 27 February 2022, the DPRK conducted a ballistic missile launch, according to Member States.

The reported flight performance and the pictures taken (if not falsified) from the vehicle during the parabolic trajectory at an altitude which theoretically would correspond to a low earth orbit[25] suggests that the booster, capable of delivering its payload at 620 km altitude, shares the characteristics of a powerful ballistic missile, ranging from a MRBM to ICBM. In addition, the apparent ability to control an onboard camera remotely and its possible re-entry vehicle provides information on the DPRK's developing capabilities in signal transmission and optical recognition potentially linked to guidance system technology.

According to KCNA on 28 February 2022, the purpose of the launch test was to help "*the DPRK National Aerospace Development Administration (NADA) and the Academy of Defence Science confirm the characteristics and working accuracy of the high-definition photographing system, data transmission system and attitude control devices through the vertical and oblique photographing of a specific area on earth with cameras to be loaded on the reconnaissance satellite"*

This reported test launch and remote control of a reconnaissance satellite would be in line with Kim Jong Un's speech to the Eighth Congress of the Workers' Party of Korea (WPK) on 9 January 2021 (see annex 13.3), in which he stated that "*means of reconnaissance and detection and military reconnaissance satellite were completed".*

However, according to information from official websites and media reporting of Member State analyses, the DPRK's largest intercontinental ballistic missile (ICBM) (also designated as an ICBM-capable platform) system has been used in two recent launches. One Member State estimated that "the ballistic missiles launched by North Korea on 27 February and 5 March were intercontinental ballistic missile (ICBM) class and have been evaluated as the same as those first confirmed in the military parade held in October 2020 (called after "Hwasong-17". It is believed that this may have been launched for the purpose of verifying some function before conducting a launch test at the maximum range of the missile."[26] Two Member States separately assessed that "the Kim regime's two most-recent launches had tested components of a new ICBM system."[27]

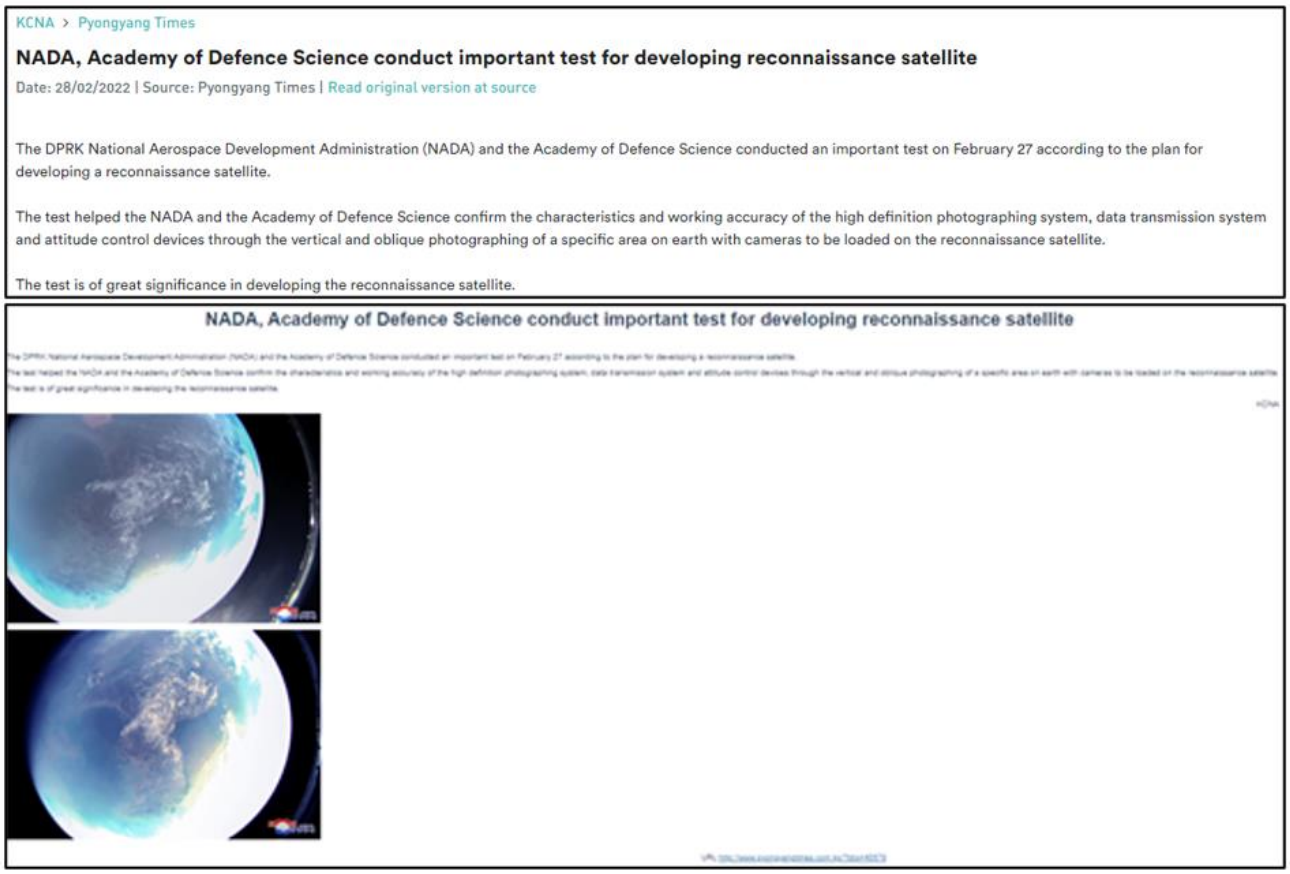
An KCNA's article of 28 February reporting on the reconnaissance satellite test of 27 February mentioned*: "The National Aerospace Development Administration and the Academy of Defence Science of the DPRK made an important test according to the plan for developing reconnaissance satellite on February 27. They conducted vertical and inclined photographing of the specified area of the ground with cameras to be loaded on satellite and confirmed the characteristics of the high-resolution camera system, data transmission system and attitude control devices and the correctness of their performance. The recent test is of great significance in the development of reconnaissance satellite."*

[25] The vehicle was not in orbit; it followed a suborbital trajectory in space for a few minutes (At an altitude of 300 km the speed of satellite in orbit is 28 000 km/h. This corresponds to circling the Earth in 90 minutes. See ESA website: https://www.esa.int/kids/fr/Apprendre/Technologie/Le_controle_de_mission/Vitesse_dans_l_espace)

[26] Member State statement on 11 March 2022 available at https://www.mod.go.jp/j/press/news/2022/03/11d.html

[27] - The Wall Street Journal, 14 March 2022: "…The U.S. and South Korea, taking the rare step of declassifying military intelligence last week, said the activity was part of a build-up toward a full-length intercontinental ballistic missile launch…"
- The Wall Street Journal, 10 March 2022: "… Two recent North Korean missile launches tested components of a new intercontinental missile system that if fully developed could hit the U.S. or its allies, officials said…"

Figure 16.2: Articles and pictures from Pyongyang Times and Voice of Korea published by KCNA on 28 February 2022, reporting the reconnaissance satellite test of 27 February.



KCNA > Pyongyang Times

NADA, Academy of Defence Science conduct important test for developing reconnaissance satellite

Date: 28/02/2022 | Source: Pyongyang Times | Read original version at source

The DPRK National Aerospace Development Administration (NADA) and the Academy of Defence Science conducted an important test on February 27 according to the plan for developing a reconnaissance satellite.

The test helped the NADA and the Academy of Defence Science confirm the characteristics and working accuracy of the high definition photographing system, data transmission system and attitude control devices through the vertical and oblique photographing of a specific area on earth with cameras to be loaded on the reconnaissance satellite.

The test is of great significance in developing the reconnaissance satellite.

NADA, Academy of Defence Science conduct important test for developing reconnaissance satellite

Source: https://kcnawatch.org/newstream/1646039170-769328268/nada-academy-of-defence-science-conduct-important-test-for-developing-reconnaissance-satellite/.

Annex 17: 16 March 2022 and 24 March 2022 (local time) - two launches of ICBMs in an easterly direction from the Sunan area. The DPRK claimed to have launched the ICBM Hwasong-17 on 24 March, providing photographs and videos the following day. However, according to several Member States, the 16 March launch of the new ICBM Hwasong-17, failed. The second launch on 24 March was considered by the same Member States to be either of a Hwasong-17 or of a version of the Hwasong-15 (tested on 29 November 2017), probably modified in order to display a lofted trajectory similar to that of the more powerful Hwasong-17

On 16 March 2022, the DPRK conducted a ballistic missile launch which failed when the missile exploded at an altitude of around 20 km, according to Member States. The DPRK did not mention this launch and KCNA did not release any photographs or details of it. However, analysis demonstrates that the KCTV footage of the 24 March ICBM launch, reportedly that of a "Hwasong-17", actually incorporated footage from the failed ICBM launch of 16 March (see table 1). As with previous test launches, it was conducted without any forewarning and constituted a safety hazard for vessels and aircraft in the relevant areas. After being removed from its storage area (hall no.3) at the Sil-li ballistic missile support facility (39° 10′ 53″ N 125° 39′ 50″ E) located 2 kilometers south-west of Pyongyang Sunan International Airport (see S/2020/840, para. 16 annex 12), the 11-axle wheeled TEL deployed to the launch pad location (39° 11′ 18″ N 125° 40′ 00″ E) between the facility and the main runway of the airport. The missile was launched at around 09:30 (local time) (figures 17.1, 17.2, 17.3). According to media reports, reddish smoke was observed in the atmosphere after the explosion.[28]

On 24 March 2022, the DPRK conducted an ICBM launch, according to three Member States. The DPRK published photographs and a video to present and detail the event in which Kim Jun Un and the Hwasong-17 were the focus. However, the KCTV footage of the 24 March ICBM "Hwasong-17" launch actually incorporated footage from the failed 16 March ICBM Hwasong-17 launch, as well as possibly other earlier footage. As with previous test launches, it was conducted without any forewarning and constituted a safety hazard for vessels and aircraft in the relevant areas. The missile was launched at around 14:34 (local time) from the Pyongyang Sunan International Airport in an easterly direction. According to Member States the flight distance of the missile was about 1080 km with a maximum altitude of about 6200 km (see figures 17.1, 17.2, 17.3).

These launches clearly identify the infrastructure at the Sil-li site, previously only suspected to be linked to the BM programme (see S/2020/840, para. 16, annex 12), as a ballistic missile support facility where ICBMs have been stored. This new facility is located 2 kilometres south-west of Pyongyang Sunan International Airport. KCTV footage of the 16 March launch showed that the Hwasong-17 and its 11-axle wheeled TEL were stored in warehouse no. 3 at the facility (figures 17.2 and 17.3).

Both launches seemed to have been overseen[29] personally by Kim Jong Un and supported by Generals Jang Chang Ha and Kim Jong Sik: The video and photographs released by the DPRK on 25 March were intended to show Kim Jong Un guiding the 24 March test and congratulating the team in charge of the ICBM programme. The Panel's assessment of the footage is contained in figure 17.3.

[28] The specific reddish-orange colour of the smoke could be related to the condensation and vaporisation of liquid fuel. See NK News article on 16 March 2022 available at https://www.nknews.org/2022/03/exclusive-north-korean-projectile-debris-fell-near-pyongyang-after-test-failure/?t=1655215602820. The orange and yellow colour is often associated with the combustion of liquid fuel propellants (see S/2017/150, para. 36). However, specific ablative coatings inside an engine's combustion chamber can produce gases whose colours can also be reddish orange.

[29] Two experts are of the view that there is insufficient evidence to support this statement.

Figure 17.1 (Overview): Two ICBM launch tests on 16 and 24 March 2022, the first of which failed.[30]

Source: Planet Labs Inc. 5 March, 01 49 UTC; 17 March, 02 02 UTC; 27 March 2022, 05 21 UTC. Photographs and screenshots from https://kcnawatch.org/kctv-archive/623dc62b7e18e/.

[30] According to the DPRK, the Hwasong-17 ICBM, presented by KCTV on 25 March, was tested on 24 March; however, according to Member States, it was tested on 16 March 2022 and failed during its flight. The 25 March KCTV broadcast incorporated older footage from the 16 March launch.

Figure 17.2: Focus on the two ICBM launch tests on 16 and 24 March 2022, the first of which failed.

Source: Planet Labs Inc. 5 March, 01 49 UTC; 17 March, 02 02 UTC; 27 March 2022, 05 21 UTC. Photographs and screenshots from https://kcnawatch.org/kctv-archive/623dc62b7e18e/

Figure 17.3: KCTV footages and photographs of the 24 March ICBM "Hwasong-17" launch incorporated footage from the 16 March ICBM Hwasong-17 launch and possibly earlier additional footage. According to Member States, on 24 March the DPRK may have tested a modified "Hwasong-15" ICBM whose trajectory was intended to resemble that of the Hwasong-17.

Figure 17.3.1:

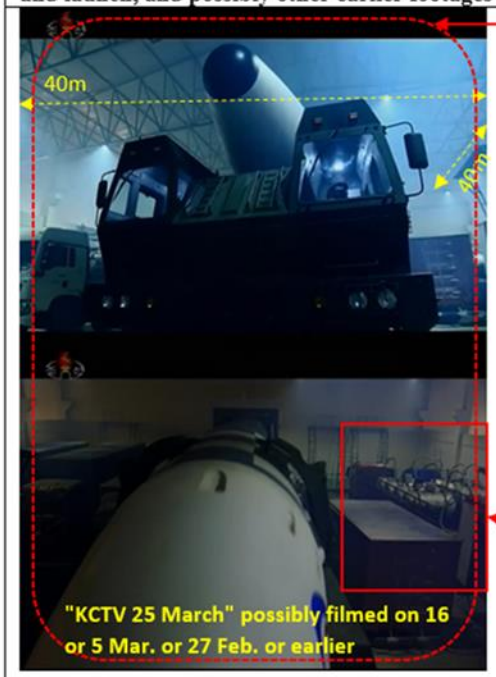
The KCTV video released on 25 March 2022 of "the 24 March ICBM launch test" includes footage of the 16 March ICBM preparation and launch, and possibly other earlier footages	Satellite Imagery Planet Labs Inc inter alia, March 16-17, 2022.	Satellite Imagery Planet Labs Inc inter alia, March 22-27, 2022.	Analysis
	 Planet Labs Mar.17, 2022, 02 02 UTC Tanks of oxidizing agent or fuel	 Planet Labs Mar.27, 2022, 05 21 UTC	**0.** The "Sil-li Ballistic missile support Facility" is identified as the area where the ICBMs were probably and temporarily stored on 16 March 2022 inter alia. This new facility is located 2 kilometres south-west of Pyongyang Sunan International Airport (see S/2020/840 para. 16 annex 12). Since the 16 March, the recent KCTV footages on the storage of the Hwasong-17 and its TEL in one of the warehouses of this facility demonstrated that it is related to the ballistic missile programme infrastructure. - Several tanks likely used to fuel the missile whilst horizontally and still in the warehouse no. 3. However, the location in the same room of the fuel and its oxidizing agent is hazardous. There are probably specific rooms dedicated to separate fuel components.

Figure 17.3.2:

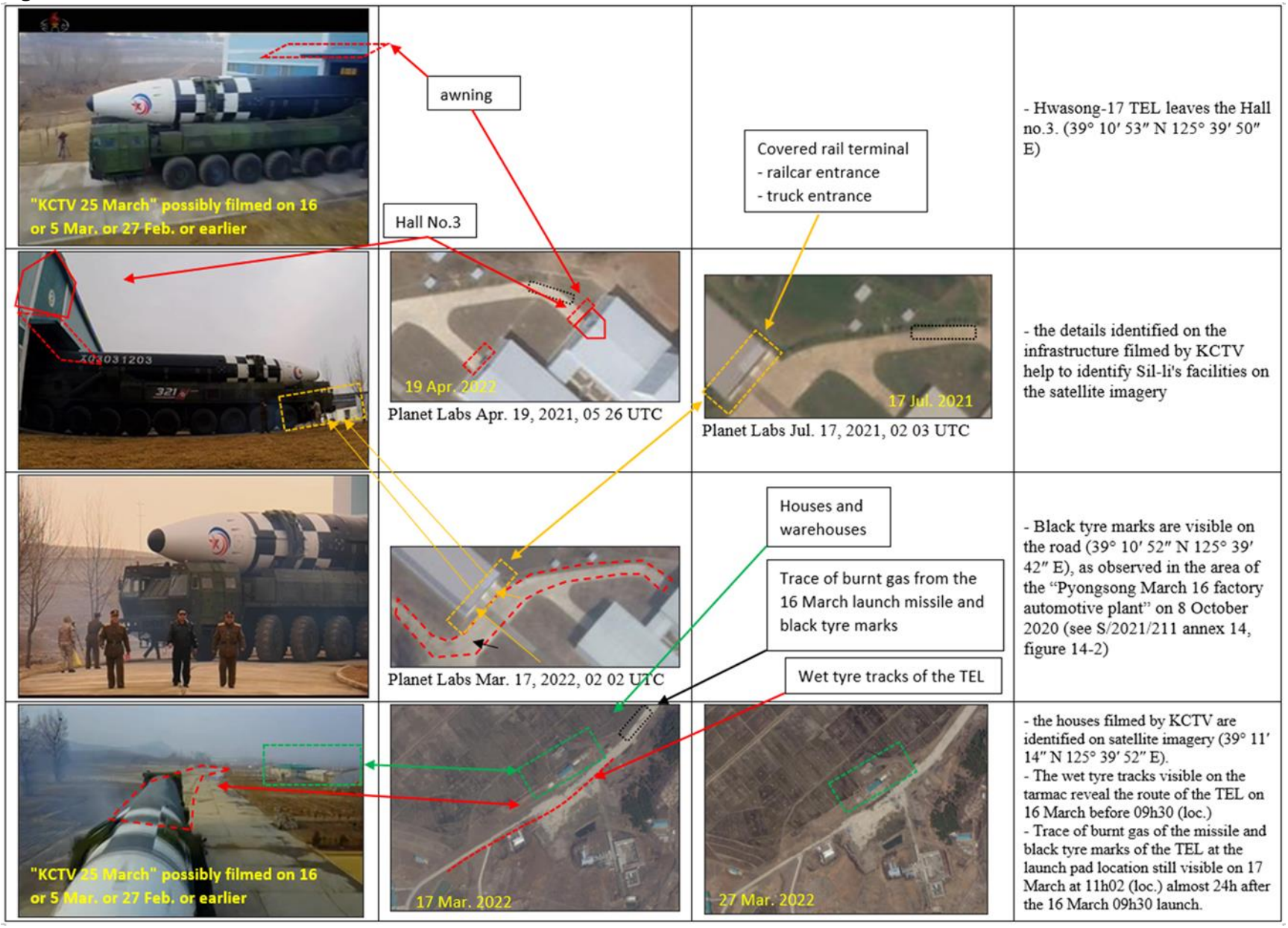
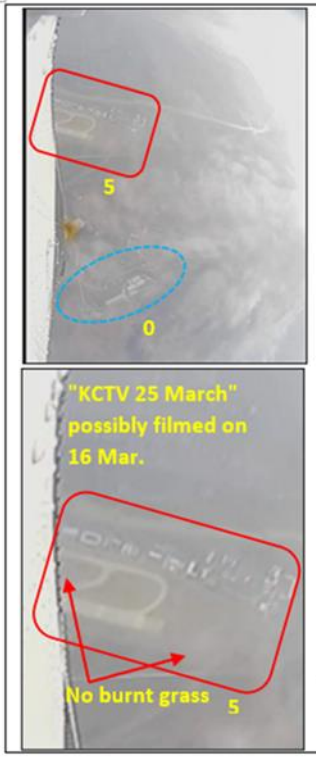

"KCTV 25 March" possibly filmed on 16 or 5 Mar. or 27 Feb. or earlier
awning
Hall No.3
Covered rail terminal
- railcar entrance
- truck entrance
- Hwasong-17 TEL leaves the Hall no.3. (39° 10′ 53″ N 125° 39′ 50″ E)
19 Apr. 2022
Planet Labs Apr. 19, 2021, 05 26 UTC
17 Jul. 2021
Planet Labs Jul. 17, 2021, 02 03 UTC
- the details identified on the infrastructure filmed by KCTV help to identify Sil-li's facilities on the satellite imagery
Houses and warehouses
Trace of burnt gas from the 16 March launch missile and black tyre marks
Planet Labs Mar. 17, 2022, 02 02 UTC
Wet tyre tracks of the TEL
- Black tyre marks are visible on the road (39° 10′ 52″ N 125° 39′ 42″ E), as observed in the area of the "Pyongsong March 16 factory automotive plant" on 8 October 2020 (see S/2021/211 annex 14, figure 14-2)
"KCTV 25 March" possibly filmed on 16 or 5 Mar. or 27 Feb. or earlier
17 Mar. 2022
27 Mar. 2022
- the houses filmed by KCTV are identified on satellite imagery (39° 11′ 14″ N 125° 39′ 52″ E).
- The wet tyre tracks visible on the tarmac reveal the route of the TEL on 16 March before 09h30 (loc.)
- Trace of burnt gas of the missile and black tyre marks of the TEL at the launch pad location still visible on 17 March at 11h02 (loc.) almost 24h after the 16 March 09h30 launch.

Figure 17.3.3:



Planet Labs August 19, 2022, 05 11 UTC

Planet Labs March 17, 2022, 02 02 UTC

Planet Labs March 22, 2022, 01 57 UTC

5. Grassed areas were burnt in this area at some point between 17 - 22 March. The KCTV footage of the alleged 24 March launch demonstrates that the launch actually took place before the grass was burnt.

Figure 17.3.4:

7. The yellow boxes and the yellow lines (8) along the west side of the tarmac appeared to have a different orientation between the KCTV (bottom) and KCNA (top) images.

Figure 17.3.5:

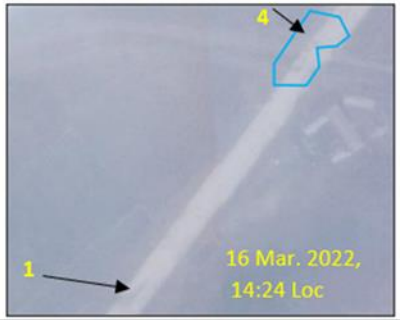
6. The picture of Kim Jong Un observing a launch, and that of the generals celebrating an allegedly successful launch, were taken at differing times of day and in a vehicle at a different orientation in relation to the runway.

The pictures in KCTV and KCNA indicate (at 6) the position of the bus from which Kim Jong Un observed the alleged launch on 24 March. However, the orientation of the bus (indicated by the yellow lines on the runway (at 8), the positioning of the yellow crates, (at 7) and the direction of the sunlight indicated by shadows – black arrow-) demonstrates that the footage of the alleged 24 March launch (which occured at 14:34) was taken on at least two separate occasions, including footage taken at a morning launch.

Figure 17.3.6:

Traces of burnt gas of the missile and black tyre marks

Trace of burnt gas no longer visible



1. Launch site on "24 March" before launch the burnt gas trace which are visible since the 16 March are not visible at the exact location on the KCTV footage however this burnt trace was visible on satellite imagery after 16 March (39° 11′ 18″ N 125° 40′ 00″ E)

2. The shadow represented in the KCTV footage from the alleged 24 March launch (oriented at 285 degrees) does not conform to a 14:34 launch time. In fact, the shadow conforms to 09:30 launch time, as reported by MS for the 16 March launch

3. Trailers arranged to form two squares side by side on 17 March and also in the "the 24 March KCTV footage" but actually arranged in parallel on 27 March

4. Four areas of wet tarmac from the KCTV footage of the alleged 24 March launch. These were actually visible in imagery only on 16 and 17 March.

Annex 18: 16 April 2022 (local time): two missiles combining ballistic and guidance technology launched from the area of Hamhung towards the sea in an easterly direction.

On 16 April 2022, at 17:50 and 18:00 from a quadruple canister mounted on a small 3-axle wheeled TEL, the SRBMs were possibly launched from the Majon beach near the residence of Kim Jong Un at Chakto-dong (39° 48′ 45″ N 127° 39′ 50″ E), as in the case of the SRBM launch tests on 27 January 2022 and 10 August 2019, eastward into waters off the east coast and impacting the uninhabited Nan-do island (40° 18′ 50″ N 128° 45′ 44″ E) as a possible target at 109 km from the launchpad. The **DPRK described the missile as a "*New-type tactical guided weapon*" to enhance the effectiveness of tactical nuclear operations** (see figure 18).

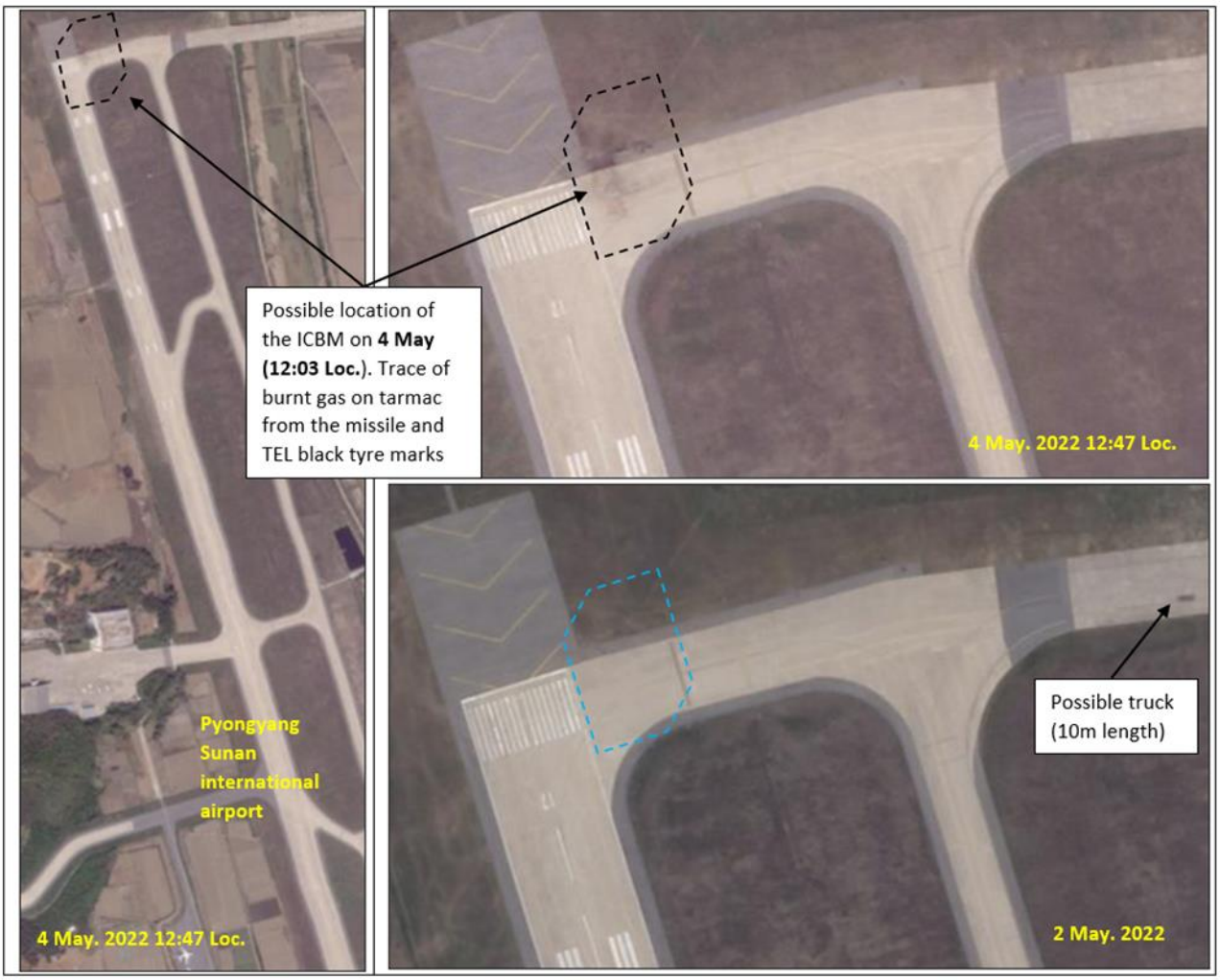
Figure 18: 16 April 2022 launch tests of new a SRBM (or close-range BM, CRBM) derived from SRBM KN-23 and KN-24 but smaller

Source: Google Earth, 13 Dec 2015*;* Planet Labs Inc., 16 April 2022, 01 54 (10 54 loc.) and 01 21 UTC; 17 April 2022, 01 52 (10 52 loc.) and 01 49 UTC; and https://kcnawatch.org.

Annex 19: 4 May 2022 (local time): An ICBM, possible Hwasong-15 or 17, launched below its full capacity and on a standard, rather than lofted, trajectory.

The possible location of the ICBM on 4 May (12:03 Loc.) could be identified by the trace of burnt gas on tarmac and TEL black tyre marks. Moreover, medium-resolution satellite imagery showed what appears to be vehicles gathering on or around 30 April and 3 May at Sunan's northern airfield around the same location where vehicles were seen after the failed 16 March test, although it is possible the activity was agriculture-related.

Figure 19: Possible location of the ICBM launch test on 4 May 2022 at 12:03 Loc (03 03 UTC) (39° 13′ 14″ N 125° 39′ 55″ E)



Source: Planet Labs Inc., 2 May 2022, 05 23 UTC**;** 4 May 2022, 05 47 UTC (14 47 Loc.).

Annex 20: Activity at the Sinpo south shipyard and Mayang-do submarine base

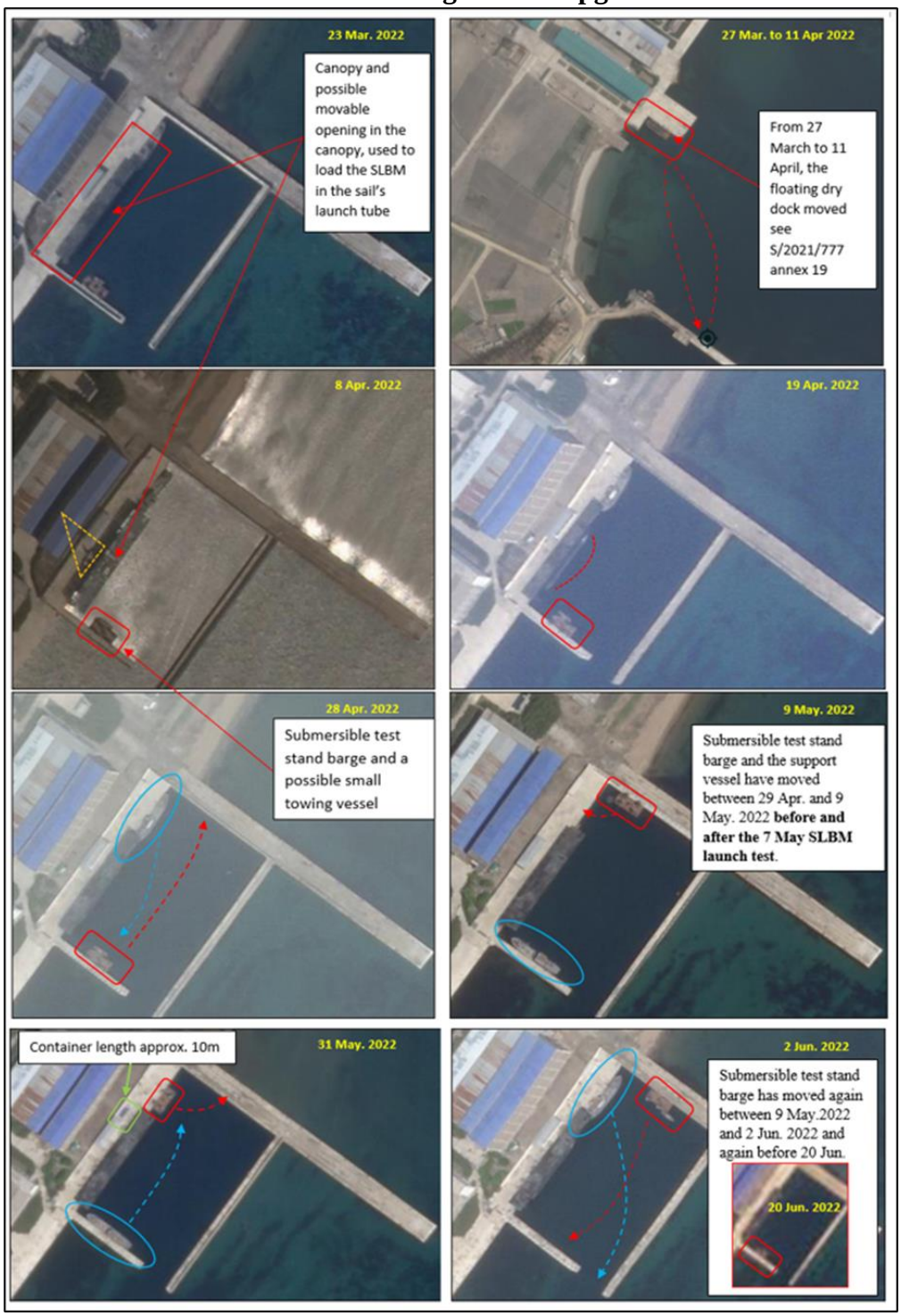
Sustained activity was detected in the secure boat basin between February and June 2022, which was likely to be related to the preparation of the launch test of the new SLBM on 7 May 2022 and possibly others. According to the analysis of satellite imagery by the Panel and a thinktank[31] the activity around the GORAE/SINPO-class ballistic missile submarine (SSB) increased between May and June (see figure 20.2). However, figure 20.1 provides information on other facilities in the Sinpo and Mayang-do shipyards that have developed relatively slowly in recent months.

[31] See "Post-SLBM Test Activity at the Sinpo South Shipyard", CSIS Beyond Parallel, 1 June 2022, available at https://beyondparallel.csis.org/post-slbm-test-activity-at-the-sinpo-south-shipyard/ and previous similar articles.

Figure 20.1: The submersible test stand barge, the support vessel and the SSB have moved in and possibly out of the secure boat basin of the Sinpo south shipyard especially for the SLBM launch test of 7 May 2022. At the static test stand for launch tube (40° 01′ 06″ N 128° 09′ 24″ E), activity was observed especially around the structure on 21 March 2022.

Source: Planet Labs Inc., 3 February 2022, 05 01 UTC; 3 March 2022, 01 31 UTC; 21 March 2022, 02 04 UTC; 23 March 2022, 05 10 UTC; 8 April 2022, 01 56 UTC; 19 April 2022, 01 26 UTC; 23 April 2022, 01 34 UTC; 28 April 2022, 01 41 UTC; 9 May 2022, 02 42 UTC; 27 May 2022, 01 52 UTC; 29 May 2022, 01 45 UTC; 31 May 2022, 01 41 UTC; 02 June 2022, 01 30 UTC; 20 June 2022, 01 53 UTC.

Figure 20.2: From 27 March to 11 April 2022, the floating dry dock has also been temporarily relocated from its quayside location (40° 01′ 07″ N 128° 09′ 51″ E) to the launching docks in front of the buildings (40° 01′ 20″ N 128° 09′ 47″ E) where the new ballistic missile submarines are being built or upgraded.



Source: Same as above.

Annex 21: 25 May 2022 (local time): An ICBM, possible Hwasong-17, launched below its full capacity

This was the first time that a liquid and a solid propellant BMs were launched at the same time (see annex 23.1). The simultaneous launch of several types of systems resembled an operational test to evaluate the operational combination of weapon systems. However, the flight did not have an intercontinental-range flight pattern as in the cases of the 27 February and 5 March launches. According to a Member State, the test may be dedicated to testing MIRV, or a reconnaissance satellite, as well as the first stage of an ICBM booster.[32]

Figure 21: 25 May 2022 (06:00 Loc.) - possible location of the ICBM launch pad at 39°13′14″N 125°39′55″E

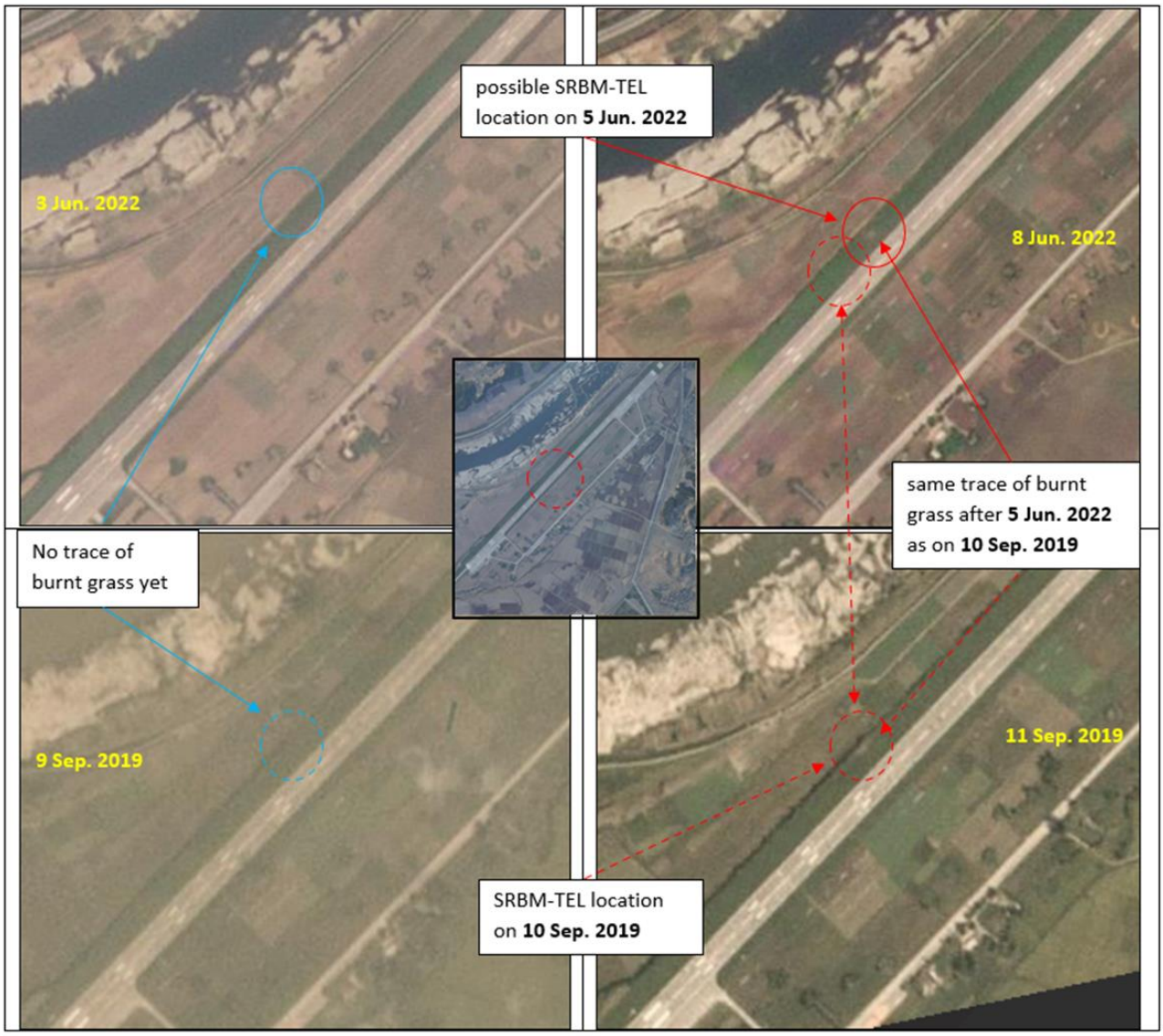
Source: Planet Labs Inc., 22 May 2022, 05 31 UTC; 24 May 2022, 20 27 UTC (25 May, 05:27 Loc.); 28 May 2022, 05 48 UTC.

[32] See also https://www.nknews.org/pro/why-north-korea-launches-long-range-missiles-on-medium-range-trajectories/?t=1670961118886.

Annex 22: 5 June 2022 (local time): 4 different SRBM types (8 BMs, probably KN-23, KN-24, KN-25 and new modified KN-23) were tested almost at the same time.

Six of the eight BMs were fired between 09:06 and 09:41 (loc.) from different locations. From the vicinity of east coast at 9:10, from west coast at 9:06, 9:15 and 9:30, from inland at 9:24, 9:41 (Sunan, Kaechon likely at 39° 45′ 11″ N 125° 54′ 02″ E, which was almost the same location as the SRBM test on 10 Sep. 2019, at Dongchang-ri, Hamhung).

Figure 22: 5 June 2022 (loc.): Consistent with the Member States reports about the series of SRBM tests on 5 June 2022, one location of the possible launch pads in Kaechon area would be 39° 45′ 11″ N 125° 54′ 02″ E. It is very close to the launch pad of the SRBM launch test on 10 September 2019 (39°45'8.46"N 125°53'59.06"E, see S/2020/151, annex 58.6).[33]

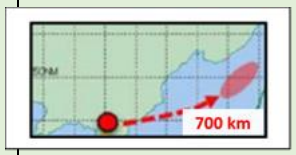


Source: Planet Labs Inc., 19 May 2022, 09 37 UTC; 3 June 2022, 02 01 UTC; 8 June 2022, 01 28UTC ; 9 September 2019, 02 02 UTC; 11 September 2019, 00 43 UTC.

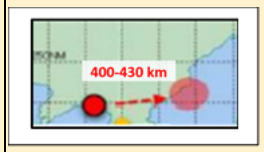
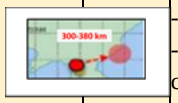
[33] Furthermore, it is understandable that the DPRK uses almost the same launch pad locations for launch tests in order to be able to compare relatively similar data sets.

Annex 23: Launch tests from May 2019 to June 2022 and the analysis of TEL and ballistic missile numbering in recent parades

Annex 23.1: Table 23: Summary table of launches of ballistic missiles or missiles combining ballistic and guidance technology with liquid and solid fuel propellant engine by the Democratic People's Republic of Korea from the resumption of testing from 4 May 2019 to 5 June 2022

Tests (all) in the year	*Tests solid/ liquid since 2018*	*Tests solid/ liquid in the year*	*Date and time (local)*	*Reported type*	*Number of missiles*	*Reported launch location*	*Reported distance travelled (km)*	*Reported apogee (km)*	*Remark*	*Korean Central News Agency classification*
17	**28**	**8**	**2022**	**Solid fuel BMs fired <u>between 2018 and 5 June 2022:</u>** **In 2022 (to date):**	**63** **22**					
	10	**9**	**2022**	**Liquid fuel BMs fired <u>between 2018 and 25 May 2022</u>:** **In 2022 (to date): 3** IRBM + **6** ICBM=	**10** **9**					
1.	**2.**	**I.**	**05 Jan. 2022** 08:10 or 08:07	**MRBM** or **SRBM** - with a liquid propellant engine**.** - *"Hypersonic glide vehicle warhead"* disclosed at the missile exhibition "Self-Defence 2021" on 11 October 2021, before the 5 January launch test. (KCNA) -Re-entry vehicle seems to be a manoeuvrable re-entry vehicle (**MaRV**) - 6 axle wheeled TEL	**1**	From an inland area in Jagang Province, eastward into waters off the east coast 	500 (or more)	50	-The shape of the warhead of the missiles tested on 28 September and on 5 January were different. It is judged to be one of the other types of missiles first unveiled in October. -The main body of the missile appeared to be made from a liquid propellant booster that resembled, but shorter than, the single-stage Intermediary Range Ballistic Missile (IRBM) Hwasong-12. - max speed between Mach 3 and 6	*The hypersonic gliding warhead* (KCNA, 7 Jan. 2022)[34]
2.	**3.**	**II.**	**11 Jan. 2022** 07:27 or 07:25	**- HSBM or MRBM or SRBM** - with a liquid propellant engine. - *"Hypersonic glide vehicle warhead"* disclosed at the missile exhibition "Self-Defence 2021" on 11 October 2021, before the 11 January launch test. - Re-entry vehicle seems to be a	**1**	From an inland area in Jagang Province, eastward into waters off the east coast 	700 (or more)	60	- Max speed: Mach 10 (3400m/s). - possible irregular trajectory including change to the direction of north - The shape of the warhead similar to the that of the BM tested on 5 January. - The main body of the missile appeared to be made from a liquid	*"The hypersonic missile weapon system… …600 kilometres and 240-kilometre acute circular… hit the target in the waters 1,000 kilometres*

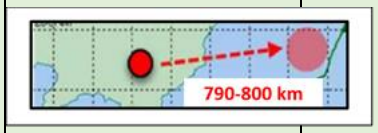
[34] *KCNA, 7 Jan. 2022: "The missile made a 120 km lateral movement from the initial launch azimuth and "precisely hit a set target 700 km away," "The test launch clearly demonstrated the control and stability of the hypersonic gliding warhead which combined the multi-stage gliding jump flight and the strong lateral movement,"…" was overseen by the Academy of Defense Science".*

				MaRV - 6-axle wheeled TEL					propellant booster that resembled, but shorter than, the single-stage IRBM Hwasong-12.	*away" (*KCNA 12 January 2022)[35]
3.	**21.**	**I.**	**14 Jan. 2022** 14:41 and 14:52	**SRBM (KN-23)** - It appears to be the same type of SRBM **KN-23** recently tested twice as a railway-borne missile system on 15 Sept. 2021 and 14 Jan. 2022. It has been displayed at the missile exhibition "Self-Defence 2021" on 11 October 2021 - railway car	**2**	From the Uiju area (Possibly located in the rectangle S-W corner 40° 13′ 10″ N 124° 34′ 02″ E, N-E corner 40° 13′ 06″ N 124° 33′ 57″ E), north-eastward into waters off the east coast and impacting an uninhabited island (possible target location 40° 38′ 50″ N 129° 33′ 02″ E") 	430 or 400	36 or 50	- New railway-borne missile system already tested on 15 Sept'2021 - Time between launches: 11 minutes - Max speed: Mach 6 - trajectories were comparable in range and manoeuvre to previous tests in 2019-2020, including a detected "pull-up manoeuvre". - The use of a railway-borne launcher gives DPRK a mode of transport for a variety of missiles which can be rapidly deploy and launch from anywhere on their rail network providing another option for concealing and launching its missile force.	*"Firing drill of railway-borne missile Regiment") or "Firing Drill for Inspection of Railway Mobile Missile Regiment* (KCNA 15 January 2022
4.	**22.**	**II.**	**17 Jan. 2022** 08:49 and 08:52 or 08:50 and 08:54	**- SRBM (KN-24)** - It appears to be the same type of SRBM KN-24 tested on 21 March 2021 and that has been displayed at the missile exhibition "Self-Defence 2021" on 11 October 2021. It was also called "Hwasong-11 Na" or Hwasong-11 B" - Track TEL	**2**	From the area of Pyongyang-Sunan airport area (Possibly located at 39° 15′ 44″ N 125° 40′ 34″ E trace of burnt gas), north-eastward into waters off the east coast and impacting an uninhabited island (possible target location 40° 38′ 50″ N 129° 33′ 02″ E")	300 or 380 	50 or 42	- Time between launches: 3 or 4 minutes - Max speed: Mach 5 - The possible fired location if confirmed was very close to the location of the Hwasong-12 launch test site on 29 August 2017 (S/2019/171 para. 174 annex 84) - The track TEL chassis may be	*"Two tactical guided missiles"* "*to confirm the weapons system's accuracy"*

[35] According to KCNA January 12, 2022, excerpt, "*The hypersonic gliding warhead was separated from the launched missile, made a gliding re-leap from the point of 600 kilometres and 240-kilometre acute circular flight from the initial launch azimuth to the pinpoint to hit the target in the waters 1,000 kilometres away*" available at NK NEWS / KCNA WATCH Website, https://kcnawatch.org/newstream/1641940310-600724419/distinguished-feat-of-wpk-in-history-of-leading-juche-based-defence-industry/?t=1649727166452
- Kim Jong Un officially attended the missile test with Jo Yong Won, member of the Presidium of the Political Bureau see S/2022/132 paragraph 20, 24, table 1

[36] Article "North Korea says it successfully launched 'tactical guided missiles' on Monday" from NK-News on 18 January 2022 available at https://www.nknews.org/2022/01/north-korea-says-it-successfully-launched-tactical-guided-missiles-on-monday/?t=1650290915010

[37] KCNA (Jan 18, 2022): "*The Academy of Defence Science confirmed the accuracy, security and efficiency of the operation of the weapon system under production."*

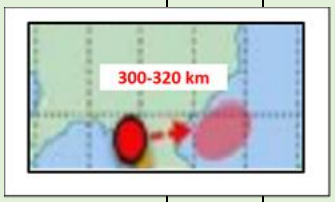
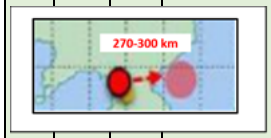
									based on the DPRK Pokpung-ho battle tank chassis (derived from T62 and T72),	
5.	**23.**	**III.**	**27 Jan. 2022** 08:00 and 08:05	**- SRBM (KN-23)** - displayed at the missile exhibition "Self-Defence 2021" on 11 October 2021 and tested several times since 4 May 2019 - 4-axle wheeled TEL	**2**	From the area of Hamhung (39° 48′ 45″ N 127° 39′ 50″ E, same launch pad as the one used for the SRBM KN-24 launch test on 10 August 2019) eastward into waters off the east coast and impacting the uninhabited Al-som Island (40°38'50.49"N 129°32'55.73" E)	190	20	- Level of operational testing - Time between launches: 5 minutes - very depressed trajectory - Kim Jong Un was nearby Hamhung inspecting a site for the Ryonpho Vegetable Greenhouse Farm and a possible missile factory, the "February 11th Plant of the Ryongsong machine complex"[38]	*"Surface to surface tactical guided missile"* (Rodong Jan 28, 2022)[39] "*confirming the power of conventional warhead*"
6.	**4**	**III.**	**30 Jan. 2022** 07:52	**- IRBM Hwasong-12** - with a liquid propellant engine. - Identified by MSs as an IRBM sharing characteristics with the Hwasong-12 last tested on 29 August and 15 September 2017 - 6-axle wheeled TEL	**1**	From same launch pad as for the Hwasong-14 launch on 28 July 2017, Muphyong-ri in Jonchon county (40° 36′ 41″ N 126° 25′ 33″ E) eastward into waters off the east coast after a 30-minute flight 	800 or 790	2 000	- launched in a lofted orbit and identified through KCNA pictures as the IRBM Hwasong-12 – 800 km is the longest flight of BMs since 2017.[40] - Re-entry vehicle speed: Mach 16[41] - The main engine still seems to be derived from RD-250 engine with 4 vernier engines. (See S/2018/171, paras 14-15, figure 3) - It is in the stage of practical use and production whose last test has been described as "*operational trial*	*"Test-fire of **Hwasong 12**-type Ground-to-ground Intermediate- and Long-range **Ballistic Missile** Held"* (Rodong Sinmun Jan.31, 2022)

[38] SRBM KN-24 launch test on 10 August 2019 (39° 48′ 45″ N 127° 39′ 50″ E) - the Ryonpho Vegetable Greenhouse Farm (39°47'23.27"N 127°32'9.36"E) and the "February 11th Plant of the Ryongsong machine complex" (39° 55′ 10″ N 127° 39′ 09″ E).

[39] "*The Academy of Defense Science of the Democratic People's Republic of Korea conducted the test-fire for updating long-range cruise missile system and the test-fire for confirming the power of conventional warhead for surface-to-surface tactical guided missile on Tuesday and Thursday respectively,*" the Korean Central News Agency (KCNA). The LRCM was tested on 25 January, according to North Korea's announcement, the missile [CM] flew for 2 hours and 32 minutes with a range of 1,800km.

[40] - Hwasong-12 (aka KN17) theoretical range could be up to 5 000 km. Lofted trajectories in May, August and September 2017 (last test) over the Japanese territory. KCNA reported that North Korea claims *"that the Hwasong-12 is meant to serve as a medium-long range strategic ballistic missile with a range of 3,000 – 4,000 km capable of reaching Guam." …" The military plans to attack Guam "through simultaneous fire of four Hwasong-12 intermediate-range strategic ballistic rocket*"." NKNEWS on 14 August 2017 available at https://www.nknews.org/2017/08/kim-jong-un-briefed-on-guam-attack-plan-at-strategic-force-command-kcna/?t=1654210722275.

[41] Article "Hwasong-12 test signals troubling new phase in North Korea's missile programs" NKPRO on 31 January 2022 available at https://www.nknews.org/pro/hwasong-12-test-signals-troubling-new-phase-in-north-koreas-missile-programs/?t=1654208852886.

									of a Hwasong-12 production unit" (KCNA Jan. 31, 2022)[42]	
7.	**5**	**IV.**	**27 Feb. 2022** 07:52 or 07:51	**- new ICBM Hwasong-17** - flying as a suborbital satellite launcher with the flight features of long-range BM - with the RD-250 liquid propellant engines for the first stage. - identified as ICBM-class by several Member States or ICBM-capable platform such as the super large BM "Hwasong-17" (see row "5 March" below)	**1**	From the Pyongyang Sunan international airport area (launch pad at 39° 13′ 17″ N 125° 40′ 17″ E because of visible trace of burnt gas on the tarmac after the launch) toward the east into waters near the east coast of North Korea,  	300 or 320	600 or 620	- lofted trajectory - if the images taken from space were genuine, the test launch was intended to test the functions of a reconnaissance satellite. According to MSs, such test was likely probable but, delivery rockets for satellite launches use technologies that are basically identical and compatible with those of ballistic missiles (see row "5 March") - it may have been launched for the purpose of verifying some function before conducting a launch test at the maximum range of the missile (see row 5 March")	- no KCNA's image of the launcher, - *"NADA and Academy of Defense Science conducted an important test Sunday under the plan of developing a* ***reconnaissance satellite****"*[43]
8.	**6**	**V.**	**5 Mar. 2022** 08:52 or 08:47  	**- new ICBM Hwasong-17** - flying as a suborbital satellite launcher with the flight features of long-range BM - with the RD-250 liquid propellant engines for the first stage. - identified as ICBM class by several Member States or as ICBM-capable	**1**	From the Pyongyang Sunan international airport area (launch pad at 39° 13′ 17″ N 125° 40′ 18″ E clearly visible trace of burnt gas on the tarmac after the launch) toward the east into waters near the east coast of North Korea after a 40-minute flight.	270 or 300	560 or 550	- lofted trajectory - if the images taken from space were genuine, the test launch was intended to test the functions of a reconnaissance satellite. According to MSs, such test was likely probable but, delivery rockets for satellite launches use technologies that are basically identical and	- no KCNA's image of the launcher - *NADA and Academy of Defence Science Conduct Another Important Test for Developing* *Reconnaissance Satellite* [49]

[42] "*It confirmed the accuracy, safety and operational effectiveness of the Hwasong-12 weapon system under production". (KCNA Pyongyang Times 31 Jan.2022) Pyongyang's official Korean Central News Agency (KCNA) said the launch of the "Hwasong-12-type surface-to-surface intermediate- and* ***long-range ballistic missile****" was organised by the Academy of Defence Science (ADS), the Second Economic Committee, and other institutions. It added that the launch aimed to verify the Hwaseong-12's deployment and accuracy and was conducted by the "highest-angle launch system from the northwestern part of the country" towards the east of the Korean Peninsula.*

[43] "*Vertical and oblique photographing of a specific area on the ground" with cameras that will be "installed on the reconnaissance satellite"* (Rodong Sinmun and KCNA 28 February2022).

				platform such as the super large BM "Hwasong-17" [44] Several Member States evaluated the BM as the Hwasong-17, and a MS assesses that this may have been launched for the purpose of verifying some function before conducting a launch test at the maximum range of the missile[45]					compatible with those of ballistic missiles.[46] - Kim Jong Un, Deputy Dpt. Director Kim Jong Sik, Dpt. Director Yu Jin of party central committee officials visited the satellite control centre (SCC) in the week of the 5 March launch (39° 2'33.55"N 125°42'35.02"E) probably on 9 March.[47] He visited the Sohae satellite launching ground on probably 10 March.[48]	
9.	**7**	**VI.**	**16 Mar. 2022** 09:30	**- new ICBM Hwasong-17** - with liquid propellant engine - identified as ICBM-class by several Member also as the super large BM "Hwasong-17" whose photos and video would be released after the	**1**	From the Pyongyang Sunan international airport area (launch pad at 39° 11′ 18″ N 125° 40′ 00″ E) same area as two ICBM system tests on Feb 27 and March 5 possible	failed	failed	- ICBM launch test according to several MSs, failed after some seconds flight and exploded at an altitude of less than 20km. - BM's debris fell in or near Pyongyang posing a threat to	No statement or information from DPRK (first no-statement in 2022)

[44] MSs evaluated the 28 February and 5 March missile as the new ICBM Hwasong-17 shown at the October 2020 Military parade and mounted on a 11-wheeled TEL (S/2022/840 para.17 and S/2021/777 annex 18.2) In particular the thermal signature of the engines analysis (one, two or four nozzles) could differentiate Hwasong-17 from others.

[45] According to a Member State, the 28 February and 5 March missiles have at least the same or longer range compared to ICBM-class missiles previously launched by North Korea (Hwasong-14 and 15), but further details are still under analysis. A MS assesses that the delivery system could have failed partially or that the test could have been aimed at testing a Post Boost Vehicle equipment, aimed at putting satellites into orbit or at developing MIRV capabilities.

[46] e.g. technologies for the separation of multi-stage propelling devices, attitude control and guidance control. MSs add that the space programme could also serve the improvement of DPRK's ICBM capabilities:
1. Suborbital flight tests are not common for a space programme and could point to a dual objective.
2. Recent launches could also have been used to test technologies useful for a MIRV capacity.
3. It is considered likely that the DPRK should soon transform one of its ICBMs (Hwasong-14, Hwasong-15 or Hwasong-17) which have shown propulsive maturity based on the RD-250 boosters into a space launch vehicle, consequently replacing its Unha SLV used in all its most recent space launches. As such, it would constitute yet another violation of UNSCRs.

[47] Rodong Sinmun 10 March 2022, https://kcnawatch.org/newstream/1646883133-164884312/respected-comrade-kim-jong-un-inspects-national-aerospace-development-administration-nada/?t=1656438970198.

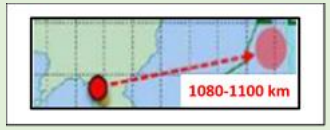
[48] KCNA 11 March 2022, https://kcnawatch.org/newstream/1646992923-861239615/respected-comrade-kim-jong-un-inspects-sohae-satellite-launching-ground/?t=1656438872679.

[49] *Through the test, the NADA confirmed the reliability of data transmission and reception system of the satellite, its control command system and various ground-based control systems (*KCNA and Rodong Sinmun 6 March 2022).

				ICBM launch on 24 March[50] - 11-axle wheeled TEL		destruction around 20km altitude			population; last time a MRBM test has failed was in 2017 - liquid propellant missile is also confirmed because of the typical colour of the vapour seen over Pyongyang[51] - According to Member States and the Panel images analysis, this BM tested on 16 March 2022 is the ICBM Hwasong-17 that was presented by KCTV on 25 March as the ICBM tested on 24 March. Thus, the 25 March KCTV broadcast incorporated older footage of the launch sequences of the Hwasong-17. - the "Sil-li Ballistic Missile Support Facility", identified by the CSIS and the Panel (see S/2020/840 Para. 16) as being possibly related to the BM programme, is clearly presented as involved in the repeated ICBM testing on 27 February, 5 March, 16 March, 24 March, 4 May, and 25 May 2022. - First ICBM launch test without detaching it from the TEL.	

[50] For the 16 March same assessment as for the 5 March. Regarding the booster.

[51] A NK News article on 16 March 2022 reported that "*The images seen by NK News shows a red-tinted ball of smoke at the end of a zig-zagging rocket launch trail in the sky above Pyongyang. Smaller trails appear to extend straight down toward the ground"* available at https://www.nknews.org/2022/03/north-korea-tries-and-fails-to-launch-another-projectile-jcs/.
Another NK News article on 16 March 2022 reported that *"the coloring matches [a] dispersed liquid oxidizer," suggesting a liquid-fuel propellant was used. The projectile may have experienced a thruster failure…" "reddish-orange smoke" is commonly associated with liquid fuel…*" NK News 16 March 2022 available at https://www.nknews.org/2022/03/exclusive-north-korean-projectile-debris-fell-near-pyongyang-after-test-failure/?t=1655215602820 . The orange and yellow colour is often associated with the combustion of liquid fuel propellants, (see S/2017/150, para. 36). However, specific ablative coatings inside an engine's combustion chamber can produce gases whose colours can also be reddish orange.

									- Trucks activity detected after failure	
	-	-	***20 Mar. 2022*** *at 7:20*[52165]							*No statement or information from DPRK*
10.	**8**	**VII.**	**24 Mar. 2022** 14:34 or 14:33	- **possible modified ICBM Hwasong-15** - with liquid propellant engine. - called by the DPRK "**Hwasong-17**" but rather an upgraded "Hwasong-15" with a lighter payload.[53] - 11-axle wheeled TEL (9-axle if Hwasong-15) 	**1**	From the Pyongyang Sunan international airport area same area as the three ICBM system tests on 27 Feb., 5 and 16 March. On 24 March likely from 39° 11′ 19″ N 125° 40′ 01″ E, toward the east and splash down at around 15:44 after a 71-minute flight, inside Japan EEZ some 170 km west of Cape Tappi, Oshima Peninsula of Hokkaido. - According to MSs and Panel's analysis, on 25 March the DPRK presented photos and videos of an earlier Hwasong-17 test, such as those of 27 February, 5 March and 16 March but mentioning the 24 March test as the reference.	1080 or 1100	6200 or 6000	- the data recorded and analysed by MSs are considered as the best to date and consistent with the ability of the ICBM to travel over 15,000 km. However, it is identified an modified Hwasong-15 rather than a Hwasong-17- the thermal signature analysis of this launch possibly identified two engine nozzles (Hwasong-15) instead a four-engine nozzle (Hwasong-17) as the photos and video released after the 24 March had shown. Must be confirmed. - According to a MS it appeared to be identical to those launched on 27 Feb. and 5 Mar. - to carry out this deception manoeuvre, the DPRK had to reduce the payload of the Hwasong-15 to achieve a trajectory	*"**Hwasongpho-17**, a new type of intercontinental ballistic missile of the DPRK strategic forces"*[54] *Flight: 67minutes* *Altitude: 6248.5km* *Distance: 1090km*

[52] -MLRS with solid propellant engine, 4 rockets, from South Pyongan Province area toward west coast for about 1 hour. Possible KN-09, 240 mm 300 mm multiple rocket launcher. This rocket test could be a violation of the Sept. 2018 inter-Korean military agreement if the launch occurred near the border with South Korea (NKnews 20 March 2022) and Reuter at https://www.reuters.com/business/aerospace-defense/nkorea-fires-multiple-rocket-launcher-south-says-2022-03-20/.

[53] Defense ministry of ROK on 29 March 2022 "*Although the projectile fired on March 24 looks like the Hwasong-17 due to the increase in its top altitude and flight time, our assessment is that it is more similar to the Hwasong-15 than the Hwasong-17*," see also Yonhap News agency, available at https://en.yna.co.kr/view/AEN20220329008052325?section=national/defense.

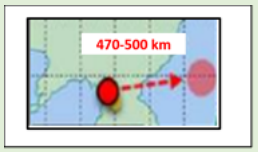
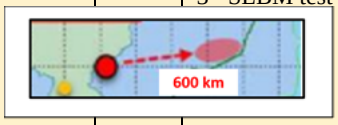
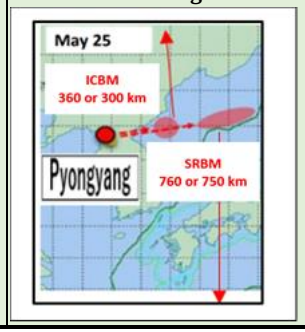
[54] "*Pyongyang, March 25 (KCNA) -- Kim Jong Un , general secretary of the Workers' Party of Korea, president of the State Affairs of the Democratic People's Republic of Korea (DPRK) and supreme commander of the armed forces of the DPRK, gave a written order to conduct the test-launch of Hwasongpho-17, a new type intercontinental ballistic missile of the DPRK strategic forces, on March 23, Juche 111 (2022)* available at https://kcnawatch.org/newstream/1648159663-278086617/respected-comrade-kim-jong-un-issues-order-for-test-launch-of-new-type-icbm/?t=1663712750438.
"*The missile had made its debut in the military parade held two years ago and successfully test-fired in March this year, fully demonstrating its power*" Naenara's declaration on 6 May 2022, see https://kcnawatch.org/newstream/1651828167-937611443/declaration-in-april/?t=1659893211916.

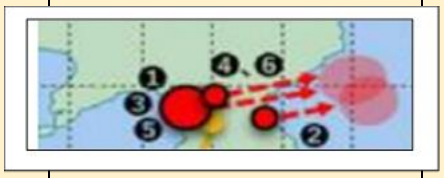
									comparable to that of the more powerful Hwasong-17. - Comparatively, the test of ICBM Hwasong-15 on 29 Nov. 2017 (53-min flight, lofted trajectory, range of 950 km and max altitude of 4 475km, see S/2018/171 Tab.1, para.9) - the missile test was officially under the guidance of Kim Jong Un[55][166]	
11.	**24.**	**IV.**	**16 Apr. 2022** 17:50 and 18:11	**- new SRBM** resembled but smaller than KN-23 and KN-24 and as ground -based version it resembled the new, smaller SLBM launched on 19 October 2022. (Single-stage system) (S/2002/132 annex 20.2) - From a quadruple canister mounted on a small 3-axle wheeled TEL presented at the next military parade on 25 April 2022.	**2**	From possibly the Majon beach near the residence of Kim Jong Un at Chakto-dong, same as for SRBM launch tests on 27 January 2022 and 10 August 2019, 39° 48′ 45″ N 127° 39′ 50″ E), eastward into waters off the east coast and impacting the uninhabited Island as possible target at 110 km Nan-do Island 40° 18′ 50″ N 128° 45′ 44″ E 109 km from launchpad	110	25	- the first time the DPRK has presented an SRBM as a tactical nuclear weapon delivery system. - Max speed Mach 4 - Flight time 60s - probably level of operational testing - Time between launches: 21 minutes - also described as Close-Range ballistic Missile (CRBM, range <300km)) - Kim Jong Un was accompanied by Kim Jong Sik [56]	*"New-type tactical guided weapon" ...* ***strengthening the effectiveness of tactical nuclear operation****...* [57]
12.	**9**	**VIII.**	**04 May 2022** 12:03 or	**- ICBM** - with liquid propellant engine.	**1**	From the Pyongyang Sunan international airport area same as the four previous ICBM	470 or 500	780 or 800	- max speed about Mach 11 around 13600 km/h	No statement or information from

[55] See KCNA, 25 Mar. 2022, and also guided with Jo Yong Won, member of the Presidium of the Political Bureau (KCNA 12 Jan. 2022)
- On 28 March KCNA Rodong Sinmum published photos and article that presented Kim Jong Sik and Jang Chang Ha as the top two military officials on the Hwasong class ICBM project.

[56] Deputy Department Director of the Central Committee of the WPK and commanding personnel of the Ministry of National Defence of the DPRK and the commanders of the large combined units of the Korean People's Army, see Voice of Korea, 17 April 2022.

[57] Voice of Korea, 17 April 2022, "*The **new-type tactical guided weapon system** developed under the special concern of the Party Central Committee is of great significance in radically increasing the fire striking power of the long-range artillery units on the front and strengthening **the effectiveness of tactical nuclear operation of the DPRK and diversification of the firepower task**...*"
https://kcnawatch.org/newstream/1650142847-935725828/president-of-state-affairs-kim-jong-un-watches-test-firing-of-new-type-tactical-guided-weapon/?t=1658076183497

			12:02	- possible **Hwasong-15 or 17** launched below its full capacity and on a standard rather than lofted trajectory 		system tests toward the east and splash down before 12:24 after a less than 21-minute flight - Location: Possibly from 39° 13′ 14″ N 125° 39′ 55″ E because of burnt gas trace at the north edge of the main runway.			- Medium-resolution satellite imagery showed what appears to be vehicles gathering on or around 30 April and 3 May at Sunan's northern airfield around the same location vehicles were seen after the failed 17 March test, though it's possible the activity is agriculture-related.	DPRK (second no-statement in 2022)
13.	**25.**	**V.**	**07 May 2022** 14:07 or 14:06 [05:06 UTC]	**- New SLBM/SRBM** - Derived from KN-23 (or KN-24); similar to the new small SLBM tested on 19 October 2021 and presented at the Self-defense exhibition and at the military parade on 25 April 2022	1	From a submarine (8.24 Yongung SSBA) or a submersible test stand barge in the sea at large off the coast of Sinpo toward the east and splash down before 14:25 after a less than 18-minute flight.	600 	60 or 50	- possibly launched from the 8.24 Yongung SSBA. - irregular trajectory - 3rd SLBM test since 2018	No statement or information from the DPRK (third no-statement in 2022)
14.	**26.**	**VI.**	**12 May 2022** 18:29 or 18:28	**- SRBM** - probably the **KN-25** (super large multiple rocket launcher)	**3**	From the Pyongyang Sunan international airport area 	360 or 350	90 or 100	- Max speed Mach 5 - Level of operational testing - Time between launches: almost simultaneous - possible depressed trajectory needs be confirmed	No statement or information from the DPRK (fourth no-statement in 2022)
15.	**10**	**IX.**	**25 May 2022** 06:00 or 05:59	**- ICBM** - with liquid propellant engine. - Possible **Hwasong-17** 	**1**	From the Pyongyang Sunan international airport area, Location: possibly from 39° 13′ 14″ N 125° 39′ 55″ E because TEL shape was visible 30 minutes before launch time and the cleaning of burnt gas trace at this location was completed.	360 or 300	540 or 550	- Series of tests point out the frequency and diversity of tests, first time that a liquid and a solid propellant BM are launched at the same time. - The simultaneous launch of several types of systems resembles an operational test to evaluate the operational combination of weapon systems. - Not intercontinental-range flight pattern as on Feb. 27 and March 5 launches possibly to test MIRV or	No statement or information from the DPRK (fifth no-statement in 2022)

									the reconnaissance satellite or the first stage of an ICBM booster[58]	
16.	**27.**	**VII.**	**25 May 2022** 06:37 06-42	**- SRBM** - likely new modified KN-23	**2**[59]	From the Pyongyang Sunan international airport area, toward the east and splash down	unknown and 760 or 750	20 and 60 or 50	- vanished because of suspect failure or irregular orbit with possible depressed trajectory - 23rd ballistic missile in 2022,[60] one of the most intensive test campaigns	No statement or information from the DPRK (sixth no-statement in 2022)
17.	**28.**	**VIII.**	**5 June 2022** 9:06 9:10 9:15 9:24 9:30 9:41	**- SRBM** 4 different SRBM types (probably KN-23, KN-24, KN-25 and new modified KN-23) 	 **1** **1** **1** **1** **1** **1**	From different locations: from the vicinity of east coast at 9:10, from west coast at 9:06, 9:15 and 9:30, from inland at 9:24, 9:41 (Sunan, Kaechon likely at 39° 45′ 11″ N 125° 54′ 02″ E almost the same location as the SRBM test on 10 Sep. 2019, Dongchang-ri, Hamhung), toward the east and splashdown	110 to 670: 350 300 400 350 400 300	25 to 90: 50 50 50 100 50 100	- Possibly some include irregular trajectory - Speed Max form M3-M6 - first time so many different missiles and ranges are combined at the same time - operational training to fire SRBMs of different ranges and strike capabilities using the tactics of the former Soviet Union[61]	No statement or information from the DPRK (seventh no-statement in 2022)
-	**-**	**-**	**5 June 2022**	**SRBM (same series as above)**	**2**	Same area	short	Very low	- Possible 2 other SRBMs detected	No statement
4	**20**	**3**	**2021**	**Solid fuel BMs fired <u>between 2018 and 19 Oct. 2021</u>:** **In 2021:**	**41** **5**					
	1	**1**	**2021**	**Liquid fuel BMs fired <u>between 2018 and 28 Sep. 2021</u>:** **In 2021:**	**1** **1**					

[58] According to MS and see also https://www.nknews.org/pro/why-north-korea-launches-long-range-missiles-on-medium-range-trajectories/?t=1670961118886.

[59] On 24 May 2022, the DPRK launched three missiles: one intercontinental ballistic missile (ICBM) and two shorter range ballistic missiles. So far this year, the DPRK has launched 23 ballistic missiles, including six ICBMs available at https://home.treasury.gov/news/press-releases/jy0801 27 May 2022.

[60] Including **six ICBMs** (US 27 May 2022); https://home.treasury.gov/news/press-releases/jy0801.

[61] - Frequency and diversity - a BM test every nine days but no report on the last five tests; - doctrine: "…use nuclear tactical against ROK at the beginning" (Kim Yo-jong from a MS's report).

	18.	**I.**	**25 Mar.2021** 0706 and 0725 hours (MS) or 0704 and 0723 hours	**New SRBM (modified KN-23)** It appears to be the new SRBM, and TEL displayed during the military parade on 14 January 2021 and identified as a possible modification and enlargement of the previously displayed and tested KN-23 SRBM	2	Hamju south Hamgyong area Near Sondok (2 airfields Sondok and Yonpo (Ryonpo))	450 600	60 Less 100	- New 5 axle wheeled TEL (if 26 March 2021 KCNA pictures are genuine. See 14 Jan 2021 military parade (Panel) - TBL: 19 minutes (0706-0725) (MS) - Possible depressed with pull-up trajectory 18th SRBM launch test since 04 May 2019 (around 35 SRBM) (Panel) falling into waters outside Japan's Exclusive Economic Zone (MS)	*"New-type tactical guided missiles" or new-type tactical guided projectile*
	19.	**II.**	**15 Sep. 2021** 12:34 and 12:39 or 12:32 and 12:37	**SRBM.** It appears to be either the previously displayed and tested SRBM **KN-23** tested as a railway-borne missile system that has been displayed at the missile exhibition "Self-Defence 2021" on 11 October 2021 or possibly the modified and enlarged version of KN-23	2	From a railcar at the entrance of a tunnel located at 39°16'31"N 126°48'17"E in Yangdok area of South Phyongan Province,[62] eastward into waters off the east coast but inside Japan's Exclusive Economic Zone.	800	60	- New railway-borne missile system - Time between launches: 5 minutes - The trajectories were the longest of the solid fuel ballistic missiles tested since 2019, with a "pull-up manoeuvre" detected. - If it was the KN-23 it showed increased range compared to previous tests, probably because of a reduced payload. - The use of a railway-borne launcher gives DPRK a mode of transport for a variety of missiles which they can rapidly deploy and launch from anywhere on their rail network providing another option for concealing and launching its missile force.	*"The Railway Mobile Missile Regiment"*[63] *(KCNA Voice of Korea 19 Sept 2021)*

[62] According to a Member State, the location could be at 39°16'2.04"N 126°47'17"E. This assessment of the coordinates is slightly different to the Panel's analysis of the KCNA video which gives an idea of the length of the tunnel and the curve of the track.

[63] "*The Railway Mobile Missile Regiment took part in the drill with a mission to move to the central mountainous area and strike the target area 800 kilometres away early on the morning of September 15* (KCNA, Voice of Korea 19 Sept. 2021).

	1.	**I.**	**28 Sep. 2021** 06:40 or 06:38	**MRBM HWASONG-8** "**Hypersonic glide vehicle HGV**" with a liquid propellant engine. - disclosed at the missile exhibition "Self-Defence 2021" on 11 October 2021, after the 28 September launch test. (KCNA) -SRBM or MRBM -Missile total length is around 14.5 m for a body diameter of 1.4 m. - Re-entry vehicle length is around 4.7m for a rear diameter of around 0.9 m. - 6-axle wheeled TEL	1	From North's Mupyong-ri, Jagang province eastward into waters off the east coast	200	60	- The mention by DPRK of a "*missile fuel ampoule"* used in liquid propellant ballistic missiles enables the missile to be loaded with propellant at the factory (KCNA) - The main body of the missile appeared to be made from a liquid propellant booster that resembled, but shorter than, the single-stage Intermediary Range Ballistic Missile (IRBM) Hwasong-12. - The possible HGV resembled an already existing HGV[64]. It appears to be at an early stage of development stage of development that would require considerable time for actual deployment. -It's known to have flown at a speed of around Mach 3 at that time	*Academy of Defense Science conducted the first test fire of the hypersonic Hwasong-8 missile from Toyang-ri, Jagang Province, on Tuesday 28 Sep.(KCNA 29 Sep.2021)*[65]
	20.	**III**.	**19 Oct. 2021** 10:17 or 10:15	**New SLBM/SRBM** It appears to be a new Short-range Submarine Launched Ballistic Missile that has been displayed at the missile exhibition "Self-Defence 2021" on 11 October 2021. Missile length, without tube adaptor, is around 6.8 m for a body diameter of 1 m	1	From a Gorae/Sinpo class submarine (or a submersible test stand barge) located in the area of Sinpo (South Hamgyong Province), eastward into waters off the east coast	600 or 430	60 or 50	New smaller SLBM, 2nd SLBM test since 2018 - a pull-up manoeuvre has been detected but with no significant horizontal movement. -Its design is smaller than the SLBM Pukguksong missile series and resembled those of the SRBM KN-23 and KN-24 as well as having similar flight characteristics.	*"a new-type of submarine-launched ballistic missile (SLBM)". (KCNA 20 Oct)*[66]

[64] This HGV is a solid propellant hypersonic missile showcased by a Member State at a military parade in 2019.

[65] KCNA 29 Sep. 2021: *"the navigational control and stability of the missile in the active section as well as its technical specifications, including the guiding manoeuvrability and the gliding flight characteristics of the detached hypersonic gliding warhead". "The engine as well as of missile fuel ampoule that has been introduced for the first time" was "ascertained,"*

[66] Rodong Sinmun /ANDS 20 Oct. 2021: The DPRK stated that it has *"successfully"* conducted a test-firing of a new-type of submarine-launched ballistic missile (SLBM) *"The new SLBM … will greatly contribute to our country's defense technology advancement and the Navy's underwater operational capabilities";*
KCNA 20 Oct. 2021: *"The Academy of National Defense Science conducted the test-launch from "8.24 Yongung" where its first SLBM was successfully launched five years ago to demonstrate the military muscle of the DPRK"… "It clarified that the new type SLBM, into which lots of advanced control guidance technologies including flank mobility and gliding skip mobility are introduced, will greatly contribute to putting the defense technology of the country on a high level and to enhancing the underwater operational capability of our navy*,"

									It could be fielded in multiple launch tubes from a larger DPRK ROMEO-class submarine that increase an offshore strike capability. - The missile was reportedly launched from an experimental **Gorae/Sinpo-B class ballistic missile submarine called "8.24 Yongung**", whose launch tube may have been adapted for a smaller SLBM than Pukguksong type. - However, the missile may have been launched from a submersible test stand barge.	
4	**17**	**4**	**2020**	**Solid fuel BMs fired <u>between 2018 and 29 Mar. 2020</u>:** **In 2020:**	**36** **11**					
	0	**0**	**2020**	**Liquid fuel BMs fired <u>between 2018 and 2020</u>:** **In 2020**	**0** **0**					
	14.	**I.**	**02 Mar.2020** 1237 hours	**SRBM (KN-25)**; same as II and IV (24 Aug., 10 Sept., 31 Oct. and possibly 28 Nov. 2019)	2	Wonsan area	240	35	- Probably an operational training test integrated into a military exercise - Wheeled TEL with four launch tubes (if KCNA pictures are genuine; images resembled those from 28 Nov. 2019) - TBL: 20 seconds	*Multiple-launch rocket – long-range artillery*
	-	**-**	From 28 Feb. to 2 Mar 2020	**MLRS (KN-09)** 240 mm 300 mm	unknown	14 km from eastern Wonsan area 39°9'19.66"N 127°36'26.85"E	–	–	- Operational training test for artillery and MLRS during "joint strike military drills" (see S/2020/840 annex 7, figure 7-1)	*Joint strike military drills*
	15.	**II.**	**9 Mar.2020** 0736 hours	**SRBM (KN-25);** same as I and IV	3 (or 2)	Sondok area	200	50	- Probably one KN-25 launch failed. Member States only counted	*Front-line long-range artillery*

									two BMs - TBL: 20 seconds and 1 minute	
	-	-		**MLRS (KN-09)** 240 mm 300 mm	2	Sondok area	–	–	- Possibly two KN-09 were also launched	*Front-line long-range artillery*
	16.	**III.**	**21 Mar.2020** 0645 and 0650 hours	**SRBM (KN-24);** same as 10 and 16 August 2019	2	Pyongan area; near Sonchon according to a Member State	410	50	- Possible depressed with pull-up trajectory - TBL: 5 minutes	*Tactical guided weapon*
	17.	**IV.**	**29 Mar.2020** 0610 hours	**SRBM (KN-25);** same as I and II	2	Wonsan area	230	30	- Tracked TEL (if KCNA photographs are genuine; images showed a tracked 6-tube TEL instead of a wheeled 4-tube TEL) - TBL: 20 seconds	*Super-large multiple rocket*
13	**13**	**13**	**2019**	**Solid fuel BMs fired <u>between 2018 and 28 Nov. 2019</u>:** **In 2019:**	**25** **25**					
	0	**0**	**2019**	**Liquid fuel BMs fired <u>between 2018 and 2019</u>:** **In 2019**	**0** **0**					
	1.	**I.**	**4 May 2019** 0830 and 1050 hours	New SRBM (KN-23); same as II, III and VI	2	Hodo Peninsula N 39°24′32.25″, E 127°31′53.63″	200-unknown (Possibly 240 to 400)	50-unknown (Possibly 40 to 60)	– One launch probably not fully successful – Four-axle wheeled TEL type 1[67] – TBL: 2h20	*Tactical guided weapons*
	-	-	4 May 2019	MLRS 240 mm 300 mm (KN-09)	unknown		70-240		Rockets were tested	*Large-calibre long-range multiple rocket launchers*

[67] According to a Member State, the transporter erector launcher parallels previous models of Iskander. Both transporter erector launchers used a WS200 chassis. In the assessment of another Member State, "*the caterpillar version is just a prototype*" and the wheeled chassis that was used is new and could be derived from other MSs chassis. *"The organization or the design is inspired by Iskander TEL."*

	2.	II.	**9 May. 2019** 1630 and 1650 hours	**New SRBM (KN-23)**; same as I, III and VI	2	Kusong area N 40°01′47″, E 125°13′38″	420; 270	50; unknown Possibly 40	- Tracked TEL similar to T-72 tank[68] - TBL: 20 minutes	*Long-range strike means*
	3.	III.	**25 Jul. 2019** 0530 and 0600 hours	**New SRBM (KN-23);** same as I, II and VI	2	Hodo Peninsula N 39°24′31″, E 127°32′03″	430; 690	50; 50	- Wheeled TEL type 2[69] - TBL: 30 minutes	*New-type tactical guided weapon*
	4.	IV.	**31 Jul. 2019** 0510 and 0530 hours	**New SRBM (possibly KN-23)** or **new MLRS** (possibly 400 mm); same as V	2	Wonsan/Kalma area	250; 250	30; (?)	- Tracked- TEL - TBL: 20 minutes	*New-type large-calibre multiple launch guided rocket system*
	5.	V.	**2 Aug. 2019** 0300 and 0320 hours	**New SRBM (possible KN-23)** or **new MLRS** (possibly 400 mm); same as IV	2	Hamhung area (Possibly Yonghung area)	220; (?)	25; (?)	- KCNA pictures show blurry MRL image not verified as for this test; possibly tracked TEL - TBL: 20 minutes	*New-type large-calibre multiple launch guided rocket system*
	6.	VI.	**6 Aug. 2019** 0520 and 0540 hours	**New SRBM (KN-23);** same as I, II and III	2	Kwail airfield N 38°24′54.98″, E 125°1′43.00″	450; 450	37; 37	- Wheeled TEL type 2; the missile flew over DPRK territory from west to east - TBL: 20 minutes (See S/2020/151 annex 58.2)	*New-type tactical guided missiles*
	7.	VII.	**10 Aug. 2019** 0530 and 0550 hours	New tactical missile similar to **ATACMS (KN-24)**;[70] same as VIII	2	Hamhung/ Hungnam N 39°48′44.32″, E 127°39′49.68″	400; 400 (Possibly 430)	48; 48	- Tracked TEL[71] (see S/2020/151 annex 58.3) - TBL: 20 minutes	*New weapon*
	8.	VIII.	**16 Aug. 2019** 0800 and 0820 hours	New tactical missile similar to **ATACMS (KN-24);** same as VII	2	Tongchon area N 39°03′33″, E 127°46′44″	230; 230	30; 30	- Tracked TEL[72e] - TBL: 16 minutes (See S/2020/151 annex 58.4)	*New weapon*

[68] According to a Member State, this tracked, or caterpillar transporter erector launcher version could be just a prototype.
[69] According to a Member State, this wheeled transporter erector launcher type 2 could be a future operational version.
[70] The Panel notes that the system resembles such surface-to-surface missile systems as the Army Tactical Missile System or the King Dragon 300 (see S/2020/151 table 3, annex 59).
[71] Built on the Pokpung-ho battle-tank chassis, which was designed in the Democratic People's Republic of Korea and resembles the T-62.
[72] Ibid 21??? FOOTNOTE 21?

	9.	IX.	**24 Aug. 2019** 0640 and 0700 hours	**New MLRS**[73] using "super-large" heavy rocket (600 mm, **KN-25**); same as X	2	Sondok airfield N 39°44′37.05″, E 127°28′23.79″	380; 380	97; 97	- Eight-axle wheeled TEL[74] - TBL: 17 minutes (see S/2020/151 annex 58.5)	*Super-large multiple rocket launcher*
	10.	X.	**10 Sept. 2019** 0650 and 0710 hours	**New MLRS** using "super-large" heavy rocket (600 mm, **KN-25**); same as IX	2	Kaechon airfield N 39°45′8.46″, E 125°53′59.06″	330; 330	50; 60	- One flight test failed[75] Eight-axle wheeled TEL; KCNA picture of 31 Oct. launch was in fact from 10 Sept. - TBL: 19 minutes (see S/2020/151 annex 58.6)	*Super-large multiple rocket launcher*
	11.	XI.	**2 Oct. 2019** 0710 hours	**New SLBM/MRBM**[76] **Pukguksong-3** Estimated potential range 1,700 km (see S/2020/151 annex 58.7)	1	Wonsan - Yonghung Bay	450	910	1st SLBM test since 2018 Submerged barge	*New-type SLBM Pukguksong-3*
	12.	XII.	**31 Oct. 2019**	**New MLRS**[78] using "super-large" heavy rocket (600 mm, **KN-25**)	2	Sunchon airfield N 39°24′48″, E 125°53′18″	370; 370	90; 90	- Wheeled TEL - TBL: 3 minutes	*Super-large multiple rocket launcher*
	13.	XIII.	**28 Nov. 2019**	**New MLRS** using "super-large" heavy rocket (600 mm, **KN-25)**	2	Ryonpo area of Sondok airfield or Ryonpo airfield	380; unknown (Possibly 380)	97; unknown (Possibly 50)	- Wheeled TEL - TBL: 30 seconds	*Super-large multiple rocket launcher*

S*ource:* Member States and Panel. *Abbreviations*: MS, Member State / KCNA, Korean Central News Agency.

[73] Four launch tubes; ballistic missile trajectory not aerodynamic, but small canards attached. The rocket is a guided battlefield missile.

[74] According to a Member State, the eight-axle wheeled transporter erector launcher of KN-25 is based on the KN-23 chassis (stretched chassis) with an armoured cabin specifically designed in the Democratic People's Republic of Korea.

[75] Several Member States stated that one flight test had failed and crashed inland, but that the other had headed towards Alsom Island; three out of four tubes had been used. One tube could have been defective (a Korean Central News Agency photograph shows that the upper cap was off but that the missile had not been fired, as the bottom cap was still in place).

[76] The submarine-launched ballistic missile is the naval adaptation of the Pukguksong-2 medium-range ballistic missile, but with a different re-entry vehicle and payload section.

[77] The Korean Central News Agency picture of the 31 October 2019 launch is in fact a picture from 10 September 2019. What was fired on 31 October 2019 was a new large-calibre canister-launched short-range ballistic missile, according to a Member State.

Annex 23.2: Analysis of the TEL and Ballistic Missile numbering in recent parades [78]

Annex 23.2.1: ICBM Hwasong-17 presented at the 25 April 2022 military parade was unveiled at the military parade on 10 October 2020, presented at the 11 October 2021 missile exhibition "Self-Defence 2021" and declared tested on 24 March 2022 by the DPRK.

According to several Member States, the resumption of ICBM tests began on 27 February 2022 with first Hwasong-17 launch test, followed by 4 ICBM Hwasong-17 tests on 5 March, 16 March (failed), 4 May and 25 May, and by the ICBM launch test of either an upgraded Hwasong-15 or an Hwasong-17 on 24 March.

Regarding the exact number, one or more spare systems may have been kept out of the parade, available to replace a vehicle in case of a breakdown, a common practice in military parade.

- Vehicles and missiles numbering: ICBM Hwasong-17 + TEL: ㅈ 03331922 rear/328, ㅈ 03525092 middle/329, ㅈ 04290911 front/321. In the KCTV footage on 25 April 2022 Parade, the Hwasong-17 ㅈ 08080436 on TEL 327 is an image of Hwasong-17 from another parade.

- The Hwasong-17 ㅈ 03031203 on TEL 321 is an image of a Hwasong-17 from footage released on 26 March 2022[79] its TEL number 321 was also the TEL number used by the TEL of the Hwasong-17 number ㅈ 7220406 at the 10 October 2020 parade. At this parade, the Hwsong-17 + TEL numbering were ㅈ(unreadable)/ TEL 324, ㅈ 31380408/TEL 323, ㅈ 21260405/TEL 322, ㅈ 07220406/TEL 321

Annex 23.2.2: ICBM Hwasong-15 presented at the 25 April 2022 military parade. According to several Member States one of its last possible launch tests was on 24 March 2022, however it was declared tested on 29 November 2017 by the DPRK and presented at the 11 October 2021 missile exhibition "Self-Defence 2021", at the military parade on 10 October 2020 and beforehand unveiled at the military parade on 8 February 2018.

- ICBM Hwasong-15 + TEL numbering: ㅈ 05250711 rear-left/314, ㅈ 07220205 rear-right/313, ㅈ 10200709 front-left/312, ㅈ 04290712 front-right/311.

- At October 2020 parade, the Hwasong-15 + TEL numbering was ㅈ 03031012 rear left/TEL 312; ㅈ(?)5031401 rear-right/TEL 311; ㅈ(????)403(?) front-left/TEL 311; ㅈ 03131004 front-right/ TEL 315.

[78] See KCTV footages on https://kcnawatch.org/kctv-archive/6267f67924e38/, https://kcnawatch.org/kctv-archive/6267f63d3465c/.

[79] See https://kcnawatch.org/kctv-archive/623dc62b7e18e/.

Annex 23.2.3: MRBM Hwasong-8 with possible Hypersonic Glide Vehicle (HGV) presented at the 25 April 2022 military parade. It was declared tested on 28 September 2021 by the DPRK and displayed at the 11 October 2021 missile exhibition "Self-Defence 2021

- Vehicles and missiles numbering: MRBM "Hwasong-8" (HGV) + TEL:

- Rear-left ㅈ 11670718, HGV 12-029, TEL 306; rear-right ㅈ??????21, HGV 12-028, TEL 305; middle-left ㅈ 07220610, HJV 12-027, TEL 304; middle-right ㅈ????????, HGV 12-026, TEL 303; front-left ㅈ?5650409, HGV 12-025, TEL 302, front-right ㅈ???????, HGV 12-024, TEL 301.

Annex 23.2.4: MRBM with possible Manoeuvrable Re-entry Vehicle (MaRV) presented at the 25 April 2022 military parade. According to several Member States its two previous possible launch tests were on 5 and 11 January 2022; it was declared tested on these dates by the DPRK as a "Hypersonic missile weapon system". It was unveiled earlier at the 11 October 2021 missile exhibition "Self-Defence 2021

- Vehicles and missiles numbering: MRBM short "Hwasong-8" (MaRV) + TEL:

- Rear-left TEL 296, rear-right MaRV 8-032, TEL 295; middle-left ㅈ 21611114, MaRV 8-035 TEL 294; middle-right MaRV 8-034, TEL 293; front-left ㅈ 01740604 MaRV 8-033, TEL 292; front-right #11210102, MaRV 8-032, TEL 291.

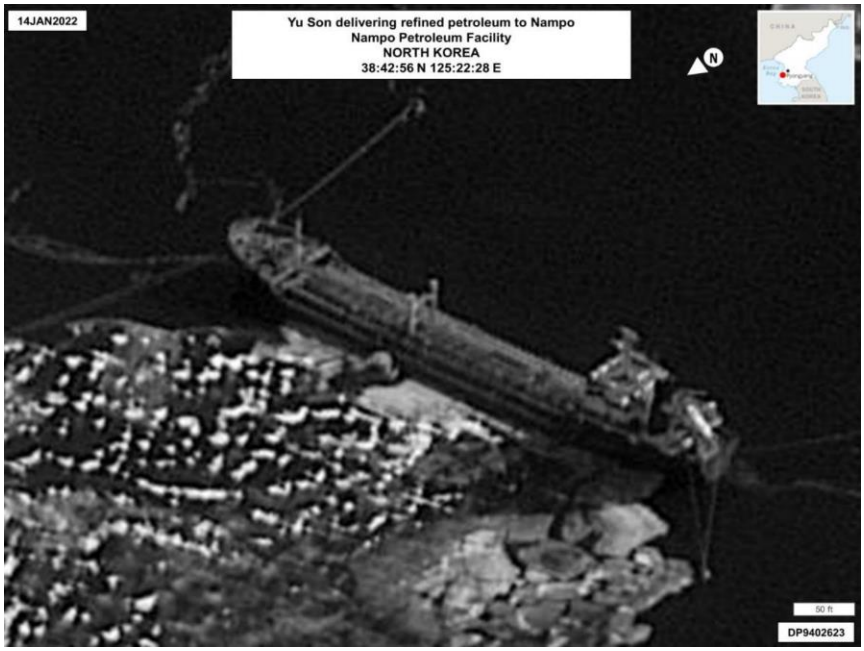
Source for Annexes 23.2.1~23.2.4:
https://kcnawatch.org/kctv-archive/6267f67924e38/,
https://kcnawatch.org/kctv-archive/6267f63d3465c/,
https://kcnawatch.org/kctv-archive/623dc62b7e18e/

Annex 24: DPRK flagged tankers observed delivering refined petroleum products at Nampo oil facilities January-April 2022

A Member State estimates that as much as 458898 barrels of refined petroleum products may have been delivered to Nampo by 30 April based on a maximum cargo capacity of 90 percent of each vessels' deadweight tonnage. The Member State has used this methodology which is widely-accepted by industry. The Member State's calculations presume the carriage of "refined petroleum" to include diesel and/or fuel oil as both these products are widely recognised to be within the category "refined petroleum". The Member State uses a conversion rate of 7.5 barrels per metric ton, the average conversion rate of gasoline, kerosene, gas oil/diesel and residual fuel oil used by the Committee.

6 January: CHIL BO SAN (IMO 8711021 DWT 1999MT). Cargo capacity (90% DWT) of refined petroleum: 13493 barrels.

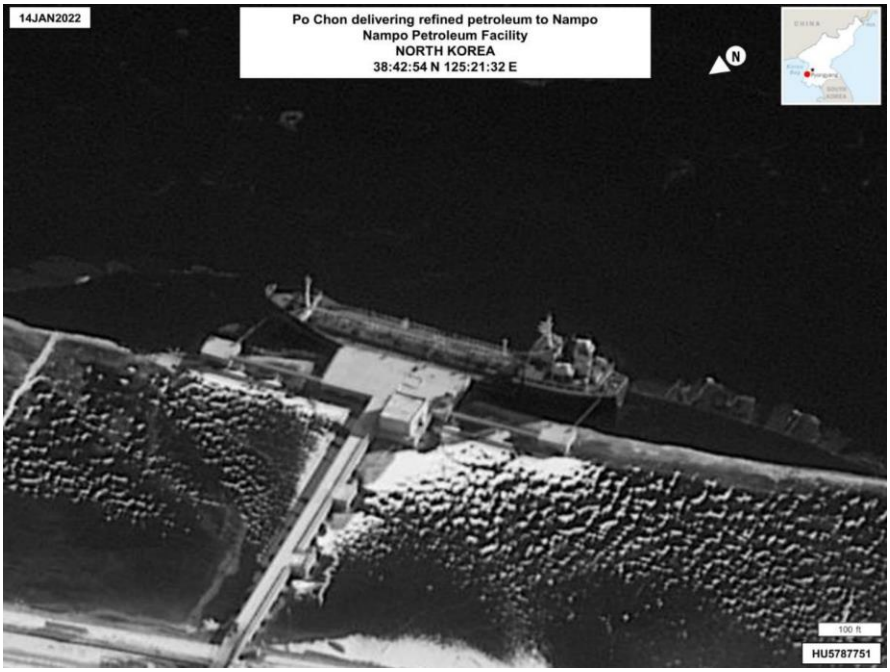
14 January: YU SON (now known as CHANG HAE2, IMO 8691702 DWT 3398MT) Cargo capacity (90% DWT) of refined petroleum: 22935 barrels.



14 January: SAM MA 2 (IMO 8106496, DWT 1731MT). Cargo capacity (90% DWT) of refined petroleum: 11685 barrels.

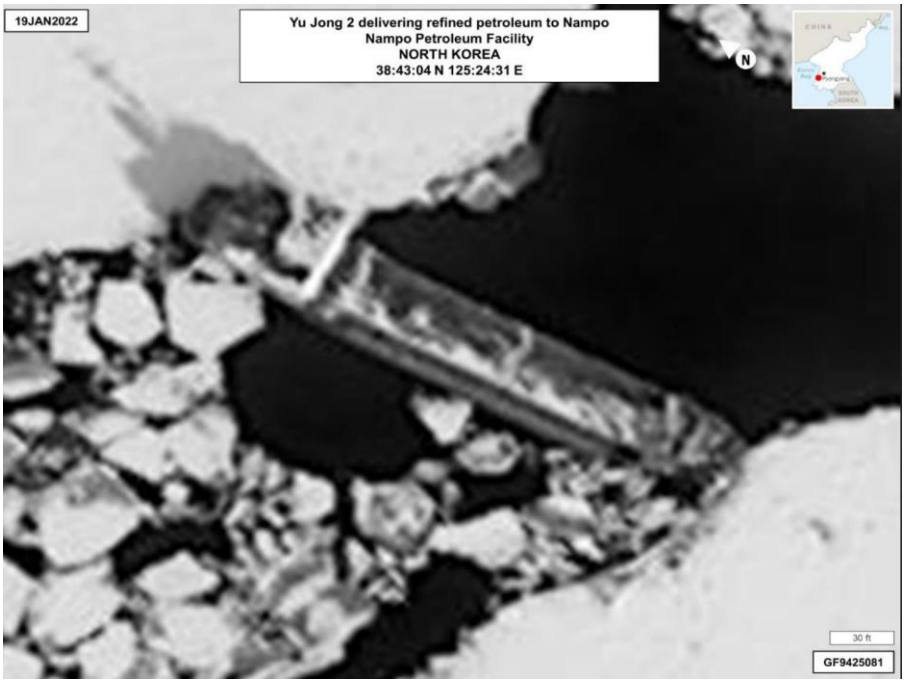
14 January: SONG WON (IMO 8613360, DWT 2101MT). Cargo capacity (90% DWT) of refined petroleum: 14183 barrels.

14 January: PO CHON (IMO 8848276, DWT 3538MT). Cargo capacity (90% DWT) of refined petroleum: 23880 barrels.



14 January: SAE BYOL (now known as SIN PHYONG 9, IMO 8916293, DWT 1150MT). Cargo capacity (90% DWT) of refined petroleum: 7763 barrels.

19 January: YU JONG 2 (IMO 8604917, DWT 1206MT). Cargo capacity (90% DWT) of refined petroleum: 8138 barrels.

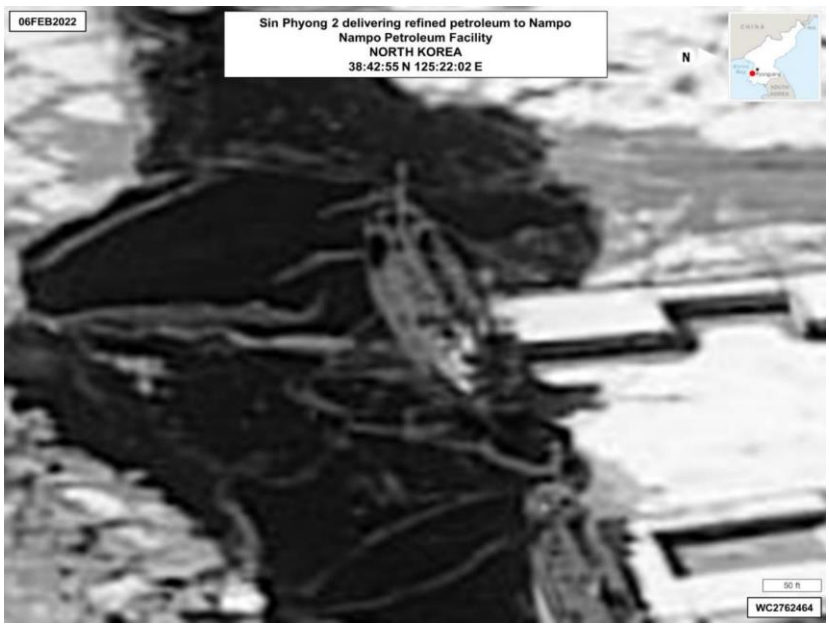


19 January: SONG WON (IMO 8613360, DWT 2101MT). Cargo capacity (90% DWT) of refined petroleum: 8138 barrels. Second discharge in the period.

29 January: AN SAN 1 (IMO 7303803, DWT 3003MT). Cargo capacity (90% DWT) of refined petroleum: 20273 barrels.

6 February: PU RYONG (IMO 8705539, DWT 2889MT). Cargo capacity (90% DWT) of refined petroleum: 19500 barrels.

6 February: SIN PHYONG 2 (IMO 8817007, DWT 2106MT). Cargo capacity (90% DWT) of refined petroleum: 14213 barrels.



10 February: SIN PHYONG 5 (IMO 8865121, DWT 3295MT). Cargo capacity (90% DWT) of refined petroleum: 22245 barrels.

10 February: YU SON (IMO 8691702, DWT 3398MT). Cargo capacity (90% DWT) of refined petroleum: 22935 barrels. Second discharge in the period.

10 February: CHONG RYONG SAN (IMO: not registered, DWT 1768MT[80]). Cargo capacity (90% DWT) of refined petroleum: 11933 barrels.

20 February: KWANG CHON 2 (IMO 8910378, DWT 1159MT). Cargo capacity (90% DWT) of refined petroleum: 7823 barrels.

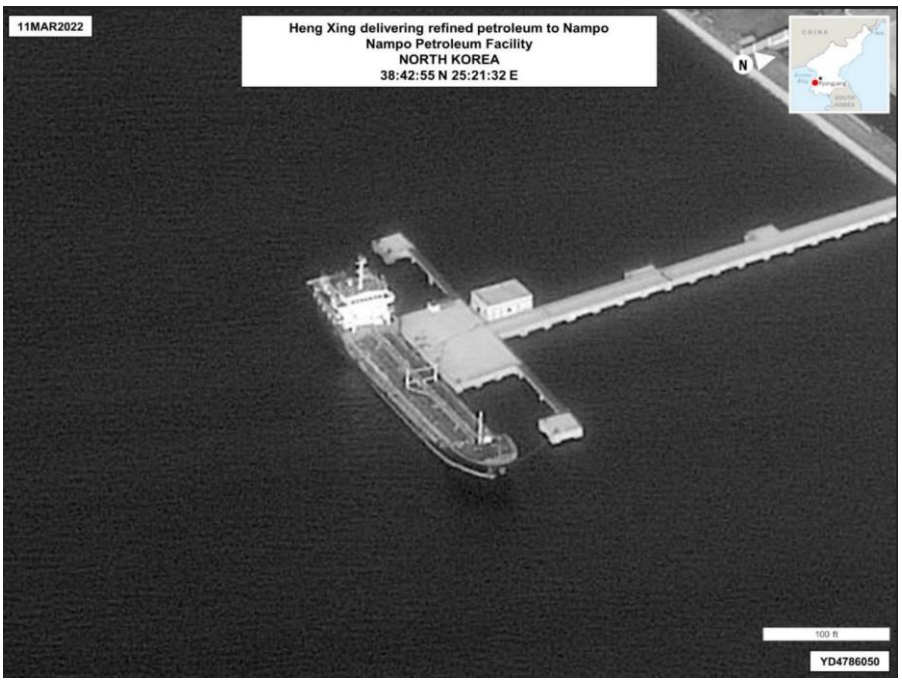
[80] CHONG RYONG SAN is not listed on the IMO website, and its precise DWT is not known. The average deadweight tonnage of 120 tankers of a similar size (70 – 72 meters) has been used to calculate its capacity.

3 March: SONG WON (IMO 8613360, DWT 2101MT). Cargo capacity (90% DWT) of refined petroleum: 14183 barrels. Third discharge in the period.

3 March: PU RYONG (IMO 8705539, DWT 2889MT). Cargo capacity (90% DWT) of refined petroleum: 19500 barrels. Second discharge in the period.

8 March: YU SON (IMO 8691702, DWT 3398MT). Cargo capacity (90% DWT) of refined petroleum: 22935 barrels. Third discharge in the period.

11 March: HENG XING (IMO 8669589, DWT 3250MT). Cargo capacity (90% DWT) of refined petroleum: 21938 barrels.



11 March: PU RYONG (IMO 8705539, DWT 2889MT). Cargo capacity (90% DWT) of refined petroleum: 19500 barrels. Third discharge in the period.

14 March: SONG WON (IMO 8613360, DWT 2101MT). Cargo capacity (90% DWT) of refined petroleum: 14183 barrels. Fourth discharge in the period.

22 March: SONG WON 2 (IMO8312497, DWT 4999MT). Cargo capacity (90% DWT) of refined petroleum: 33743 barrels.

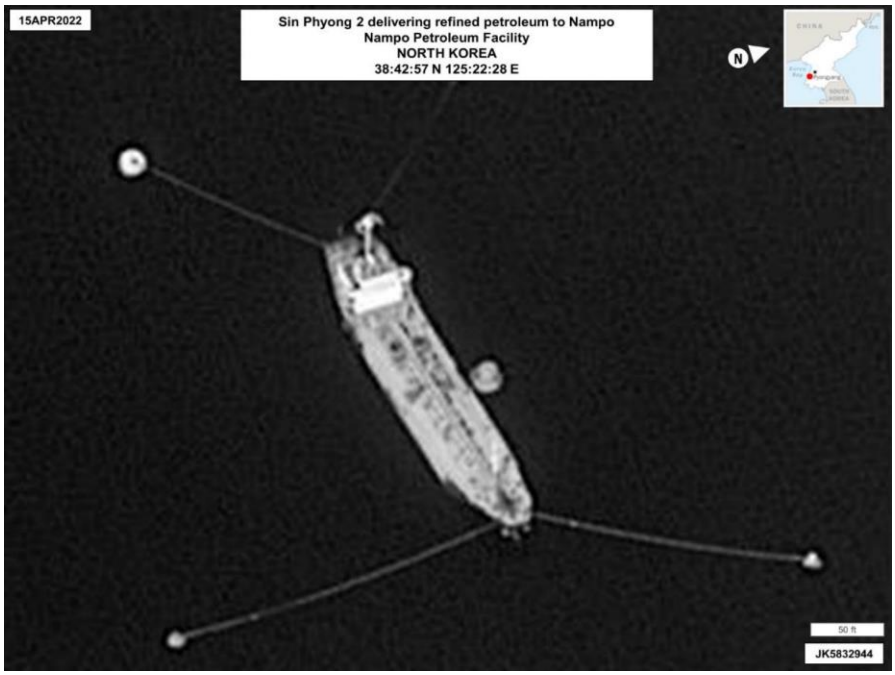
26 March: YU SON (IMO 8691702, DWT 3398MT). Cargo capacity (90% DWT) of refined petroleum: 22935 barrels. Fourth discharge in the period.

31 March[81]: CHON MA SAN (IMO 8660313, DWT 3566MT). Cargo capacity (90% DWT) of refined petroleum: 24068 barrels.

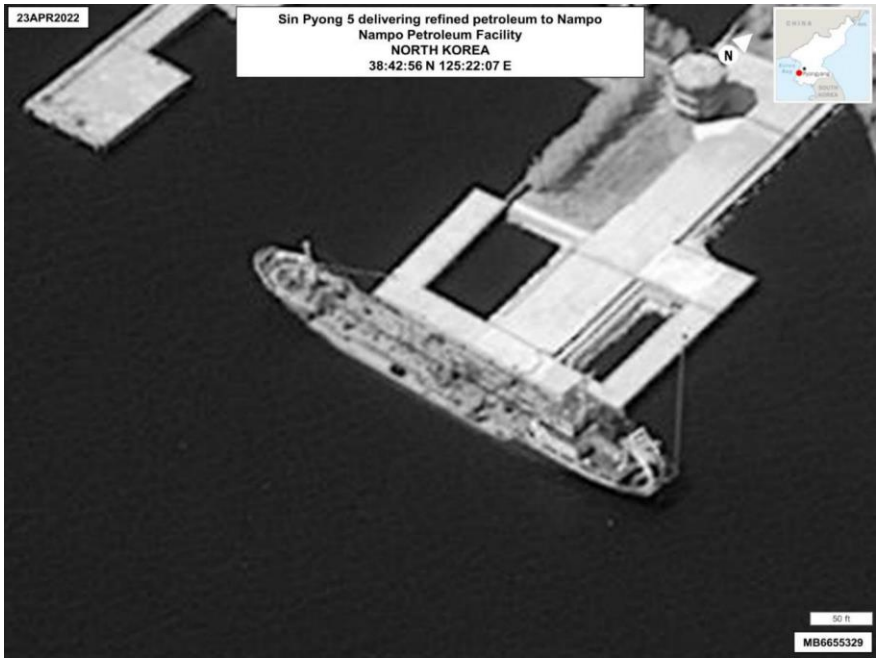
81 Although the vessel is pictured on 31 March, the actual discharge of cargo occurred after this picture was taken. The cargo was included in calculations for April.

7 April: PO CHON (IMO 8848276, DWT 3538MT). Cargo capacity (90% DWT) of refined petroleum: 23880 barrels.

15 April: SIN PHYONG 2 (IMO 8817007, DWT 2106MT). Cargo capacity (90% DWT) of refined petroleum: 14213 barrels. Second discharge in the period.



23 April: SIN PHYONG 5 (IMO 8865121, DWT 3296MT). Cargo capacity (90% DWT) of refined petroleum: 22245 barrels. Second discharge in the period.



Annex 25: China's Reply on Refined Petroleum Products

2. Refined petroleum products (OC. 50)

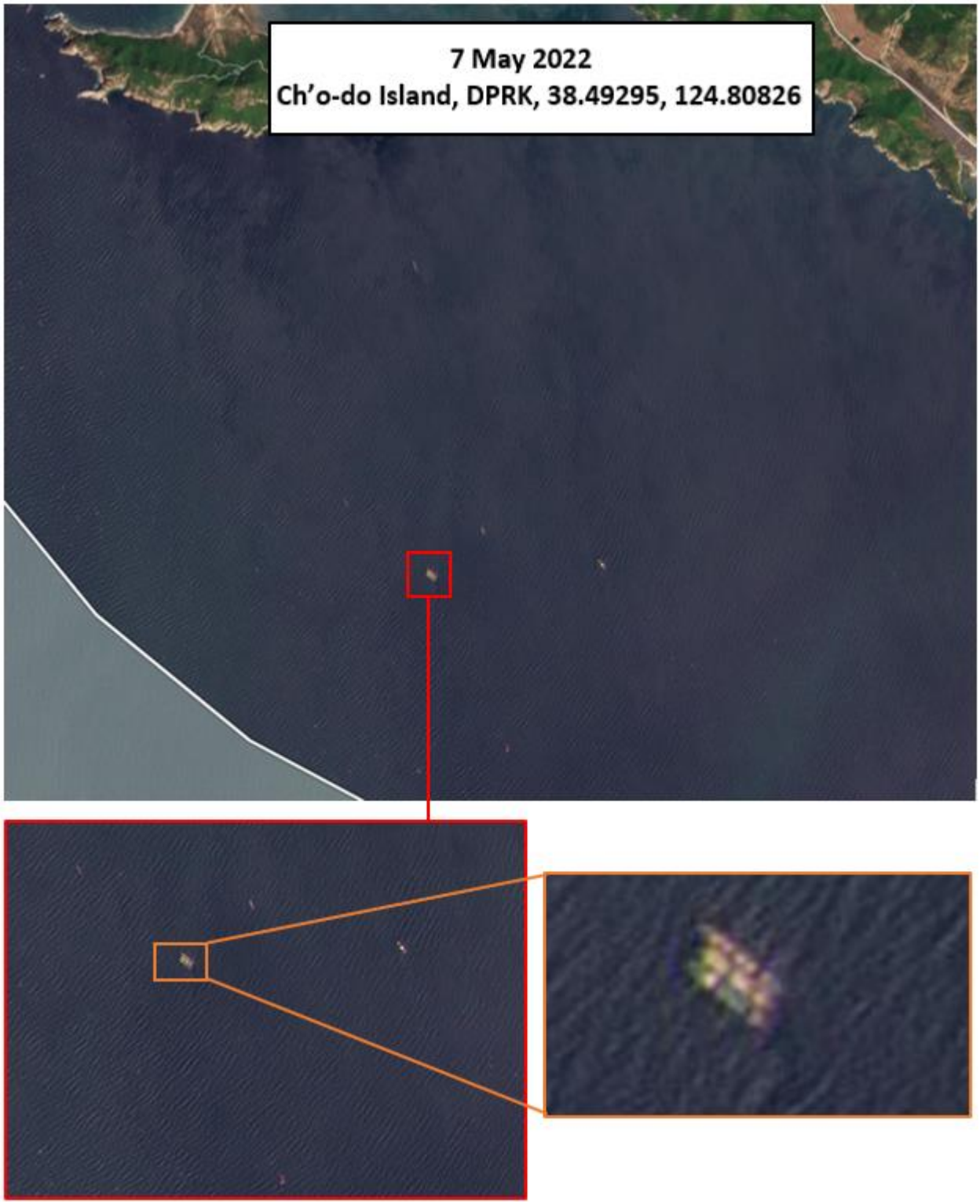
China has always been strictly implementing the provisions of exporting refined petroleum products to the DPRK. After the adoption Security Council Resolution 2397, the Chinese side immediately published relevant notifications so as to ensure that the activities of Chinese enterprises and individuals are consistent with the resolutions. China has been notifying the 1718 Committee of the amount of China's exports of refined petroleum products to the DPRK. Chinese enterprises do not and will not carry out transactions with sanctioned individuals and entities.

China attaches great importance to protecting the information and privacy of trading parties involved in the international trade, which is an internationally accepted practice. Given the persistent leakage of the POE report and the lack of adequate information security measures, China finds it difficult to directly provide the relevant information.

Annex 26: Additional sample satellite imageries of ship activity around Ch'o-do Island, January to June 2022

January 2022

May 2022



Source: The Panel.

Annex 27: HAI JUN (IMO: 9054896)

The Panel reported on HAI JUN (IMO: 9054896) as an intermediary vessel engaged in ship-to-ship transfers of refined petroleum destined for the DPRK, since at least 2020.[82] In 2021, HAI JUN transhipped oil cargo from SKY VENUS (IMO: 9168257) onward to the 'direct delivery' tanker UNICA (IMO: 8514306), transmitting as LITON and as HAISHUN2.[83] The previous year, HAI JUN met NEW KONK (transmitting as M0USON), another 'direct delivery' vessel. HAI JUN was also photographed on the high seas the same year using removable identifiers that are against IMO regulations.

Photograph of HAI JUN, East China Sea, 3 October 2020

Source: Member State, annotated by the Panel.

Around the time investigations were conducted into HAI JUN, the Cook Islands de-registered HAI JUN from its ship registry in early December 2021, due to information obtained from the vessel's registered owner and ship operator, Ruicheng (HK) Shipping Co Ltd., on the ship's onward sale. HAI JUN was transferred to the Togo flag registry. The Panel notes that IMO records however showed HAI JUN remained under the same owner and operator. The Panel continued to track HAI JUN.

[82] S/2022/132, paras. 53-58 and annex 42.
[83] S/2022/132, para. 44 and annexes 36-37.

Since then, HAI JUN has continued to operate in the Taiwan Strait where suspected ship-to-ship activity with 'direct delivery' tankers occur. HAI JUN is also often located in proximity of ships identified as part of a chain of transfers of oil cargo destined for the DPRK. It continued to register dark activity without AIS transmission during significant periods of time where illicit transfers could have occurred.

On and around 27 April 2022, HAI JUN, intermittently transmitting under its Togo-registered MMSI: 671244100, was located[84] in the Taiwan Strait. Around this time, the 'direct delivery' vessel UNICA, transmitting on its known fraudulent identity, HAISHUN2, sailed south towards HAI JUN. A similar process was repeated in May 2022 (see relevant section of main text of this Panel report). HAI JUN had not transmitted on its Togo-registered MMSI since end-May 2022.[85]

HAI JUN has been assessed by a Member State to have operated exclusively as an intermediary by receiving oil cargo between tankers and transferring it to DPRK-bound 'direct delivery' vessels from as far back as 2019. The Panel continues to investigate the networks behind HAI JUN's past shipments.

The Panel wrote to Togo and is awaiting Togo's response.

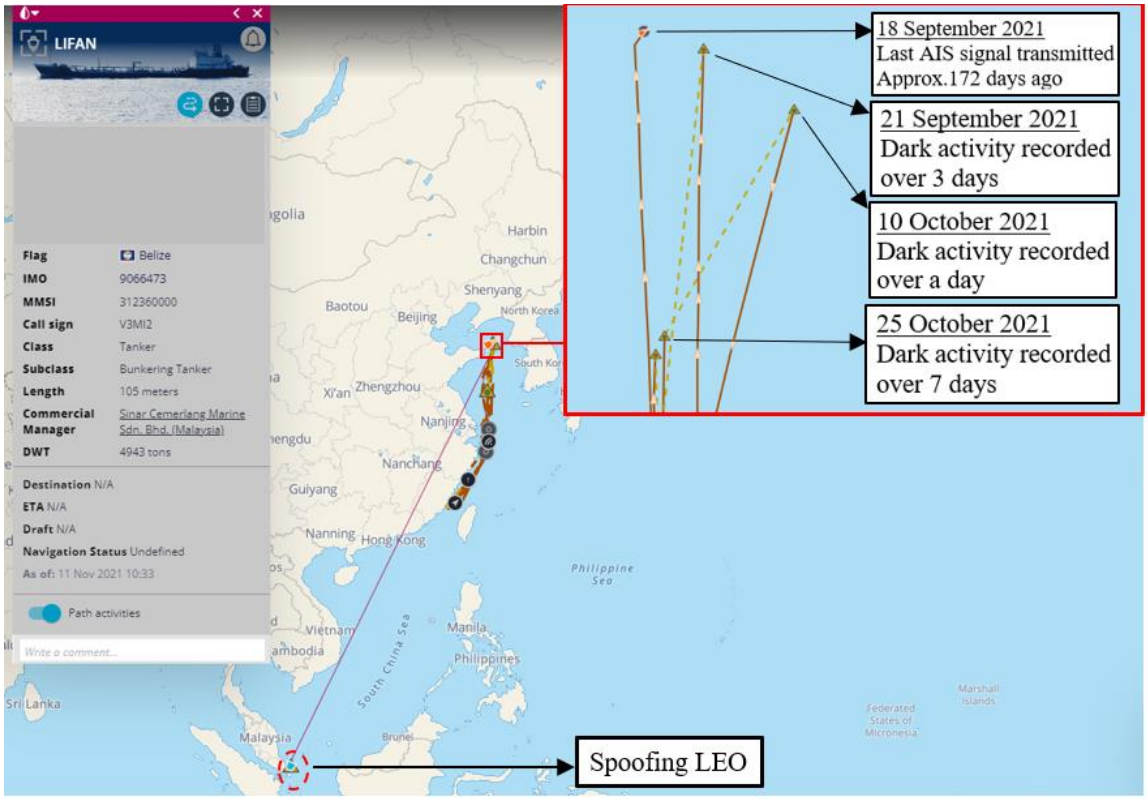
Source: The Panel.

[84] Per AIS transmission.
[85] As of July 2022. Windward.

Annex 28.1: NEW KONK transmitting as LIFAN and spoofing MMSI of LEO (IMO: 9066473)

Between September and October 2021, the Panel observed 'LIFAN' spoofing a Belize-registered MMSI: 312360000 belonging to a tanker named LEO (IMO: 9066473) operating in Southeast Asian waters (see figure 28.1.1). LIFAN's voyage routes mirrored the direct delivery' vessels the Panel has tracked over the years. LIFAN also transmitted in waters in Sansha Bay, China. Between September and October 2021 alone, LIFAN recorded multiple AIS transmissions sailing towards the Korea Bay. In 2021 and 2022, LIFAN transmitting on a number of MMSIs including on another Belize-associated MMSI number and two other MMSIs associated with Sierra Leone.

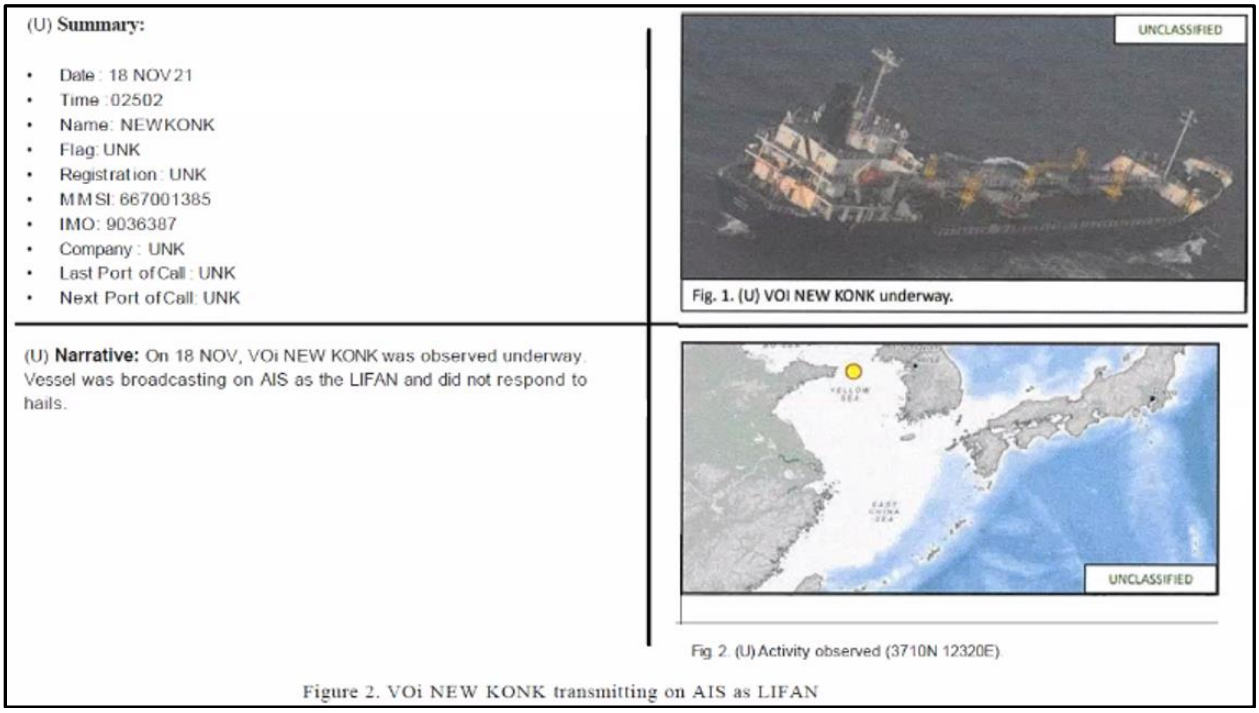
Figure 28.1.1: LIFAN spoofing the MMSI of another tanker, LEO



Source: Windward, annotated by the Panel.

The Panel subsequently obtained a photograph from a Member State showing NEW KONK transmitting as LIFAN on 18 November 2021 while sailing in the Yellow Sea (see figure 28.1.2):

Figure 28.1.2: NEW KONK observed by a monitoring asset transmitting as LIFAN, 18 November 2021



Source: Member State.

The then ship operator of LEO, Malaysia-registered Sinar Cemerlang Marine Sdn Bhd, stated the vessel was no longer under its management during the material time. The company also provided the Panel a letter issued by the Belize Ship Administration in April 2022 confirming cancellation of LEO on 26 August 2021 from its registry, ex-officio, with the stated reason of the "… *vessel registering under the flag of Equatorial Guinea whilst still provisionally registered under the Belize Flag*". According to the letter, the Belize Administration additionally confirmed that in presenting itself to the Belize Flag, the registered owner of LEO, SW2 Limited, was not recorded, and that a deletion certificate from LEO's previous ship registry was never presented to Belize to "… *accomplish permanent status*" - see annex 28.2. The Panel notes that the tanker LEO continued to show under IMO records as Belize-flagged until at least June 2022,[86] with no record of the ship having been flagged under Equatorial Guinea. The suspect nature behind LEO's flag status since 2021, along with its MMSI identity being used by NEW KONK transmitting as LIFAN the same year, is of note. IMO records currently list LEO as unknown-flagged.

The Panel wrote to Belize on LEO and is awaiting a response.

Source: The Panel.

[86] Recorded updates were post-dated.

Annex 28.2: Cancellation Letter issued by the Belize Ship Registry, provided by LEO's then ship operator

IMMARBE
INTERNATIONAL MERCHANT MARINE REGISTRY OF
BELIZE

Control Number: EX-01/01-2022

CERTIFICATION LETTER

Name of Vessel	Registration Number	Call Letters	IMO Number	Ownership Details
LEO	622120266	V3MI2	9066473	SW2 LIMITED No. 3 Jalan Tupai Singapore 249134

The undersigned Senior Deputy Registrar of the International Merchant Marine Registry of Belize (IMMARBE) hereby certifies that the above-mentioned vessel was initially enrolled under the Belize flag on April 19th, 2021 and cancelled by ex-officio on 26th August 2021 due to vessel registering under the flag of Equatorial Guinea whilst still provisionally registered under the Belize Flag.

- Be it resolved that the Merchant Ships (Registration) Act of 2010, S.I. 56 of 1999, duly empowers the International Merchant Marine Registry of Belize to cancel the existing record of a Belizean registered ship, inter alia, in the event if a vessel is registered in the Merchant Marine Registry of another country without the consent of IMMARBE;

By this means the Belize Administration confirms cancellation of the m.v "LEO" from the Belize Registry and confirms that the Ownership title in favour of registered owner mentioned above has not been recorded and a deletion certificate from its previous Registry, Malaysia was never presented to this Administration to accomplish permanent status.

We further certify that at the time of issuance of this certification letter, there were no recorded mortgages, liens or encumbrances registered at IMMARBE and all sums due to the Registry are fully satisfied.

Given this 4th day of April, 2022

[redacted]

Senior Deputy Registrar
IMMARBE Head Office, Belize

Keystone Building, Suite 302,
304 Newtown Barracks,
Belize City, Belize
+501 223 5031 / +501 223 5026
immarbe@immarbe.com

BZ 0009080

Source: The Panel.

Annex 29.1: XIANG SHUN (IMO: 9153800)

XIANG SHUN was flagged under the Mongolia ship registry from September 2019 until it was sent for scrap in June 2022. XIANG SHUN was under the same registered owner and manager, the Seychelles-incorporated Vantage Point Enterprise Ltd (hereafter "Vantage Point Enterprise") since 2017. The ship's technical manager was You Young Ship Management & Consultant Co Ltd (hereafter "You Young Ship"). Vantage Point Enterprise is listed in the care of You Young Ship and has the same contact details provided in documentation. You Young Ship also manages HONG HU (IMO: 9125293) – see annex 30, another tanker investigated by the Panel in its role as mothership in a multi-stage oil transshipment of refined petroleum destined for the DPRK.

XIANG SHUN, like HONG HU, operated primarily out of Taichung port during the investigative periods of interests. XIANG SHUN recorded lost AIS transmissions in the Taiwan Strait and South China Sea. During those times, transshipment of refined petroleum occurred. The Panel wrote to relevant parties including Mongolia, Seychelles, Vantage Point Enterprise and You Young Ship. For the latter two companies, the Panel sought information, *inter alia*, on the company and its beneficial (natural person/s) ownership and the company's customer due diligence processes for the transfer of refined petroleum cargo, all ship-to-ship transfers conducted by XIANG SHUN during the investigative periods of interests, and the related information with regards counterparties involved in the transactions.

According to You Young Ship, it provided services for ship certification, crew manning and ship supplies. As the company did not own ships, it was " *…not responsible for the vessel's commercial operation and we don't have the required documents/information*" with regards records of the petroleum transfers and its cargo. According to the company, it was the ship owner that arranged the transshipment of the oil cargo. You Young Ship also stated that "*As the ship's technical manager, we remind the ship owners and the master to avoid trading in the sanction area. We also request the master to verify the trading vessel not belonging to the sanction countries*". No other documentation beyond this statement was provided to show its due diligence measures to ensure sanctions compliance. No information was supplied on the ship owner, which was listed in You Young Ship's care.

On an explanation on the multiple extended and unaccounted periods of XIANG SHUN's lack of AIS transmission, the company stated, "*We remind the ship owners and the master to maintain the full function of AIS transmissions. We learned from the master that the AIS transmission may be disturbed by weak signal or may be turn off by the master's particular consideration at the high sea*". See also annex 29.2.

Mongolia and Seychelles assisted the Panel in its investigations.

Source: The Panel.

Annex 29.2:

WAN HSIANG TRADE CO., LTD

萬祥貿易有限公司

ADD: NO.180,Fongong Rd., Qianzhen Dist.,
Kaohsiung City 806,Taiwan [redacted]

SERVICE REPORT

JOB NO.

Ship's Name (船名) M/T XIANG SHUN	Owner(船東)/Agent(代理)	Location(地點)
Equipment Type/Model (設備型式) JRC JHS-180	S/No. (設備序號) BB13306	
Symptoms(症狀) RECORD POSITION OF AIS IN 2019 YEAR		

ACTION TAKEN (修理情況)

1.AIS NO RECORD GPS POSITION FUNCTION .

2.ONLY RECORD POWER ON/OFF HISTORY LOG. (THE LIMITED FLASH MEMORY IN AIS CAN ONLY RECORD LIMIRED PERIOD OF POWER ON/OFF)

3.SPECIFIC EXPLANTION.

[redacted]

MATERIAL USED (使用零件)

Description (摘要)	Qty. (數量)	Description (摘要)	Qty. (數量)

Time involved

Date	Men	On Board	Travel/Wait		Total(h)

Remarks :

We confirm that the service requested has been carried out as per service report.

[redacted] 2021/08/27

Service Engineer | Date | Master/Officer's signature | Ship Stamp

Annex 30.1: HONG HU (IMO: 9125293)

The DPRK continues to procure refined petroleum in violation of sanctions through the use of a multi-stage oil transhipment scheme involving multiple tankers that regularly employ evasion tactics to avoid detection. The scheme depends on a previously identified typology involving motherships which are engaged in the first step of oil procurement that then transfer them to other intermediary tankers, and in turn on to 'direct delivery' vessels or DPRK tankers. Such multi-stage transhipments also obfuscate tracking and frustrate enforcement efforts. The Panel has investigated several illicit oil supply chains during the reporting period and is highlighting the following example to illustrate the typology.

HONG HU – JOFFA – NEW KONK (transmitting as LIFAN)

On 28-29 January 2022, JOFFA was in proximity of NEW KONK, transmitting as LIFAN, before both lost transmissions for a period of time that allowed for ship-to-ship transfer to occur. A day later, around 30-31 January 2022, NEW KONK then proceeded to sail in a northerly direction, dropping transmission in the Yellow Sea area.

Prior to its meeting with JOFFA, NEW KONK made a similar trip sailing in a northerly direction past the Yellow Sea before dropping transmission on 4 January 2022 and re-appearing 16 days later sailing in the opposite direction, where it met JOFFA on 30-31 January 2022 (see figure 30.1.1), suggesting multiple transfers could have taken place.

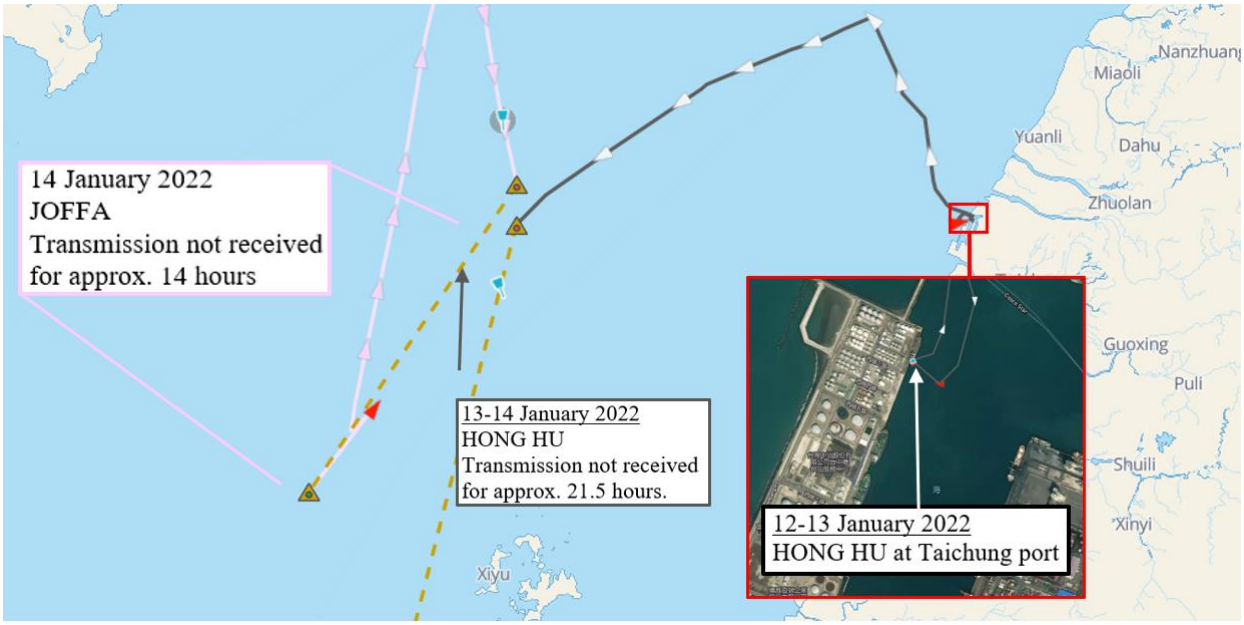
As early as September 2021, NEW KONK was captured on satellite imagery transmitting as LIFAN in waters off Wuqiu Island. The Panel's AIS tracking of NEW KONK, transmitting as LIFAN, showed NEW KONK already began making such voyages in August 2021.

HONG HU also conducted similar transfers that involved JOFFA and another 'direct delivery' vessel, UNICA, transmitting as HAISHUN2. The Panel is providing the following storyboard as an example.

Figure 30.1.1: Storyboard of multi-stage transshipment of refined petroleum destined for DPRK, January- February 2022

HONG HU and JOFFA

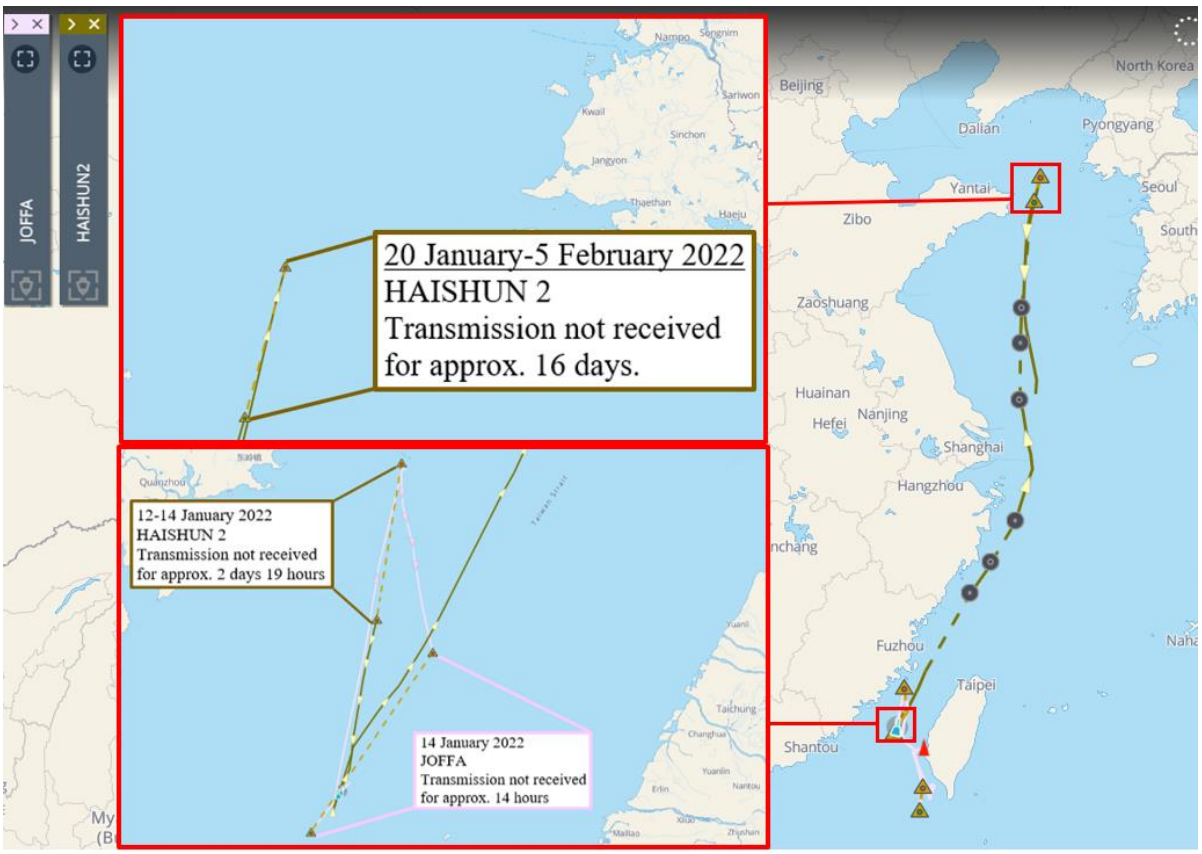
Step 1: HONG HU and *JOFFA operating in Taiwan Strait, 12-14 January 2022*



JOFFA – UNICA (transmitting as HAISHUN2)

Step 2: UNICA (transmitting as HAISHUN2) and JOFFA, with UNICA proceeding to sail in a northerly direction towards the DRPK's EEZ before dropping AIS transmission for half a month, 12 January to 5 February 2022

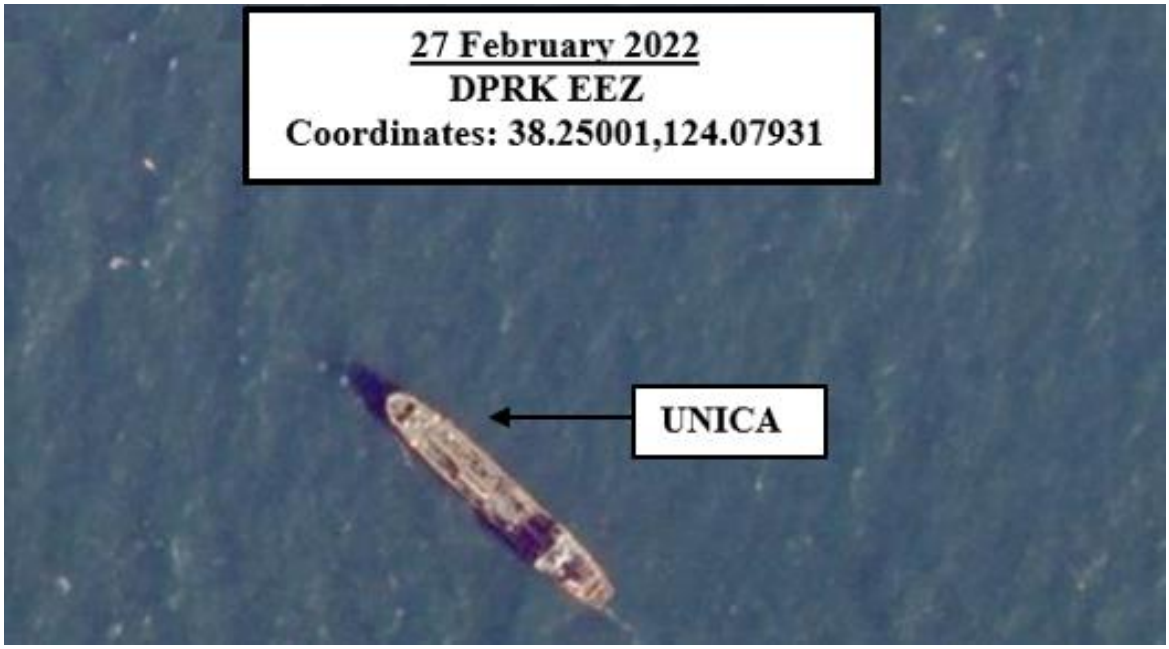
UNICA's (transmitting as HAISHUN2) ship activity, January-February 2022



Source: Windward, annotated by the Panel.

On 22 February 2022, satellite imagery captured UNICA in the Korea Bay in DPRK's EEZ where it remained over the next several days. UNICA had made several voyages to the Korea Bay, which the Panel notes is a hotspot for DPRK-related ship-to-ship transfers.

UNICA in DPRK EEZ, 27 February 2022



Source: Planet Labs, annotated by the Panel.

The Panel separately notes an all-cash payment for HONG HU in September 2017 by Fortune Maker Internation Limited (registered owner). See Bill of Sale at annex 30.2.[87]

Palau confirmed its de-registration of HONG HU and assisted the Panel in its investigation.

Ownership and cargo

You Young Ship Management & Consultant Co Ltd (hereafter "You Young Ship"), with a Kaohsiung City address, was HONG HU's ship manager and operator since May 2020. HONG HU's registered owner is the Seychelles-incorporated Fortune Maker Internation Ltd (hereafter "Fortune Maker")[88]. Fortune Maker lists You Young Ship as its 'care of' address. You Young Ship also served as XIANG SHUN's (IMO:9153800) ship's technical manager during the investigative periods of interest (see relevant paragraphs in this report's main text).

The Panel wrote to You Young Ship and Fortune Maker in its care, seeking *inter alia,* information on the company and its beneficial (natural person/s) ownership and the company's customer due diligence processes for the transfer of refined petroleum cargo. The Panel also sought information on all ship-to-

[87] The Panel notes that the vast majority of legitimate ship purchases are completed as bank transfers which guarantee to the parties, including the financial institutions, proper accounting for significant purchases of this type. The irregularity of a USD 5.3 million cash purchase prompts the Panel to examine this transaction in fuller detail.

[88] IMO records. As of July 2022.

ship transfers conducted by HONG HU since 2019, including with JOFFA and the related information with regards counterparties involved in the transactions.

According to You Young Ship, it provided services for ship certification, crew manning and ship supplies. As the company did not own ships, it "*was not responsible for the vessel's* (HONG HU) *commercial operation*" and its cargo. In that regard, it did not possess information nor documentation on shipments and shipping documentation concerning the oil cargo transfers. According to the company, it was the ship owner that arranged the transshipment of the oil cargo. "*As the ship's technical manager, we remind the ship owners and the master to avoid trading in the sanction area. We also request the master to verify the trading vessel not belonging to the sanction countries*". No information was supplied on the ship owner, which was listed in You Young Ship's care.

The Panel has highlighted in its successive reports the DPRK's deceptive shipping practices where DPRK ships do not identify themselves under their own profile to conduct illicit activities. Instead, DPRK and complicit vessels often disguise themselves physically as well as digitally and use false documentation to sail and trade. In that regard, beyond a reminder not to trade in sanctioned areas and to verify that ships did not belong to sanctioned countries, or that such ships were not being blacklisted by port authorities, little else was described by You Young Ship on its due diligence measures to ensure proper sanctions compliance. The company also stated "*We believe that all vessels we manage do not have sanction violation issue. However, the counter party our managed vessel trading with is under the owner's commercial management*".

Discrepancies

The Panel also requested from You Young Ship, documentation of all ship-to-ship transfers conducted between December 2021 and February 2022 (material time). The company provided a table listing nine ship-to-ship transfers that occurred between 14 December 2021 and 12 March 2022. Only the date, ship name - but no IMO number – were provided, together with the ship's location of ship-to-ship transfer activity (loading or discharge). See figure 30.1.2.

Figure 30.1.2: Ship-to-ship transfers conducted by HONG HU, December 2021 to March 2022

A LIST OF ALL SHIP TO SHIP TRANSFERS CONDUCTED BY HONG HU

NO	DATE	SHIP'S NAME	LOCATION	REMARK
01	14 DEC 2021	ROCKY	18° 15 000' N-120° 31 138'E	DISCHARGE
02	20 DEC 2021	ROCKY	18° 15 051' N-120° 31 130'E	DISCHARGE
03	1 JAN 2022	ROCKY	18° 15 062' N-120° 31 127'E	DISCHARGE
04	15 JAN 2022	JOFFA	22° 31 110'N-118° 39 709'E	DISCHARGE
05	29 JAN 2022	JOFFA	21° 19 821'N-118° 17 618'E	DISCHARGE
06	10 FEB 2022	[redacted]	[redacted]	LOADING STS
07	23 FEB 2022	ROCKY	18° 39 879'N- 106° 57 461'E	DISCHARGE
08	25 FEB 2022	ROCKY	18° 39 876'N- 106° 57 481'E	DISCHARGE
09	12 MAR 2022	HAI JUN	18° 39 874'N-106° 57 452'E	DISCHARGE

MASTER MT HONG HU

CHIEF OFFICER MT HONG HU

Source: Table provided by You Young Shipping, redactions made by the Panel.
*Ship named at #6 is not the subject of this present report.

The Panel's vessel tracking information showed HONG HU departed Taichung port by 10 December 2021 and sailed down Taiwan Strait in a southwesterly direction. The tanker then dropped AIS signal for over 21 days in the South China Sea, returning to when it last transmitted AIS signal by 3 January 2022. According to the table provided by You Young Ship, HONG HU conducted three ship-to-ship transfers with 'ROCKY' over a two-week period on the 14 and 20 December 2021 and again on 1 January 2022 to a vessel named ROCKY located near a port city[89] in the Philippines, before making its return trip. No IMO number was provided for this ship. Only two ships named ROCKY are recorded on the IMO website, with one operating as a tug-boat in waters of a different continent. The remaining ROCKY (IMO: 8878984) is a 29-meter long, 187 gross tonnage fishing boat with no AIS tracks.

[89] Coordinates provided for ROCKY is located near the coastal city of Laoag, Philippines.

Separately the Panel obtained documentation[90] that showed between 12-30 December 2021, almost 20 transfers of oil cargo totaling several thousand metric tons were transferred in December 2021 from HONG HU to unidentified non-IMO numbered ships over multiple occasions, and at a different location in the South China Sea. The said documentation differed significantly from the information provided by You Young Ship

AIS transmission

With regards AIS information from December 2021 to February 2022 (material time) and on the multiple extended and unaccounted periods of HONG HU's lack of AIS transmissions, You Young Ship stated "*We remind the ship owners and the master to maintain the full function of AIS transmissions. We learned from the master that the AIS transmission may be disturbed by weak signal or may be turn off by the master's particular consideration at the high sea*".

In response to the Panel's enquiry, Palau informed the Panel that "*On February 25, 2022, we had requested explanation of AIS gaps transmission and ship managers sent us a technical service report for AIS which was issued on December 02, 2021. However, we requested further explanation as the vessel continues with AIS gaps after December 2021*."

Source: The Panel.

[90] Confidential information held on file by the Panel.

Annex 30.2: Bill of Sale for HONG HU, September 2017

Prescribed by the Commissioners of Customs & Excise with the consent of the Secretary of State for Trade and Industry

Form No. 10A

X.S. 79 A

BILL OF SALE (Body Corporate)

Registration Number / IMO No.	Name of Ship	Built year and port of registry	Whether a sailing, steam or motor ship	Horse power of engines (if any)
22823-96-E / 9125293	GOLDEN GION	1996, PANAMA	MOTOR SHIP	4,900 BHP

	Meters	Tenth	Number of Tons	
Length (Article 2(8))	110	10		
Breadth (Reg 2(3))	20	00	Gross	Net
Moulded Depth Amidships to Upper Deck (Reg 2(2))	11	20	6,253.00	3,549.00

And as described in more detail in the Register Book.

We, (a) BEAUTIFUL SOUTH SHIPPING S.A. having its registered address at 53rd E Street, Urbanizacion Marbella, MMG Tower, 16th Floor, Panama, Republic of Panama (hereinafter called "the Transferors") in consideration of the sum of United States Dollars Five Million Three Hundred Thousand (US$5,300,000.-) only in cash paid to us by (b) FORTUNE MAKER INTERNATION LIMITED having its registered address at 306, Victoria House, Victoria, Mahé, Seychelles (hereinafter called "the Transferee(s)") the receipt whereof is hereby acknowledged, transfer all (100%) shares in the Ship above particularly described, and in her boats and appurtenances, to the said Transferee (s).

Further, we, the said Transferors for ourselves and our successors covenant with the said Transferee(s) and (c) their assigns, that we have power to transfer in manner aforesaid the premises hereinbefore expressed to be transferred, and that the same are free from (d) any and all encumbrances, mortgages, maritime liens or any other liens, taxes, levies, duties and any other debts or claims whatsoever.

In witness whereof we have executed this Bill of Sale on the 4th day of September, 2017.

BEAUTIFUL SOUTH SHIPPING S.A.

[redacted]

Title : Director/President

(a) Insert title in FULL of the Body Corporate. (b) Insert name and address in full and description of transferees. (c) Insert "his", "her" or "their".
(d) If there be any subsisting Mortgage, or outstanding Certificate of Mortgage or Sale, add "save as appears by the Registry of the said Ship".
(e) Description of Witness: Directors, Secretary, etc. (as the case may be).
NOTE. - A purchaser of a registered British vessel does not obtain a complete title until the Bill of Sale has been recorded at the Port of Registry of the ship; and neglect of this precaution may entail serious consequences
NOTE. – Registered Owners or mortgagees are reminded of the importance of keeping the Register of British Ships informed of any change of residence on their part.

Sec. F. 4058 (Aug. 1973)

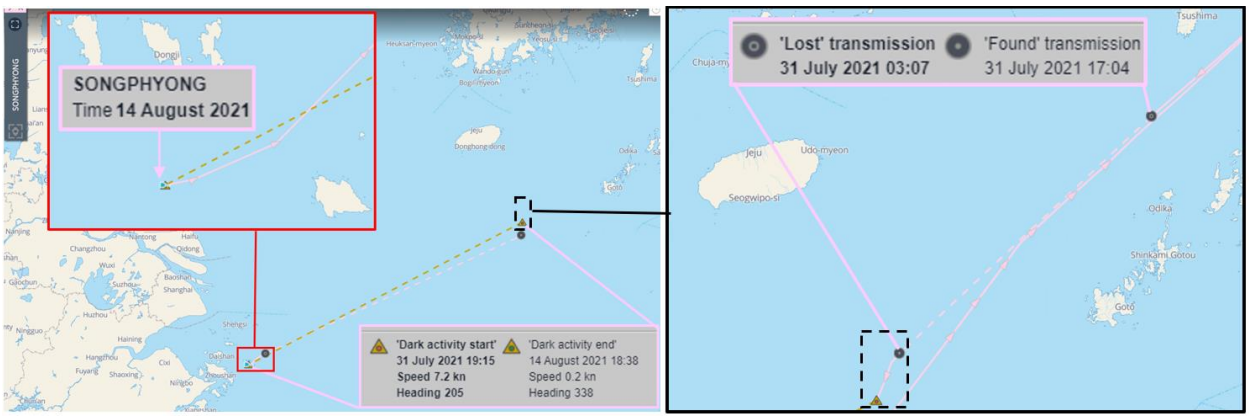
Source: The Panel.

Annex 31: Vessel Disguise of SIN PHYONG 5 (IMO: 8865121) to Conduct Sanctioned Activities

In 2021, the Panel tracked a number of DPRK vessels transmitting on limited occasions where it departed the DPRK's eastern coast, sailing in a southerly direction. Some of these vessels briefly transmitted on falsified identifiers. One such vessel was SONG PHYONG, transmitting on an invalid IMO number 8417812. An AI maritime platform showed the vessel transmitting on two DPRK MMSIs, with a length of 89 meters, and a reported destination of 'Zhoushan of China'.

The Panel noted that during its July to August voyage, one of the MMSI's SONG PHYONG transmitted (MMSI : 445121501) was similar to that of SIN PHYONG 5 (MMSI : 445121000), with a difference in the last three digits. See figure 31.1.

Figure 31.1: SIN PHYONG 5's (as SONGPHYONG) voyage in July and August, 2021



Source: Windward, annotated by the Panel

Photographic evidence provided by a Member State on the tanker's outward-bound voyage from the DPRK and its return journey showed the tanker's waterlines of both occasions being markedly different, with the tanker sailing lightly laden on its outbound voyage while returning heavy-laden (figure 31.2). The Member State assessed that the vessel most likely "*loaded refined petroleum products when coming back from the west to the east*". SIN PHYONG 5 was captured on satellite imagery by another Member States at outside Hungnam port, an Eastern port of the DPRK, by 22 September 2021 (figure 31.3).

The Panel's tracking of the tanker showed it again briefly transmitted another outbound voyage, reporting again headed for 'Zhoushan' between August and October 2021, before it dropped transmission.

SIN PHYONG 5 has continued to illicitly deliver refined petroleum to the DPRK in 2022 (see annex 24).

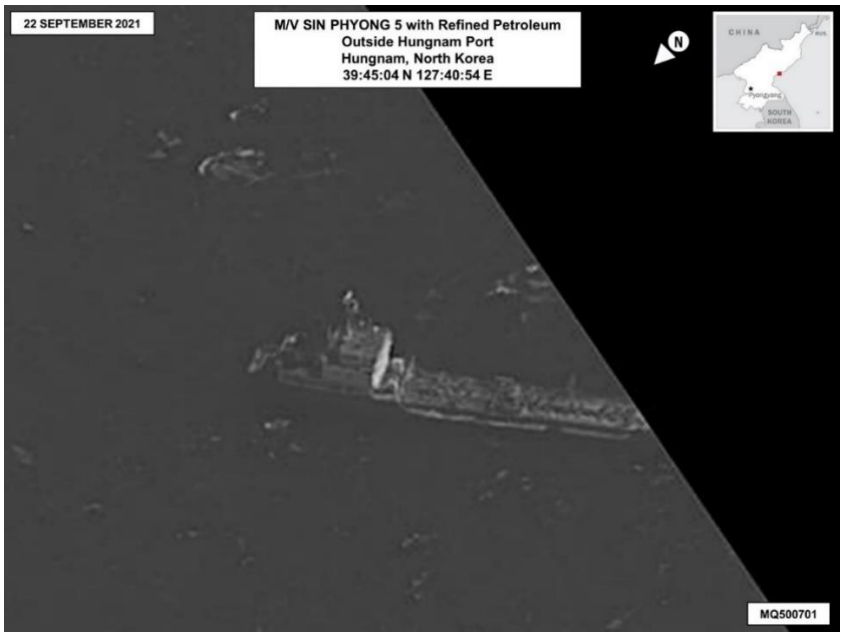
Figure 31.2: SIN PHYONG 5 (as SONG PHYONG) outbound and inbound voyage, July – August 2021

Outbound: Sailing west, lightly laden, 30 July 2021

Inbound: Sailing east, heavy laden, 19 August 2021

Source: Member State

Figure 31.3: SIN PHYONG 5 outside Hungnam port, DPRK, on 22 September 2021



Source: Member State.

The Panel's comparative analysis of the vessel's structure and additional close-up photographs from another Member State confirmed SONG PHYONG to be SIN PHYONG 5.

Source: The Panel.

Annex 32.1: Investigations conducted into JAN VICTORIA (formerly SKY VENUS) (IMO: 9168257)

Investigations

JAN VICTORIA

The Panel continued its investigations into SKY VENUS,[91] a tanker suspected of supplying multiple shipments of refined petroleum that were ultimately delivered to the DPRK via successive ship-to-ship transfers from mid-2021 to early 2022. Following Palau's deletion of SKY VENUS from its flag registry in March 2022, the Panel learned that the vessel's owner, Cheng Chiun Shipping Agency Co., Ltd (hereafter "Cheng Chiun Shipping"), approached several flag registries to re-flag the ship. In April 2022, the Sierra Leone Maritime Administration issued an interim Document of Compliance certificate for the vessel at Kaohsiung - see annex 32.2. SKY VENUS was renamed JAN VICTORIA and transferred to a new owner and manager: the Samoa-registered Topaz International Corp (hereafter "Topaz International") – see annex 32.3 and Seychelles-registered, Philippines based Well-Found International Management Corp (hereafter "Well-Found International"), respectively.

The Panel wrote to Sierra Leone, Topaz International and Well-Found International to request additional information on their engagement with SKY VENUS, now known as JAN VICTORIA.

The Panel's review of documentation from several counterparties showed that an email address associated with Topaz International shared a similar name with an alias established by Cheng Chiun Shipping, Evermore Trading Corp. , The latter company, according to financial records provided by Cheng Chiun Shipping, was the beneficiary customer of bank transfers into the oil cargo transacted for SKY VENUS.[92] The Panel recalls it has previously identified Cheng Chiun Shipping as setting up multiple shell companies in offshore jurisdictions. The Panel's findings are also consistent with a Member State's separate assessment that Cheng Chiun Shipping had established Topaz International to further obfuscate their network of shell companies.

Sierra Leone assisted the Panel in its investigations.

The Panel continues to await responses from Samoa.

The Panel continues to await a response from the registered ship owner and management company, Topaz International and Well-Found International.

De-registration of SKY VENUS

SKY VENUS was registered under the Palau flag state in August 2020. See annex 32.4. A "Prohibition from Sailing Notice" was issued by the Palau Ship Registry for SKY VENUS in December 2021, with suspected sanctionable activities conducted, including a violation of paragraph 5 of UN Security Council resolution 2397 (2017). The ship's registration with the Palau flag was revoked in March 2022, pending an Administrative hearing. A closure certificate was issued in May 2022, at the request of SKY VENUS' representative - see annex 32.5. Palau ship registry assisted the Panel in its investigations.

[91] See S/2022/132, paras. 64-73 and annex 48.
[92] Document held on file by the Panel.

Loss of AIS transmissions

In response to the Panel's enquiry, Palau Ship Registry provided information that as part of its due diligence process, it "*checked the AIS and LRIT reporting and identify some AIS gaps*" which the ship registry requested an explanation from the ship owner. Palau noted significant periods of AIS interruption spanning several months, including in the month of May 2021. Ocean Energy International Corp, the SKY VENUS' registered owner and alias of Cheng Chiun Shipping's[93] response was to attribute the ship's AIS outages to bad weather conditions. See figure 32.1.

The Panel however notes that maritime tracking data showed other vessels transmitted AIS signal in the same area and timeframe where SKY VENUS attributed bad weather conditions as affecting transmission. SKY VENUS moreover did not transmit AIS signal for significant periods of time in 2022, lasting up to a month. Her AIS outages also occurred during the investigative periods of interest. Further, SKY VENUS continued to sail and trade over several months before its AIS transponder was reported fixed in August 2021, in contravention to SOLAS regulations.

[93] Cheng Chiun Shipping the owner of SKY VENUS, set up Ocean Energy International Corp to serve as the ship's registered owner.

Figure 32.1: An undated letter from SKY VENUS' registered owner to Palau Ship Registry on the ship's AIS / LRIT transmissions

Ocean Energy International Corp.
Suite 309, Capital City Building, Independence Avenue, Victoria, Mahe, Republic of Seychelles
[redacted]

To: Palau International Ship Registry

Vessel: Sky Venus
IMO: 9168257
Inmarsat mobile unit number: [redacted]

We have well received your LRIT Screening Report, vessel's position on the report is same as our record of the route of vessel.

As reported by Master, both the LRIT and AIS are working normally, what discussed with Radio Technician, our conclusion is as follows:
1. Now is the Typhoon Season, most of the satellites were blocked by the heavy cloud resulted from the typhoon or tropic depression.
2. Signal may not get through the heavy rain.
3. Our antenna or cable may be get wet, which affect the transmission of signal. For this we will check at vessel's call.

Taiwan is now under the thunder storm and heavily rain, we have request a local INM-C vessel monitoring service provider to check our vessel LRIT, seems no response. We have arranged the service engineer to go on board at coming port call to confirm the problem.

Thank you!

Best regards,
Ocean Energy International Corp.

For and on behalf of
OCEAN ENERGY INTERNATIONAL CORP.
[redacted]
Authorised Signature(s)

The Panel continued to track the activities of SKY VENUS. In December 2021, SKY VENUS was suspected to have engaged with yet another multi-stage oil cargo transfer destined for the DPRK, involving JOFFA as the intermediary vessel and the 'direct delivery' vessel NEW KONK, transmitting as LIFAN. Details are at annex 32.6.

See also annex 33 on related Cheng Chiun Shipping investigations.

Source: The Panel.

Annex 32.2: Certificate of Incorporation of JAN VICTORIA

Company No.: **88843**

SAMOA

INTERNATIONAL COMPANIES ACT 1988
(Section 14(3))

CERTIFICATE OF INCORPORATION

It is hereby certified that pursuant to the provisions of Section 14(3) of the International Companies Act 1988

TOPAZ INTERNATIONAL CORP.

was incorporated as an international company on the 22nd day of March 2022.

Given under my hand and seal at Apia this 22nd day of March 2022.

[redacted]

DEPUTY REGISTRAR OF INTERNATIONAL AND FOREIGN COMPANIES

This Certificate of Incorporation shall remain valid until the company is struck off and dissolved, pursuant to the provisions of the International Companies Act 1988.

An annual renewal fee is due and payable by the company on the 30th day of November of every year following incorporation.

Source: The Panel.

Annex 32.3: De-registration certificate of JAN VICTORIA (former SKY VENUS) (IMO: 9168257)

REPUBLIC OF SIERRA LEONE

CERTIFICATE OF DE-REGISTRATION
REMOVAL FROM REGISTER

Issued in accordance with the Sierra Leone Merchant Shipping Act of 2003, Part III, Section 20 & 21.

Certificate No.
VHQ-200-22-1949

Name of Vessel JAN VICTORIA		Official No. SLR10797
Call Sign 9LU 2810	Port of Registry FREETOWN	IMO No. 9168257
MMSI No 667 002 007	Type of Vessel Oil Tanker	Gross Tonnage 5818
Owner's Name and Address TOPAZ INTERNATIONAL CORP., Unit 25, 2nd Floor, Nia Mall, Saleufi Street, Apia, Samoa		Owner's IMO No 6304140

I, the undersigned, hereby certify that:

1. The registration of the vessel described above as Sierra Leonean ship was terminated and on the date given below and an entry was made in the merchant ship Register to this effect.
2. At the time of de-registration the following particulars of encumbrances and rights were registered on the vessel:

The vessel is free from all registered Encumbrances and Mortgages on the register of Sierra Leone.

3. The reason for de-registration of the vessel is:

Other: Deleted in accordance with Article 20 (f) of the Sierra Leone Merchant Shipping Act, 2003 as amended.

Place and Date of issuance
Freetown, Sierra Leone on 24 June 2022 at 13:47 UTC

[redacted]

This is an electronically generated certificate. It has been digitally signed and stamped.

[redacted]fi - Assistant Registrar

To Whom it may Concern: Authenticity of this certificate can be verified through the Flag Administration's website at www.slmarad.com based on the Certificate Number or by contacting directly the Flag Administration through the contact details at the bottom of the certificate.

Sierra Leone Maritime Administration SLMARAD
info@slmarad.com www.slmarad.com

VHQ-200-22-1949 Page 1 of 1

Source: The Panel.

Annex 32.4: Continuous Synopsis Record of SKY VENUS

CERTIFICATE | CERTIFICADO | 证书 | СЕРТИФИКАТ | ΠΙΣΤΟΠΟΙΗΤΙΚΟ | CERTIFICAT

REPUBLIC OF PALAU

CONTINUOUS SYNOPSIS RECORD (CSR) DOCUMENT #16
IMO NUMBER: 9168257

Dates should be in the format yyyy/mm/dd

1	This document applies from (date):	2020/08/31
2	Flag State:	Republic of Palau
3	Date of Registration:	2020/08/04
4	Name of ship:	SKY VENUS
5	Port of Registration:	MALAKAL HARBOR
6	Name of Registered Owner (s) and address(es):	OCEAN ENERGY INTERNATIONAL CORP. SUITE 309, CAPITAL CITY BUILDING, INDEPENDENCE AVENUE VICTORIA, MAHE REPUBLIC OF SEYCHELLES
7	IMO # of Registered Owner (s):	6171291
8	If applicable, name of current registered bareboat charterer(s) and address(es):	- N.A.
9	Name of Company (International Safety Management) and address:	WILLS INTERNATIONAL CO.LTD NO.27 HOU AN ROAD, CHIEN CHEN DIST. KAOHSIUNG CITY [redacted]
10	IMO# of Managing Company:	5564351
11	Name of Classification Society with which the ship is classed:	IRS - International Register of Shipping
12	Administration/ Government/ Recognized Organization which issued the Document of Compliance:	IRS - International Register of Shipping
13	Administration/Government/Recognized Organization which issued Safety Management Certificate:	IRS - International Register of Shipping
14	Administration/Government/Recognized Security Organization which issued International Ship Security Certificate:	IRS - International Register of Shipping
15	Date in which the ship ceased to be registered with the Republic of Palau:	-
16	Remarks (insert relevant information as appropriate):	INITIAL REGISTRATION

THIS IS TO CERTIFY THAT this record is correct in all respects. Issued by the Administrator of the Republic of Palau.

Issued On: 2020/08/31

Issued At: PIRAEUS,GREECE

Issued By: ARISTOFANIS CHIONIS

Certificate No: 20080020150000 4945

Deputy Registrar: [redacted]

[redacted]

Electronic Signature

Scan to verify this document or visit www.palaureg.com

This original document was received on board the ship and attached to the ship's CSR file on the following:

Date: Signature:

This is an electronic certificate pursuant to the requirements of FAL.5/Circ.39 as amended, based on PISR MN-232 as amended. For verification, scan the QR code or visit www.palaureg.com/information-centre/ and use certificate no.

PISR C-121
Rev. 17.07.19

Europe Head Office
5, Sachtouri Street
Piraeus, Greece
18536, 6th floor
[redacted]

USA Head Office
The Woodlands, TX 77380
9595 Six Pines,
Suite 8210, Office 277

Source: The Panel.

Annex 32.5: Closure of Registry certificate of SKY VENUS *

*The ship registry's closure certificate was issued on 19 May 2021, with the original registration of SKY VENUS revoked on 14 March 2022.

CERTIFICATE | CERTIFICADO | 证书 | СЕРТИФИКАТ | ΠΙΣΤΟΠΟΙΗΤΙΚΟ | CERTIFICAT

REPUBLIC OF PALAU
CERTIFICATE OF CLOSURE OF REGISTRY

Vessel Name:	SKY VENUS		
IMO No or ID No:	9168257	Port of Registry:	MALAKAL HARBOR
Call Sign:	T8A3449	Official No:	P046052
MMSI No:	511 100 326	Vessel Type:	OIL TANKER

Ownership Details:

Name:	Residence:	IMO No:
OCEAN ENERGY INTERNATIONAL CORP.	SUITE 309, CAPITAL CITY BUILDING, INDEPENDENCE AVENUE VICTORIA, MAHE REPUBLIC OF SEYCHELLES	6171291

I hereby certify that the registration of the above-mentioned ship as a ship navigating under the Republic of Palau Flag was terminated on the date given below and an entry was made in the merchant ship register to this effect.

The reason for de-registration is: PISR found M/T SKY VENUS in a violation of SOLAS Regulation V/19, PISR MN 124-2 related to the Automatic identification System (AIS), PISR MN 129-2 related to the Long Range Identification System Compliance (LRIT) and Section 608 (f) of Title 7 of Palau National Code, which prohibits activities that contravenes the laws of the Republic of Palau or any international convention to which Palau is party.

As a result of these violations, PISR revoked the Certificates of Registry issued for M/T SKY VENUS. The vessel will be registered with Sierra Leone.

Issued On: 19/05/2022
Issued At: PIRAEUS, GREECE
Issued By: KLEOPATRA MICHALAKOPOULOU
Certificate No: 22050020150001531O
Deputy Registrar: [redacted]

[redacted]

Electronic Signature

Scan to verify this document or visit www.palaureg.com

This is an electronic certificate pursuant to the requirements of [illegible] as amended based on PISR [illegible] as amended. For verification, scan the QR code or visit [illegible] and use certificate no.

PISR C-199
Rev. 08.09.20

Palau International Ship Registry
www.palaureg.com

Annex 32.6: SKY VENUS – JOFFA – NEW KONK (as LIFAN) ship-to-ship transfer activities

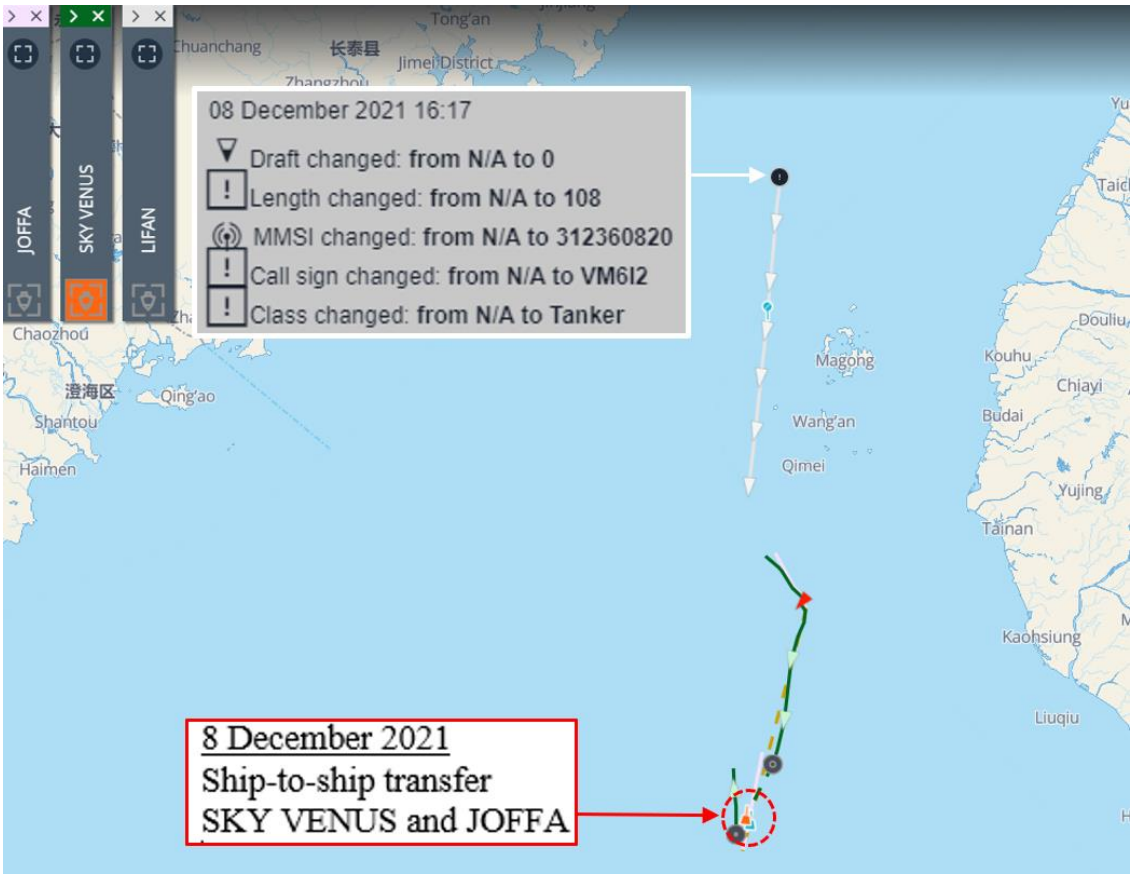
Between December 2021 and February 2022, SKY VENUS and JOFFA often sailed in proximity to each other before dropping AIS transmissions over a period of time, likely to conduct ship-to-ship operations.

One such meeting took place around 8 December 2021 where both SKY VENUS and JOFFA recorded extended periods of overlapping dark activity of over 10 hours, resuming transmission on 9 December 2021. Around that time, NEW KONK, transmitting as LIFAN (MMSI: 312360820), a fraudulent AIS profile, was recorded on 8 December sailing towards SKY VENUS and JOFFA. 'LIFAN' then resumed AIS transmission on 10 December 2021, proceeding to sail in a northerly direction towards the DPRK's EEZ.

Other occasions where SKY VENUS and JOFFA sailed in proximity of one another and dropped AIS transmissions were around 4 December 2022, 8 January 2022 and 25 January 2022.[94]

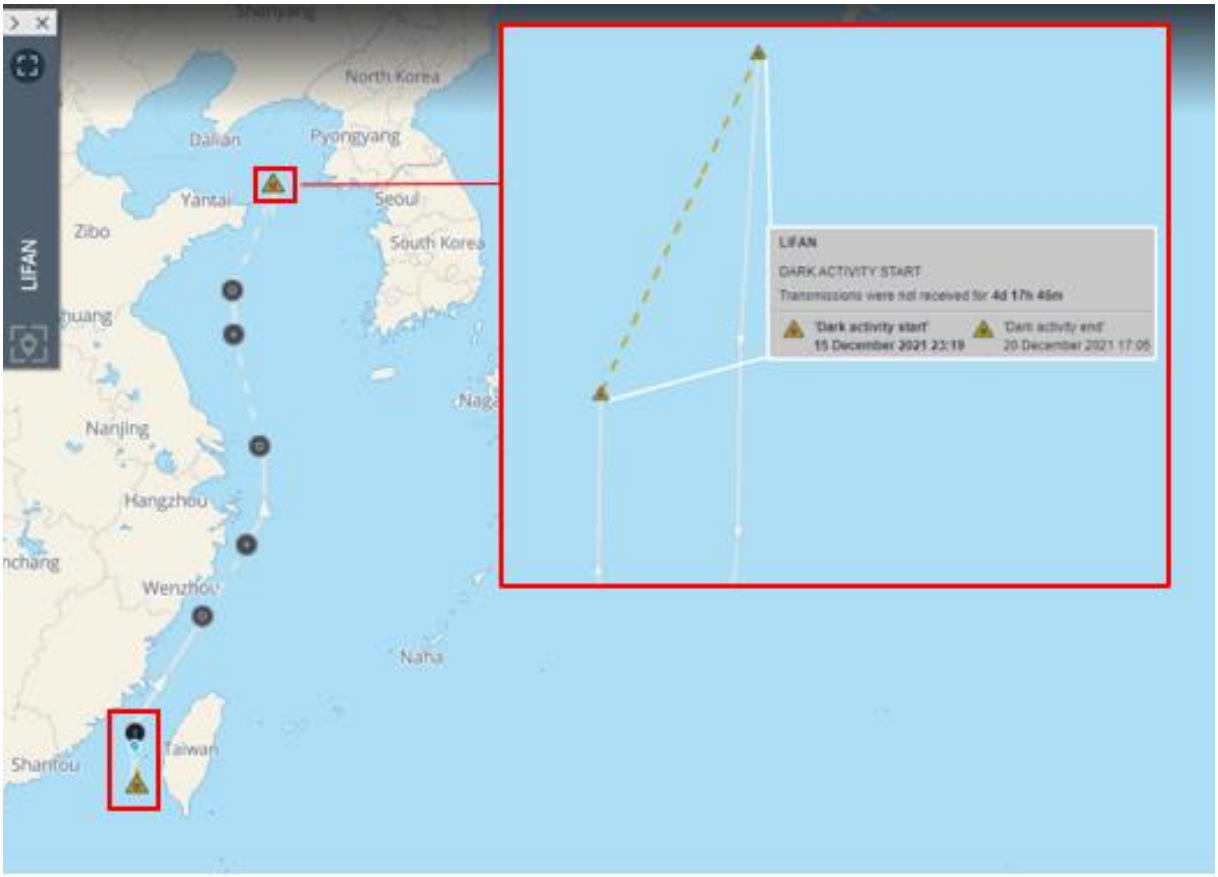
Figure 32.6:

NEW KONK as LIFAN sailing towards SKY VENUS and JOFFA on 8 December 2021



[94] All dates are based on EST.

NEW KONK as LIFAN sailing towards DPRK's EEZ before dropping transmission on 15 December 2021 for 5 days (top figure)



Source: Windward, annotated by the Panel.

Annex 33.1: Cheng Chiun Shipping Agency Co., Limited

Further to the last reported response from Cheng Chiun Shipping Agency Co., Ltd (程群船務代理有限公司) (hereafter "Cheng Chiun Shipping") contained in S/2022/132, the Panel continued its correspondence with the company.

The Panel notes that to date, while Cheng Chiun Shipping had supplied responses, it has not responded to all requests for information and other queries fully. Based on the available information and documentation, the Panel has identified inconsistencies in Cheng Chiun Shipping's responses. The Panel is reflecting key information relevant to its investigations provided by Cheng Chiun Shipping in annexes 33.2-33.4.

Panel's correspondence with Cheng Chiun Shipping, 2022

The Panel sent a further request for information letter on 31 March 2022 to Cheng Chiun Shipping. Cheng Chiun Shipping responded on 22 April 2022. The Panel's list of questions, Cheng Chiun Shipping's response and the Panel's comments to the latter's responses are contained in annex 33.2.

In explaining Cheng Chiun Shipping's business model, the owner explained that Cheng Chiun Shipping set up separate 'subsidiary' companies to conduct their "supplier-to-customer relationship" with their oil suppliers. According to Cheng Chiun Shipping, a one-to-one (1-to-1) supplier-to-customer relationship would place its company higher in terms of priority to be selected on a customer list. "*Other criteria for selection include the financial capacity, the amount of monthly trading, independent banking for transactions*." … "*As a result of this one-to-one correspondence, the contracts (signed contracts with petrochemical company), trading (with end-buyer), and shipping (delivering the cargo), all require separate subsidiary companies to carry out"*.

The Panel, through its correspondence with multiple parties, independently established shared ownership / beneficial interests across the supply chain which linked Cheng Chiun Shipping to shell companies -- companies it subsequently explained as 'Trading Company', 'Shipping Agent' and Registered Owner for ships it managed. For instance, Cheng Chiun Shipping's owner (Person X) was also the owner (same Person X) of the SKY VENUS that conducted the refined petroleum ship transfers destined for the DPRK. Cheng Chiun Shipping purchased the oil cargo for transfers to ships reported as chartered by Hong Yao International Co., Limited. Cheng Chiun Shipping used a number of aliases including Everway Global Ltd and Evermore Trading Corp, as the beneficial customer for the payments rendered for the oil cargo sold.

Cheng Chiun Shipping's additional response, 12 May 2022

On 12 May 2022, Cheng Chiun Shipping sent another email to the Panel containing numerous challenges to the Panel's S/2022/132 report on its case.

The Panel is of the view that Cheng Chiun Shipping has misrepresented the Panel's reporting through a selection of specific paragraphs, taking the issue out of context. The Panel's entire statement of case and evidence can be found in the relevant extracts of the Panel's case report at S/2022/132, paragraphs 64-73 and annex 48. The Panel's comments to Cheng Chiun Shipping's explanations are attached.

The Panel's investigations continue.

Source: The Panel.

Annex 33.2: List of queries submitted by the Panel to Cheng Chiun Shipping, Cheng Chiun Shipping's response and the Panel's comments

1. On Cheng Chiun Shipping (CCS)*abbreviated:

In your letter, you stated you are the acting manager of Cheng Chiun Shipping, as well as of the other entities listed in Annex 2 of the Panel's letter OC.381. You also stated that SUNWARD and SKY VENUS "belong to me and my shareholders".

1.1 Please provide full identifying and contact details of the other shareowners, directors and beneficial owners of Cheng Chiun Shipping and Cheng Chiun Shipping's other subsidiary companies.

CCS Response (excerpts): "The one-to-one (1-to-1) supplier-to-customer relationship has higher priority to be selected on the customer list. Other criteria for selection include the financial capacity, the amount of monthly trading, independent banking for transactions." … : "As a result of this one-to-one correspondence, the contracts (signed contracts with petrochemical company), trading (with end-buyer), and shipping (delivering the cargo), all require separate subsidiary companies to carry out. The final shipments were done by Sunward and Sky Venus."

Panel comment: The Panel notes Cheng Chiun Shipping did not provide requested information but instead described its business model.

1.2 In addition to the list of entities provided by the Panel, please provide a list of all other (subsidiary) entities, their documents of incorporation, directors, shareholders and beneficial owners that Cheng Chiun Shipping used in connection with its shipments and transactions.

CCS Response (excerpts): "…please see the Certificate of Incumbency (COI) and company articles of the above mentioned companies shown in Figure 1 (Jaguar Trading Corp., Everway Global Ltd., Galaxy Amber Ltd., Ocean Energy International Corp., Sunward Marine S.A., and Cheng Chiun Shipping Agency)".

Panel comment: The Panel requested the names for all 'subsidiaries' under CCS. CCS only confirmed the companies the Panel provided.

1.3 Please explain your / Cheng Chiun Shipping's association with: Jaguar Trading Corp, Galaxy Trading Corp, Galaxy Amber Ltd, and Everway Global Ltd. Please also explain their connection with Hong Yao International Trade Co., Ltd (hereafter "Hong Yao company").

CCS response (excerpts): *"…these companies are either trading companies (Everway Global, Jaguar, and Galaxy Amber) or shipping agent (Cheng Chiun Shipping Agency). While shipping arrangements are carried out by Sunward Marine and Ocean Energy. Hong Yao Company is the end-buyer."*

1.4 Please provide full details of any other (physical) operating location(s) outside Taiwan used by Cheng Chiun Shipping.

CCS response: "No other physical companies operating outside Taiwan."

1. On Mr Liu / Hong Yao company:

You mentioned in your letter that you were unable to travel to Hong Kong due to the COVID-19 outbreak.

2.1 Please detail the nature of your business in Hong Kong? Have you met Mr Liu whom you say is in-charge of Hong Yao company? When and under what circumstances did you first engage and develop a business relationship with Mr Liu / Hong Yao company.

CCS response: "Cheng Chiun Shipping Agency did not set up branch office in Hong Kong since Cheng Chiun Shipping Agency is a small company. I did not have a chance to go to Hong Kong to visit Mr. Liu since the outbreak of COVID-19 in December of 2019 in China. I first knew Mr. Liu through a friend of mine in Hong Kong and later received the first purchase order from Mr. Liu through his Hong Yao Company in October of 2020."

2.2 Do you have another means of communicating with Mr Liu / Hong Yao company other than the telephone number you have provided? Have you been in touch with Mr Liu following the Panel's correspondence with you? Please provide us with a copy of all written communication with him.

CCS response (excerpts): "My communication with Hong Yao Company mostly relied on LINE instant message." …. "In these LINE screenshots the communications were mostly concerning accounting statements or asking for the required documents such as COI, company articles/by-laws, annual reports, registration certificates from Hong Yao Company." …. "Quite a few older dialogues and communications were missing since I changed my cell phone once last year."

2.3 How long has Mr Liu / Hong Yao company been your customer? Is Mr Liu / Hong Yao company also a customer of other vessels you own / operate to supply refined petroleum cargo? If so, please provide full vessel details.

CCS response: *"Cheng Chiun Shipping Agency received the first purchase order from Hong Yao Company in October, 2020. At that time, only Sunward shipped gasoil for Hong Yao Company. After Sunward was decommissioned in May 2021, only Sky Venus took the place for oil shipping."*

2.4 You have stated in your letter that "*Mr Liu had never arranged identifiable ships for his oil transporting*", and that "*Mr. Liu always sends his ships which had the signs and numbers shown on the ships covered*". Why is this so? Is this always the case where ship names and identifiers are covered in your dealings with Mr Liu or was it only for SUNWARD and SKY VENUS ship transfers? In these circumstances, why did you/Cheng Chiun Shipping continue to proceed with these deals?

CCS response (excerpts): *"Most of the receiver boats arranged by Hong Yao Trading Company were small boats, usually with a capacity of only a few hundred tons. These boats were for inland navigation. It is common that most of these small Chinese boats did not show their identities …." " As Cheng Chiun is a purchase and shipping agency, it receives purchase order and delivers the cargo to the buyer according to the FAS rules. The responsibility (and risk) for Cheng Chiun to deliver the oil to the designated location and transfer to the buyer is ceased and the responsibility automatically passes over to the buyer at the moment when the transfer is complete and oil pumping hose is disconnected."*

Panel comment: The Panel has noted the risk of FAS / FOB (Free-on-Board) principle and has provided recommendations on this issue.

2.5 With knowledge of the high degree of risk concerning the smuggling of oil cargo to the DPRK, please explain why you consider your company's actions in ship-to-ship transfers as sufficient. Please provide copies of your company's current due diligence and know-your-customer policies.

CCS response (excerpts):

"(1) Ask the buyer to provide the detail information of the receiver ship at least ten days to two weeks before we accept the purchase order.
(2) The buyer's information about the receiver ship must include the name and the IMO number (if it has an IMO number). More importantly the Q88 must be included.
(3) We check the company name on the entity list of the website:…."
(4) We check the name of receiver ship on the watch list …"

"A sample inquiry to ask for the information about the buyer's receiver ship … in this case the ship was JOFFA."

Panel comment: The Panel notes a similar procedure was not conducted for the small ships that received oil cargo from SKY VENUS during the material times of interest.

3. On vessels:

3.1 Please explain why the SKY VENUS and SUNWARD's AIS were not traceable during periods of time, including that covering the material times (i.e. the periods of the Panel's investigative interest).

CCS response (excerpts): *"The AIS on board Sky Venus had bad connection and short-circuited, as I have previously reported to Palau's PISR on July 30, 2021 …" … "All these very harsh weather conditions resulted in bad AIS functioning. We had called repair service and the service report suggested that the bad AIS signal connection was due to the short circuit when the rain and sea water got through the seams of the outer covering tube of the device on the mast. The repair took certain time as the service company had no AIS in stock. A new AIS set was finally installed on August 17, 2021."*

Panel comment: AIS non-transmission for SKY VENUS was recorded for significant periods of time (up to a month) in April 2021 and beyond, before CCS's stated report to Palau Ship Registry. SKY VENUS nonetheless continued to sail and trade despite a malfunctioning AIS for months, in contravention of SOLAS regulation. With regards the weather conditions resulting in bad AIS transmissions, the Panel notes other vessels continued to transmit in the same waters during the same dates when SKY VENUS was not transmitting. The SKY VENUS' AIS outages also coincided with the vessel's suspected DPRK-related ship-to-ship transfers.

3.2 Regarding the inland ships and fishing boats which received refined petroleum from SUNWARD and from SKY VENUS, please provide copies of all relevant documentation e.g. times-stamped photos of the receiving ships, meter readings before and after the transfers, bunker delivery receipts etc.

CCS response (excerpts): *"… documents (i.e., the Bill of Lading, discharge summary, receipts with dates and quantities, and the one-dollar paper bills receipts) of Sunward in March and April, 2021 in Annex 2, total 21 pages)."*

Panel comment: The Panel cannot determine based on the table provided by CCS, the identity of any of the receiver vessels, and therefore cannot determine that these vessels were who they said they were, and where they said they were. Of the three identifiers of receiver vessels that

Cheng Chiun Shipping subsequently provided,[95] the receiver vessels could not have met SKY VENUS (see relevant section of this report's main text). No photographs, meter readings etc. were provided for the transfers, as requested.

3.3 According to information separately obtained by the Panel, you / Cheng Chiun Shipping stated that the following small ships were involved in the transfer of refined petroleum cargo from the SKY VENUS in May 2021:

- HUI HANG 79 on 14 May 2021;
- JIANG XING 78 on 18 May 2021;
- QUAN YI YOU 02 on 31 May 2021.

3.3bis Please confirm the above transfers and provide all information and copies of original documentation of vessels that received oil cargo from the SKY VENUS.

CCS response (excerpts): *"The dates were May 14, 18, and 31, 2021, respectively. Please find the three receipts shown".*

Panel comment: See also comments at 3.2.

3.4 What is the relationship / association between Cheng Chiun Shipping and the above-named vessels?

CCS response: *"There was no relationship between Cheng Chiun Shipping Agency and the above named boats in Part 3.3 which were arranged by Hong Yao Company."*

3.5 Please explain SUNWARD's continued journey northwards in the East China Sea despite having discharged all of its cargo on 9 April 2021 to SKY VENUS, with the reason of the transfer given that the former was slated for scrap?

CCS response (excerpt): *"Sunward had not sailed to the outside of its regular locations".*

Panel comment: The Panel notes Cheng Chiun Shipping did not provide an explanation for SUNWARD's voyage in question and instead provided SUNWARD's positional data on 1 May 2021 to make their case. However, SUNWARD disappeared from maritime tracking platforms had recorded lost positional data on maritime tracking platforms for around 10 days following

[95] Cheng Chiun Shipping did not volunteer the names of the three ships to the Panel when it had knowledge of it. Cheng Chiun Shipping confirmed the name of these ships following receipt of the Panel's letter submitting the ship names for confirmation, having separately obtained it from another counterparty.

its last transmission on 1 May. Cheng Chiun Shipping has not provided any positional data for SUNWARD between 9 April and 1 May 2021.

3.6 Please explain why there was no trading (ship-to-ship transfers) until a month after the transfer of cargo in April 2021 from SUNWARD to SKY VENUS? Why was the SKY VENUS without AIS transmission for that duration?

CCS response (excerpt): "…explanation due to crew strike."

Panel comment: The Panel notes no documentation was provided on the crew strike.

4. On other ship-to-ship transfers:

4.1 As requested in the Panel's original letter, please provide a list of all vessels with which the SKY VENUS has conducted ship-to-ship transfers (including dates, identifiers, counterparty details and other relevant documentation) since March 2021.

CCS response (excerpt): "…details in Annex 3, which include the Bill of Lading, the discharge summary, receipts with dates and quantities, and the one-dollar paper bill receipts of Sky Venus since May 2021 …"

Panel comment: CCS provided a Word formatted table containing the dates of ship-to-ship transfers (discharged dates) with the alleged discharged amounts, associated renminbi numbers (that served as identification for the ship transfers), and photocopies of (limited information) cargo bunker delivery receipts – see overleaf of sample table and accompanying receipts provided for the SKY VENUS' ship-to-ship transfers for the month of May 2021. No independently verifiable information was provided.

5. On associations:

5.1 Please provide the following information and any documentation as it relates to the following: [redacted]

Panel comment: The Panel has omitted details of this section due to ongoing investigations.

6. On financial information provided for the SUNWARD and SKY VENUS:

6.1 The SWIFT messaging records you provided lists various Hong Kong and Philippines-based ordering customers. Please explain who are these customers and how are they associated with Hong Yao and / or Cheng Chiun Shipping.

6.2 Please provide beneficiary customer details for all the SWIFT messaging records.

CCS response (excerpt): *"These remitter companies were on behalf of Hong Yao Company to fulfill the payment obligations for Hong Yao's purchase orders. The screenshot below shows the communication with the beneficiary's bank (the receiving bank) on 21 December 2021. My beneficiary's bank must audit (verify and check) various documents of the remitter companies. These documents required as shown in the screenshot, include (1) business registration certificate, (2) certificate of incumbency (COI) for company detail, (3) company annual report, (4) company articles/by-laws".*

Panel comment: The Panel's investigation into the financial transactions is ongoing.

Source: The Panel.

Sample of table and accompanying receipts provided by Cheng Chiun Shipping on information of ship-to-ship transfers conducted by SKY VENUS, May 2021

MT SKY VENUS

Loading Date 裝貨日期	Loading Quantity 裝貨數量(MT)	Date of Discharge 卸貨日期	Discharge Quantity 卸貨數量(MT)	Sight(CNY) 代號	Period 交易期間	Remark 備註
2021/4/9	4,965.092	2021/5/10	650	3710	2021/5/10~2021/5/20	Contact: Mr. Liu [redacted] Loaded by MT Sunward and transferred to MT Sky Venus
		2021/5/10	630	3977		
		2021/5/12	600	6876		
		2021/5/13	650	2056		
		2021/5/14	620	1899		
		2021/5/15	560	3203		
		2021/5/18	670	6091		
		2021/5/20	610	3559		
			4,990			

估價單

3977 買號 2021 年 5 月 10 日

品名	數量	單價	金額	備註
1 ① 31040				
2 400				
3 31440				
4				
5				
6 ② 42224				
7 356				
8 42580				
9				
10				
11 400+356=756 公斤				
12 756÷1.2=630 噸				
13				
14				
15				

№ 112951 合計NT$ 刘

估價單

3710 買號 2021 年 5 月 10 日

品名	數量	單價	金額	備註
1 ① 30640				
2 400				
3 31040				
4				
5				
6 ② 41844				
7 380				
8 42224				
9				
10				
11 400+380=780 公斤				
12 780÷1.2=650 噸				
13				
14				
15				

№ 112330 合計NT$ 刘

估價單

2056 買號 2021 年 5 月 13 日

品名	數量	單價	金額	備註
1 ① 31800				
2 400				
3 32200				
4				
5				
6 ② 42940				
7 380				
8 43320				
9				
10				
11 400+380=780 公斤				
12 780÷1.2=650 噸				
13				
14				
15				

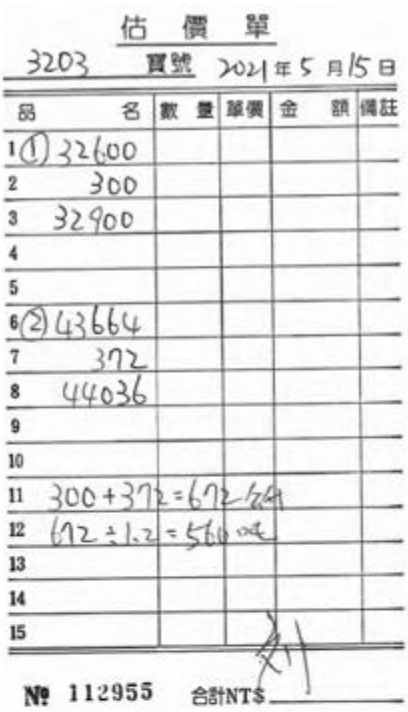
№ 112953 合計NT$ 刘

估價單

6876 買號 2021 年 5 月 12 日

品名	數量	單價	金額	備註
1 ① 31440				
2 360				
3 31800				
4				
5				
6 ② 42580				
7 360				
8 42940				
9				
10				
11 360+360=720 公斤				
12 720÷1.2=600 噸				
13				
14				
15				

№ 112952 合計NT$ 刘

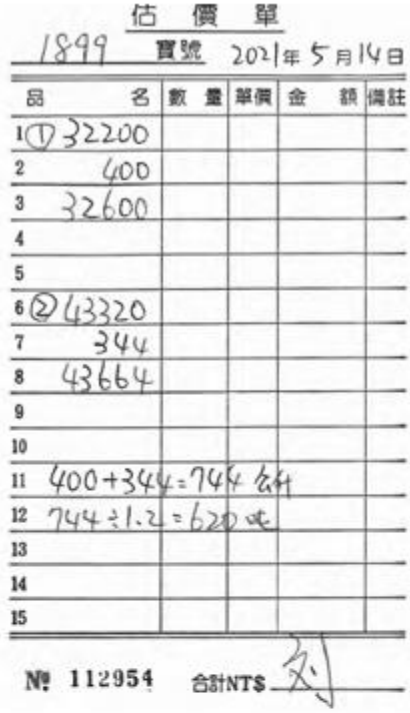


估 價 單

3203 寶號 2021年5月15日

品名	數量	單價	金額	備註
1 ① 32600				
2 300				
3 32900				
4				
5				
6 ② 43664				
7 372				
8 44036				
9				
10				
11 300+372=672 公斤				
12 672÷1.2=560 吨				
13				
14				
15				

№ 112955 合計NT$ 刘

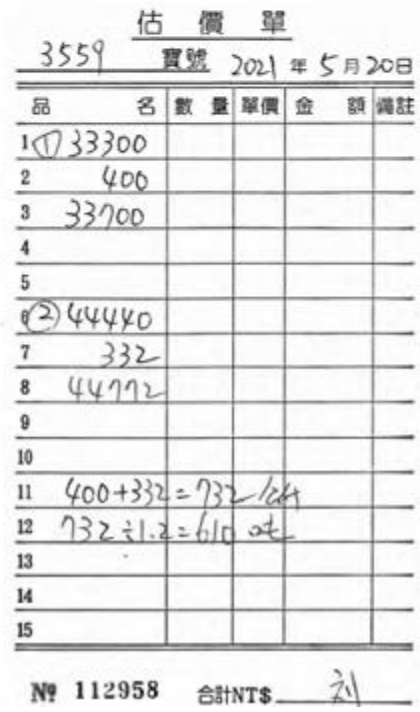


估 價 單

1899 寶號 2021年5月14日

品名	數量	單價	金額	備註
1 ① 32200				
2 400				
3 32600				
4				
5				
6 ② 43320				
7 344				
8 43664				
9				
10				
11 400+344=744 公斤				
12 744÷1.2=620 吨				
13				
14				
15				

№ 112954 合計NT$ 刘

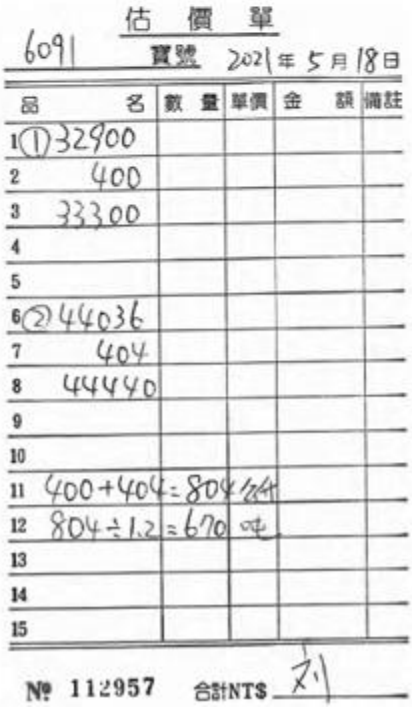


估 價 單

3559 寶號 2021年5月20日

品名	數量	單價	金額	備註
1 ① 33300				
2 400				
3 33700				
4				
5				
6 ② 44440				
7 332				
8 44772				
9				
10				
11 400+332=732 公斤				
12 732÷1.2=610 吨				
13				
14				
15				

№ 112958 合計NT$ 刘



估 價 單

6091 寶號 2021年5月18日

品名	數量	單價	金額	備註
1 ① 32900				
2 400				
3 33300				
4				
5				
6 ② 44036				
7 404				
8 44440				
9				
10				
11 400+404=804 公斤				
12 804÷1.2=670 吨				
13				
14				
15				

№ 112957 合計NT$ 刘

Source: The Panel.

Annex 33.3: Cheng Chiun Shipping's email of 12 May 2022*[96]

May 12, 2022

Dear Madams and Sirs,

The United Nations Security Council Panel of Experts (POE) pursuant to Resolution 1874 (2009) presented a report S/2022/132 to Security Council on March 1, 2022 (Annex 1).

My letter is regarding the Annex 48 on pages 234 to 238 of the report (Annex 2, total five pages). In Annex 48, the POE 1874 (2009) Team gave two case examples alleging two oil tankers of my company violating sanction against Democratic People's Republic of Korea (DPRK). Since this Report gives unproven serious allegations, I appeal to your office in this letter as my human rights, asking for the POE 1874 (2009) Team to correct the information.

In brief, POE alleged that both Sunward and Sky Venus conducted ship-to-ship transfer delivering oil to North Korean ships (Democratic People's Republic of Korea, DPRK).

I quote the figures and legends of Figures 48-1, 48-2, and 48-3 in POE 1874 Team's report in the following pages:

[pages referenced were pages 235-237 of S/2022/132]

Figure 48-1 on page 235 shows four photos of one ship docked in a North Korean port with the figure legend wrote *"DPRK vessels involved in ship-to-ship transfers with the SUNWARD delivering refined petroleum"*. The four photos in Figure 48-1 only showed one North Korean ship in the port of North Korea.
In Figure 48-2 on page 236, the figure legend wrote " YU JONG 2 and SAM JONG 1 involved ship-to-ship transfers with Sky Venus delivering refined petroleum".
In Figure 48-3 on page 237, the figure legend wrote " SIN PHYONG 5 involved in ship-to-ship transfers with Sky Venus, delivering refined petroleum".

All the photos in the above mentioned three figures of POE's report show only one North Korean ship conducting the alleged "ship-to-ship transfer." The quality of these three figures do not allow us to read clearly. All the characters shown on all these photos can hardly be seen (dates around September 22). All the positions can hardly be seen as well. The latitudes were around 29 to 30 degrees, and the longitude were around 127 to 129 degrees, all in North Korea.

My ships have not been near the North Korean waters. The position record from the British satellite telecommunication company, Inmarsat (International Maritime Satellite Organization), includes Vessel Monitoring System (VMS) and Automatic Location Communicator (ALC), both devices together provide tracking history of Sky Venus between the interested September 15 and October 15, 2021, as shown below (and also in Annex 3).

In summary, (1) the positions of Sky Venus cover a range of latitude between 23.0 and 24.5°, and longitude between 118.5 and 120.5° in the time period alleged by the UN POE 1874 Team. These position records show Sky Venus all remained in Taiwan waters; and (2) the distance between Taiwan waters and North Korean waters is approximately 900 to 1,000 nautical miles and needs more than one week for Sky Venus to sail from Taiwan to North Korea back-and-forth. It is impossible for Sky Venus to appear in Taiwan waters and North Korean waters at the same time.

Conclusion: Since the positions from British Inmarsat satellite tracking history proved that Sky Venus has never been close to North Korean waters, the information given in Figures 48-1, 48-2, and 48-3 in the report presented by POE Resolution 1874 (2009) Team given to the Security Council on March 1, 2022 (please refer to Annex 2) is one-hundred percent erroneous and is completely contradicting with the British Inmarsat automatic satellite communication record of vessel tracking system.

In addition, Sky Venus was flagged under the Republic of Palau. POE Resolution 1874 (2009) Team had asked Palau maritime authority to investigate the suspicious violation of UN sanctions on DPRK. After investigation and open hearing on March 4, 2022, Palau International Ship Registry (PISR) on March 14, 2022, concluded that *"PISR finds that there are not enough evidence to confirm that the transfer of oil conducted in May, August, and December 2021 by Sky Venus was delivered to DPRK resulting in violation of the relevant UN sanctions and given the involvement of the Sky Venus in these activities result on the violation of UNSCR 2397 OP5."* (Annex 4)

[96] *Attachments not enclosed.

> In conclusion, the Security Council Panel of Experts 1874 (2009) Team gave erroneous and contradicting results in its report on March 1, 2022, at least include the following erroneous information:
>
> 1. First, POE 1874 Team reported erroneous position data which is completely contradicting with positions history of international automatic vessel tracking system. The tracking system indicates Sky Venus was in Taiwan waters at the time period described by POE 1874 (2009) Team.
>
> 2. Second, POE 1874 Team had earlier (in December, 2021) asked Palau Ship Registry to conduct investigation. The results of investigation confirmed that Sky Venus has not violated UN sanctions of UNSCR 2397 OP5.
>
> Finally, about damage to the reputation of my company as a result of POE's erroneous information. The United Nations Panel of Experts Resolution 1874 (2009) Team (the POE team) had finished its S/2022/132 report in February and presented this report to the Security Council on March 1, 2022. However, the official PISR investigation report appeared on March 14. Thus, the Security Council POE 1874 Team wrote its S/2022/132 report at very early stage even before the investigation came to an end. Thus, POE had (1) the erroneous data about the latitude and longitude of the oil tanker Sky Venus at the interested time period, and (2) apparently, Panel of Experts 1874 team lack the official report of maritime investigation conducted by PISR at the time when POE wrote its early version of S/2022/132 report. These erroneous information of the early version of S/2022/132 report presented by Panel of Experts (to the Security Council) have great impact on my personal fame and company reputation of my shipping agency. Therefore, I request the United Nations Panel of Experts 1874 (2009) Team must make corrections in the very near future for the erroneous information on pages 234 to 238 in its S/2022/132 report to the Security Council on March 1, 2022.

The Panel is of the view the above selective points that misrepresent the Panel's reporting. The Panel's report details the multi-stage ship-to-ship transfers involving SKY VENUS, resulting in the transfer of refined petroleum destined for the DPRK. Resolution 2397 (2017) paragraph 5 mandates the prohibition of the "*direct or indirect supply, sale or transfer to the DPRK … of all refined petroleum products*" that are not reported towards the assigned restricted refined petroleum cap, as laid out in the resolution. The DPRK continues to illicitly procure unreported amounts of refined petroleum, as demonstrated in successive Panel reports over the years. The Panel's report demonstrated the typology of how illicit unreported refined petroleum were procured with sanctions evasion activities involving SKY VENUS and other ships suspected to have ultimately transferred their oil cargo to DPRK tankers.

In response to Cheng Chiun Shipping's email of 12 May 2022, the Panel notes the following:

(i) Cheng Chiun Shipping claims that its ships could not have violated sanctions on oil transfers to the DPRK because they did not travel to the DPRK. The Panel has never alleged that Cheng Chiun Shipping's vessels travelled to the DPRK. Instead, the Panel has published extensive analysis of AIS data, satellite imagery, corporate records, and Member State information that show Cheng Chiun Shipping's vessels likely served as motherships in a multi-stage ship-to-ship transfer scheme that delivered refined petroleum to the DPRK in violation of sanctions. Vessels need not travel to the DPRK in order to conduct sanctionable activities. Cheng Chiun Shipping has misrepresented the Panel's findings in its defence.

(ii) With regards Cheng Chiun Shipping's claim of inaccuracies in figures selected, 48-1, 48-2 and 48-3 on pages 235 to 237 of Annex 8 of S/2022/132, Cheng Chiun Shipping has made factually incorrect statements. Cheng Chiun Shipping asserts that "*All the photos in the above mentioned three figures of POE's report show only one North Korean ship conducting the alleged 'ship-to-ship transfer*." Each of the seven referenced satellite images was provided

by a Member State and clearly identifies the DPRK tanker, date and location of the image.

(iii) It is unclear why Cheng Chiun Shipping has chosen to include the months of September and October 2021 to cite its AIS tracking history that included INMARSAT data. The Panel sought specific dates / months of investigative interest and asked clarification from Cheng Chiun Shipping on the all the relevant periods of AIS outages.

(iv) With regards Cheng Chiun Shipping's claim that the Panel had published its report prior to the Palau Ship Registry's official investigation, the Panel notes it reports on its investigations to date. The Panel conducts its own investigations and corroborates data and information from a wide variety of sources. The Panel's investigations are not tied to ship registry investigations, who may conduct their own due diligence checks in conformity with the respective registry's requirements. The Panel encourages all regulatory bodies like flag registries to conduct their own investigations and share their findings with the Panel.

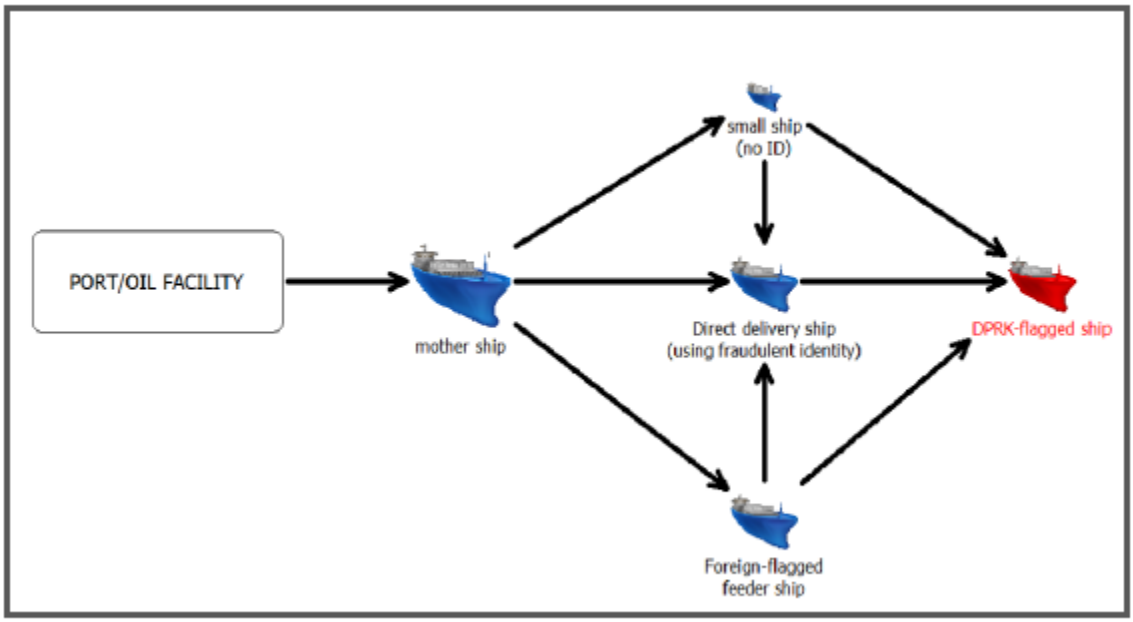
Source: The Panel.

Annex 33.4: Cargo Bunker Delivery Receipts of receiving vessels provided by Cheng Chiun Shipping for SKY VENUS

In Cheng Chiun Shipping's original statement to the Panel, it indicated that it served as purchasing and shipping agent for gasoil customers near Fujian Province, China. All the oil cargo was purchased by a Mr Liu from the Hong-Kong incorporated Hong Yao International Trading Co., Limited (hereafter "Hong Yao International"). The oil was transferred to "*inland ships*" and "*fishing boats*" nominated by Mr Liu, which covered their identifiers, and identified by a "*CNY paper bill*", whose serial numbers were provided to Cheng Chiun Shipping to identify and match against the receiver ships.

The Panel recalls its typology of motherships used to transfer refined petroleum cargo destined for the DPRK, through a chain of ship-to-ship transfers. This ostensibly provides a layer of deniability of the associated individuals involved in the ship-to-ship transfer from mothership to the small feeder vessels.

Multi-stage oil transfers destined for the Democratic People's Republic of Korea



Source: The Panel.

The following receiver vessels were confirmed by Cheng Chiun Shipping in response to the Panel's follow-up letter which contained information on the identities of three receiver ships the Panel had obtained from a third party:

Table: Receiver vessels' identities recorded

Mothership	Discharge Date to receiver vessel	Receiver vessel (ship-to-ship transfer)	Cargo (bunker) delivery receipt
SKY VENUS (IMO: 9168257)	14 May 2021	HUI HANG 97	620 MT transferred
	17 May 2021	JIAN XING 78	670 MT transferred
	30 May 2021	QUAN YI YOU 02	500 MT transferred

*Information according to Cheng Chiun Shipping; Table compiled by the Panel

To recall, a Member State had indicated the oil cargo offloaded from SKY VENUS onto small ships were in turn transferred to DPRK tankers YU JONG 2 (IMO: 8604917) for the 14 May 2021 transfer, to SAM JONG 1 (IMO: 8405311) on 17 May 2022 and again to SAM JONG 1 around 28 May 2021. The Member State assessed that Cheng Chiun Shipping "*was aware of the sanctions evasion activity and attempted to cover up their activities*".

Cargo Bunker Delivery Receipts

The Panel notes the accompanying bunker delivery receipts provided by Cheng Chiun Shipping contained very limited information as compared to other cargo delivery receipts that typically provide more details of the counterparties. The Panel's various attempts to reach Mr Liu and Hong Yao International were unsuccessful. Cheng Chiun Shipping also did not respond to the Panel's request for alternate contact details of Mr Liu.

Tracking[97] inconsistencies

SKY VENUS

According to Cheng Chiun Shipping, SKY VENUS conducted its ship-to-ship activity around the coordinates 23-26˚N, 119-121˚E. The Panel's tracking information showed SKY VENUS recorded dark activity for 10 days between 9-19 May 2021,[98] re-transmitting in the Taiwan Strait thereafter. The Panel's tracking of the three receiver vessels showed those vessels were not in proximity of SKY VENUS during and around the said transfer dates, and therefore unable to have conducted the said transfers then.

[97] Vessels were tracked on Windward.
[98] Eastern Standard Time dates.

HUI HANG 79

With regards the receiver small ships identifier provided by Cheng Chiun Shipping, HUI HANG 79 is a Chinese coastal ship of a reported length of 53 meters, transmitting on the same MMSI since 2014. It has kept a coastal trading pattern and was sailing inland at Guangzhou between 13-15 May 2021, during the investigative dates of interest (material time). It is unlikely to have met SKY VENUS.

JIAN XING 78

With regards the receiver small ships identifier provided by Cheng Chiun Shipping, JIAN XING 78 is a Chinese coastal ship of a reported length of 69 meters, transmitting on the same MMSI since 2015. It has kept a coastal trading pattern and was at Changsu port area on 15 May 2021, and sailed in a northerly direction, reaching Dalian by 19 May 2021, covering the material time. It is unlikely to have met SKY VENUS.

QUAN YI YOU 02

With regards the receiver small ships identifier provided by Cheng Chiun Shipping, QUAN YI YOU 02 is a Chinese coastal ship of recorded length of 52 meters. It was at the Quanzhou port area between 29 May to 2 June 2021, during the material time. It is unlikely to have met SKY VENUS.

Source: The Panel.

Annex 34: JOFFA (IMO: 8513405) 99 as an intermediary vessel engaged with multiple motherships, in a chain of trans-shipments of refined petroleum destined for DPRK

JOFFA, a former Sierra Leone tanker, exhibited indicators of a vessel of interest[100] that included dropped AIS signals sailing within the Taiwan Strait, operating in waters that were known staging areas where suspect 'direct delivery' vessels loitered. Panel investigations into the vessel's ownership and management companies showed the vessel, like other suspect vessels, was owned and managed by a company that registered only a single ship. The registered owner, Joffa Trade International Co Ltd, incorporated in Hong Kong, listed a Chinese national as the sole director and shareholder. The Panel notes that in several instances where suspect vessels were investigated, the registered owner individual provided to corporate registries have a tenuous or non-existent link to the vessel, likely serving as a front. Joffa Trade registered a corporate secretary address[101] familiar to the Panel of having provided company secretary services to other investigated entities, including the registered owner for NEW KONK, New Konk Ocean International Company.

Examples of JOFFA serving as the intermediary vessel in a multi-stage ship-to-ship transfer chain of refined petroleum destined for the DPRK are at figures 34.1 to 34.3. Prior to this, JOFFA spent a few months along the Baima River, including at Yihe Shipbuilding Industry Co. Ltd, a shipyard of interest investigated by the Panel for its past association with servicing tankers that conducted sanctionable activity.[102]

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[99] JOFFA was listed as broken up on IMO records as of April 2022. It was renamed ZOFFA in March 2022 prior to scrap.

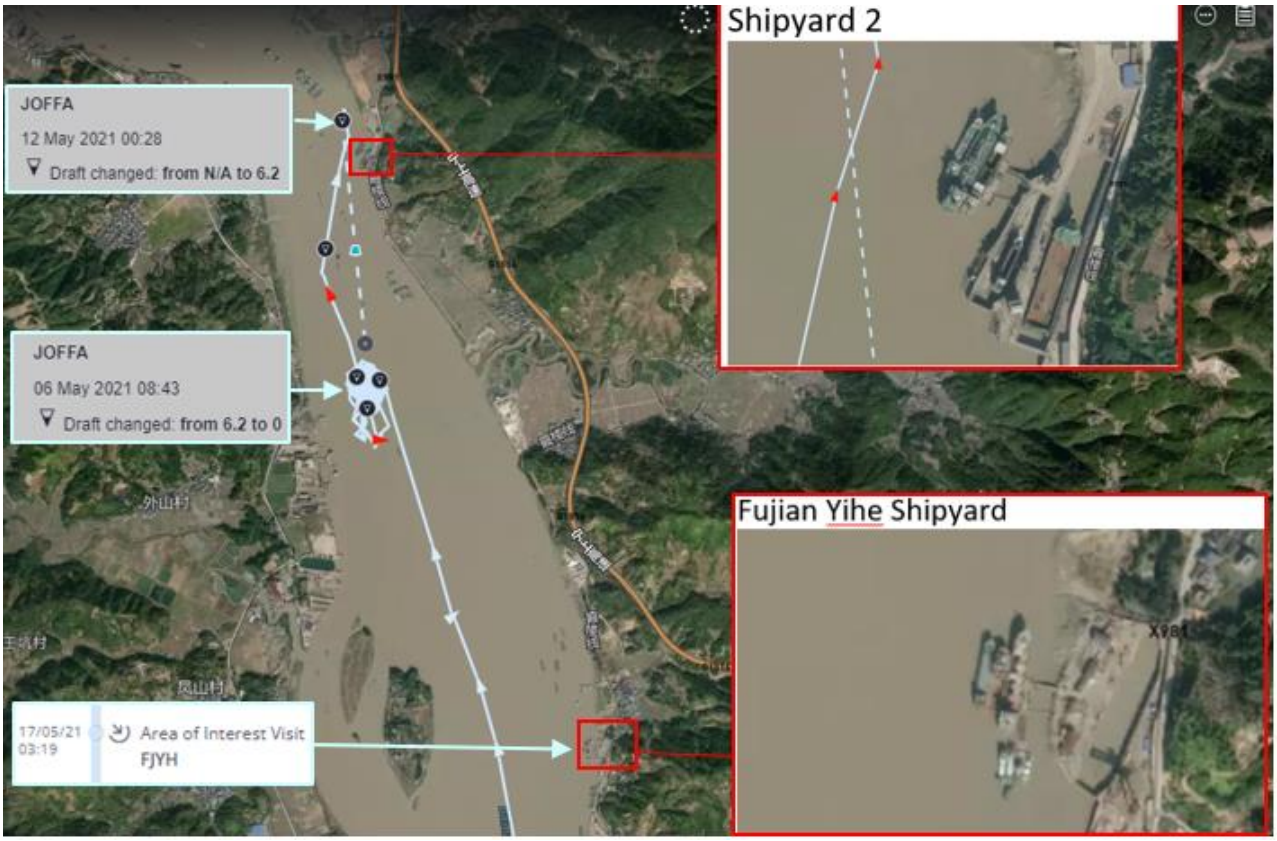
[100] See S/2022/132, annex 40, and S/2021/777, annex 33b, on the list of vessels of interest.

[101] 502C, 5th Floor, Hong King Commercial Building, Fa Yuen Street, Mong Kok, Kowloon, Hong Kong, China.

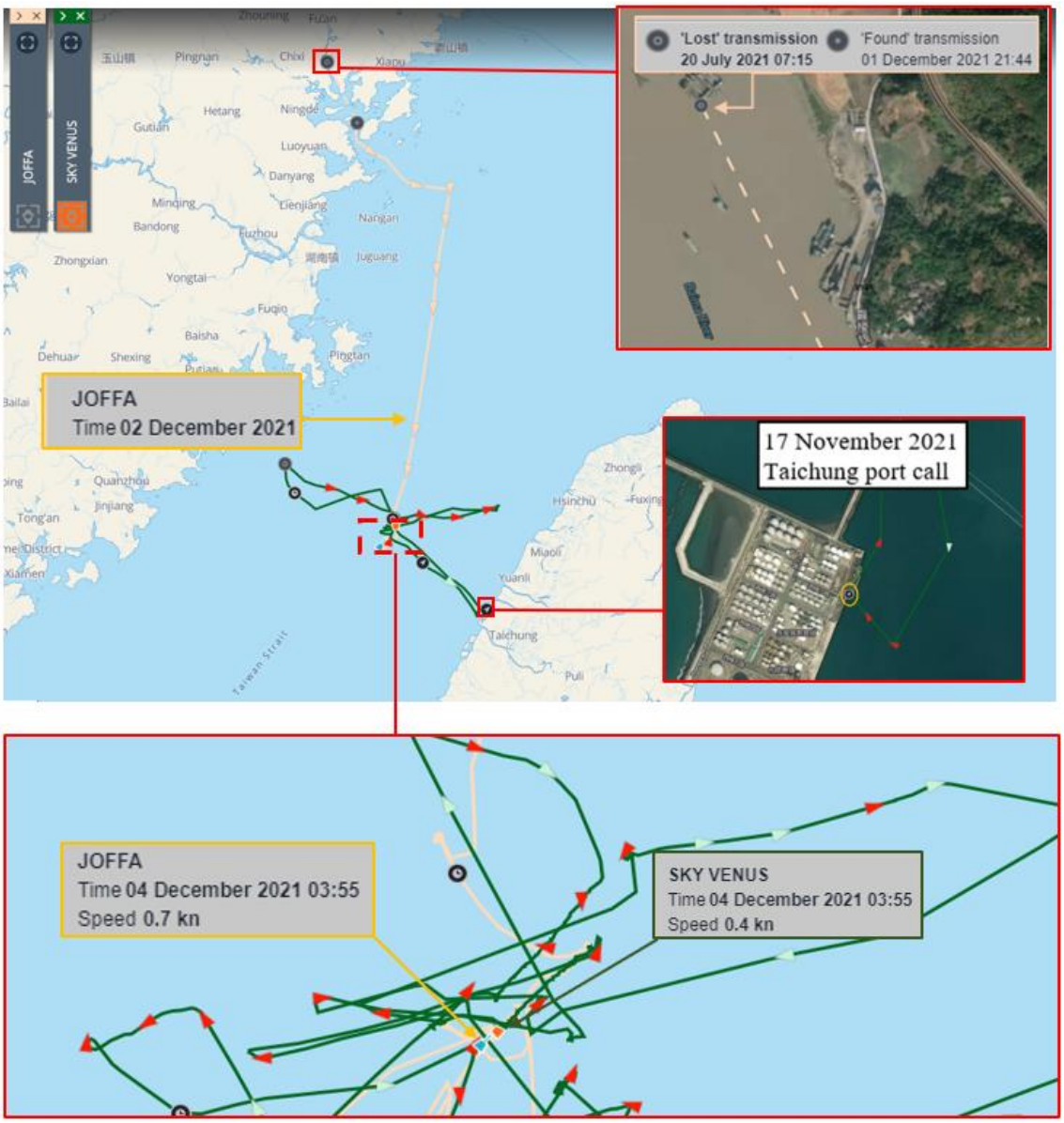
[102] S/2022/132, paras. 47-53, 60-63, and annex 35, 39.

Figure 34.1: JOFFA and SKY VENUS – JOFFA's voyage, second half of 2021

JOFFA arrived the Baima River by April 2021, transmitting intermittently along the river including at Fujian Yihe Shipbuilding Industry Co. Ltd[103] *and another shipyard further north. It sailed out of the river by early December 2021. Thereafter, it proceeded in a southerly direction and met with SKY VENUS.*



[103] See also S/2022/132, paras. 47-53, 60-63, and annexes 35, 39.



Source: Windward, annotated by the Panel; inset imagery, (provided only for reference purposes)

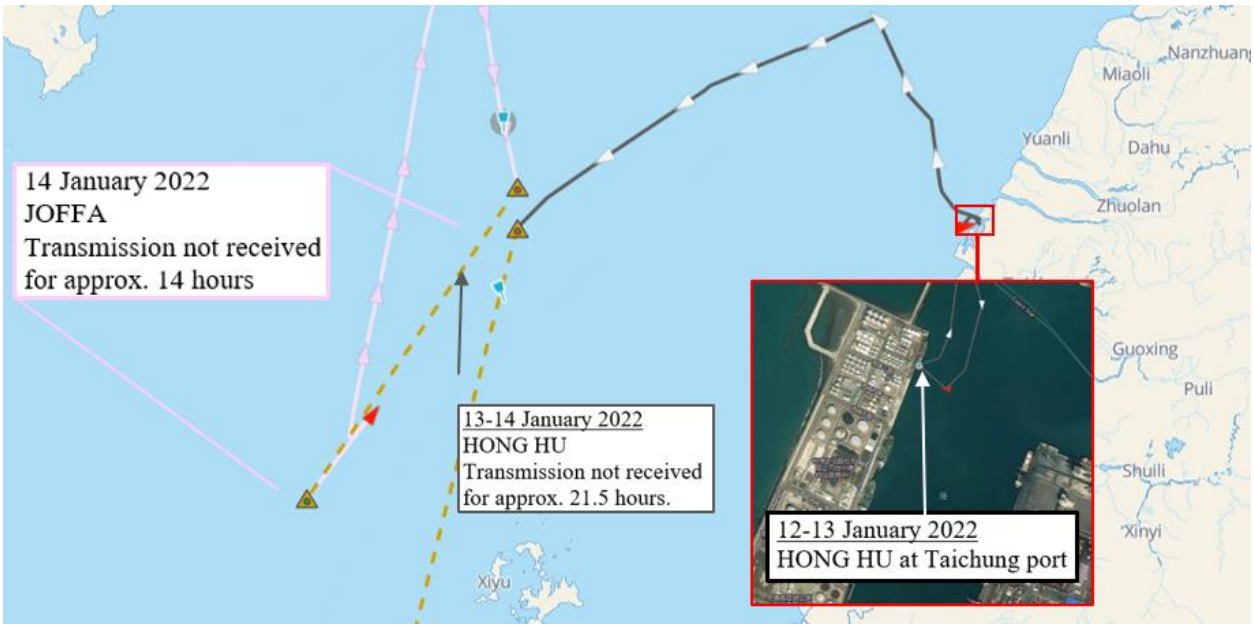
JOFFA also met with SKY VENUS on another occasion on 8 December 2021. On both these occasions, NEW KONK, sailing as LIFAN, was in the vicinity. Maritime tracking analysis indicated the vessels would have met, allowing for at least over 9 hours of transshipment. LIFAN then proceeded to sail towards the DPRK's EEZ.

Figure 34.2: JOFFA and HONG HU, January 2022

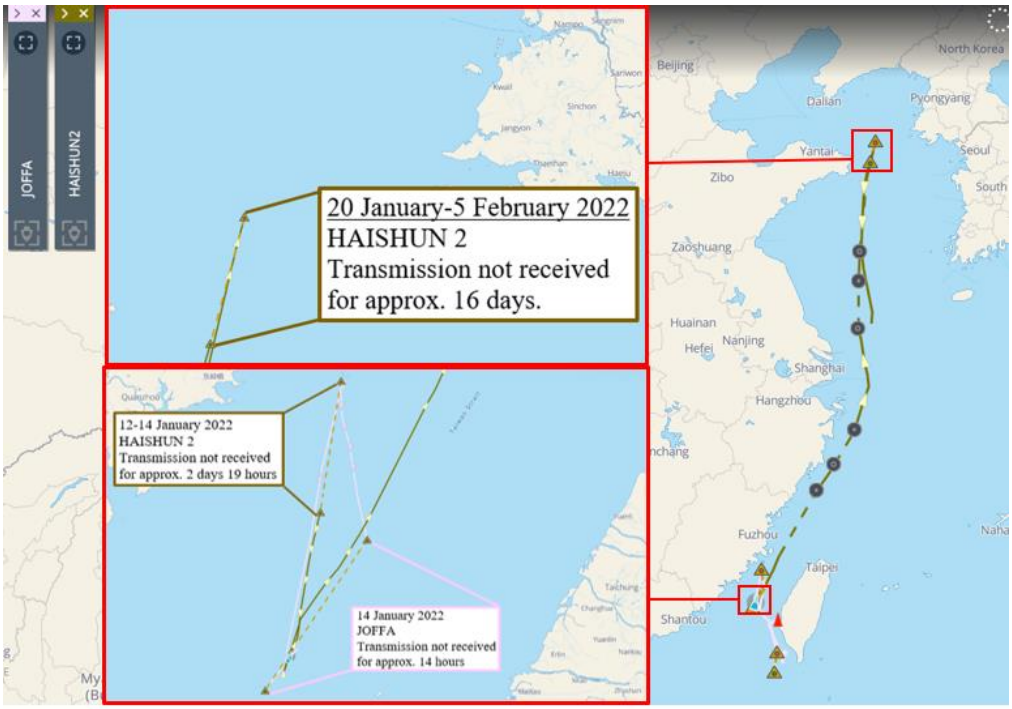
Then Palau-flagged SKY VENUS was not the only vessel that JOFFA loaded its refined petroleum cargo. In 2022, the Palau-flagged HONG HU played the role of the mothership loading oil from Taichung port. The Panel's analysis of maritime tracking showed the suspected transfer of oil cargo from JOFFA to the UNICA and NEW KONK on different occasions in the Taiwan Strait in January 2022.

The UNICA and NEW KONK, fraudulently transmitting as HAISHUN 2 and LIFAN respectively, then sailed in a northerly direction towards the Yellow Sea before dropping transmission, in a similar pattern observed when these vessels had delivered refined petroleum to the DPRK since 2020 (see annexes 30 and 28 respectively for full storyboard).

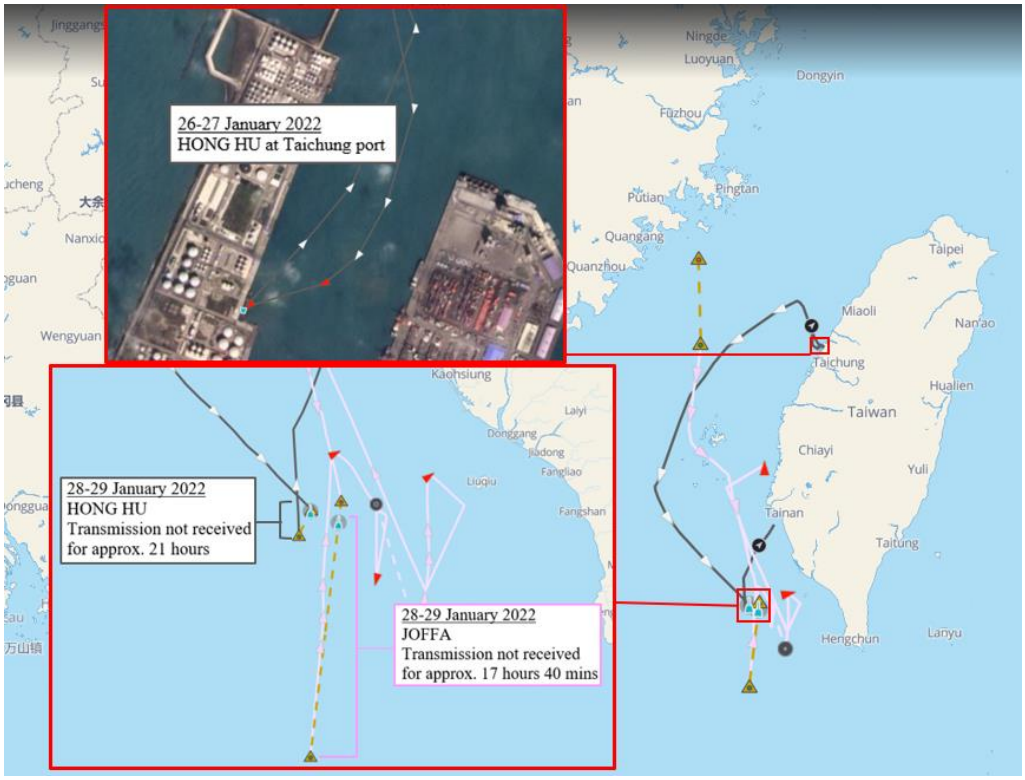
HONG HU and JOFFA ship activity in Taiwan Strait, 13-14 January 2022



JOFFA and UNICA (transmitting as HAISHUN 2, fraudulent identifier of UNICA), 12-14 January 2022



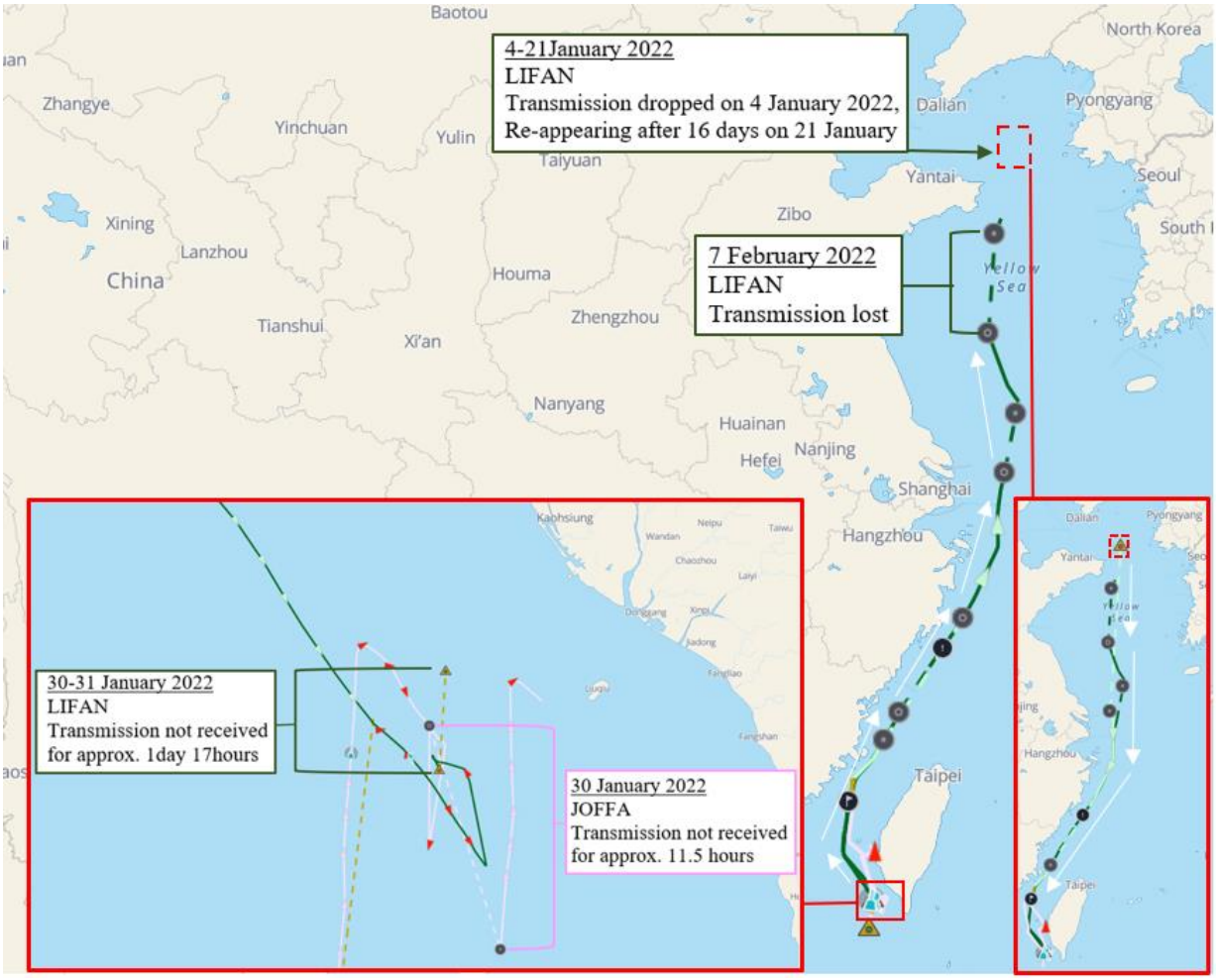
HONG HU and JOFFA, 28-29 January 2022



JOFFA – NEW KONK (transmitting as LIFAN)

JOFFA also likely transshipped its oil cargo onto LIFAN, a falsified identifier associated with NEW KONK again in the Taiwan Strait two weeks after JOFFA met with UNICA. NEW KONK, transmitting as LIFAN, sailed in a northerly direction after meeting with JOFFA around 30-31 January 2022.

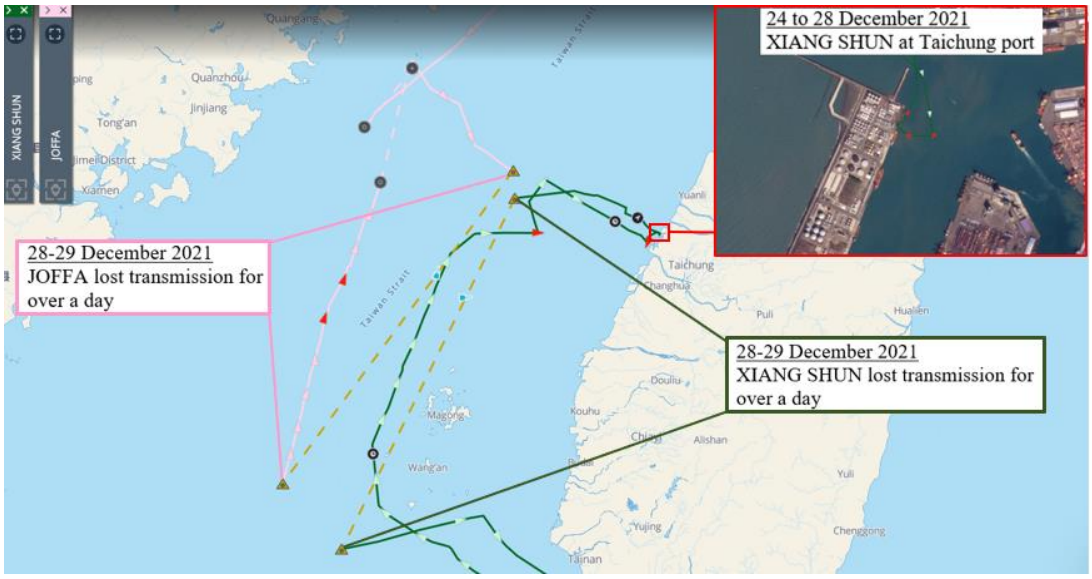
JOFFA and NEW KONK (transmitting as LIFAN) ship activity, 30-31 January 2022



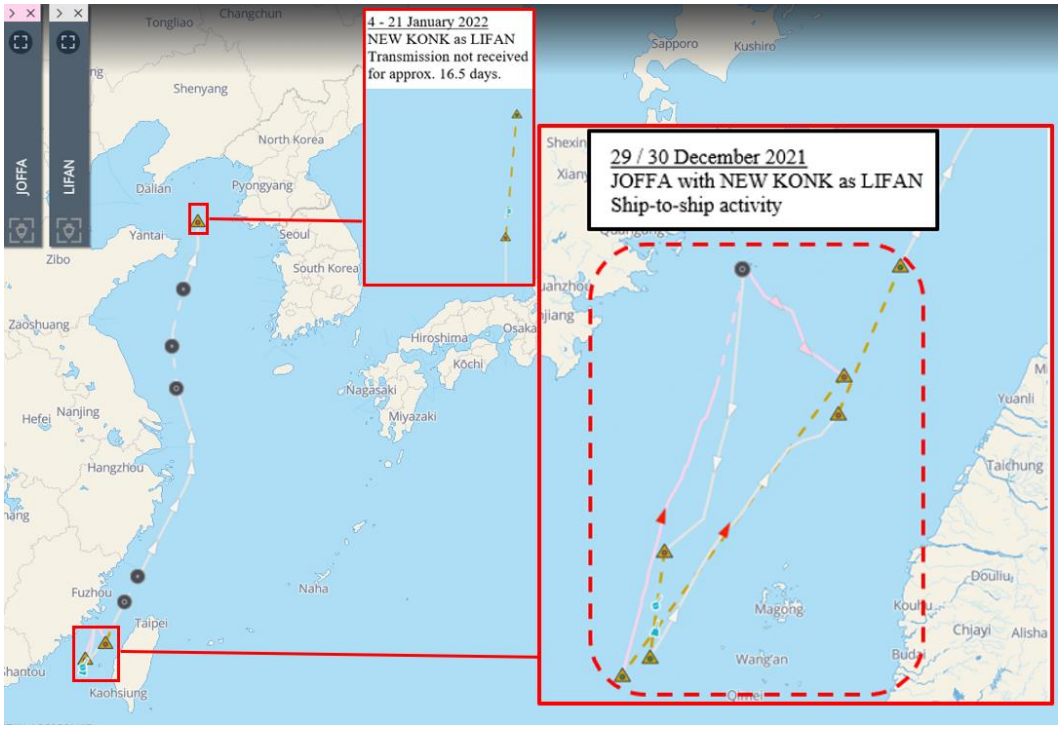
Source: Windward, annotated by the Panel; inset imagery (provided only for reference purposes)

Figure 34.3: JOFFA and XIANG SHUN, December 2021-January 2022

Then Mongolian-flagged XIANG SHUN departed Taichung port by 28 December 2021, where it was remained in vicinity of JOFFA. Both vessels recorded an overlap of unexplained AIS outage of approximately one-and-a-half days.



JOFFA then likely met with NEW KONK, which was transmitting a fraudulent identifier as LIFAN.



Source: Windward, annotated by the Panel; inset imagery (provided only for reference purposes).

The NEW KONK then sailed towards the DPRK's EEZ where it dropped AIS transmission for around three weeks. Satellite imagery showed the vessel conducting a ship-to-ship transfer with the DPRK-flagged UN HUNG (IMO: 9045962) on 21 January 2022.

The Panel wrote to JOFFA's flag state Sierra Leone, Dalian-based Union Bureau of Shipping[104] that provided registration services for Joffa Trade and Nuwanni, and sought assistance from China, including on the Chinese national listed as Director of Joffa Trade on Hong Kong corporate registry records.

China responded:

> **5. Hong Kong companies (OC.45, OC. 61)**
>
> In coordination with relevant authorities and the Hong Kong SAR Government, China found neither involvement in DPRK-related activities by the two Hong Kong companies mentioned in the Panel's letters, nor record of port calls in China for vessels *HENG XING* and *JOFFA*. The Chinese side has no information of the illicit ship-to-ship trade of refined petroleum products by the two vessels. In view of the lack of substantial evidence that the relevant companies and vessels were engaged in any activities violating the resolutions, we hope the Panel will not include the above-mentioned information into the report.

Union Bureau of Shipping and Sierra Leone have yet to respond.

Investigations continue.

Source: The Panel.

[104] Union Bureau of Shipping provided services to a number of ships that conducted sanctioned activity including: GOLD STAR (IMO: 9146247), and the following 'direct delivery' vessels: HOKONG, UNICA, SUBBLIC, VIFINE (currently UN HUNG) and NEW KONK. See S/2021/777, annex 35a.

Annex 35: Table 35: Officially-registered transitioned ships sailing under DPRK flag, 2020-2022*

	IMO number	Ship name	Type	DWT	Previously referenced in Panel reports
Year 2022					
1	9125308	CHOL BONG SAN 1 (ex- OCEAN SKY)	Tanker	5807	Yes (S/2021/777)
Year 2021					
2	8356120	TAE DONG MUN 2 (ex- JIANG PENG 337)	Cargo	2790	No
Year 2020					
3	8865121	SIN PHYONG 5 (ex- WOO JEONG)	Tanker	3295	Yes (S/2022/132, S/2021/777)
4	9016430	SU RYONG SAN (ex CJK OSAKA)	Cargo	4519	Yes (S/2022/132)
5	8602763	TAE PHYONG 2 (ex- MIING ZHOU 6)	Cargo	26,013	Yes (S/2022/132, S/2021/777, S/2021/211)
6	8651178	MU PHO (ex- DOUBLE LUCKY)	Cargo	2980	No
7	9045962	UN HUNG (ex – VIFINE)	Tanker	1978	Yes (S/2020/132, S/2021/777, S/2020/151)
8	9340257	KANG HUNG (ex- SUN MIRACLE)	Cargo	3800	Yes (S/2022/132)
9	9340271	RA SON 6 (ex- SUN HUNCHUN)	Cargo	3800	Yes (S/2021/777)
10	7636638	XIN HAI (ex- WOL BONG SAN)	Tanker	4969	Yes (S/2021/ 777, S/2021/211)
11	9011399	TAE DONG MUN (ex- POLE STAR 1)	Cargo	5137	Yes (S/2021/211)
12	9162318	TO MYONG (ex- RI HONG)	Cargo	8773	Yes (S/2022/132, S/2020/211, S/2020/840)
13	9018751	TAE PHYONG (ex- GREAT WENSHAN)	Cargo	26,369	Yes (S/2021/211, S/2020/840)
14	9020003	PUK DAE BONG (ex- HUA FU)	Cargo	10,030	Yes (S/2019/171)

*A number of these vessels investigated by the Panel had been reported sailing under its previous flags when it conducted sanctionable activity. The table lists the official dates the vessels, often retroactively updated as re-flagged under the DPRK.

Source: The Panel. Ship information obtained from S&P Global and IMO records.[105]

[105] Accessed as of May 2022.

Annex 36.1: Heng Chen Rong (Hong Kong) Marine Co., Limited

Heng Chen Rong (Hong Kong) Marine Co., Limited (hereafter "Heng Chen Rong" is HENG XING's (IMO: 8669589) registered owner and ship manager. The formerly Sierra Leone-flagged HENG XING was observed on satellite imagery by 11 March 2022 offloading refined petroleum at Nampo port, DPRK. The Panel sought China's assistance on information on the Chinese national listed as director of Heng Cheng Rong on Hong Kong corporate registry records, the individual's association with vessels or provision of maritime-related services and beneficial ownership information of Heng Chen Rong.

China replied:

> **5. Hong Kong companies (OC.45, OC. 61)**
>
> In coordination with relevant authorities and the Hong Kong SAR Government, China found neither involvement in DPRK-related activities by the two Hong Kong companies mentioned in the Panel's letters, nor record of port calls in China for vessels *HENG XING* and *JOFFA*. The Chinese side has no information of the illicit ship-to-ship trade of refined petroleum products by the two vessels. In view of the lack of substantial evidence that the relevant companies and vessels were engaged in any activities violating the resolutions, we hope the Panel will not include the above-mentioned information into the report.

Source: The Panel.

Annex 36.2: De-registration Certificate of HENG XING

REPUBLIC OF SIERRA LEONE

CERTIFICATE OF DE-REGISTRATION
REMOVAL FROM REGISTER

Issued in accordance with the Sierra Leone Merchant Shipping Act of 2003, Part III, Section 20 & 21.

Certificate No.
VHQ-200-21-3807

Name of Vessel		Official No.
HENG XING		SLR10880
Call Sign	**Port of Registry**	**IMO No.**
9LU 2893	FREETOWN	8669589
MMSI No	**Type of Vessel**	**Gross Tonnage**
667 001 377	Oil Tanker	2076
Owner's Name and Address		**Owner's IMO No**
HENG CHEN RONG (HONG KONG) MARINE CO., LIMITED., 9B, CHEONG TAI COMMERCIAL BUILDING 66, WING LOK STREET, SHEUNG WAN, Hong Kong		6086421

I, the undersigned, hereby certify that:

1. The registration of the vessel described above as Sierra Leonean ship was terminated and on the date given below and an entry was made in the merchant ship Register to this effect.
2. At the time of de-registration the following particulars of encumbrances and rights were registered on the vessel:

The vessel is free from all registered Encumbrances and Mortgages on the register of Sierra Leone.

3. The reason for de-registration of the vessel is:

Other: Deleted in accordance with Article 20 (c) of the Sierra Leone Merchant Shipping Act, 2003 as amended.

Place and Date of issuance
Freetown, Sierra Leone on 10 November 2021 at 11:55 UTC

[redacted]

This is an electronically generated certificate. It has been digitally signed and stamped.

Assistant Registrar

To Whom it may Concern: Authenticity of this certificate can be verified through the Flag Administration's website at www.slmarad.com based on the Certificate Number or by contacting directly the Flag Administration through the contact details at the bottom of the certificate.

Sierra Leone Maritime Administration SLMARAD
info@slmarad.com www.slmarad.com

VHQ-200-21-3807 Page 1 of 1

Source: The Panel.

Annex 37: DPRK-flagged cargo ship THAE SONG 8 (IMO: 9003653) exporting coal, Ningbo-Zhoushan area

The Panel's tracking on a maritime database platform showed THAE SONG 8 (IMO: 9003653) briefly transmitted an AIS signal between 21-22 January 2022 sailing up the East China Sea towards the Yellow Sea. The Panel obtained information from a Member State that stated the ship offloaded coal in Ningbo-Zhoushan waters. The Panel's tracking on maritime database also showed THAE SONG 8 in Ningbo-Zhoushan waters by 21 February 2022. The vessel proceeded to Yantai port area by 10 April 2022, anchoring *enroute* at the Shidao area.

Taean – Ningbo-Zhoushan – Nampo, December 2021 - February 2022

Source: Member State

The Panel sought information from China on THAE SONG 8, including the vessel's activity in Ningbo-Zhoushan and other Chinese territorial waters in 2022, along with information on any ship-to-ship transfers, cargo loaded and offloaded, trans-shipped and at port / port area. China replied:

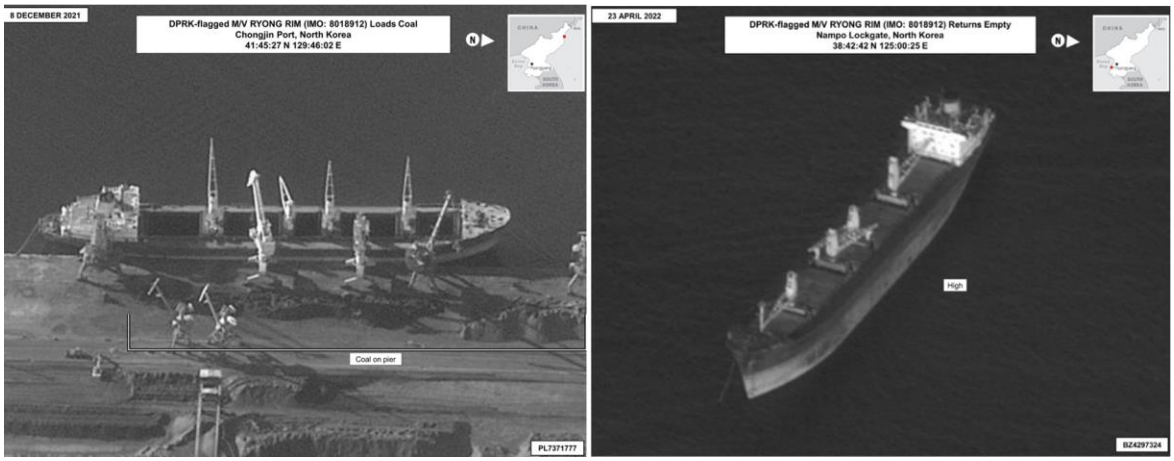
> (3) **OC.93** *THAE SONG 8* entered Yantai port empty-loaded from Nampo port in April 2022, and left Yantai port loading urea in the same month. No evidence of any activity violating the Security Council resolutions by the vessel was found.

Source: The Panel.

Annex 38: DPRK-flagged cargo ship RYONG RIM (IMO: 8018912) exporting coal, Lianyungang area

The DPRK-flagged RYONG RIM (IMO: 8018912) exported its coal cargo from the DPRK's eastern coast to Lianyungang , between January and February 2022, before returning to Nampo by April 2022. RYONG RIM did not broadcast on its AIS for the most part.

Chonjin – Lianyungang – Nampo, December 2021 – April 2022



Source: Member State.

China replied:

(6) **OC.97** There has been no record of port calls in China for *TONG SAN 2, RYONG RIM* since 2021.

China's position against ship-to-ship transfer and its commitment to cracking down on such violations of provisions in accordance with laws remain unchanged. There is no record of port calls in China for several vessels mentioned in the Panel's letters in 2021 and 2022, and vessels that called at Chinese ports only loaded necessary humanitarian cargoes. China kindly requests the Panel strengthen the screening and verification, instead of suspecting that all vessels related to the DPRK are engaged in ship-to-ship transfer activities or carrying embargoed items. China hopes that the Panel leaves out unverified information to ensure the credibility of the report.

Source: The Panel.

Annex 39: DPRK-flagged cargo ship BOUN 1 (IMO: 9045986) exporting coal, Huanghua anchorage area, Bo Hai

December – January 2021

February-March 2022

Source: Member State.

China replied:

(2) **OC.92** There has been no record of port calls in China for Vessel *BOUN 1* since 2021. No evidence of any activity related to carrying coal by the vessel was found.

Source: The Panel.

Annex 40: DPRK-flagged coal cargo ships at Chinese port / port areas, 2022

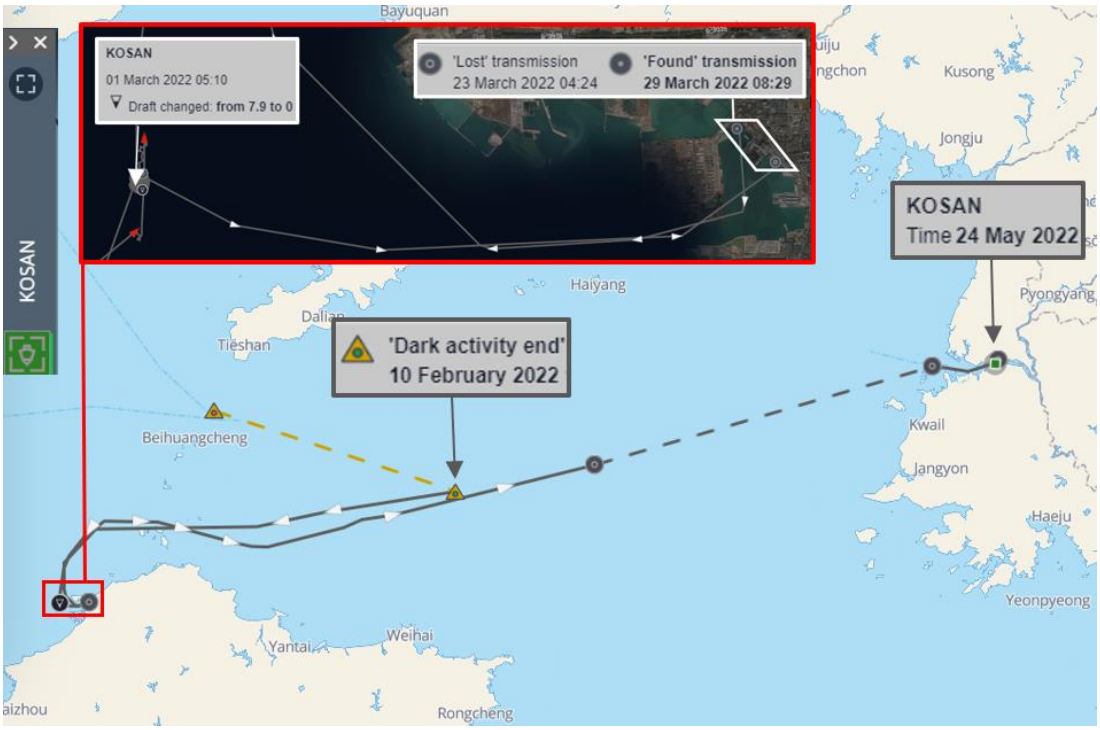
The Panel continued to track DPRK cargo ships that were reported by the Panel[106] to have engaged in sanctioned activity of the export of DPRK-origin coal via ship-to-ship-to-ship transfers in Chinese territorial waters.

DPRK cargo vessel	IMO number	At port area or berthed at port	Dates [includes the month of material times of interest where the vessel was within the vicinity of Chinese ports]
KO SAN	9110236	Dalian Longkou	The month of February 2022, including on and around 9-10 February 2022 The months of March and April 2022, including on and around 1 March 2022 and 23-29 March 2022
JIN HUNG 8	8416023	Dalian	The months of November and December 2022, including on and around 29 November to 7 December 2021
SU RYONG SAN	9016430	Longkou	The month of February 2022, including on and around 2-12 February 2022

Source: Maritime databases, the Panel.

[106] For KO SAN, see S/2021/777 paras. 100, 104 and annex 46. For JIN HUNG 8, see S/2021/777 para. 55 figure VII and annex 45. For SU RYONG SAN, see S/2022/132, paras.76, 90, 93, 117 and annexes 51, 58 and 60.

KO SAN (IMO: 9110236), March 2022, Longkou



Source: Windward, annotated by the Panel.

JIN HUNG 8 (IMO: 8416023), November to December 2021, Dalian

Source: Windward, annotated by the Panel; inset satellite imagery, Planet Labs.

SU RYONG SAN (IMO: 9016430), February 2022, Longkou

Source: S&P Global, annotated by the Panel.

The Panel sought assistance from Chinese authorities on the listed ships below, namely: confirmation of the presence of these DPRK ships at Chinese ports / port areas in 2022 and their activities, whether banned commodities or items were on or offloaded (either pier side or via ship-to-ship transfer) at Chinese port / port areas, and information on the outcome of any investigations conducted where it applied.

China replied:

> (5) **OC.95** *KO SAN* entered Longkou port empty-loaded from Nampo port in March 2022, and left the port in April 2022 loading pesticides, herbicides and tires, all of which are not prohibited by the related Security Council resolutions.
>
> *JIN HUANG 8* entered Dalian port in November 2021, and left the port in December 2021 loading sugars and PVC which are not prohibited by the Security Council resolutions.

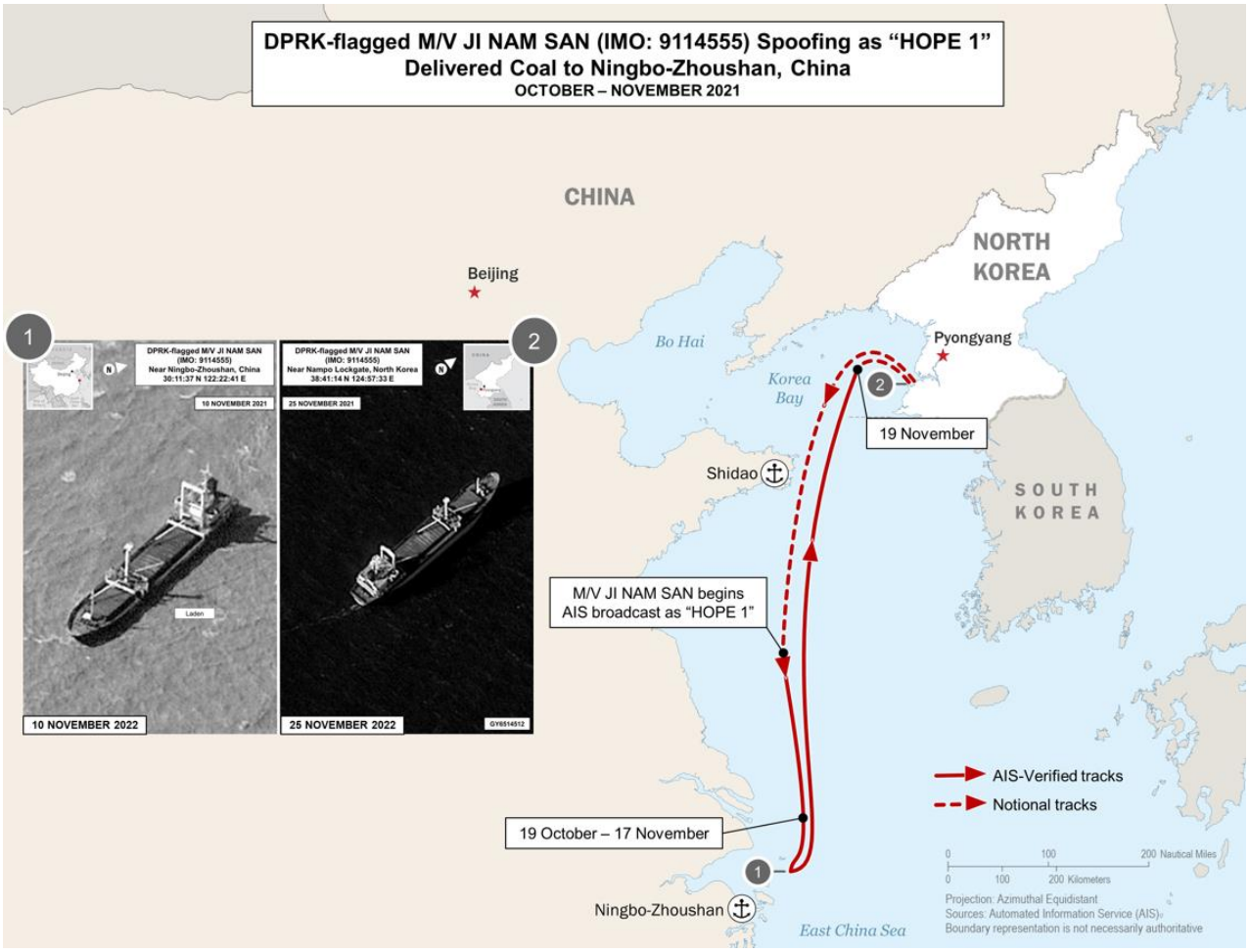
SU RYONG SAN entered Longkou port in Yantai empty-loaded in February 2022, and left the port in the same month loading sodium carbonate, seasonings, flours and other groceries.

No evidence of any activity related to carrying coal or the ship-to-ship transfer by the three vessels mentioned above was found.

Source: The Panel.

Annex 41: Designated DPRK-flagged coal cargo ships at Chinese port / port areas, 2021

The designated DPRK-flagged cargo ships JI NAM SAN (IMO: 9114555) was spoofing as HOPE 1 according to information provided by a Member State, when it exported its DPRK-origin coal at Ningbo-Zhoushan waters between October and November 2021.



China replied:

> (4) **OC.94** There has been no record of port calls in China for Vessel *RYO SONG* (*POLE STAR*) and *JI NAM SAN (HOPE 1)* since 2021. The Chinese authority found that this vessel appeared in the East China Sea but did not find any activity violating the Security Council resolutions.

Source: The Panel.

Annex 42: ITC Trade Map Data on DPRK Trade Statistics bv Commodity (HS Code) (2021)

** Note: highlighted may include restricted HS Code commodities

Source : ITC Trade Map / Unit : thousand USD

Total Exports : 122,218

HS CODE	Commodity Type	Export Value
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	23,763
72	Iron and steel	16,733
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	14,864
39	Plastics and articles thereof	10,138
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	9,063
84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	7,560
30	Pharmaceutical products	5,871
29	Organic chemicals	5,074
76	Aluminium and articles thereof	4,932
38	Miscellaneous chemical products	3,912

Total Imports : 241,368

HS CODE	Commodity Type	Import Value
39	Plastics and articles thereof	30,202
40	Rubber and articles thereof	28,586
31	Fertilisers	24,241
24	Tobacco and manufactured tobacco substitutes	21,942
30	Pharmaceutical products	16,386
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	10,738
29	Organic chemicals	9,514
34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepare waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, 'dental waxes' and dental preparations with a basis of plaster	9,084
9	Coffee, tea, maté and spices	8,968
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	8,758

HS CODE	Commodity Type	Export Value
91	Clocks and watches and parts thereof	3,349
11	Products of the milling industry; malt; starches; inulin; wheat gluten	2,518
50	Silk	2,442
73	Articles of iron or steel	1,936
31	Fertilisers	1,410
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	1,086
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	1,006
96	Miscellaneous manufactured articles	564
22	Beverages, spirits and vinegar	516
54	Man-made filaments; strip and the like of man-made textile materials	504
92	Musical instruments; parts and accessories of such articles	441
63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags	438

HS CODE	Commodity Type	Import Value
55	Man-made staple fibres	8,029
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard	6,573
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	6,310
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	6,082
38	Miscellaneous chemical products	5,558
54	Man-made filaments; strip and the like of man-made textile materials	4,545
4	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	3,812
17	Sugars and sugar confectionery	3,482
69	Ceramic products	2,965
63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags	2,946
44	Wood and articles of wood; wood charcoal	2,922
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	1,866

HS CODE	Commodity Type	Export Value
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair	394
40	Rubber and articles thereof	330
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	318
83	Miscellaneous articles of base metal	241
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	226
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	223
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard	222
79	Zinc and articles thereof	189
93	Arms and ammunition; parts and accessories thereof	187
61	Articles of apparel and clothing accessories, knitted or crocheted	179

HS CODE	Commodity Type	Import Value
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	1,667
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks	1,642
84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	1,592
47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	1,512
96	Miscellaneous manufactured articles	1,118
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated nameplates and the like; prefabricated buildings	1,113
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	1,048
21	Miscellaneous edible preparations	1,009
18	Cocoa and cocoa preparations	871
35	Albuminoidal substances; modified starches; glues; enzymes	868

HS CODE	Commodity Type	Export Value
3	Fish and crustaceans, molluscs and other aquatic invertebrates	127
99	Commodities not elsewhere specified	109
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	101
60	Knitted or crocheted fabrics	101
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks	87
19	Preparations of cereals, flour, starch or milk; pastrycooks' products	78
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	71
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	65
74	Copper and articles thereof	63
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal	61
69	Ceramic products	61
70	Glass and glassware	51
47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	50

HS CODE	Commodity Type	Import Value
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	614
60	Knitted or crocheted fabrics	542
6	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage	463
61	Articles of apparel and clothing accessories, knitted or crocheted	389
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	377
11	Products of the milling industry; malt; starches; inulin; wheat gluten	320
70	Glass and glassware	312
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	294
3	Fish and crustaceans, molluscs and other aquatic invertebrates	278
64	Footwear, gaiters and the like; parts of such articles	262
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	251
19	Preparations of cereals, flour, starch or milk; pastrycooks' products	204
41	Raw hides and skins (other than furskins) and leather	147

HS CODE	Commodity Type	Export Value
89	Ships, boats and floating structures	50
34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepare waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, 'dental waxes' and dental preparations with a basis of plaster	49
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated nameplates and the like; prefabricated buildings	42
21	Miscellaneous edible preparations	41
55	Man-made staple fibres	39
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	38
88	Aircraft, spacecraft, and parts thereof	35
62	Articles of apparel and clothing accessories, not knitted or crocheted	32
95	Toys, games and sports requisites; parts and accessories thereof	26
35	Albuminoidal substances; modified starches; glues; enzymes	25
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	19
18	Cocoa and cocoa preparations	18

HS CODE	Commodity Type	Import Value
20	Preparations of vegetables, fruit, nuts or other parts of plants	128
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	116
57	Carpets and other textile floor coverings	90
23	Residues and waste from the food industries; prepared animal fodder	83
62	Articles of apparel and clothing accessories, not knitted or crocheted	76
37	Photographic or cinematographic goods	74
52	Cotton	65
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	53
92	Musical instruments; parts and accessories of such articles	53
72	Iron and steel	46
99	Commodities not elsewhere specified	40
22	Beverages, spirits and vinegar	34

HS CODE	Commodity Type	Export Value
75	Nickel and articles thereof	18
86	Railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electromechanical) traffic signalling equipment of all kinds	14
65	Headgear and parts thereof	14
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silkworm gut)	9
7	Edible vegetables and certain roots and tubers	8
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	7
20	Preparations of vegetables, fruit, nuts or other parts of plants	6
24	Tobacco and manufactured tobacco substitutes	6
64	Footwear, gaiters and the like; parts of such articles	6
97	Works of art, collectors' pieces and antiques	6
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	5
9	Coffee, tea, maté and spices	4
81	Other base metals; cermets; articles thereof	3
17	Sugars and sugar confectionery	2

HS CODE	Commodity Type	Import Value
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silkworm gut)	29
95	Toys, games and sports requisites; parts and accessories thereof	21
74	Copper and articles thereof	16
13	Lac; gums, resins and other vegetable saps and extracts	14
73	Articles of iron or steel	7
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	7
7	Edible vegetables and certain roots and tubers	6
8	Edible fruit and nuts; peel of citrus fruit or melons	5
91	Clocks and watches and parts thereof	3
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	2

HS CODE	Commodity Type	Export Value
8	Edible fruit and nuts; peel of citrus fruit or melons	2
52	Cotton	2
46	Manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork	1
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	1

Source : ITC Trade Map, accessed on 30 June 2022, annotated by the Panel.

Annex 43: Recent Chinese legal proceedings concerning the sentencing of individuals involved in illegal imports of DPRK-origin coal

The Panel reviewed some Chinese legal proceedings, involving the illegal DPRK exports of coal. In one case, between June 2020 and January 2021, several Chinese citizens conspired to smuggle DPRK-origin coal into China. Payments were made to an owner of a freighter called 'Ninggaofeng 606' to smuggle around 7,000 tons of DPRK coal. This individual seeking to make profits with DPRK coal was arrested in January 2021. The Chinese court, finding the defendant guilty, sentenced the individual to five years of imprisonment and a monetary penalty of 350,000 RMB.[107]

Another similar case, between May 2020 and November 2020, involved an individual who conspired with crew members of the freighter 'Xiangcheng 678' to smuggle 9,000 tons of DPRK coal. Conspirators of the freighter were caught by the Chinese authorities in July 2020, while the defendant was arrested in November 2020. The Chinese court sentenced the defendant to two years of imprisonment, two years of suspended sentence, and a monetary penalty of 200,000 RMB.[108]

[107] http://wenshu.court.gov.cn/website/wenshu/181107ANFZ0BXSK4/index.html?docid=6055b54f3ae44de7a27ead7500effcb5

[108] http://wenshu.court.gov.cn/website/wenshu/181107ANFZ0BXSK4/index.html?docid=872202c5862649e98e66ad21011f562a

Annex 44: List of HS Codes the Panel applies to monitor the sectoral ban

Below is the list of HS codes assigned for each category of goods under sectoral ban by relevant UN Security Council resolutions. This list superseds S/2018/171 annex 4 as amended by S/2018/171/Corr.1. See https://www.un.org/securitycouncil/sanctions/1718/prohibited-items for the complete list of prohibited goods and Implement Assistance Notes.

a. Items prohibited from being exported to the DPRK

Item	HS Codes	Description	Resolutions
Condensates and natural gas liquids	**2709**	Oils; petroleum oils and oils obtained from bituminous minerals	Para. 13 of 2375 (2017)
	2711	Petroleum gases and other gaseous hydrocarbons	
Industrial machinery	**84**	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	Para. 7 of 2397 (2017)
	85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	
Transportation vehicles[109]	**86**	Railway, tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signaling equipment of all kinds	Para. 7 of 2397 (2017)
	87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof	
	88	Aircraft, spacecraft and parts thereof [110]	
	89	Ships, boats and floating structures	
Iron, steel and other metals	**72-83**		Para. 7 of 2397 (2017)
	72	Iron and steel	
	73	Articles of iron or steel	
	74	Copper and articles thereof	
	75	Nickel and articles thereof	
	76	Aluminum and articles thereof	
	78	Lead and articles thereof	
	79	Zinc and articles thereof	
	80	Tin and articles thereof	
	81	Other base metals; cermets; articles thereof	
	82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal	
	83	Miscellaneous articles of base metal	

[109] Pursuant to paragraph 30 of resolution 2321 (2016) and paragraph 14 of resolution 2397 (2017), States shall prevent the direct or indirect supply, sale or transfer to the DPRK, through their territories or by their nationals, or using their flag vessels or aircraft, and whether or not originating in their territories, of new helicopters, new and used vessels, except as approved in advance by the Committee on a case-by-case basis.

[110] Shall not apply with respect to the provision of spare parts needed to maintain the safe operation of DPRK commercial civilian passenger aircraft (currently consisting of the following aircraft models and types: An-24R/RV, An-148-100B, Il-18D, Il-62M, Tu-134B-3, Tu-154B, Tu-204-100B, and Tu-204-300).

b. Items prohibited from being imported from the DPRK

Item	HS Codes	Description	Resolutions
Coal	**2701**	Coal; briquettes, ovoids and similar solid fuels manufactured from coal	Para. 8 of 2371 (2017)
Iron Ore	**2601**	Iron ores and concentrates, including roasted iron pyrites	
Iron	**72**	Iron and steel (**7201-7229**)	
Iron and Steel products	**73**	Articles of Iron and steel (**7301-7326)**	
Gold	**261690**	Gold ores and concentrates	Para. 30 of 2270 (2016)
	7108	Gold (incl. put plated), unwrought, semi-manufactured forms or powder	
	710811	Gold powder, unwrought	
	710812	Gold in other unwrought forms	
	710813	Gold in other semi-manufactured forms	
	710820	Monetary gold	
Titanium	**2614**	Titanium ores and concentrates	
Vanadium	**2615**	Vanadium ores and concentrates	
Rare Earth Minerals	**2612**	Uranium or thorium ores and concentrates [**261210** and **261220**]	
	2617	Ores and concentrates, [Nesoi code **261790** - Other Ores and Concentrates]	
	2805	Alkali metals etc., rare-earth metals etc., mercury	
	2844	Radioactive chemical elements and isotopes etc.	
Copper	**74**	Copper and articles thereof (**7401-7419**)	Para. 28 of 2321 (2016)
	2603	Copper ores and concentrates	
Zinc	**79**	Zinc and articles thereof (**7901-7907**)	
	2608	Zinc ores and concentrates	
Nickel	**75**	Nickel and articles thereof (**7501-7508)**	
	2604	Nickel ores and concentrates	
Silver	**2616100** **7106, 7107**	Silver ores and concentrates Silver unwrought or semi manufactured forms, or in powdered forms; base metals clad with silver, not further worked than semi-manufactured	
	7114	Articles of goldsmiths or silversmiths' wares or parts thereof, of silver, whether or not plated or clad with other precious metal	
Seafood (including fish, crustaceans, mollusks, and other aquatic invertebrates in all forms)	**3**	Fish and crustaceans, mollusks and other aquatic invertebrates (**0301-0308)**	Para. 9 of 2371 (2017)
	1603	Extracts and juices of meat, fish or crustaceans, mollusks or other aquatic invertebrates)	
	1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	
	1605	Crustaceans, mollusks and other aquatic invertebrates, prepared or preserved	
Lead	**78**	Lead and articles thereof (**7801-7806**)	Para. 10 of 2371 (2017)
Lead ore	**2607**	Lead ores and concentrates	
	50-63		

Textiles (including but not limited to fabrics and partially or fully completed apparel products)	**50**	Silk, including yarns and woven fabrics thereof	Para. 16 of 2375 (2017)
	51	Wool, fine or coarse animal hair, including yarns and woven fabrics thereof; horsehair yarn and woven fabric	
	52	Cotton, including yarns and woven fabrics thereof	
	53	Vegetable textile fibres nesoi; yarns and woven fabrics of vegetable textile fibres nesoi and paper	
	54	Manmade filaments, including yarns and woven fabrics thereof	
	55	Manmade staple fibres, including yarns and woven fabrics thereof	
	56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	
	57	Carpets and other textile floor covering	
	58	Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery	
	59	Textile fabrics; impregnated, coated, covered or laminated; textile articles of a kind suitable for industrial use;	
	60	Knitted or crocheted fabrics	
	61	Apparel and clothing accessories; knitted or crocheted;	
	62	Apparel and clothing accessories; *not* knitted or crocheted;	
	63	Textiles, made up articles; sets; worn clothing and worn textile articles; rags	
Agricultural products	**07**	Vegetables and certain roots and tubers; edible	Para. 6 of resolution 2397 (2017)
	08	Fruit and nuts, edible; peel of citrus fruit or melons	
	12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder	
Machinery	**84**	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	Para. 6 of resolution 2397 (2017)
Electrical equipment	**85**	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	
Earth and stone including magnesite and magnesia	**25**	Salt; sulphur; earths, stone; plastering materials, lime and cement	
Wood	**44**	Wood and articles of wood; wood charcoal	
Vessels	**89**	Ships, boats and floating structures	

c. For paragraphs 4 and 5 of resolution 2397 (2017), the Panel uses the following HS codes. The Panel notes that annual caps are placed for the two items below.

- HS 2709 : crude oil [cap: 4 million barrels or 525,000 tons]
- HS 2710, HS 2712 and HS 2713 : refined petroleum products [cap: 500,000 barrels]

Source : The Panel.

Annex 45: Comparison table of International Trade Statistics and replies provided by Members States on trade with the DPRK

** Note: DPRK Trade Statistics and Member State's reply cover the last quarter of 2021 and first quarter of 2022 (October 2021 to March 2022

As of 22 July 2022
* Unit : Thousand US$

No.	Member State(MS)	Trade Volume w/ DPRK		Restricted HS Code Trade w/ DPRK		MS Reply
		Export to	Import from	Export to	Import from	
1	Armenia, Republic of	0	5		2 (HS Code 85) 1 (HS Code 73)	Technical error in the declaration of goods / Country of origin was the ROK
2	Barbados	0	136		80 (HS Code 84) 11 (HS Code 85) 26 (HS Code 61) 1 (HS Code 62) 1 (HS Code 73)	
3	Belgium	17	15			(Not Restricted)
4	Belize	0	10			(Not Restricted)
5	Benin, Republic of	0	178		178 (HS Code 84)	
6	Bosnia and Herzegovina	97	2			(Not Restricted)
7	Brazil, Federative Republic of	0	50			(Not Restricted)
8	Bulgaria, Republic of	0	1			(Not Restricted)
9	Burundi, Republic of	0	104		42 (HS Code 63)	
10	Canada	0	15		4 (HS Code 85)	Inaccurately reported as a result of miscoding of the country of origin / will be updated
11	China, People's Republic of	281,809	47,824	1178 (HS code 2710) 9 (HS code 2712) 1955 (HS code 2713)	17,686 (HS Code 72) 7,275 (HS Code 50)	Ferroalloys (HS Code 72) is different from iron and iron ore / Raw silk and silk waste (HS Code 50) fall in category of raw materials / These commodiites are not prohibited by the Security Council
12	Colombia	78	86		15 (HS Code 84) 23 (HS Code 85) 1 (HS Code 61) 3 (HS Code 56)	Request extension for reply
13	Congo, Republic of the	0	2			(Not Restricted)
14	Costa Rica	0	345			(Not Restricted)
15	Czech Republic	0	14			(Not Restricted)
16	Eswatini, Kingdom of	0	1		1 (HS Code 84)	
17	Ethiopia, Federal Democratic Republic of	92	477		1 (HS Code 84)	
18	Fiji, Republic of	63	1,026		493 (HS Code 72) 7 (HS Code 73) 4 (HS Code 63) 4 (HS Code 85) 8 (HS Code 84) 2 (HS Code 61)	
19	Finland, Republic of	0	1			(Not Restricted)
20	Greece (Hellena Republic)	98	5	4 (HS Code 2710)		(Not Prohibited)

No.	Member State(MS)	Trade Volume w/ DPRK		Restricted HS Code Trade w/ DPRK		MS Reply
		Export to	Import from	Export to	Import from	
21	Guyana, Co-operative Republic of	0	247		218 (HS Code 84) 16 (HS Code 85)	Country of origin based on supplier's info was the ROK
22	Honduras	0	131		45 (HS Code 72)	
23	Hungary	3	2			(Not Restricted)
24	Indonesia, Republic of	3	108		34 (HS Code 85) 9 (HS Code 84) 18 (HS Code 73) 3 (HS Code 74)	Need additional time to gather information
25	Kyrgyz Republic	0	2			(Not Restricted)
26	Madagascar, Republic of	2	2			(Not Restricted)
27	Mauritania, Islamic Republic of	0	5		5 (HS Code 56)	Misnamed the country of origin (DPRK instead of ROK)
28	Mozambique, Republic of	0	1,206		251 (HS Code 84) 199 (HS Code 85) 64 (HS Code 72) 85 (HS Code 54) 59 (HS Code 73)	
29	Nicaragua	0	40			(Not Restricted)
30	Nigeria	0	2,105		13 (HS Code 85) 449 (HS Code 84) 367 (HS Code 73) 3 (HS Code 63)	
31	Netherlands, Kingdom of the	204	3			(Not Restricted)
32	Poland, Republic of	153	7		1 (HS Code 73)	
33	Russian Federation	0	39			(Not Restricted)
34	Saint Vincent and the Grenadines	0	1		1 (HS Code 74)	Error made by shipment broker by entering wrong country code / country of origin was ROK
35	Samoa, Independent State of	0	1,105			(Not Restricted)
36	South Africa, Republic of	184	317	184 (HS Code 84)	19 (HS Code 84) 201 (HS Code 74) 1 (HS Code 85)	
37	Spain, Kiingdom of	78	15	64 (HS Code 85) 4 (HS Code 87)	1 (HS Code 85)	
38	Sweden, Kingdom of	59	0			(Not Restricted)
39	Thailand, Kingdom of	38	196		164 (HS Code 59) 11 (HS Code 54) 1 (HS Code 84) 7 (HS Code 85)	Misfiled DPRK as country of destination/origin instead of ROK which is the correct code

No.	Member State(MS)	Trade Volume w/ DPRK		Restricted HS Code Trade w/ DPRK		MS Reply
		Export to	Import from	Export to	Import from	
40	Togo, Republic of	0	2,164			(Not Restricted)
41	Trinidad and Tobago, Republic of	0	219		7 (HS Code 73) 2 (HS Code 85) 41 (HS Code 72)	DPRK erroneously selected by as the country of origin/ country of origin was ROK
42	United Kingdom of Great Britain and Northern Ireland	0	119		102 (HS Code 73) 16 (HS Code 85) 19 (HS Code 84)	
43	Zambia, Republic of	0	13		2 (HS Code 84)	

Source: ITC Trade Map, accessed on 22 July, annotated by the Panel.

Annex 46: Replies from Member States

[Armenia]

PERMANENT MISSION OF THE REPUBLIC OF ARMENIA
TO THE UNITED NATIONS
119 East 36th Street, New York, New York 10016
Tel: 212-686-9079 Email: armenia@un.int

UN/3101/384/2022

29 June 2022, New York

[redacted]

With reference to your letter Ref: S/AC.49/2022/PE/OC.74 dated 3 June 2022, I am transmitting herewith the information, provided by the State Revenue Committee of the Republic of Armenia, according to which the country of origin of the items listed in the Tables 1 and 2 is the Republic of Korea. The inaccuracy of data is related to a technical error in the declaration of goods.

Attached please find the copies of the relevant declarations of goods.

The Permanent Mission of Armenia stands ready to provide any additional clarification, as needed.

Encl.: 20 pages

Sincerely,

MHER MARGARYAN
Ambassador, Permanent Representative

[redacted]

[Canada]

Permanent Mission of Canada
to the United Nations

Mission permanente du Canada
auprès de l'Organisation des Nations Unies

466 Lexington Ave, 20th Fl
New York, NY 10017

June 28, 2022

[redacted]

Dear [redacted]

Thank you for your letter of 3 June 2022, reference S/AC.49/2022/PE/OC.76, wherein the Panel of Experts established pursuant to Security Council Resolution 1874 (2009) requested information pertaining to reported trade between Canada and the Democratic People's Republic of Korea (DPRK). More specifically, the Panel requested confirmation as to whether trade statistics reported by Canadian authorities to the International Trade Centre (ITC), involving electrical equipment subject to sectoral sanctions as stipulated in Resolution 2397 (2017), were accurate. The Panel also inquired as to whether such cargo containing the relevant items were inspected pursuant to paragraph 18 of Resolution 2270 (2016), and requested any other relevant information with respect to exports and imports with the DPRK.

For the data in Table 1 identified by the Panel in its letter, relating to electrical equipment (HS code 85), the Government of Canada can confirm that this information was inaccurately reported to the ITC and that these items were not imported by Canada from the DPRK.

The reason for these inaccuracies was determined to be the result of miscoding in relation to the country of origin for these items. The data will be updated and revised with the correct countries of origin in future submissions to the ITC.

[redacted]

Regarding the Panel's request as to whether the cargo containing the relevant items were inspected pursuant to paragraph 17 of Resolution 2270 (2016), the Government of Canada notes that such inspections did not take place, as this was not required given that the specified trade did not actually involve imports from the DPRK.

Canada

With regard to sanctions, Canada implements United Nations Security Council decisions through regulations enacted under Canada's *United Nations Act*. Sanctions regulations relating to the DPRK were first enacted in 2006 under the *Regulations Implementing the United Nations Resolutions on the Democratic People's Republic of Korea (DPRK)* to implement Security Council Resolution 1718 (2006) into Canada's domestic law. Contravening an order or regulation made under the *United Nations Act* is a criminal offence. Possible violations of sanctions are investigated and enforced by the Canada Border Services Agency and the Royal Canadian Mounted Police.

Please be assured that the Government of Canada takes our obligations as a UN Member State with the utmost seriousness. To that end, Canada continues to stand ready to support the important work of the Panel. Please do not hesitate to contact us further.

Sincerely,

Hon. Bob Rae, P.C., C.C.
Ambassador and Permanent Representative
of Canada to the United Nations

[China]

1. Raw material and ferroalloys (OC. 77)

The Chinese customs authority has taken a series of effective measures in accordance with laws and regulations to ensure the implementation of DPRK-related embargo provisions of the Security Council.

The Panel's question on the customs data has already been answered by China in January 2022. China would reiterate that the Panel's understanding of the scope of embargo in the Security Council resolutions is not precise enough. The raw silk and silk waste imported from the DRPK under HS Code 50 fall in the category of raw materials, not textiles, whose exports are prohibited by the Security Council resolutions. The ferroalloys imported from the DPRK under HS Code 72 is also different from the iron and iron ore prohibited by the Security Council. We hope the Panel will not include the above-mentioned information into the report.

[Guyana]

THE GUYANA REVENUE AUTHORITY
HEADQUARTERS
200-201 CAMP STREET, GEORGETOWN PHONE: 227-6060, 227-8222

June 28, 2022

[redacted]

RE: Democratic People's Republic of Korea (DPRK) Exports to Guyana:

I refer to your letter dated June 3, 2022 in which you are seeking verification of information on the exports of goods from the Democratic People's Republic of Korea (DPRK) to Guyana during the period October 2021 to March 2022. The information gathered will be utilized to examine and analyses whether Guyana is in compliance with the implemented measures imposed on the DPRK by Security Council resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016), 2321 (2016), 2356 (2017), 2371 (2017), 2375 (2017) and 2397 (2017).

The GRA has reviewed your request and wishes to advise that a thorough exanimation was conducted in ASYCUDA and the following should be noted:

- As it relates to point 1, there was a variance in the approximate value for table 1: Machinery (HS Code 84) as shown below.

Table 1: Machinery (HS Code 84)

DATE	INFORMATION PRESENTED				INFORMATION REFLECTED IN ASYCUDA
	REPORTING COUNTRY	PARTNER COUNTRY	HS CODE	APPROXIMATE VALUE (USD)	APPROXIMATE VALUE (USD)
Oct-21	Guyana	DPRK	84	1,000	15,000
Jan-22	Guyana	DPRK	84	86,000	86,000
Feb-22	Guyana	DPRK	84	44,000	-
Mar-22	Guyana	DPRK	84	87,000	87,000

- Additionally, an in-depth examination was conducted in ASYCUDA on the individual declarations referencing the country of origin as DPRK. Based on the examination, it was revealed that while the e-SAD showed the country of origin as "DPRK", the attached invoices and waybills referenced suppliers' addresses as The Republic of Korea. Furthermore, three (3) of the nine (9) declarations showed the country of export as Trinidad and Tobago and the Country of Origin as Korea and one (1) showed the export as Panama and the Country of origin as China. It may be concluded based on the investigation conducted that the Brokers erroneously selected the country of origin as Democratic People's Republic

of Korea. This may be attributed to Brokers not being familiar with the difference between the Democratic People's Republic of Korea and The Republic of Korea. **(See table 2 below).**

Going forward ASYCUDA would be amended to include Democratic People's Republic of Korea **(North Korea)** and The Republic of Korea **(South Korea)**

Table 2: Showing information reflected on e-SAD, Invoice and Waybill

Declaration Number	Country of Origin on e-SAD	Exporter according Waybill and Invoice	Country of Origin according to Invoice
GY401 2022 362	Korea Democratic People's Rep.	Massy Automotive Components O'meara Road Arima Trinidad & Tobago	Korea
GY405 2022 339	Korea Democratic People's Rep.	Top Global Parts Co., Ltd. 2f Dong Sung Bldg, 94.89 Youngd 7- Ga, Youngdeungpo-Gu, Seoul. Korea	The Republic of Korea
GY406 2022 382	Korea Democratic People's Rep.	LG Electronics Panama, RUC 6490-0023-074806D.V.42. CLAVE R656 Avenida 3A, Diagonal A Las Oficinas De Aduana, Area Commercial Coco Solito, Zona Libre De Colon. Rep. Panama	China
GY404 2022 6651	Korea Democratic People's Rep.	June Heung Filter Co Ltd 20 Dongkyo Ro Pocheon Si Gyeonggi Do Korea Tel 82 31 541 7111	The Republic of Korea
GY405 2022 2880	Korea Democratic People's Rep.	Top Global Parts Co,Ltd. 2f Dong Sung Bldg,94-89 Youngdeungpo-Dong 7-Ga, Youngdeungpo-Gu, Seoul, Korea	The Republic of Korea
GY412 2021 13349	Korea Democratic People's Rep.	Massy Automotive Components O'meara Road Arima Trinidad & Tobago	Korea
GY403 2021 58263	Korea Democratic People's Rep.	Noble Drilling International Services Pte Ltd C/O Ceva Logistics Korea Inc. 5f, 56 Magokjungang-Ro, Gangseo-Gu, Seoul, South Korea Zip: 07631	The Republic of Korea
GY412 2021 11097	Korea Democratic People's Rep.	Amos Korea Co Ltd	The Republic of Korea

GY412 2021 11946	Korea Democratic People's Rep.	Massy Automotive Components O'meara Road Arima Trinidad & Tobago	Korea

- Referencing point 2, as it relates to paragraph 18 of the resolution 2270 (2016) and paragraph 20 of resolution 2397 (2017), there was no need for any seizure or disposal of cargo, since the verification in ASYCUDA revealed that the consignments originated from The Republic of Korea (South Korea), or directly exported from Panama and Trinidad.

- In relation to point 3, there were no actions taken by the Guyanese authorities since the country of origin based on the supplier's information on the invoices referenced The Republic of Korea (South Korea). Please see addresses referenced in Table.

If you have any further clarifications, please feel free to contact my Office at 227-6060 Ext 2601 or 2602.

[redacted]

[Mauritania]

الممثلية الدائمة لدي منظمة الأمم المتحدة
MISSION PERMANENTE AUPRÈS DES NATIONS UNIES

الجمهورية الإسلامية الموريتانية
شرف - إخاء - عدل
RÉPUBLIQUE ISLAMIQUE DE MAURITANIE
Honneur - Fraternité - Justice

Mismaur/438/AS/22

The Permanent Mission of the Islamic Republic of Mauritania to the United Nations presents its compliments to the Panel of Expert established pursuant to resolution 1874 (2009), and in reference to your letter S/AC.49/2022/PE/OC.81, dated June 3rd 2022, I have the honor to inform you that we received a response stating that confusion happened at the Customs level in naming the country of origin as Democratic People's Republic of Korea instead of Busan , Republic of Korea, which is the main source of these shipments as contained in the attached documents. Other than that, the Mauritanian authorities are not aware of any imports or exports operations to and from Democratic People's Republic of Korea.

The Permanent Mission of the Islamic Republic of Mauritania to the United avails itself of this opportunity to renew to the Panel of Expert established pursuant to resolution 1874 (2009), the assurances of its highest consideration.

New York, July 20th 2022

Security Council Committee established pursuant to resolution 1874 (2009)

830 SECOND AVENUE – SUITE 17 A – NEW YORK NY 10017 – TEL. : 211-252-0113 – FAX. : 212-252-0175 – E-MAIL : MAURITANIAMISSION@GMAIL.COM

[Saint Vincent and the Grenadines]

PERMANENT MISSION OF ST. VINCENT AND THE GRENADINES TO THE UNITED NATIONS
685 3rd Ave., Suite 1108, New York, NY 10017 • Tel: (212) 599-0950 • Fax: (212) 599-1020 • svgmission@gmail.com | http://svg-un.org

22 July 2022

[redacted]

Dear Coordinator,

The Permanent Mission of Saint Vincent and the Grenadines to the United Nations presents its compliments to the Office of the Coordinator of the Panel of Experts established pursuant to Security Council Resolution 1874 (2009) and has the honour to refer to the inquiry made via the latter's Correspondence No. S/AC.49/2022/PE/OC.162, dated June 23, 2022, regarding a suspected trade made between Saint Vincent and the Grenadines and the DPRK in items that are covered by the relevant sectoral sanctions provisions in resolutions 2270 (2016), 2321 (2016), 2371 (2017), 2375 (2017) and 2397 (2017).

In this connection, the Permanent Mission, on behalf of the Government of Saint Vincent and the Grenadines wishes to inform that the trade data from the International Trade Centre (ITC) Trade Map between October 2021 and March 2022, indicating the DPRK transferred to Saint Vincent and the Grenadines items in the following categories subject to the sectoral sanctions pursuant to resolution 2321 (2016): copper, is in fact **inaccurate**.

The matter was investigated by the Customs and Excise department of Saint Vincent and the Grenadines, and it was determined that an error was made by a shipment broker in the State, who inadvertently entered the country DPRK as the source of the material in question, as oppose to the Republic of Korea where the material in question actually originated from.

Additionally, the Ministry takes this opportunity to transmit herewith the full report from the Customs and Execise Department explaining the cause of the inaccuracy along with all relevant evidence.

The Mission further informs that Saint Vincent and the Grenadines has already taken the necessary steps to correct the information held at the ITC on this matter, and reiterates the State's full compliance with all

sanctions measures under the purview of the esteemed Panel of Experts (POE), as confirmed in the last report by the State to the POE.

The Permanent Mission of Saint Vincent and the Grenadines to the United Nations avails itself of this opportunity to renew to the Office of the Coordinator of the Panel of Experts established pursuant to Security Council Resolution 1874 (2009) the assurances of its highest consideration.

Sincerely,

H.E. Inga Rhonda King
Permanent Representative

[Trinidad and Tobago]

PERMANENT MISSION OF THE REPUBLIC OF TRINIDAD AND TOBAGO TO THE UNITED NATIONS, NEW YORK
633 Third Avenue, 12th Floor, New York, N.Y. 10017
Tel: 212-697-7620; Fax: 212-682-3580; Email: tto@un.int

INT: 2/4/8

21 July 2022

[redacted]

I should like to refer to your letters dated 3 and 23 June 2022 requesting the assistance of the Government of Trinidad and Tobago in providing information concerning reported trade data that listed the Democratic People's Republic of Korea (DPRK) as the partner country in the following categories subject to sanction pursuant to Security Council resolutions 2371 (2017) and 2397 (2017): iron, steel products and electrical equipment.

In this connection, based on a review of invoices, as well as conversations with the respective importers, the Government of Trinidad and Tobago wishes to advise that the DPRK was erroneously selected by each importer as the country of origin. This error can occur since the options presented for country selection are based on the official country names as opposed to their common names.

In this regard, please see the enclosed invoices pertaining to the shipments referenced in the aforementioned correspondence from the Panel of Experts, which show the country of origin as the Republic of Korea (South Korea) as follows:

a) **Attachment I:** Iron and Steel Products (HS Code 73);
b) **Attachment II:** Electrical Equipment (HS Code 85); and
c) **Attachment III:** Iron (HS Code 72).

Given that these invoices contain sensitive information as a result of negotiations between the supplier and importer, the Government of Trinidad and Tobago requests that the information provided is treated with the highest standards of confidentiality and should be used solely for the information of the Security Council and the 1718 Committee.

Annex 47: Reply from Malaysia to the Panel

REQUEST BY THE UN PANEL OF EXPERTS (POE) ON THE DPRK ON INFORMATION REGARDING GLOBAL COMMUNICATIONS (GLOCOM)

Letter's Ref. No. : S/AC.49/2021/PE/0C.263
Letter's Date : 13 October 2021

1. Any comments you may have on the authenticity of the media report in Annex 1.

The Malaysian authorities confirmed that Global Communications (Glocom) has never operated in Malaysia.

2. Confirmation of the current operation of Glocom (and any other DPRK-affiliated businesses) in your country along with:

Global Communications (Glocom) has never operated in Malaysia.

However, there were two companies that the PoE suspected to be the 'front companies' to promote Glocom's products, namely International Global Systems Sdn. Bhd. and International Golden Services Sdn. Bhd. Both companies have already been dissolved.

2.1. The names of owners and managers of Glocom whilst active in Malaysia.

As mentioned above, Glocom has never operated in Malaysia.

The names of directors and shareholders of International Global Systems Sdn. Bhd. and International Golden Services Sdn. Bhd. were mentioned in our response to PoE's letter ref. no. S/AC.49/2016/PE.OC.999.

2.2. The number of DPRK staff employed by Glocom.

As mentioned earlier, Glocom has never operated in Malaysia.

As for the two companies concerned, there were three DPRK nationals who worked with International Global Systems Sdn. Bhd. (Ryang Su Nyo, Pyon Won Gun and Pae Won Chol), and two with International Golden Services Sdn. Bhd. (Kim Chang Hyok and Kim Un Sim).

2.3. Types and numbers of the passports and visas used by DPRK nationals employed by and affiliated with Glocom in your country, as well as their associated travel records.

As mentioned earlier, Glocom has never operated in Malaysia.

Nevertheless, please find the records of entries and exits to/from Malaysia of Ryang Su Nyo, Pyon Won Gun and Kim Chang Hyok, which were already shared with the PoE in our response to the PoE's letter ref. no. S/AC.49/2016/PE/OC.999.

2.4. Copies of property leases for Glocom.

As mentioned earlier, Glocom has never operated in Malaysia.

2.5. Information on revenue made by Glocom whilst active in Malaysia.

As mentioned earlier, Glocom has never operated in Malaysia and there was no record of any trade activities under a company named Glocom.

2.6. Amount paid in taxes, if any.

As mentioned earlier, Glocom has never operated in Malaysia and there was no record of any trade activities under a company named Glocom.

2.7. Information on the bank account(s) used by Glocom including records of transactions relating to operating expenses including but not limited to the purchase of supplies, paying of rent, deposit of or transfer of funds. Include all relevant invoices and remittance documents showing amounts transferred both to and from the account. If funds were deposited or withdrawn in cash, please provide copies of all relevant bank documents, invoices and receipts.

As mentioned earlier, Glocom has never operated in Malaysia.

For International Golden Services Sdn. Bhd., they had three bank accounts with CIMB Bank Berhad, i.e., one current account and two foreign currency accounts, from July 2012 until April 2015. Please find the information on bank accounts as well as records of some transactions undertaken from the bank accounts of International Golden Services Sdn. Bhd. in our responses to PoE's letters ref. no. S/AC.49/2016/PE/OC.999, S/AC.49/2016/PE/OC.26 and S/AC.49/2017/PE/OC.108.

As for the International Global Services Sdn. Bhd., the Malaysian authorities do not have any other details regarding other bank accounts used by the company.

2.8. Wages currently being paid to DPRK workers, if any.

Since the severance of diplomatic ties between Malaysia and DPRK on 19 March 2021, there is no DPRK national living/working in Malaysia.

2.9. Information on all contacts between the DPRK embassy (before its closure in March 2021) and Glocom or its associated businesses.

As mentioned earlier, Glocom has never operated in Malaysia.

2.10. The specific actions undertaken by Malaysian authorities against Glocom and its associates in recent years, if any.

As mentioned earlier, Glocom has never operated in Malaysia.

Nevertheless, the Malaysian authorities have undertaken steps in ensuring that Malaysian citizens who had business ties with Kim Chang Hyok have severed such ties with the latter.

The Royal Malaysia Police (RMP) has been constantly working with relevant authorities and foreign intelligence agencies to trace, curb and conduct illicit activities conducted in Malaysia.

2.11. Copies of any investigation or inquiry by your competent authorities on the activities of Glocom and its parent companies, any of its subsidiaries, or related companies for the past five years; and

NIL.

2.12. Measures taken by your competent authorities to prevent the provisioning of financial services or the transfers of any financial or other asset or resources, including cash, letters of credit, and other financing instruments, that could contribute to the DPRK's nuclear or ballistic missile programmes, or other activities prohibited by relevant resolutions.

Malaysia's implementation of the operative provisions of the UN Security Council sanctions resolutions on DPRK is being governed by several laws and regulations including those described in Malaysia's response to PoE's letter ref. no. S/AC.49/2016/PE/OC.269.

Annex 48: Reply from Canon

Canon

CANON INC. HEADQUARTERS

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo 146-8501, Japan
Phone +81-3-3758-2111

May 13, 2022

[redacted]

We would like to report the final investigation results regarding the cameras that are missing supply channel information in relation to Inquiry(3) as follows.

INQUIRY(3) "Any specific supply channel information for the cameras mentioned in Fig 4 (purchase location, date of purchase, price, information on the buyer(s))"

Canon EOS 70D : [redacted]

→This serial number is not for sales purpose but used as a sample product for sales promotion at Canon (China) Co. LTD.
All the sample products must be disposed after the promotion period according to Canon's internal rule. And thus this camera was handed over to the disposal company in 2016.

Canon EOS 60D : [redacted]

→ We could manage to find out the manufacturing date and supply channel information after intensive investigation with manufacturing factory and marketing subsidiary.
We sincerely apologize for our previous answer as to this serial number on the letter dated 15 April 2022.

Canon EOS 60D : [redacted]

→ This serial number is not for sales purpose but used as an inspection tool in the manufacturing process at one of our factories, Canon Opt. Malaysia which manufactures camera lenses.
All the cameras for inspection purpose in our factory must be disposed after the usage period according to Canon's internal rule.
And thus this camera was handed over to the disposal company.
However disposal record is not available because the retention period of the document had expired based on the internal rule in Canon Opt. Malaysia.

[redacted]

We hope that our investigation results would meet your expectations.
Please do not hesitate to contact me if you require any further questions

Yours faithfully,

[redacted]

Global Logistics Management Center
Canon Inc.

Source: The Panel.

Annex 49: Reply on Cameras from China /Japan

[China]

3. Japanese cameras (OC. 109)

The investigation requirement of the letter is beyond the mandate of related resolutions. The DPRK-related Security Council resolutions do not include camera in the list of prohibited luxury goods, nor do they give mandate to the panel to explain the scope of luxury goods. The information from the media is far from accurate. We hope the Panel will carry out its work on the basis of facts, and not include the information unverified or even inconsistent with the facts into its report.

[Japan]

PERMANENT MISSION OF JAPAN
TO THE UNITED NATIONS
NEW YORK

22 July 2022

[redacted]

The Government of Japan highly values the work of the Panel of Experts established pursuant to United Nations Security Council Resolution (UNSCR) 1874 (hereinafter "the Panel") as well as that of the Security Council Committee established pursuant to UNSCR 1718 (hereinafter "the 1718 Committee"), and reaffirms its commitment to cooperate with the Panel to ensure the full and strict implementation of all relevant UNSCRs against North Korea.

Upon instructions from the capital, I have the honour to share Japan's response, as attached, to your letter dated 9 June 2022 (Reference: S/AC.49/2022/PE/OC.106) with respect to information on the sales of Canon and Nikon cameras in Japan.

The Government of Japan reaffirms its commitment to continue working closely with the Panel and the 1718 Committee. Should the Panel have any inquiries, please contact the Permanent Mission of Japan to the United Nations.

Please accept the assurance of my highest esteem.

Kimihiro ISHIKANE
Ambassador Extraordinary & Plenipotentiary
Permanent Representative of Japan to the United Nations

[redacted]

Japan’s response
regarding the information on the sales of Canon and Nikon cameras in Japan

1 Japan's Foreign Exchange and Foreign Trade Act prohibits the export to North Korea of all goods, not just those prohibited by Security Council sanctions, and we will continue to thoroughly enforce such measures, including border control. Since the introduction of these measures, we have been asking for the understanding and cooperation of related entities to ensure that the full ban on exports to North Korea is enforced. Since the economic sanctions against North Korea were initiated in 2006, we have been issuing reminders and requests for cooperation to industry associations (about 1,000 organizations) and local customs offices every one to two years (every extension of its own sanctions under Article 10 of the Foreign Exchange and Foreign Trade Act. At first, every six months, more recently every two years). In addition, trade management training, including North Korean sanctions, is conducted annually, with customs officials and police officers participating.

2 We are aware that both Canon and Nikon have thorough distribution controls and have responded to the Panel's inquiry in extremely good faith. With respect to the sale of consumer products, such as the subject of the inquiry, there is nothing unnatural about the situation in which a manufacturer is unable to trace the distribution of products beyond the retailer. The issue of the transfer of samples or inspection equipment, which the Panel's letter describes as "operations that may be illegal" is whether the products were properly handled after being delivered to the disposal companies in China or Malaysia. Thus we understand those occurred outside of Japan.

3 In any case, as stated above, the Government of Japan will thoroughly enforce the ban on exports to North Korea of all goods, not only prohibited goods under Security Council sanctions, in accordance with Japan's domestic laws.

Annex 50: Reply from Japan

PERMANENT MISSION OF JAPAN
TO THE UNITED NATIONS
NEW YORK

29 March 2022

[redacted]

The Government of Japan highly values the work of the Panel of Experts established pursuant to United Nations Security Council Resolution (UNSCR) 1874 (hereinafter "the Panel") as well as that of the Security Council Committee established pursuant to UNSCR 1718 (hereinafter "the 1718 Committee"), and reaffirms its commitment to cooperate with the Panel to ensure the full and strict implementation of all relevant UNSCRs against North Korea.

Upon instructions from the capital, I have the honour to share Japan's response, as attached, to your letter dated 1 March 2022 (Reference: S/AC.49/2022/PE/OC.5) with respect to a Secure Digital (SD) card found in mail sent to DPRK.

The Government of Japan reaffirms its commitment to continue working closely with the Panel and the 1718 Committee. Should the Panel have any inquiries, please contact the Permanent Mission of Japan to the United Nations.

Please accept the assurance of my highest esteem.

Kimihiro ISHIKANE
Ambassador Extraordinary & Plenipotentiary
Permanent Representative of Japan to the United Nations

[redacted]

Japan's response to Panel's inquiry
regarding a Secure Digital (SD) card found in mail sent to DPRK

1 Basis of the measure

The basis of the measure that the Government of Japan has taken with regard to the said SD card is found in Act on Special Measures Concerning Cargo Inspections Conducted by the Government Taking into Consideration United Nations Security Council Resolution 1874, specifically its paragraph 4 of Article 3, paragraph 2 of Article 4, and paragraph 1 and 2 of Article 5. SD card is classified as a "luxury item" based on its "I", sub-paragraph 1 of Article 2, paragraph 2 of Article 1 of its Order for Enforcement, and section 21 of its Appended Table 6 under its Order for Enforcement.

2 Details of the SD card:

- Manufacturer and type: SanDisk Ultra 8GB HC1 40MB/S
- Content stored: 12 files of filename extension WAV (containing picture of transceiver display and voice.) and 7 files of filename extension MP4 (voice including songs).

3 Details of the sender and the addressee:

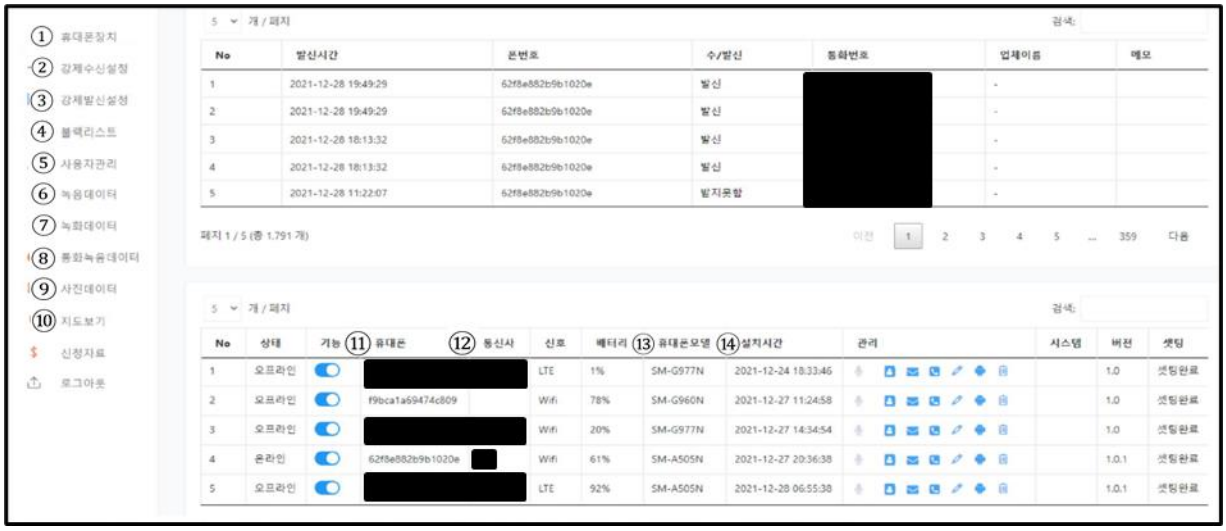
- Sender: [redacted]
- Addressee: The Voice of Korea Radio of the Radio and Television Broadcasting Committee of the Democratic People's Republic of Korea (address: Jonsung-dong, Moranbong District, Pyongyang)
- We do not have any further information regarding the sender and the addressee.

4 Practice and experience of deliveries of international mail addressed to North Korea since 2017

- Since June 2009, an export from Japan to North Korea has been generally prohibited. When there is an international mail to North Korea, the Japanese custom authorities have instructed to the Japan Post Ltd. to present it to the authorities. The custom authorities then inspect the mail, except in the case of a letter or diplomatic mail, in accordance with the Customs Act. When the authorities have

Annex 51: Additional Information on the Voice Phishing Hacking Applications sold by DPRK IT workers, including screenshots of Demonstration Video Clips

Screenshot of Song Rim explaining how to use the remotely controllable hacking application



① Device information
② Setting for redirection (of outgoing calls from the hacked smartphone)
③ Setting to disguise the caller's number (into a fake number) displayed on the hacked smartphone
④ Blacklist (blocked numbers)
⑤ User management
⑥ Voice recording
⑦ Video recording
⑧ Calls recording
⑨ Photo data
⑩ GPS
⑪ Mobile number
⑫ Service provider
⑬ Model name of mobile
⑭ Date and time the hacking application was installed

Screenshot of Song Rim's demonstration video clip showing the redirection function of outgoing calls from hacked smartphone

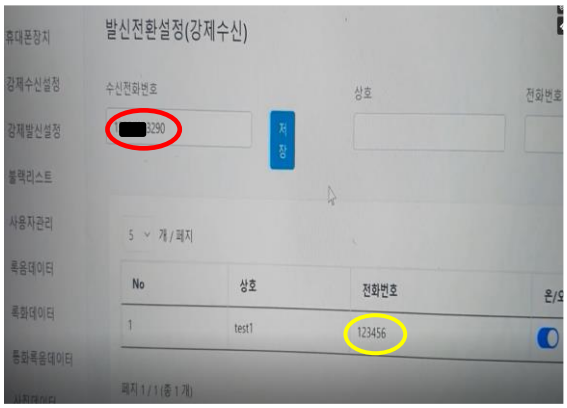


Photo 1

Photo 2

[Redirection function for outgoing calls]

◎ Purpose: When a victim makes a call from a hacked smartphone to a legitimate financial institution phone number, for example, the call can be redirected to the voice phishing group's office (call center, mobile) with the victim being unaware of the redirection.

◎ Demonstration of the redirection function

Photo 1: Remote control programme setting
(circled in red, voice phishing group's mobile no. / circled in yellow, fake no.)

Photo 2: Demonstration of redirecting outgoing calls from the hacked smartphone to voice phishing group's mobile
(circled in white, hacked smartphone no. / circled in yellow, fake no.)

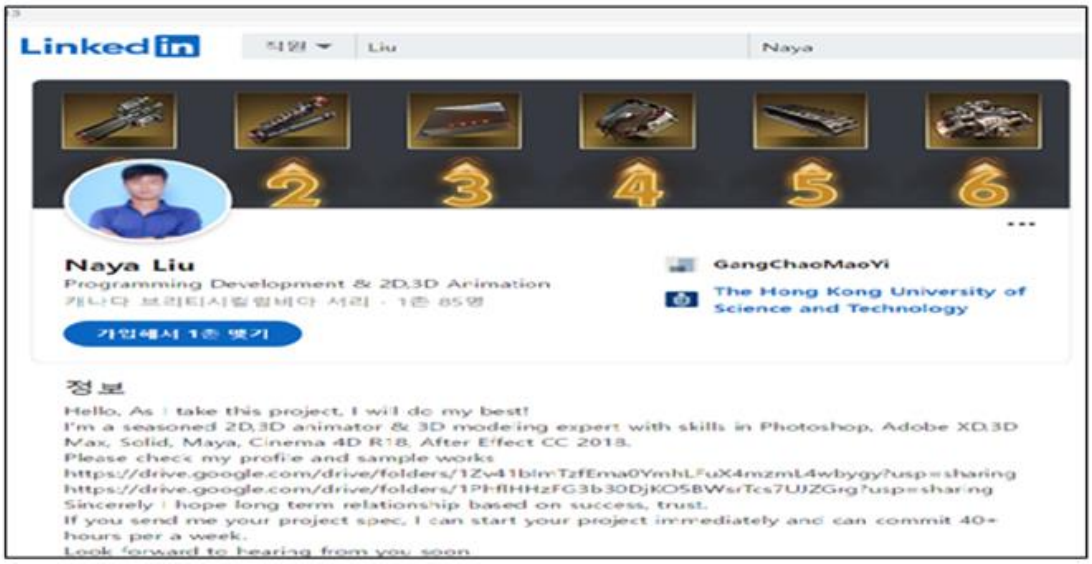
Source: Member State, annotated by the Panel.

Annex 52: Information on DPRK IT Worker Song Rim

	o DOB : Feb. 25, 1991 o Affiliation/Position: Head of IT development department of Biryugang Overseas Technology Cooperation Company under the Dandong branch of Hapjanggang Trading Corporation o Phone No. : [redacted] o WeChat ID : [redacted] o Major activities - Illegal trade of hacking apps with voice phishing crime rings - Won SW development contracts under the fraudulent identity as a Chinese IT developer on LinkedIn

Source: Member State

[Alias Linked in Profile]



Source: Linked in, annotated by Member State

Annex 53.1: Kimsuky's Cyberattacks using 'KONNI' Malware

According to multiple reports, [111]Kimsuky hackers have attacked political institutions in several Member States, using the 'KONNI Remote Administration Tool (RAT)' malware to harvest credentials and compromise victims. A cybersecurity company noted that "*spear phishing emails usually are weaponized with macro embedded documents that upon opening drop one of KONNI RAT variants*". Using the harvested credentials, the perpetrators gain access to sensitive information or deploy additional ransomware to generate illicit revenue. Recently, this malware has been found to include significant updates such as code improvements to make detection harder. The Panel itself has also received spoofed phishing emails carrying the 'KONNI' tool.[112]

Source: The Panel.

[111] https://blog.malwarebytes.com/threat-intelligence/2022/01/konni-evolves-into-stealthier-rat/, https://blog.lumen.com/new-konni-campaign-targeting-russian-ministry-of-foreign-affairs/ and https://blog.malwarebytes.com/threat-intelligence/2021/08/new-variant-of-konni-malware-used-in-campaign-targetting-russia/

[112] S/2021/211, para. 128

Annex 53.2: Links to reports from Ahnlabs ASEC in 2022

Kimsuky Group

Kimsuky's Attack Attempts Disguised as Press Releases of Various Topics

(25 May 2022)

APT Attacks Using Word File Disguised as Donation Receipts for Uljin Wildfire (Kimsuky)

(1 April 2022)

VBS Script Disguised as PDF File Being Distributed (Kimsuky)

(28 March 2022)

APT Attack Using Word Files About Cryptocurrency (Kimsuky)

(25 March 2022)

APT Attack Attempts Disguised as North Korea Related Paper Requirements (Kimsuky)

(22 February 2022)

Distribution of Kimsuky Group's xRAT (Quasar RAT) Confirmed

(8 February 2022)

Lazarus Group

Lazarus Group Exploiting Log4Shell Vulnerability (NukeSped) - ASEC BLOG (ahnlab.com)

(19 May 2022)

New Malware of Lazarus Threat Actor Group Exploiting INITECH Process - ASEC BLOG (ahnlab.com)

(26 April 2022)

Source: Ahnlabs ASEC, annotated by the Panel.

Annex 54: Reply from the Russian Federation to the Panel

Original

В соответствии с запросом группы экспертов сообщаем следующее.

По информации компетентных ведомств, на территории Российской Федерации аккредитованных подразделений Министерства народных вооруженных сил КНДР, отвечающих за торговлю оружием, включая «Департамент 53», не имеется.

Указанные в обращении северокорейские граждане Choe Hyon Il, Song Il Hyok и Kim Un Song являются дипломатическими сотрудниками посольства КНДР в Москве. Сведениями о приобретении ими продукции военного и двойного назначения, а также об использовании посольства КНДР в России для закупок товаров, на которые распространяются международные санкционные ограничения, компетентные ведомства не располагают.

Информации о совершении таможенных операций по запрашиваемой продукции в центральной базе данных единой автоматизированной системы таможенных органов не выявлено. В базе данных финансового мониторинга отсутствуют сведения о контрактах «Департамента 53» по приобретению продукции оборонного или военного назначения и о соответствующих им транзакциях.

Officially translated from Russian

As requested by the Panel of Experts, we hereby report the following.

According to the information received from the competent agencies, there are no accredited units of the Ministry of People’s Armed Forces of the Democratic People’s Republic of Korea (DPRK) responsible for the arms trade, including “Department 53”, on the territory of the Russian Federation.

The North Korean citizens mentioned in the submission are diplomatic staff members of the DPRK Embassy in Moscow, Choi Hyon Il, Song Il Hyuk and Kim Un Song. The competent authorities have no information about their purchases of military and dual-use products, or about the use of the DPRK Embassy in Russia for the purchase of goods subject to international sanctions restrictions.

No information on customs operations for the requested items was found in the central database of the unified automated system of the customs authorities. The financial monitoring database does not contain information on “Department 53” contracts for the purchase of defence or military items and their corresponding transactions.

Annex 55: Reply from Syria to the Panel

THE PERMANENT MISSION OF THE SYRIAN ARAB REPUBLIC TO THE UNITED NATIONS
820 Second Ave., 15th Floor, New York, N. Y. 10017
Tel: (212) 661-1313
Fax: (212) 983-4439
E-mail: exesec.syria@gmail.com

PM/2022/249

30 June 2022

The Permanent Mission of the Syrian Arab Republic to the United Nations presents its compliments to the Coordinator of the Panel of Experts established pursuant to Security Council Resolution 1874 (2009) and with reference to his letter number S/AC.49/2022/PE/OC.99 dated 03 June 2022 has the honor to inform the Panel that there is no cooperation in the military domain between the Syrian Arab Republic and the Democratic People's Republic of Korea, and that the information provided to the Panel is categorically incorrect.

The Permanent Mission of the Syrian Arab Republic to the United Nations avails itself of this opportunity to renew to the Coordinator of the Panel of Experts established pursuant to Security Council Resolution 1874 (2009) the assurances of its highest consideration.

PERMANENT MISSION OF THE SYRIAN ARAB REPUBLIC * NEW YORK *

Coordinator of the Panel of Experts established pursuant to Security Council Resolution 1874 (2009)
New York, NY.

Annex 56: Reply from China to the Panel

6. DPRK Representatives in China (OC. 103)

China has always been strictly implementing the DPRK-related embargo provisions of the Security Council resolutions and strictly regulating the export of military items. China has put in place a full-fledged policy and legal system of export control with strict implementation. No evidence of any activities related to the illicit trade of weapons was found within China. The information provided by the Panel's letter is very limited, and the persons cannot be accurately verified and targeted with names only.

Annex 57: Algeria

1) Construction workers

According to information received by the Panel, the DPRK company Namgang Construction General Corporation contracted with the company from a third country to provide DPRK nationals to work in Algeria on construction projects in June and July 2021. This cooperation may have been structured as a joint venture. The Panel notes that Namgang Construction General Corporation might utilise the alias "Ryongrim Construction Company" in Algeria.

2) Reply from Algeria

Algeria replied to the Panel's enquiry that neither DPRK companies exist in Algeria and these companies have never been registered in official records (see figure 57).

Figure 57: Reply from Algeria

الجمهوريـــة الجزائريـــة الديمقراطيـــة الشعبيـــة
PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA

Permanent Mission of Algeria
to the United Nations
New York

البعثـة الدائمـة للجزائر
لـدى الأمـم المتحـدة
نيويـورك

MPANY / NL / N° /2022/133

The Permanent Mission of the People's Democratic Republic of Algeria to the United Nations presents its compliments to the Panel of Experts established pursuant to United Nations Security Council resolution 1874 (2009), and with reference to its letter S/AC.49/2022/PE/OC.17 dated 18 March 2022, has the honour to inform that the investigation so far conducted by the Algerian Authorities revealed that neither DPRK company named "Namgang Construction General Corporation" or acting under the alias "Ryongrim Construction Company" exist in Algeria.

The Algeria Ministry of Trade and Export Promotion indicated that these companies have never been registered on the National Centre of Trade Register. The Ministry of Labor, Employment, and Social Security also indicated that these companies do not appear in its official records. Both companies have not contracted any agreement or joint venture in Algeria with companies activating in the area of building and construction or civil engineering.

Furthermore, the Algerian Authorities expressed their readiness to share with the Panel of experts any updates in this regard.

The Permanent Mission of the People's Democratic Republic of Algeria to the United Nations avails itself of this opportunity to renew to the Panel of Experts established pursuant to United Nations Security Council resolution 1874 (2009), the assurances of its highest consideration.

New York, May 5th, 2022

Panel of Experts established pursuant to United Nations Security Council resolution 1874(2009)
New York

Address: 326 East 48th Street 10017, New York **Phone:** +12127501960, Fax: +12127599538,
E-mail: Algeria@un.int; algerianmission326@gmail.com

Annex 58: Corporate registry of DRPK entities in Cambodia (Sunrise Horizon Co., Ltd and Keochakrey Trading Co., Ltd)

Address of Sunrise Horizon Co., Ltd (Deregistered in 2019)

Unit 1302 Floor 13th, Pyoangyang, Building 33, Buksac Dong, Korea, Democratic People's Republic Of

Address of Keochakrey Trading Co., Ltd (Deregistered in 2022)

Unit 1302, Floor 13th Building 33, Buksac Dong, Gang Won Province, Korea, Republic Of

Source : Opencorporates, Business registration of Cambodia.

Annex 59: Cote d'Ivoire

According to information received by the Panel, **Korea Moranbong Medical Cooperation Center (Moranbong Medical)** entered into two separate contracts with medical centres in Côte d'Ivoire covering the employment of DPRK medical doctors in June and July 2019. The Côte d'Ivoire entities partnering with the DPRK were as follows:

- **The Regional Hospital Center of Divo**
- **The Indica Diedri Pharma Medical Center in Abidjan**

Both relationships, which appeared to be structured as joint ventures or cooperative entities, involved the DPRK sending doctors and medical workers to Côte d'Ivoire for several years, an expansion of the partnership over time, and profit-sharing. The Panel has yet to receive a reply from Côte d'Ivoire.

Annex 60: Lao People's Democratic Republic

The Panel has continued its investigations into the current status of the DPRK workers in Laos. According to recent information provided by a Member State, a team of DPRK IT workers have continued to work in Laos. These workers are associated with Lao-Toshyo IT Service Company Ltd and the details of information are below.

Laos already replied to the Panel in July 2020 that the operation of Lao-Toshyo IT service Company Ltd was cancelled (see figure 60) in June 2020 and there is no Lao company hiring DPRK IT workers. Investigations continue.

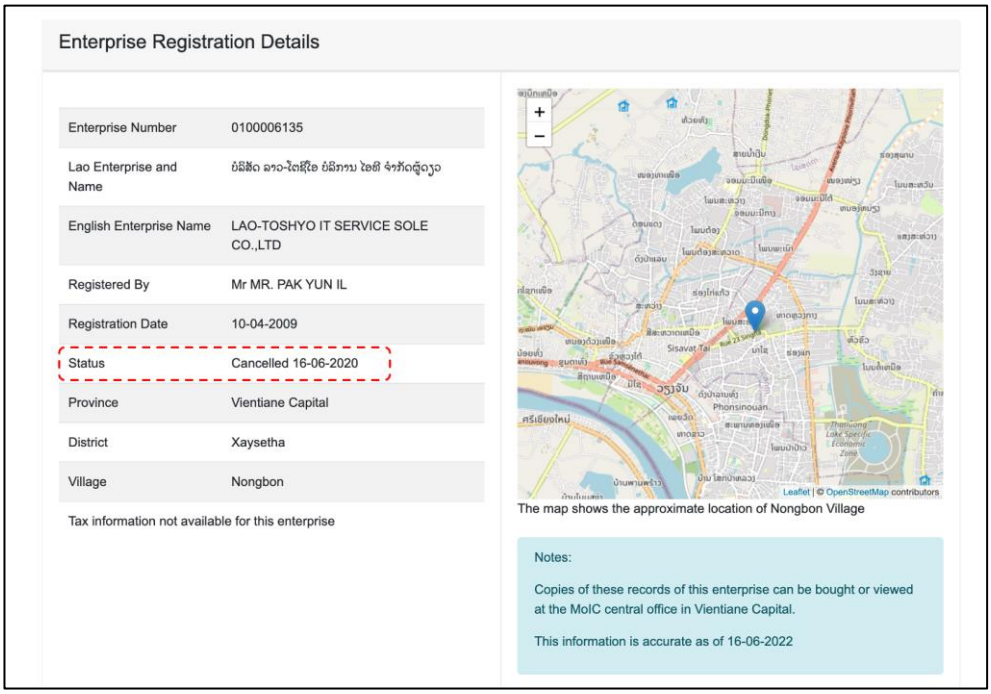
DPRK IT workers reportedly located in Laos:

- Kim Chol Hun
- Kim Kum Il
- Ri Song Kuk
- Sin Chun Song
- Ko In Jae

DPRK IT workers in Laos are associated with the following company and address:

Company name: Lao-Toshyo IT Service Company Ltd
Address: House 46, unit 3, Phonsinuan Village, Sisattanak District, Vientian

Figure 60: Corporate registry of Lao-Toshyo IT Service Company Ltd



Enterprise Registration Details

Enterprise Number	0100006135
Lao Enterprise and Name	ບໍລິສັດ ລາວ-ໂຕຊີໂອ ບໍລິການ ໂອທີ ຈຳກັດຕົວເງົາ
English Enterprise Name	LAO-TOSHYO IT SERVICE SOLE CO.,LTD
Registered By	Mr MR. PAK YUN IL
Registration Date	10-04-2009
Status	Cancelled 16-06-2020
Province	Vientiane Capital
District	Xaysetha
Village	Nongbon

Tax information not available for this enterprise

The map shows the approximate location of Nongbon Village

Notes:

Copies of these records of this enterprise can be bought or viewed at the MoIC central office in Vientiane Capital.

This information is accurate as of 16-06-2022

Source: Laos National Enterprise Database.

Annex 61: Republic of the Congo

According to information received by the Panel, **Korea Moranbong Medical Cooperation Center** worked with the authorities of the Republic of the Congo to extend work visas for several DPRK medical doctors working in the Republic of the Congo in March 2021. One of these doctors worked at the **Republic of Congo Military Medical University Nerve Science Department**.

The information shows that **Moranbong Medical** has established a joint venture medical clinic with the Congo entity '**Association of Humanitarian Development and Actions (ADAH) of Congo**[113]**'.** This joint venture clinic is the **Royal Health Polyclinic**, and its staff included multiple DPRK and Congo doctors.

Moranbong Medical also established a medical joint venture in 2017 with the Congo entity **'Foundation Ecobahou Systems Plus (Ecobahou)'** to establish medical facilities across the Republic of Congo. As part of this joint venture, **Moranbong Medical** was to provide teams of DPRK medical specialists to work in the facilities.

The Panel has yet to receive a reply from the Republic of the Congo.

[113] Association de Développement et d'Action Humanitaire (ADAH).

Annex 62: Russian Federation

According to the Russian media ASTV on 18 August 2021, DPRK nationals are working in the construction site in Yuzhno-Sakhalinsk city, Sakhalin. ASTV reported that residents of Yuzhno-Sakhalinsk are unhappy with the sounds, including North Korean tunes from the construction site that wake them up early in the morning. ASTV, whose company's office is located in close proximity to the construction site, confirmed the claim of residents and interviewed the contractor " SZ "Rybovodstroi" (ООО "СЗ "РЫБОВОДСТРОЙ") for a comment. The foreman of the company confirmed that a large number of workers from North Korea are actually working at the facility. They promised that they will take into the claims into account, to make the music quieter, and to ensure silence early in the morning.

The Russian company has yet to respond to the Panel's enquiry.

Фото: архив astv.ru

Жители Южно-Сахалинска устали просыпаться под северокорейскую музыку с соседней стройки Претензий к композициям у них нет, но не устраивает раннее время ежедневных трансляций

Жители Южно-Сахалинска недовольны звуками со стройки, которые будят их рано утром. К шуму техники они давно привыкли, однако последние дни на него наложились и северокорейские напевы.

Как сообщила жительница одного из домов по улице Комсомольской, претензии вызывает огромная стройка, расположенная в районе перекрёстка улиц Комсомольской и Пограничной. Здесь возводят сразу шесть многоэтажных жилых секций на участке общей площадью более 3 гектаров.

- На объекте работают северокорейские бригады. Претензий к ним нет, не пьют, не дебоширят, мы их и не видим. Однако национальная музыка вечером и рано утром - это не то, что я хотела бы слушать каждый день, - поделилась горожанка.

Информацию подтверждают и сотрудники astv.ru, офис компании находится в непосредственной близости от строящегося объекта. Уже в семь утра северокорейские мотивы врываются в окна, органично сочетаясь со строительным грохотом.
Редакция astv.ru обратилась за комментарием к подрядчику. Судя по информации на паспорте объекта, строительство ведёт ООО "СЗ "Рыбоводстрой".

Прораб подтвердил, что на объекте на самом деле работают большое количество рабочих из Северной Кореи. Замечания обещали учесть, музыку сделать тише, а рано утром обеспечить режим тишины.

Source: АСТВ, https://astv.ru/news/society/2021-08-18-zhiteli-yuzhno-sahalinska-ustali-prosypat-sya-pod-severokorejskuyu-muzyku-s-sosednej-strojki.

Annex 63: Reply from Russian Federation

1. "SZ"Rybovodstroi

В связи с запросом группы экспертов Комитета СБ 1718 по КНДР ОС.23 сообщаем следующее.

ООО «СЗ «Рыбоводстрой» является девелоперской ореанизацией, в штате которой граждане КНДР не состояли и не состоят. Российские компетентные ведомства сведениями об использовании этой компанией северокорейских рабочих при строительстве жилого комплекса «Авангард» в Южно-Сахалинске не располагают. Ссылка в статье на северокорейскую музыку является субъективной оценкой одной из жительниц Южно-Сахалинска.

В настоящее время трудовую деятельность на территории сахалинской области граждане КНДР не осуществляют. Действительных разрешений на работу у них нет. Возвращение на родину тех, у кого срок действия разрешительных документов на пребывание в нашей стране истек, не представляется возможным в связи с приостановкой транспортного сообщения с КНДР из-за коронавирусной пандемии.

Translated from Russian

In connection with the request from the Panel of Experts on the Democratic People's Republic of Korea of the Security Council Committee established pursuant to resolution 1718 (2006) contained in note OC.23, we should like to inform you of the following.

SZ Rybovodstroi LLC is a real estate development organization that has not employed and does not employ any nationals of the Democratic People's Republic of Korea. The Russian competent agencies have no information about the use by this company of workers from the Democratic People's Republic of Korea in the construction of the Avangard apartment complex in Yuzhno-Sakhalinsk. The reference in the article to North Korean music is a subjective assessment by one resident* of Yuzhno-Sakhalinsk.

No work is currently being done in Sakhalin Province by nationals of the Democratic People's Republic of Korea. They do not have valid work permits. Those whose permits to stay in the Russian Federation have expired are not able to return to their home country because transport links with the Democratic People's Republic of Korea have been suspended owing to the coronavirus disease (COVID-19) pandemic.

2. Pyongyang Kwangmyong Information Technology Corporation

В связи с запросом группы экспертов ОС.153 сообщаем следующее.

Северокорейская корпорация информационных технологий «Пхеньян Кванмён» (Pyongyang Kwangmyong Information Technology Corporation) на территории Приморского края не зарегистрирована, к административной ответственности не привлекалась, по вопросу оформления виз и приглашений на въезд в Россию иностранных граждан не обращалась. Данных о лицах, причастных к ее деятельности, не имеется.

В Приморском крае отсутствуют граждане КНДР, прибывшие на территорию России с целью осуществления трудовой деятельности в IT- сфере. Разрешений на работу указанной категории лиц не выдавалось. Данные о нелегальном трудоустройстве и получении дохода северокорейскими IT-специалистами отсутствуют.

Сведения экспертов о попытках компании «Пхеньян Кванмён» трудоустроить северокорейских специалистов в сфере IT-технологий в российские коммерческие структуры датированы 2014 годом, когда перечень санкционных ограничений в отношении КНДР не включал запрета на привлечение иностранными государствами северокорейских граждан.

Сервис «Upwork» является международной платформой по установлению деловых и рабочих отношений, представляет собой площадку для размещения заказов на разработку отдельных элементов программного кода или цельных решений на так называемом «аутсорсинге». Рекомендуем экспертам обратиться к администраторам данного Интернет-ресурса с целью получения сведений об учетных записях.

Translated from Russian

In connection with reference No. OC.153 from the Panel of Experts, we hereby report the following.

The North Korean information technology (IT) company "Pyongyang Kwangmyong Information Technology Corporation" is not registered in Primorskiy krai, has not been brought to administrative responsibility, and has not applied for visas or invitations for foreign citizens to enter Russia. There are no data on the persons involved in its activities.

There are no citizens of the Democratic People's Republic of Korea in Primorskiy krai who arrived in Russia for the purpose of working in the IT sphere. No work permits have been issued to this category of persons. There are no data on the illegal employment or income of North Korean IT specialists.

The information from the Experts about attempts by Pyongyang Kwangmyong to employ North Korean IT specialists in Russian commercial structures dates back to 2014, when the list of sanctions against the Democratic People's Republic of Korea did not include a ban on the recruitment of North Korean citizens by foreign countries.

The "Upwork" service is an international platform for establishing business and working relationships. It provides a platform for placing orders for the development of individual elements of software code or entire solutions through "outsourcing". We recommend that the Experts contact the administrators of this Internet resource to obtain information about the accounts.

Source: The Panel.

Annex 64: Togo

According to a Member State, DPRK medical workers had been cooperating with Togo-based organizations between 2019 and 2020.

4) Contract between NGO La Perez and DPRK K.A. Medical Center

In January 2020, **DPRK K.A. Medical Center** (located in the Republic of Congo), signed a medical labour contract with Togo-based NGO **La Perez**. Pursuant to the contract, DPRK K.A. Medical Center would assist the Togolese Ministry of Health with enacting its National Health Development Plan by staffing medical facilities in Togo with DPRK medical workers. The NGO La Perez would manage visas and accommodating the DPRK medical workers. The contract was to be in effect for a period of five years.

5) Joint venture between Alzema Society SRL and DPRK Moranbong Medical Cooperation Company

In January 2020, **Alzema Society SRL** based in Lomé, invited the DPRK to send DPRK nationals to travel to Togo to establish and work for an agricultural joint venture in Togo. In October 2019, Alzema Society SRL, invited a group of DPRK medical workers from the **DPRK Moranbong Medical Cooperation Company** to work in Togo. This relationship was structured as a joint venture or cooperative entity, and involved profit sharing between DPRK Moranbong Medical Cooperation Company and Alzema Society SRL

6) Sponsorship by the Churches of the Evangelical Ministry of the Works of God of Togo for inviting DPRK medical workers

In December 2019, the Churches of the Evangelical Ministry of the Works of God of Togo sponsored invitations for several DPRK doctors to work in Togo. This project was approved by the Togolese Ministry of the Interior and the mayor of Lomé.

Annex 65: Chainalysis Report on 'Overall Trends in DPRK's On-Chain Activity'

Overall Trends in DPRK's On-Chain Activity

Three main typologies – access, obfuscation, and cash-out – distinguish DPRK's nefarious activity on the blockchain. "Access" describes attack vectors, which are the recurring methods used to gain access to victims' infrastructure and/or devices. "Obfuscation" refers to actors' behavioral patterns, where they aim to disassociate the source of funds from their eventual cash-out methods. "Cash-out" describes the methods actors use to convert cryptocurrency to fiat currency or otherwise maintain custody over their ill-gotten proceeds.

Since 2017, DPRK-affiliated actors have used these access methods to steal approximately USD 2.1 billion worth of cryptocurrency. Experts have stated that these illicit gains help fund DPRK's weapons of mass destruction programs; identifying and preventing similar activity in the future is a vital national security imperative (S/2019/691).

ACCESS: Attack Vectors

The Lazarus Group has a long and successful history of deceiving victims into unwittingly providing access to their systems and sensitive data. Dating back as far as 2016, DPRK affiliates have characteristically commenced the cyber intrusion process with off-chain tactics that hinge on two elements: social engineering and malware. First, threat actors gather organizational information, identify vulnerable individuals and weaknesses in infrastructure, and analyze the behavior of their targets. The hackers then deploy advanced social engineering tactics that rely on human error by targeting the gullible, trusting, and carelessness of human nature to elicit victims' sensitive information and gain access to corporate networks. They then exploit this access by deploying malware without tipping off any virus detection protocols and take advantage of weak or improperly maintained information technology infrastructure.

Lazarus Group affiliates have leveraged both unaffiliated individuals and false personas with intricate cover stories to conduct their work. These actors have gone to extensive lengths to create sock puppet accounts,[1] establish fictitious businesses, and assume fake personas in order to communicate with and gain the trust of their targets. They have refined this type of deception for nearly a decade, using carefully curated identities to conduct cyber attacks, as evidenced by the "Kim Hyon Woo" persona used to breach Sony Pictures Entertainment, the Central Bank of Bangladesh, and many other technology and financial companies.[2] For example, DPRK-affiliated actors have created fake-yet-legitimate-looking accounts on social media platforms such as LinkedIn and Twitter. These accounts are comprehensive, updated with new content regularly, and active at the time of attack. The account users engage in personal and curated conversations with their specifically selected targets and present themselves as legitimate entities or operators in the cryptocurrency or information security industries, suggesting that the attackers conduct extensive research prior to making initial contact.

Additionally, state-affiliated DPRK cyber actors have launched widespread email phishing campaigns that contain either links for wateringhole attacks[3] or malware-ridden attachments. More recently, firms have reported their phishing attacks being delivered in the form of legitimate-looking automated emails which notify the recipient that someone the victim knows has shared a document with them. This most frequently appears as a

[1] A "sock puppet" is a false identity created on the internet for the purpose of deception.

[2] Source: https://www.justice.gov/usao-cdca/press-release/file/1091951/download

[3] Per the National Institute of Standards and Technology, a wateringhole attack is "a security exploit where the attacker infects websites that are frequently visited by members of the group being attacked with a goal of infecting a computer."

shared Google Docs link, a Sharepoint invitation, or other email attachment. When the victim clicks to open the shared document or download the email's attachment, they are prompted to enable a feature (such as "enable macros" in Microsoft Office products) which authorizes the malware to download onto the device. Often, the content appears to be relevant and important to the recipient at face value.

One specifically alarming iteration of Lazarus Group cyberattacks is a malware strain dubbed "AppleJeus," which presents as an automated cryptocurrency trading platform.[4] After download, when the victim approves or acknowledges a seemingly benign pop-up that lists the user's rights according to European Union General Data Protection Regulation (GDPR) or asks victims to enable the aforementioned macros, the second stage payload is enabled, during which the malware initiates command and control communication and provides the attacker unrestricted access to sensitive information, such as login credentials and private keys necessary to access hot wallets.

DPRK's behaviors after deployment vary, but indications suggest actors maintain a silent, undetected presence on a victim's system for a period of time after first gaining access. Threat actors exploit vulnerabilities in the victim's IT infrastructure, and because the malware has granted them access, they are able to gather system information, add decryption programs, grant themselves privileged access to controlled data, or remove or bypass detection and response mechanisms. While they remain undetected, they continue to target other employees in an attempt to gain additional access through other verticals of an organization.[5] At a certain point, the actors begin to move funds.

This movement of funds – especially at the volume the Lazarus Group has stolen in the past – has typically quickly alerted the victims and industry writ large to a breach, which then results in the rogue actors taking a series of steps in an attempt to obfuscate the true origin of the funds prior to cashing out.

OBFUSCATION: Tactics, Techniques, and Characteristics

Chain Hopping

Throughout its history of cryptocurrency-related hacks, the Lazarus Group does not appear to have a preference for the specific cryptocurrency it targets for theft. The Lazarus Group has stolen many varieties of cryptocurrency, irrespective of tokens' volume, value, desirability, or liquidity. Bitcoin (BTC) formerly dominated the composition of stolen coins, but among the DPRK-attributed cryptocurrency exchange hacks in 2021, 58% of stolen coins were ether (ETH)-denominated and 22% was denominated in either ERC-20 tokens or altcoins.

[4] Source: https://www.cisa.gov/uscert/sites/default/files/publications/Joint_Cybersecurity_Advisory_AppleJeus%E2%80%93Analysis%20of%20North%20Korea%E2%80%99s%20Cryptocurrency%20Malware.pdf

[5] Source: https://labs.f-secure.com/assets/BlogFiles/f-secureLABS-tlp-white-lazarus-threat-intel-report2.pdf

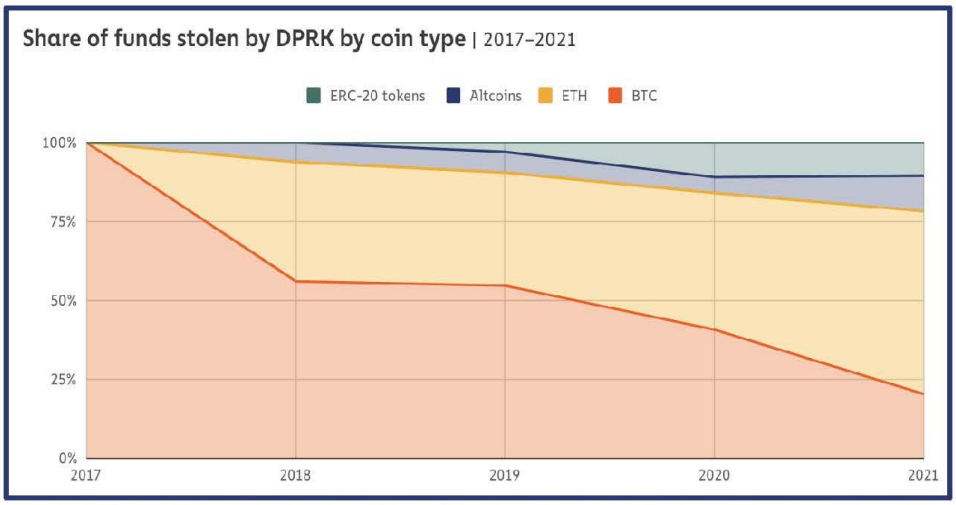


IMAGE 1: A chart that displays the distribution of the varieties of cryptocurrencies allegedly stolen by Lazarus Group-related actors between 2017 and 2021.

Using non-custodial decentralized exchange (DEX) platforms, the Lazarus Group swaps more restrictive or less common denominations of crypto for more usable types, such as ETH). This process is called "coin swapping." A DEX is a type of non-custodial cryptocurrency exchange that relies on smart contracts[6] to allow users to swap assets without an intermediary facilitating the transaction. This means users do not lose custody of their funds. Decentralized finance (DeFi) platforms therefore do not require their users to provide identification or Know Your Customer (KYC) information, which makes it easier for cybercriminals to move funds through DEXs with greater anonymity. DPRK actors occasionally employ multiple rounds of coin swapping, thereby executing multiple transactions before ultimately obtaining a payout in their desired amount and denomination. On the blockchain, this appears as several contract calls, where the remitter is initiating a swap with a contract (usually through a DEX). As such, it is not uncommon for stolen funds investigations to involve multiple DEXs, bridges, smart contracts, and other fund movement vehicles that enable actors to move funds between different blockchains.

After interacting with DEXs, the Lazarus Group then engages in "chain hopping." This practice involves the use of smart contract bridges to swap a coin on one blockchain for a coin on another blockchain. The mirroring smart contracts operate in tandem on separate blockchains. When the transaction is initiated and the conditions are met on one blockchain (i.e., the funds are deposited and fees are paid), the destination blockchain's smart contract releases the desired funds to the address provided by the initiator on the destination blockchain, thereby completing the transaction.[7] While chain hopping is neither unique to the Lazarus Group nor limited to illicit actors, it can be leveraged to further obscure the original source of funds while avoiding the requirement to provide KYC information.

[6] Smart contracts are immutable programs stored on the blockchain that execute when specific predetermined conditions are met. The Ethereum blockchain, and other platforms such as Solana and Cardano, are designed to execute smart contracts.

[7] Due to the conditional nature of smart contract programming, chain hopping works in a way that **IF** a condition is met on one blockchain, it will **THEN** trigger an execution of an action on another blockchain. For example, **IF** 1 ETH is deposited to a smart contract, **THEN** the equivalent in bitcoin will be remitted on the bitcoin blockchain to the address directed by the initiator.

At this point, Lazarus Group actors have traditionally converted the majority of stolen funds to ETH via decentralized exchanges. Then, through varied mechanisms, the funds are ultimately sent to centralized (custodial) exchanges to convert the ETH to BTC.

In addition to chain hopping, DPRK-affiliated actors use several obfuscation tactics in an attempt to further dissociate the source of the stolen funds from the destination. The Lazarus Group frequently uses the following techniques to move funds and conduct such activity: deploying peel chains; conducting test deposits and structured deposits; leveraging mixers and coinjoin services; and consolidating funds prior to cash-out.

Peel Chains

Peel chains are strings of single use wallet addresses. A peel chain is created when an entity attempts to hide the source or destination of funds by sending coins through dozens or even hundreds of wallets. This can be a manual process or executed through an automatic feature of certain cryptocurrency wallet software. Peel chains can be identified on the bitcoin network by their characteristic transaction features, which are based on bitcoin's unspent transaction output model. One input in a peel chain transaction will create two outputs (where one output is the actual spend and the other output is the change from the transaction). This pattern will typically repeat in rapid succession before funds reach their ultimate destination address. Lengthy peel chains appear often in investigations of stolen funds movement purported to be associated with DPRK, which is likely a result of the actors' choice of wallet software. The peel chains identified in alleged DPRK activity most frequently occur between the initial stolen funds destination (or the destination wallet of the converted ETH to BTC) and deposits to mixing and coinjoin services.

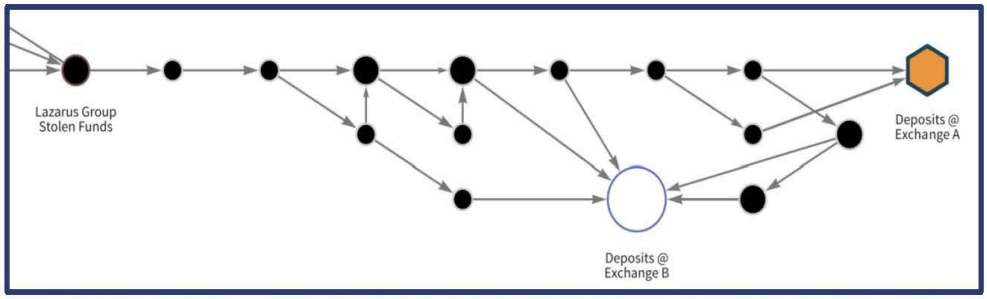


IMAGE 2: A graphical representation of a peel chain deployed prior to the Lazarus Group cashing out at two different centralized exchanges.

Test Deposits

Prior to transferring funds to a new wallet, before making a deposit to a new address at an exchange, or ahead of sending funds to a mixing service, DPRK-affiliated actors make low-value transfers in order to validate receiving addresses. These deposits characteristically begin with the actor making a 0.01 or 0.10 BTC payment – known as a "test deposit" – and then, in rapid succession, conducting subsequent deposits. Due to this transaction pattern's distinct nature, it is often possible to identify DPRK-affiliated activity based on sending exposure and deposit patterns.

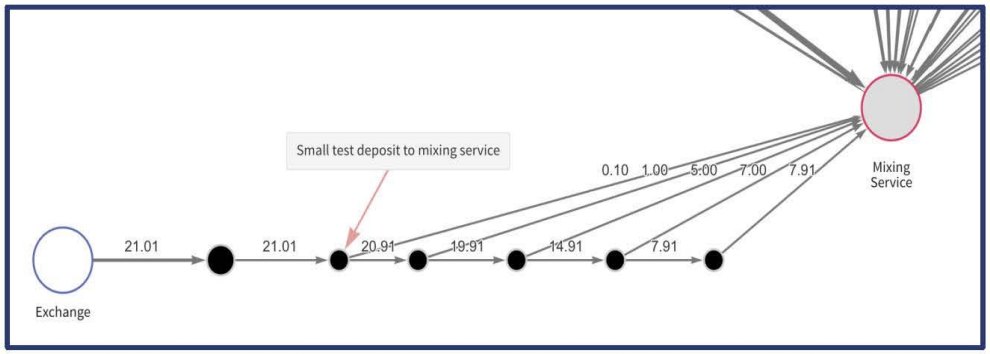


IMAGE 3: A small test deposit (0.10 BTC) made from an alleged DPRK affiliate-controlled account at a centralized exchange to a mixing service, immediately followed by additional deposits that increase in value.

Structured Deposits

To launder funds, the Lazarus Group sends stolen funds in structured payments of the same size, often in a large, round, repeating value in bitcoin.[8] The actors typically wait for each payment's output to be confirmed by the recipient before sending a new one, in order to minimize the potential for loss in the event that the transaction does not validate.

Mixers & Coinjoin Services

The Lazarus Group uses mixers and coinjoin services[9] to obfuscate the relationship between a user's deposit and the withdrawal of "clean" stolen fund outputs. In both types of services, cryptocurrency from multiple deposits is combined, mixed, and then paid out in "clean" coins. This practice makes it very difficult to trace the outputs from the mixing service back to the source of the deposits, similar to the concept of "layering" in traditional fiat money laundering.

Consolidation Addresses

At a few different points through on-chain movement, DPRK-affiliated actors funnel all funds into one or a few wallets. Similar to flooding, this consolidation is not an obfuscation technique, but appears to be the DPRK affiliates' intentional and manual effort to retain central custody over the stolen funds. Consolidation points have been used in nearly every DPRK-attributed cryptocurrency exchange hack since 2017. The attackers most frequently use consolidation wallets immediately before making deposits to an exchange.

[8] These amounts may differ very slightly due to service fees.

[9] Mixers and coinjoin services are two obfuscation techniques frequently used in cryptocurrency money laundering. While both aim to create a disconnect between the source and destination of a user's funds and both pool incoming funds from many users at once, their differences are worth noting. Mixing services, or "mixers" are custodial in nature and have one deposit with multiple timed withdrawals in varying amounts. Coinjoin services, or "coinjoins," are non-custodial, meaning that no user loses custody of their funds. Coinjoins require multiple deposits that are withdrawn in batches over a longer period of time, typically structure withdrawals in similar sized outputs, and often have the same number of inputs and withdrawals. Due to the similarities of their function, "mixing" and "coinjoin" are terms frequently used interchangeably in the industry.

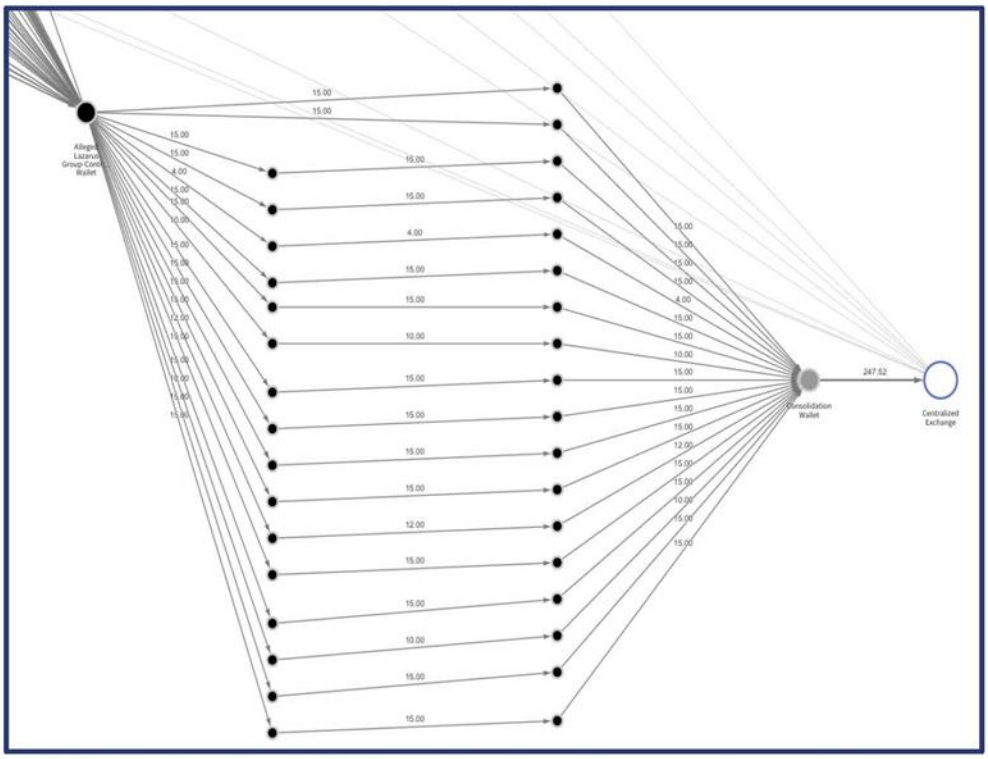


IMAGE 4: A graphical depiction of DPRK-affiliated actors' use of a consolidation point prior to moving stolen funds to a centralized exchange.

CASH-OUT AND HOLDING

Holding

As previously stated, DPRK-affiliated actors have demonstrated a pattern of moving funds into consolidation wallets. In some instances, the funds remain idle at those addresses for a period of time, ranging from a few weeks to as long as six years. Yet, the Lazarus Group's tactics for holding ill-gotten funds have evolved over time. Before 2018, it was not uncommon for the Lazarus Group to allow balances to sit idly in wallets for 12 to 18 months before suddenly sweeping these amounts into other pools of funds, and depositing these sums to an off-ramp, such as a peer-to-peer (P2P) service or exchange, where they could presumably trade for fiat currency. In 2019, a large majority of the funds stolen in DPRK-linked exchange hacks were liquidated in less than 60 days. More recently, the holding patterns of funds allegedly linked to nefarious DPRK activity are less predictable, where funds may sometimes move from the initial receiving wallet to a cash-out point in just a few days. In other instances, DPRK-affiliated actors cease the movement of funds at different points in the obfuscation process and let the funds sit idly for an indeterminate period of time.

The rationale behind DPRK's holding patterns remains a mystery. A commonly accepted theory is that cyber actors wait for a perceived lull in law enforcement activity in the hope that they will be able to move funds without detection. Alternatively, it is possible that there is a change of custody, wherein individuals acting on behalf of DPRK may physically turn custody over to a different, more trusted individual – perhaps even to the

Reconnaissance General Bureau or another government entity. Lastly, it is also possible that DPRK seeks to maximize its profits by using BTC as an investment vehicle, such that holding funds is a carefully calculated bet that the value of cryptocurrency will increase.

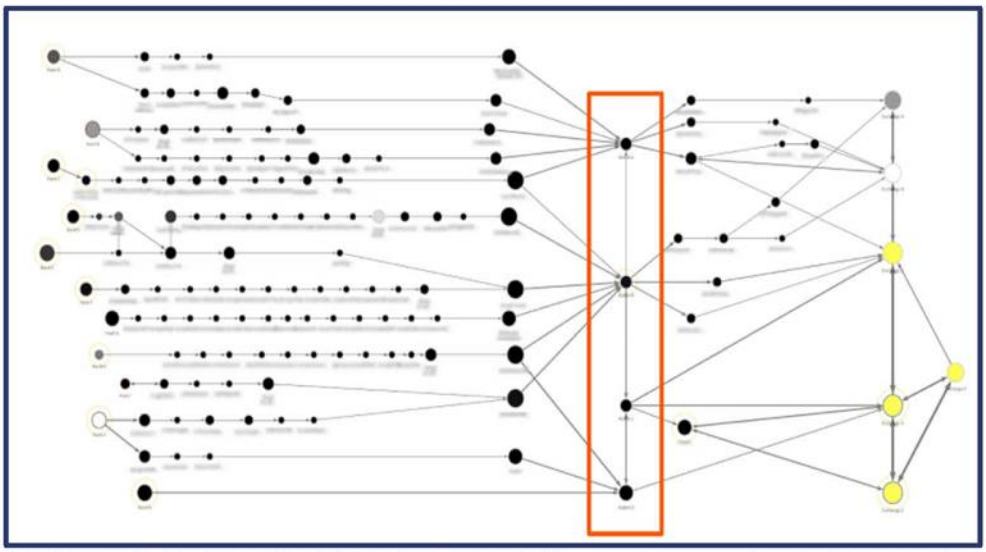


IMAGE 5: A graphical depiction of alleged DPRK stolen funds from 11 different cryptocurrency exchange hacks being moved to four consolidation wallets. This is likely DPRK's attempt to retain centralized control prior to cashing out at centralized exchanges.

Cash-Out

DPRK-linked stolen funds often display common cash-out characteristics. In approximately 2017, during the early days of its attacks on cryptocurrency exchanges, the Lazarus Group cashed out laundered funds at P2P exchanges. P2P exchanges differ from traditional centralized exchanges in that some P2P platforms operate in ways that allow users to act as unlicensed virtual asset service providers (VASPs) or unlicensed money service businesses (MSBs). By leveraging a P2P exchange, users traditionally are not required to register or provide KYC documentation. The use of P2P exchanges implies that the affiliated actors had trusted relationships with individuals who had access to large amounts of funds and could facilitate crypto-to-fiat transactions.

The DPRK-attributed hacking activity of the past few years reflects a tactical shift in TTPs, where funds are now consistently deposited to accounts at Eastern European or Asia-based exchanges. These exchanges have remained mostly noncompliant when presented with law enforcement requests for information requests or subpoenas. These exchanges have also been known to facilitate other illicit activity. In the last few years, DPRK-linked actors have forgone cash-out at P2P exchanges and have instead relied solely on converting cryptocurrency to fiat currency via centralized exchanges. It is believed that the trusted individuals that once operated using P2P exchanges have shifted to conducting transactions using the well-established infrastructure at those Eastern European or Asian exchanges.

Source: Chainalysis

Annex 66: US Justice Department's Disruption of DPRK's 'Maui' Ransomware Campaign

On 19 July 2022, US Justice Department announced the seizure of nearly half a million dollars in cryptocurrency that was paid as ransom to alleged DPRK cyberthreat actors and their accomplices by two US hospitals.

In May 2021, threat actors infected the servers of the medical center in the District of Kansas. The Kansas hospital paid approximately USD 100,000 ransom in Bitcoin to regain the use of their computers and equipment. The Kansas medical centre notified the authorities, which investigated the incident and was able to identify the previously unknown 'Maui' ransomware and trace the payment to money launderers abroad.

In April 2022, the authorities observed a Bitcoin payment worth approximately USD 120,000 into one of the seized cryptocurrency accounts. These accounts were identified with the cooperation of the Kansas hospital.

Authorities confirmed that the funds were related to the payment of a medical provider in Colorado that was hit by the 'Maui' ransomware. In May 2022, the FBI seized two cryptocurrency accounts that were used by the threat actors to receive the payments from the Kansas and Colorado health care providers. The District of Kansas then began proceedings to forfeit the hackers' funds and returned the stolen money to the victims.

See https://www.justice.gov/opa/pr/justice-department-seizes-and-forfeits-approximately-500000-north-korean-ransomware-actors for details.

Previously, on 7 July 2022, US authorities (Federal Bureau of Investigation, Cybersecurity and Infrastructure Security Agency and the Department of Treasury) released a Joint Advisory on 'Maui' ransomware, explaining that DPRK cyberthreat actors have been using this ransomware as early as May 2021 to target various healthcare and public health sector organisations. Victims of Maui ransomware was strongly advised "*to report the incident to their local FBI field office or CISA*". For technical details on 'Maui' ransomware see figure 66.

Figure 66: Joint Advisory on 'Maui' Ransomware

Alert (AA22-187A)

More Alerts

North Korean State-Sponsored Cyber Actors Use Maui Ransomware to Target the Healthcare and Public Health Sector

Original release date: July 06, 2022 | Last revised: July 07, 2022

Summary

The Federal Bureau of Investigation (FBI), Cybersecurity and Infrastructure Security Agency (CISA), and the Department of the Treasury (Treasury) are releasing this joint Cybersecurity Advisory (CSA) to provide information on Maui ransomware, which has been used by North Korean state-sponsored cyber actors since at least May 2021 to target Healthcare and Public Health (HPH) Sector organizations.

This joint CSA provides information—including tactics, techniques, and procedures (TTPs) and indicators of compromise (IOCs)—on Maui ransomware obtained from FBI incident response activities and industry analysis of a Maui sample. The FBI, CISA, and Treasury urge HPH Sector organizations as well as other critical infrastructure organizations to apply the recommendations in the Mitigations section of this CSA to reduce the likelihood of compromise from ransomware operations. Victims of Maui ransomware should report the incident to their local FBI field office or CISA.

The FBI, CISA, and Treasury highly discourage paying ransoms as doing so does not guarantee files and records will be recovered and may pose sanctions risks. Note: in September 2021, Treasury issued an updated advisory highlighting the sanctions risks associated with ransomware payments and the proactive steps companies can take to mitigate such risks. Specifically, the updated advisory encourages U.S. entities to adopt and improve cybersecurity practices and report ransomware attacks to, and fully cooperate with, law enforcement. The updated advisory states that when affected parties take these proactive steps, Treasury's Office of Foreign Assets Control (OFAC) would be more likely to resolve apparent sanctions violations involving ransomware attacks with a non-public enforcement response.

For more information on state-sponsored North Korean malicious cyber activity, see CISA's North Korea Cyber Threat Overview and Advisories webpage.

Download the PDF version of this report: pdf, 553 kb.

Click here for STIX.

Technical Details

Since May 2021, the FBI has observed and responded to multiple Maui ransomware incidents at HPH Sector organizations. North Korean state-sponsored cyber actors used Maui ransomware in these incidents to encrypt servers responsible for healthcare services—including electronic health records services, diagnostics services, imaging services, and intranet services. In some cases, these incidents disrupted the services provided by the targeted HPH Sector organizations for prolonged periods. The initial access vector(s) for these incidents is unknown.

Maui Ransomware

Maui ransomware (`maui.exe`) is an encryption binary. According to industry analysis of a sample of Maui (SHA256: 5b7ecf7e9d0715f1122baf4ce745c5fcd769dee48150616753fec4d6da16e99e) provided in Stairwell Threat Report: Maui Ransomware—the ransomware appears to be designed for manual execution [TA0002] by a remote actor. The remote actor uses command-line interface [T1059.008] to interact with the malware and to identify files to encrypt.

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Maui uses a combination of Advanced Encryption Standard (AES), RSA, and XOR encryption to encrypt [T1486] target files:

1. Maui encrypts target files with AES 128-bit encryption. Each encrypted file has a unique AES key, and each file contains a custom header with the file's original path, allowing Maui to identify previously encrypted files. The header also contains encrypted copies of the AES key.
2. Maui encrypts each AES key with RSA encryption.
   - Maui loads the RSA public (`maui.key`) and private (`maui.evd`) keys in the same directory as itself.
3. Maui encodes the RSA public key (`maui.key`) using XOR encryption. The XOR key is generated from hard drive information (`\\.\PhysicalDrive0`).

During encryption, Maui creates a temporary file for each file it encrypts using `GetTempFileNameW()` . Maui uses the temporary to stage output from encryption. After encrypting files, Maui creates `maui.log` , which contains output from Maui execution. Actors likely exfiltrate [TA0010] `maui.log` and decrypt the file using associated decryption tools.

See Stairwell Threat Report: Maui Ransomware for additional information on Maui ransomware, including YARA rules and a key extractor.

Indicators of Compromise

See table 1 for Maui ransomware IOCs obtained from FBI incident response activities since May 2021.

Table 1: Maui Ransomware IOCs

Indicator Type	Value
Filename	maui.exe
	maui.log
	maui.key
	maui.evd
	aui.exe
MD5 Hash	4118d9adce7350c3eedeb056a3335346
	9b0e7c460a80f740d455a7521f0eada1
	fda3a19afa85912f6dc8452675245d6b
	2d02f5499d35a8dffb4c8bc0b7fec5c2
	c50b839f2fc3ce5a385b9ae1c05def3a
	a452a5f693036320b580d28ee55ae2a3
	a6e1efd70a077be032f052bb75544358
	802e7d6e80d7a60e17f9ffbd62fcbbeb
SHA256 Hash	5b7ecf7e9d0715f1122baf4ce745c5fcd769dee48150616753fec4d6da16e99e
	45d8ac1ac692d6bb0fe776620371fca02b60cac8db23c4cc7ab5df262da42b78
	56925a1f7d853d814f80e98a1c4890b0a6a84c83a8eded34c585c98b2df6ab19
	830207029d83fd46a4a89cd623103ba2321b866428aa04360376e6a390063570
	458d258005f39d72ce47c111a7d17e8c52fe5fc7dd98575771640d9009385456
	99b0056b7cc2e305d4ccb0ac0a8a270d3fceb21ef6fc2eb13521a930cea8bd9f
	3b9fe1713f638f85f20ea56fd09d20a96cd6d288732b04b073248b56cdaef878
	87bdb1de1dd6b0b75879d8b8aef80b562ec4fad365d7abbc629bcfc1d386afa6

Attribution to North Korean State-Sponsored Cyber Actors

The FBI assesses North Korean state-sponsored cyber actors have deployed Maui ransomware against Healthcare and Public Health Sector organizations. The North Korean state-sponsored cyber actors likely assume healthcare organizations are willing to pay ransoms because these organizations provide services that are critical to human life and health. Because of this assumption, the FBI, CISA, and Treasury assess North Korean state-sponsored actors are likely to continue targeting HPH Sector organizations.

Mitigations

The FBI, CISA, and Treasury urge HPH Sector organizations to:

- Limit access to data by deploying public key infrastructure and digital certificates to authenticate connections with the network, Internet of Things (IoT) medical devices, and the electronic health record system, as well as to ensure data packages are not manipulated while in transit from man-in-the-middle attacks.

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- Use standard user accounts on internal systems instead of administrative accounts, which allow for overarching administrative system privileges and do not ensure least privilege.
- Turn off network device management interfaces such as Telnet, SSH, Winbox, and HTTP for wide area networks (WANs) and secure with strong passwords and encryption when enabled.
- Secure personal identifiable information (PII)/patient health information (PHI) at collection points and encrypt the data at rest and in transit by using technologies such as Transport Layer Security (TPS). Only store personal patient data on internal systems that are protected by firewalls, and ensure extensive backups are available if data is ever compromised.
- Protect stored data by masking the permanent account number (PAN) when it is displayed and rendering it unreadable when it is stored—through cryptography, for example.
- Secure the collection, storage, and processing practices for PII and PHI, per regulations such as the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Implementing HIPAA security measures can prevent the introduction of malware on the system.
- Implement and enforce multi-layer network segmentation with the most critical communications and data resting on the most secure and reliable layer.
- Use monitoring tools to observe whether IoT devices are behaving erratically due to a compromise.
- Create and regularly review internal policies that regulate the collection, storage, access, and monitoring of PII/PHI.

In addition, the FBI, CISA, and Treasury urge all organizations, including HPH Sector organizations, to apply the following recommendations to prepare for, mitigate/prevent, and respond to ransomware incidents.

Preparing for Ransomware

- **Maintain offline (i.e., physically disconnected) backups of data, and regularly test backup and restoration.** These practices safeguard an organization's continuity of operations or at least minimize potential downtime from a ransomware incident and protect against data losses.
  - **Ensure all backup data is encrypted,** immutable (i.e., cannot be altered or deleted), and covers the entire organization's data infrastructure.
- **Create, maintain, and exercise a basic cyber incident response plan and associated communications plan** that includes response procedures for a ransomware incident.
  - Organizations should also ensure their incident response and communications plans include response and notification procedures for data breach incidents. Ensure the notification procedures adhere to applicable state laws.
    - Refer to the National Conference of State Legislatures: Security Breach Notification Laws for information on each state's data breach laws.
    - For breaches involving electronic health information, you may need to notify the Federal Trade Commission (FTC) or the Department of Health and Human Services, and, in some cases, the media. Refer to the FTC's Health Breach Notification Rule and U.S. Department of Health and Human Services' Breach Notification Rule for more information.
  - See CISA-Multi-State Information Sharing and Analysis Center (MS-ISAC) Joint Ransomware Guide and CISA Fact Sheet Protecting Sensitive and Personal Information from Ransomware-Caused Data Breaches for information on creating a ransomware response checklist and planning and responding to ransomware-caused data breaches.

Mitigating and Preventing Ransomware

- **Install updates for operating systems, software, and firmware as soon as they are released.** Timely patching is one of the most efficient and cost-effective steps an organization can take to minimize its exposure to cybersecurity threats. Regularly check for software updates and end-of-life notifications and prioritize patching known exploited vulnerabilities. Consider leveraging a centralized patch management system to automate and expedite the process.
- **If you use Remote Desktop Protocol (RDP), or other potentially risky services, secure and monitor them** closely.
  - Limit access to resources over internal networks, especially by restricting RDP and using virtual desktop infrastructure. After assessing risks, if RDP is deemed operationally necessary, restrict the originating sources, and require multifactor authentication (MFA) to mitigate credential theft and reuse. If RDP must be available externally, use a virtual private network (VPN), virtual desktop infrastructure, or other means to authenticate and secure the connection before allowing RDP to connect to internal devices.

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Monitor remote access/RDP logs, enforce account lockouts after a specified number of attempts to block brute force campaigns, log RDP login attempts, and disable unused remote access/RDP ports.
  - Ensure devices are properly configured and that security features are enabled. Disable ports and protocols that are not being used for a business purpose (e.g., RDP Transmission Control Protocol Port 3389).
  - Restrict Server Message Block (SMB) Protocol within the network to only access servers that are necessary and remove or disable outdated versions of SMB (i.e., SMB version 1). Threat actors use SMB to propagate malware across organizations.
  - Review the security posture of third-party vendors and those interconnected with your organization. Ensure all connections between third-party vendors and outside software or hardware are monitored and reviewed for suspicious activity.
  - Implement listing policies for applications and remote access that only allow systems to execute known and permitted programs under an established.
  - Open document readers in protected viewing modes to help prevent active content from running.
- **Implement user training program and phishing exercises** to raise awareness among users about the risks of visiting suspicious websites, clicking on suspicious links, and opening suspicious attachments. Reinforce the appropriate user response to phishing and spearphishing emails.
- Require MFA **for as many services as possible**—particularly for webmail, VPNs, accounts that access critical systems, and privileged accounts that manage backups.
- Use strong passwords and avoid reusing passwords for multiple accounts. See CISA Tip Choosing and Protecting Passwords and National Institute of Standards and Technology (NIST) Special Publication 800-63B: Digital Identity Guidelines for more information.
- **Require administrator credentials to install software.**
- **Audit user accounts with administrative or elevated privileges** and configure access controls with least privilege in mind.
- **Install and regularly update antivirus and antimalware software on all hosts.**
- **Only use secure networks and avoid using public Wi-Fi networks.** Consider installing and using a VPN.
- **Consider adding an email banner to messages coming from outside your organizations.**
- **Disable hyperlinks in received emails.**

Responding to Ransomware Incidents

If a ransomware incident occurs at your organization:

- Follow your organization's Ransomware Response Checklist (see Preparing for Ransomware section).
- Scan backups. If possible, scan backup data with an antivirus program to check that it is free of malware. This should be performed using an isolated, trusted system to avoid exposing backups to potential compromise.
- Follow the notification requirements as outlined in your cyber incident response plan.
- Report incidents to the FBI at a local FBI Field Office, CISA at us-cert.cisa.gov/report, or the U.S. Secret Service (USSS) at a USSS Field Office.
- Apply incident response best practices found in the joint Cybersecurity Advisory, Technical Approaches to Uncovering and Remediating Malicious Activity, developed by CISA and the cybersecurity authorities of Australia, Canada, New Zealand, and the United Kingdom.

Note: the FBI, CISA, and Treasury strongly discourage paying ransoms as doing so does not guarantee files and records will be recovered and may pose sanctions risks.

Request for Information

The FBI is seeking any information that can be shared, to include boundary logs showing communication to and from foreign IP addresses, bitcoin wallet information, the decryptor file, and/or benign samples of encrypted files. As stated above, the FBI discourages paying ransoms. Payment does not guarantee files will be recovered and may embolden adversaries to target additional organizations, encourage other criminal actors to engage in the distribution of ransomware, and/or fund illicit activities. However, the FBI understands that when victims are faced with an inability to function, all options are evaluated to protect shareholders, employees, and customers. Regardless of whether you or your organization have decided to pay the ransom, the FBI, CISA, and Treasury urge you to promptly report ransomware incidents to the FBI at a local FBI Field

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Office, CISA at us-cert.cisa.gov/report, or the USSS at a USSS Field Office. Doing so provides the U.S. Government with critical information needed to prevent future attacks by identifying and tracking ransomware actors and holding them accountable under U.S. law.

Resources

- For more information and resources on protecting against and responding to ransomware, refer to StopRansomware.gov, a centralized, U.S. whole-of-government webpage providing ransomware resources and alerts.
- CISA's Ransomware Readiness Assessment is a no-cost self-assessment based on a tiered set of practices to help organizations better assess how well they are equipped to defend and recover from a ransomware incident.
- A guide that helps organizations mitigate a ransomware attack and provides a Ransomware Response Checklists: CISA-Multi-State Information Sharing and Analysis Center (MS-ISAC) Joint Ransomware Guide.
- The U.S. Department of State's Rewards for Justice (RFJ) program offers a reward of up to $10 million for reports of foreign government malicious activity against U.S. critical infrastructure. See the RFJ website for more information and how to report information securely.

Acknowledgements

The FBI, CISA, and Treasury would like to thank Stairwell for their contributions to this CSA.

Contact Information

To report suspicious or criminal activity related to information found in this Joint Cybersecurity Advisory, contact your local FBI field office at fbi.gov/contact-us/field, or the FBI's 24/7 Cyber Watch (CyWatch) at (855) 292-3937 or by e-mail at CyWatch@fbi.gov. When available, please include the following information regarding the incident: date, time, and location of the incident; type of activity; number of people affected; type of equipment used for the activity; the name of the submitting company or organization; and a designated point of contact. To request incident response resources or technical assistance related to these threats, contact CISA at report@cisa.gov.

Revisions

July 6, 2022: Initial Version
July 7, 2022: Added STIX

Source: https://www.cisa.gov/uscert/ncas/alerts/aa22-187a.

Annex 67: FATF Guidance on Virtual Assets and VASPs[115]

FATF

Guidance for a Risk-Based Approach for Virtual Assets and Virtual Asset Service Providers

Updated October 2021

IN BRIEF

The virtual asset (VA) sector is fast-moving and technologically dynamic, which means continued monitoring and engagement between the public and private sectors is necessary. In June 2020, the FATF completed its *12-Month Review of the Revised FATF Standards on VAs and VASPs*, which identified areas requiring greater FATF guidance in order to clarify the application of the revised FATF Standards.

The updated *Guidance for a Risk-Based Approach for Virtual Assets and VASPs* forms part of the FATF's ongoing monitoring of the virtual assets and virtual asset service provider (VASP) sector. The FATF will be vigilant and closely monitor the VA and VASPs sector for any material changes that necessitate further revision or clarification of the FATF Standards. This includes in relation to areas covered in this Guidance such as stablecoins, peer-to-peer transactions, non-fungible tokens and decentralised finance.

The updated Guidance, originally published in 2019, reflects the input from the public consultation in March –April 2021, and explains how the FATF Recommendations should apply to VA activities and VASPs; provides relevant examples; identifies obstacles to applying mitigating measures; and offers potential solutions. In particular, it focuses on the following six key areas:

- clarification of the definitions of VA and VASP
- guidance on how the FATF Standards apply to stablecoins
- additional guidance on the risks and the tools available to countries to address the ML/TF risks for peer-to-peer transactions
- updated guidance on the licensing and registration of VASPs
- additional guidance for the public and private sectors on the implementation of the "travel rule"
- principles of information-sharing and co-operation amongst VASP Supervisors

[115] Full version of FATF's '*Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers*' is at https://www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf

IN DETAIL

Part One reiterates the findings of the 2020 FATF report on *Virtual Asset Red Flag Indicators* and the FATF's *Second 12-Month Review of the Revised FATF Standards on VAs and VASPs*. The Guidance clarifies that central bank digital currencies are not considered to be VAs, although the FATF Standards would apply to them similar to any other form of fiat currency. It also outlines that all varieties of VASPs, regardless of their business model, should be treated on an equal footing from a regulatory and supervisory perspective.

Part Two discusses the concept of so-called stablecoins with a view to the risk of "mass-adoption", while also referencing specific design features which can impact ML/TF risks. It calls on countries, VASPs and other obliged entities to identify and to assess ML/TF risks relating to so-called stablecoins before launch and in an ongoing and forward-looking manner. It also calls on them to take appropriate measures to manage and mitigate the risks before launch. In addition, it calls on countries and VASPs to understand risks associated with peer-to-peer (P2P) transactions, which are transactions in VAs that do not involve obliged entities, and as well as the types and drivers of P2P transactions. As such, the Guidance expands on the risks and the tools available to countries to address the ML/TF risks for P2P transactions.

This section also provides a non-exhaustive list of elements in relation to VAs/VASPs that countries and VASPs need to consider when identifying, assessing, and determining how best to mitigate the risks associated with VA activities and the provision of VASP products or services.

The updated guidance includes more detailed definitions of virtual asset and VASP than in the 2019 Guidance. Countries are advised to take an expansive approach to the definitions. The definitions apply to the asset or service and not to the nomenclature or terminology being used. The Guidance provides detailed information about each of the components of the VASP definition and includes information about what is covered by each of them. This includes updated guidance on how stablecoins, non-fungible tokens (NFTs), decentralised finance (DeFi) and decentralised or distributed applications (DApp) and multisignature arrangements relate to the FATF Standards

The Guidance includes hypothetical case studies of stablecoins and initial coin offerings (ICOs) and the application of the FATF Standards, to shed more light on obliged entities. The revised Guidance also outlines that the FATF does not seek to regulate, as VASPs, natural or legal persons that provide ancillary services or products to a VA network, to the extent that they do not provide or actively facilitate as a business any covered VA activities or operations on behalf of their customers.

Part Three builds on the measures that countries should consider in understanding and mitigating the risks of P2P transactions. This revised section emphasizes that countries that ban or prohibit VA activities or VASPs should assess the ML/TF risks associated with VAs and VASPs on a periodic basis. It also refines the description on licencing/registration, including the addition of considerations concerning the licensing and registration process. The Guidance further sets out how to interpret the "correspondent banking and other relationships" definition in the FATF Standards.

In the context of Recommendation 16, the Guidance further refines the text on the travel rule by including a definition of transaction fees and how the travel rule applies to certain transactions where there are automatic refunds. It also clarifies :

- the approach towards counterparty VASP due diligence and what kind of information should be collected on transactions with unhosted wallets.
- the FATF's approach to sanctions screening and the travel rule, and batch transfers, in particular, that the FATF does not accept post facto transmission travel rule data.
- how countries and VASPs should approach the sunrise issue.

Part Four covers the application of the FATF Standards to VASPs and other obliged entities that engage in or provide VA activities under the FATF definition of VA/VASP. This section has been updated to include references to:

- correspondent banking and other similar relationships
- technological solutions enabling VASPs to comply with the travel rule in an effective and efficient manner
- counterparty VASP identification and due diligence
- VA transfers to/from unhosted wallets
- key red-flag indicators for VAs

Guidance for a Risk-Based Approach for Virtual Assets and VASPs - updated October 2021
IN BRIEF

Part Five provides country examples of the risk-based approach to VAs/VASPs and remains largely the same, with updated and new case studies.

Part Six is a new section of the the FATF Guidance which discusses FATF principles of information-sharing and co-operation amongst VASP supervisors. These are non-binding principles for supervisors that introduce a wide range of requirements (e.g., supervisors should acknowledge receipt of requests, respond to requests for information, and provide interim partial or negative responses in a timely manner) and facilitate co-operation between counterparts and exchange of relevant information.

DOWNLOAD THE GUIDANCE

Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers **(Updated October 2021)**

www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html

More information:

www.fatf-gafi.org/publications/virtualassets/documents/virtual-assets.html

Guidance for a Risk-Based Approach for Virtual Assets and VASPs - updated October 2021
IN BRIEF

Source: FATF, https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html

Annex 68: Questions of Panel's survey to Member States and their replies

Annex 68.1: Enquiries to Member States

In its effort to assess the impact of sanctions on humanitarian situations and humanitarian assistance operations within the Democratic People's Republic of Korea, the Panel in March 2022 requested information from a number of Member States, including those maintaining diplomatic presence in the country, with the following questions:

1. Any evidence in your possession, concerning the dynamics of the humanitarian situation in DPRK since 2017, when the latest comprehensive resolutions were adopted (concerning, p.e., incomes and employment, food availability, consumer goods availability, standards of living, healthcare, social benefits etc);

2. Assessment of the impact of UN sanctions on the humanitarian situation in the DPRK and how has that impact changed over time, especially since the end of 2017;

3. Assessment of the total cumulative negative effect of sanctions for socio-economic situation in DPRK (including the areas mentioned in para 1) after 2017 and how it has translated into long-term factors affecting humanitarian situation;

4. What causal chains of the sanction impact on the humanitarian situation in DPRK do you observe? If possible, please include information or examples that support your assessment;

5. What are the sectors and population groups you consider most affected by the sanctions?

6. Assessment of the negative influence of UN sanctions on international cooperation, food aid and humanitarian assistance to DPRK and the work of international and non-governmental organisations carrying out assistance and relief activities in the DPRK for the benefit of the civilian population of the DPRK. If possible, please include information or examples that support your assessment.

7. Could you propose ways in which UN Security Council and other UN organisations might act to prevent the negative humanitarian impact of sanctions and mitigate the unintended adverse impacts of sanctions on the civilian population of the Democratic People's Republic of Korea and on humanitarian aid operations to benefit the country's vulnerable population?

Annex 68.2: Replies from Member States

Member State 1

[Member State 1] remains committed to providing humanitarian assistance to the most vulnerable and crisis affected people in DPRK, based on need and in line with the humanitarian principles of humanity, neutrality, impartiality and independence. We note that COVID 19-related border constraints imposed by the DPRK have significantly limited international humanitarian response activities inside the country over the past two years. In 2021, [Member State 1] provided $1.5 million in humanitarian assistance funding to the World Food Programme and UNICEF to support the humanitarian response in DPRK, where feasible, and enable a timely scale-up of their operations quickly once border restrictions are eased.

In terms of sanctions, [Member State 1] implements Security Council decisions through regulations enacted under [Member State 1's Act]. Sanctions regulations relating to the DPRK were first enacted in 2006 under the [Member State 1's Regulations]. Under these regulations, [Member State 1] mitigates unintended humanitarian consequences of sanctions through legislated exceptions for humanitarian activities, and through the permit and certificate process. We note a number of [Member State 1]-based non-governmental organizations have continued to apply for exemptions, in anticipation of the DPRK's eventual resumption of importation of goods. Some of these organizations have consistently pointed to the lack of banking/financial services as a challenge to delivering in-country assistance, including as a result of overcompliance by financial institutions in response to the prohibition on the provision of financial services and transfer of assets as prescribed by multiple Security Council resolutions, such as resolutions 2094 (2013) and 1874 (2009).

[Member State 1] stands ready to support the work of the Panel and welcomes further inquiries on the implementation of Security Council sanctions related to the DPRK.

Member State 2 (UN Official Translation)

Non-paper submitted by [Member State 2] on the negative humanitarian impact of Security Council sanctions on the Democratic People's Republic of Korea[116]

1. The Democratic People's Republic of Korea (DPRK) has been facing humanitarian challenges for a long time; sanctions imposed by the Security Council on the DPRK have impacted the humanitarian situation and people's livelihood in that country, producing serious negative humanitarian effects. Although the DPRK policy of "sealing the border to defend against the epidemic" has some connection with the deterioration of the humanitarian situation in the DPRK, that policy is a measure of last resort taken by the DPRK in consideration of its own backward medical situation, in an effort to prevent the entry of the virus. This provides a classic example of how long-term sanctions have deprived it of the ability to mount an active defence against the epidemic, as well as of those sanctions' negative humanitarian effects. All parties should draw a distinction between this epidemic-prevention border closure policy and the impact of sanctions on the DPRK, and avoid simply blaming this policy for the deterioration of the humanitarian situation in the DPRK.

2. The 2016 and 2017 Security Council resolutions on sanctions against the DPRK heavily impacted DPRK bulk-commodity exports and foreign exchange earnings, and restricted its imports of machinery and equipment and some civilian goods. As these sanctions have been in place for more than five years now, their negative impact on the humanitarian situation in the DPRK is steadily increasing:

(i) *Restricting the right to development of the DPRK*

First, the size of the DPRK gross domestic product (GDP) is shrinking by the day. According to external estimates, the DPRK GDP could, under normal conditions, basically maintain a positive growth rate of 1 per cent per year; it grew by 3.9 per cent to US$34.5 billion in 2016. As a result of the sanctions, the economy instead entered a period of negative growth in 2017, with yearly growth rates of -3.5 per cent, -4.1 per cent, 0.4 per cent and -4.5 per cent through 2020. Although the DPRK has continued to increase the proportion of fiscal expenditure in the areas of infrastructure construction and people's livelihood in recent years, the actual amount of funds has decreased significantly.

Second, the scale of DPRK foreign trade has sharply declined. The normal scale of DPRK imports and exports was around US$6.5 billion per year in 2015, but it shrank to US$700 million in 2020. Even before the DPRK implemented its epidemic-prevention border closure policy, the value of foreign trade was only US$3.2 billion in 2019, with the export component shrinking particularly significantly and contributing to the continuous increases in the trade deficit. Financial sanctions have left the DPRK short of funds, while the repatriation of DPRK labourers by various countries has reduced its foreign exchange earnings by more than US$200 million and rendered foreign-exchange turnover extremely difficult. Security Council sanctions resolutions, which are supposed to be a means, not an end, are restricting the right to development of the Democratic People's Republic of Korea. The deterioration of the overall DPRK economy is an important cause of the humanitarian problem in that country.

[116] One expert believes that "impact" in this translation version should be "consequences".

(ii) *Constraining the right to survival of the common people in the DPRK*

First, food shortages are worsening. Agriculture in the DPRK has long been weather-dependent, and in 2020 and 2021 it suffered from successive floods and droughts, necessitating the mobilization of emergency food reserves to provide relief. The level of mechanization is an important determinant of food production in the DPRK. Before the implementation of the sanctions concerned, the country imported about US$200 million-worth of vehicles and spare parts from [Member State 2] every year. Following sanctions implementation, the embargo on tractors, rice transplanters, grain drills, harvesters and their spare parts led directly to a serious shortage of agricultural equipment in the DPRK. Currently, 70 per cent of the agricultural machinery in the DPRK is reportedly already unusable owing to breakdowns and the shortage of spare parts. According to estimates by the Food and Agriculture Organization of the United Nations, yearly grain yields in the DPRK from 2016 to 2020 in millions of tons were 4.97, 4.84, 4.23, 5.6 and 4.66 respectively, with an average annual food deficit of more than one million tons. The daily per capita intake of 52.3 grams of protein and 38.1 grams of fat in the DPRK is less than half of the normal level.

Second, clean water is a conspicuous issue. According to tests conducted by specialized agencies, E. coli bacteria counts in DPRK tap water exceeded the standard by more than 10 times. In 2017, the DPRK proposed to promote a water-supply and sewage pipeline renovation project in Pyongyang at the national level, but the project has been unable to move forward owing to difficulties in importing water pipes, valves and water purification equipment. According to statistics from the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 8.4 million people in the DPRK still do not have access to clean drinking water.

Third, the medical situation is difficult to ameliorate. The DPRK relies on imported medical equipment, medical consumables and medicines, and there is a serious lack of basic medical supplies like vaccines, antibiotics, nutrients and vermicides, and tuberculosis, hepatitis and malaria are still highly prevalent in the country. Owing to shrinking foreign exchange earnings and cumbersome procedures for importing medical equipment resulting from the sanctions, replacement of medical equipment in the DPRK has been slow in recent years. The Pyongyang Friendship Hospital, for example, which specialises in treating diplomatic-mission personnel stationed in the DPRK, still relies on its self-modified X-ray and chest X-ray machines, which take half an hour to warm up each time they are used to provide examinations.

(iii) *Directly impacting the quality of life of the people in the DPRK*

First, there is a shortage of daily-use items and household appliances. As a result of the sanctions, it is difficult to buy small items such as wire dish-scouring pads, soup spoons, kitchen utensils, light bulbs and mobile phones on the market in the DPRK, as well as large items such as aluminium doors and windows, water heaters, washing machines, sinks, gas stoves, lifts, refrigerators and air conditioners. Although the DPRK Government is committed to improving people's livelihoods and is vigorously promoting the construction of 10,000 housing units per year, such construction projects are also affected by sanctions restricting the import of some decoration materials.

Second, people are suffering from power outages. With a total installed power-station capacity of 8.15 million kilowatts and a generating capacity of 23.8 billion kilowatt-hours, power plants in the DPRK are mainly hydroelectric and thus subject to seasonal factors, making the supply of electricity unstable. As a result of the

embargo on solar panels, household generators and transformers, 24-hour access to electricity for ordinary households in the DPRK has become a luxury.

Third, insufficient transport capacity is a prominent problem. In recent years, under the effect of sanctions, epidemic prevention measures and other factors, shipping is taking on increasing importance for the DPRK. The total capacity of DPRK ships is only 1.01 million gross tons, with port throughput totalling 43.61 million tons. As large numbers of ships are successively sanctioned and scrapped, DPRK shipping capacity has significantly weakened, severely restricting the import of goods for the livelihood of its people.

(iv) *Threatening the safety of life and property of the people in the DPRK*.

First, production accidents occur frequently. In 2020, the production of basic industrial products such as coal and steel were reduced by more than 9 million tons and 4 million tons respectively compared to 2016, and the number of safety accidents caused by aging and overloaded machinery and equipment has increased significantly.

Second, there are many traffic accidents. Infrastructure construction in the DPRK has not been improved for many years; the rail network totals roughly 5,300 kilometres of track, but with the embargoes of materials such as rails, rail sleepers and base plates, rails cannot be effectively maintained for long periods of time and train derailments and stoppages are common. There are about 26,000 kilometres of public roads in the country, which are basically dirt or gravel roads, most of which are maintained by bedding and re-burning backfill of waste asphalt, and the roads are in extremely poor condition. As imports into the DPRK of batteries, anti-skid chains, spark plugs, automotive hardware, car lights and other spare parts are embargoed, vehicles in the DPRK also go without effective maintenance for long periods of time and junk vehicles are still on the road, resulting in traffic accidents.

(v) *International organizations' humanitarian assistance to the DPRK is a drop in the bucket*.

The United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the Food and Agriculture Organization of the United Nations (FAO), the World Food Programme (WFP), the World Health Organization (WHO) and other United Nations agencies and some non-governmental organizations have been providing humanitarian assistance to the DPRK for a long time. Although they have achieved some results, they have had little effect in fundamentally improving the humanitarian situation in the DPRK.

First, there is great demand for humanitarian assistance to the DPRK. The annual budget of the above-mentioned agencies for humanitarian assistance to the DPRK is about US$140 million, but the actual financing only amounts to about US$40 million, and a single item of assistance can only cover a maximum of some 2 million people (the total population of the DPRK is about 25 million), so the actual effect is limited.

Second, the long-arm jurisdiction and secondary sanctions exercised by the United States have intimidated financial institutions and economic and trade entities in various countries, so that banks and trade and logistics companies are basically afraid to undertake business involving the DPRK, resulting in difficulty implementing humanitarian aid to the DPRK.

Third, although humanitarian aid to the DPRK is eligible for exemptions, it is nonetheless beset with difficulties in the practical operation of customs clearance and transport procedures; anything unforeseen occurring at a particular stage in the

process results in the goods and materials being held in place, which greatly affects the efficiency of the aid. With the withdrawal of United Nations staff from the DPRK over the past two years, it has become even more difficult to carry out the relevant work.

Member State 3

[Member State 3]'s response to questions
regarding the humanitarian situation in North Korea

1. First of all, it is important for the Panel of Experts (PoE), as a basis of this discussion, to recall that under UNSCR 2397 paragraph 23, the Security Council "condemns the DPRK for pursuing nuclear weapons and ballistic missiles instead of the welfare of its people while people in the DPRK have great unmet needs, emphasizes the necessity of the DPRK respecting and ensuring the welfare and inherent dignity of people in the DPRK, and demands that the DPRK stop diverting its scarce resources toward its development of nuclear weapons and ballistic missiles at the cost of the people in the DPRK". In addition, paragraph 25 of the resolution stresses "the DPRK's primary responsibility and need to fully provide for the livelihood needs of people in the DPRK".

2. We also take note of the PoE's final report released on April 1, 2022, which mentions that the deterioration of the humanitarian situation in North Korea is "due to a combination of the COVID-19 pandemic and the resulting border closure, probably the most important factor in the past two years, sanctions, natural disasters and changes in internal economic policy for greater use of administrative command methods" (paragraph 186), and that "there is no reliable methodology that disambiguates the effects of United Nations sanctions from other factors, including unilateral sanctions regimes and domestic socioeconomic problems" (paragraph 187).

3. In our view, the root cause of the deteriorating humanitarian situation in North Korea is North Korea itself diverting its scarce resources toward development of nuclear weapons and ballistic missiles at the cost of the welfare of its own people. It is not only practically difficult but also misleading to try to objectively discuss only UN sanctions independent of other possible elements which can affect the humanitarian situation in North Korea. In this context, it is also worth recalling the G7 Foreign Ministers' Statement responding to the launch of an ICBM by North Korea on 26 March 2022, which states that "[w]e are clear that the dire humanitarian situation in the DPRK is the result of the DPRK's diversion of the DPRK's resources into weapons of mass destruction and ballistic missile programs rather than into the welfare of its people".

4. We would like to request the PoE that if it receives any "empirical data" or "assessment" from countries in response to its request for information, the objectivity and reliability of such information should be thoroughly verified as the PoE considers it, and that the PoE's analysis should be carefully conducted using neutral, reliable and appropriate methodology.

5. It should also be recalled that UNSCR 2397 paragraph 25 provides for exemption of sanctions to enable necessary humanitarian assistance. Furthermore, we understand that, as a result of the review in response to the Covid-19 pandemic, the application process for exemption has been expedited, and the period of exemption has been extended for cases not related to Covid-19 as well. We would like to stress that necessary humanitarian assistance can be provided if procedures are appropriately completed. [Member State 3] takes the position that humanitarian assistance to meet the needs of North Korea should be provided in accordance with the existing procedures and we support the efforts of the Committee and other relevant countries to further expedite and simplify the procedures as necessary.

6. Finally, in its letter dated 18 March 2022, the PoE asked if a receiving Member State could “propose ways in which the UN Security Council and other UN organizations might act to mitigate any negative humanitarian impact of UN sanctions". We consider it critically important that the PoE's consideration, discussion and recommendations should be made based on its own objective and unbiased examination and analysis of information. If any Member State submits such a policy recommendation in response to the said letter, it should not be used as a direct basis of new recommendations by the PoE, nor should such a recommendation be quoted directly in the PoE’s deliverables.

Member State 4

[Member State 4] appreciates the Panel's reports to the Security Council and its Sanctions Committee on the DPRK on issues concerning the unintended impact of UN sanctions measures on the civilian population of the DPRK, pursuant to paragraph 25 of resolution 2397 (2017). The resolution reaffirms that the measures imposed by resolutions 1718 (2006), 187 4 (2009), 2087 (2013), 2094 (2013), 2270 (2016), 2321 (2016), 2356 (2017), 2371 (2017), 2375 (2017), 2397 (2017) are not intended to have adverse humanitarian consequences for the civilian population of the DPRK or to affect negatively or restrict those activities, including economic activities and cooperation, food aid and humanitarian assistance, that are not prohibited by the above-mentioned resolutions, and the work of international and non-governmental organizations carrying out assistance and relief activities in the DPRK for the
benefit of the civilian population of the DPRK.

As you note in your letter, the Panel's ability to report on this issue has been hindered by a lack of empirical and verifiable data on which to base its analysis. The DPRK's self-imposed border closure since January 2020, and its impact on the in-country international presence and country visits, similarly affects our ability to provide adequate and reliable empirical data.
The humanitarian situation in the DPRK has long been of concern to the international community, expressed, inter alia, in Security Council resolution 1718 (2006) that underlined the "importance that the DPRK respond to other security and *humanitarian concerns* of the international community" (emphasis added). The lamentable humanitarian situation predates the UN sanctions measures, and points to the responsibility not of sanctions or ineffective implementation of exemptions, but of policy choices by the government of the DPRK It is our assessment that economic priorities made by the DPRK government, where national resources are channelled to the continued development of nuclear weapons and ballistic missiles not only subverts stability in the region and undermines international peace and security, but also aggravates an already deteriorating economic and humanitarian situation, and the vulnerability of the people of the DPRK The self-imposed closure of the DPRK's border has reinforced already difficult circumstances for the people of the DPRK. It furthermore directly adds to operational limitations for humanitarian organisations.

The 1718 Committee has since January 2021 approved sanction exemptions for 12 humanitarian projects in addition to 32 extensions/ amendments of already approved projects. However, due to the continuous blockade a limited amount of this humanitarian assistance has entered the country and reached the recipients. We are also aware that the international society, through various channels, have offered to provide Covid-19 vaccines, but that these offers so far have been turned down by the DPRK.

[Member State 4] is committed to the expedient processing of humanitarian exemptions aimed at facilitating humanitarian assistance to those in need. We have a long-standing policy of depoliticised humanitarian assistance. Over the years, we have consistently contributed assistance to the vulnerable population of the DPRK. On this basis, we note that among the changed factors that are related to the work of international and non-governmental organizations carrying out assistance and relief activities in the DPRK for the benefit of the civilian population, is the absence of a stable banking channel to support such activities. We are not in a position to assess the reason for the lack of such a channel but note that its absence has created unwanted

uncertainties for humanitarian activities. Lack of access and monitoring has compounded the effects of the in-country cash shortage.

Last year, the 3rd Plenary Meeting of 8th Central Committee of the Workers Party of Korea reportedly assessed that "the people's food situation is now getting tense" and a nation-wide mobilisation took place to prevent and mitigate widespread risks linked to typhoons and floods, which have severely hit the country in the past years. We are, however, not aware that sanctions measures would have prevented the DPRK to import food supplies to make up for their reported shortfall in grain production.

We have been informed that among humanitarian partners, at least one organization is of the impression that sanctions in general have contributed to higher logistical costs as well as operational stresses in importing humanitarian goods into DPRK. As the Panel noted in its Final Report submitted in accordance with paragraph 2 of Council resolution 2569 (2021), the "unintended humanitarian consequences of United Nations sanctions affecting the civilian population continue to be difficult to disaggregate from other factors".

The lack of access for and monitoring of humanitarian assistance in accordance with international principles continue to remain main obstacles for international and non-governmental organizations carrying out assistance and relief activities in the DPRK for the benefit of the civilian population. In the event that the DPRK's border closure is lifted to allow for unrestricted humanitarian operations, we could foresee situations for which the absence of an exceptional payment modality or a stable, safe and transparent banking channel in compliance with the UN Sanctions, at some point might delay or otherwise impact assistance and relief activities in the DPRK.

Member State 5

International community and [Member State 5] experts on Democratic People's Republic of Korea (DPRK) assess that the humanitarian situation in the DPRK is critical. According to United Nations Office for the Coordination of Humanitarian Affairs (OCHA), humanitarian situation in the DPRK has worsened in terms of food security, medical and public health care system, and water. In particular, the situation for vulnerable groups, such as children and the elderly, has deteriorated. In 2021, the number of malnourished children significantly went up compared to 2020, and children with pneumonia from January to June of 2021 increased by 69% over the same period of the previous year.

While limited access to information does not allow a clear-cut assessment of the current humanitarian situation in the DPRK, the outbreak of COVID-19 and its border closure measure to respond it starting from January 2020 have impeded transports of humanitarian supplies and left great negative impact on conditions of the civil population of the DPRK. As of March 18, 2022, 11 of 13 projects by humanitarian organizations of the [Member State 5] that have been granted sanctions exemption were not able to ship aid and relief supplies to the DPRK due to its strict lockdown and applied for extension of their sanctions exemption. Besides, international organizations in the DPRK, including WFP, WHO, and UNICEF, have expressed concerns that its long-term border closure have prevented aid workers from returning to the country and aid supplies from being brought in. According to the Global Alliance for Vaccines and Immunization (GAVI), the DPRK relies heavily on humanitarian aid in terms of crucial medicines and relief items. For instance, 98% of childhood vaccines for under the age of 5 are provided by international organizations and NGOs.

[Member State 5] government is concerned about the humanitarian crisis in the DPRK and believes that humanitarian assistance is necessary to relieve this crisis. We appreciate that the 1718 Committee revised the Implementation Assistance Notice No.7 (IAN No.7) on November 30, 2020, to streamline the process of sanctions exemption. This measure has contributed to accelerate the approval process for humanitarian projects and COVID-19 relief projects. There remains a need to re-establish the banking channel, bring back staffs of international organizations and NGOs to the DPRK in order to fully carry out and monitor humanitarian support, and continue to communicate with NGOs.

Member State 6

In response to request OC.15 of 18 March 2022 from the Panel of Experts, we report the following.

The rapid deterioration of the humanitarian situation in the Democratic People's Republic of Korea in 2018–2019 was a direct result of the indiscriminate application of international sanctions, which exacerbated existing problems (such as economic insularity and inefficiencies, and the impact of natural disasters). In 2020–2021, the situation was compounded by the negative effects of the coronavirus disease (COVID-19) pandemic and the resulting measures to suspend foreign trade. These measures were necessitated in large part by the dire state of health care as a result of the sanctions.

For objective reasons, primarily the lack of agricultural land, the Democratic People's Republic of Korea is unable to feed its population on its own; it does not have a developed pharmaceutical industry; and its health-care system is in an unacceptably poor state. Nevertheless, improving the well-being of the population in 2021–2022 was declared the main focus of the work of the party and the Government. A large-scale housing programme is being implemented, and about 12,000 new apartments are commissioned annually in the capital alone. As part of measures to address the food problem, more greenhouses, livestock farms and fertilizer production facilities are being built. The urgency of the situation is clear from the variety of the first consignments to arrive in the Democratic People's Republic of Korea after the borders were opened, comprising construction and finishing materials, powdered milk, sugar, vegetable oil, soap, washing powder, medicines and garment accessories for sewing school uniforms.

The humanitarian situation in the Democratic People's Republic of Korea is very much, even crucially, dependent on links with the outside world.

The Democratic People's Republic of Korea needs to acquire, by purchase and/or bilateral and international aid donation, food, fertilizers, pesticides, medicine, medical equipment and much more. It also requires assistance in training and developing the skills of local doctors.

Such opportunities have, however, been completely eliminated by the sanctions and the climate of ostracism that has been created.

Imports of petroleum products are restricted, and equipment and machinery, cars, chemical products and almost all types of raw materials cannot be lawfully procured from abroad. The Democratic People's Republic of Korea cannot even buy permitted items because it has no export revenues or currency reserves, banking channels have been blocked, almost its entire merchant fleet has been outlawed and foreign ships are prohibited from entering its ports.

The self-isolation supposedly because of COVID-19 was essentially just the culmination of the long-standing blockade forced upon the country by the sweeping and indiscriminate sanctions. In real terms, the contribution of international humanitarian organizations to addressing the problems faced by the most vulnerable people in North Korea has been extremely small in recent years. The largest donor to the Democratic People's Republic of Korea has always been the World Food Programme, through which $215 million is expected to be allocated over the five-year period from 2019 to 2023, representing $10 per person per year (covering 4.4 million people). Such stinginess on the part of donors is due in

large part to external pressure and retaliation against anyone who enters into any sort of relations, even on humanitarian grounds, with the Democratic People's Republic of Korea.

The food situation has worsened in 2022. The market price of rice, which serves as a basis for all food prices, has now surpassed 5,700 won per kilogram. By the beginning of the "barley hump" in June (the hungriest time of the year), the price could exceed 7,000 won, dragging with it all other commodity prices.

A food rationing system is in effect only in the capital and is reserved for privileged groups. It has emerged that a number of categories of people have been dropped from the list of those covered by the centralized supply, and rations have been reduced to a minimum for all other categories. To survive, families rely on small-scale black-market trading and all sorts of side jobs, such as street vending, home-based work and cooperatives. The real income of average North Koreans has decreased by at least 1.5 times over the past two years, entailing a significant reduction in the quantity and nutritional value of the food that they can afford. Some items have been completely excluded from their diet, such as sugar and vegetable oil. As always in such circumstances, children, persons with disabilities and pregnant women have been hit the hardest.

Without sufficient fertilizers, pesticides, fuel and machinery, which can be obtained only through imports, cooperatives cannot significantly increase food production. A radical change in the current situation will not be possible without urgent deliveries of grain from abroad.

The state of health care in North Korea has never been as dire as it is now. More than 90 per cent of medicine needs used to be met through imports. Domestic production of medicines has collapsed because of the failure to obtain the necessary components and packaging from abroad. As a result, almost all products sold at pharmacies are no longer available for purchase over the counter. Many drugs, including insulin, could not be purchased for any money in 2020–2021.

Given the lack of precursors, basic blood tests cannot be performed. The majority of laboratories and X-ray units were closed down after the stocks of imported consumables were exhausted and machines failed owing to a shortage of spare parts for medical equipment. Pyongyang Medical University now has the only working magnetic resonance imaging machine in the capital. There is no such equipment at all in the provinces.

Hospitals do not have even basic items such as alcohol, absorbent cotton, disposable syringes and adhesive plaster. People who have the means prefer to be treated by private doctors, but this is very expensive. The areas of medicine that were hit the hardest in the Democratic People's Republic of Korea over the past two years were those that used imported components the most in treatment, namely, oncology, cardiovascular surgery, dentistry and ophthalmology. There has been a significant increase in the mortality rate for cancer, cardiovascular disease and, in particular, diabetes, which is widespread in the Democratic People's Republic of Korea.

The construction of a multifunctional hospital building in Pyongyang has been completed, and large medical centres have been built or are under construction in every province. Equipping them, however, has posed serious problems. The country does not have, and does not expect to obtain, the hard currency necessary to purchase expensive modern equipment.

The suspension of vaccine supplies from abroad and the depletion of existing supplies led to the spread of diseases such as tuberculosis and hepatitis. Another negative consequence was an extreme shortage of hygiene items. The Democratic People's Republic of Korea has traditionally procured from abroad large quantities of soap, washing powder, detergents and chemicals for cleaning clothes, and raw materials for the production of haberdashery goods. Such a shortage inevitably resulted in pervasive helminthiasis and an increase in gastrointestinal disease and poisonings.

An option that could be explored is the establishment of a special replenishment fund, which would be made up of the proceeds from exports under special quotas of North Korean goods that can be traded on the international market, including coal, iron ore and seafood, with funds deposited into a special account. Funds from this account would be used under the supervision of the Security Council Committee established pursuant to resolution 1718 (2006) to purchase food, medicine and Western parts and consumables for medical equipment in the Democratic People's Republic of Korea.

Member State 7

[Member State 7] has maintained diplomatic relations with the Democratic People's Republic of Korea, henceforth DPRK, since [year] and operates an Embassy in Pyongyang since [year]. [Member State 7]'s commitment to peace and development on the Korean peninsula remains strong and is manifested not least through the work of our Embassies in Seoul and Pyongyang, the [Member State 7 contingent], and through our [Special Envoy of Member State 7].

Due to the strict anti-epidemic measures of the DPRK in response to the coronavirus pandemic, [Member State 7] decided to temporarily relocate its diplomatic staff at the Embassy in Pyongyang to [City in Member State 7] in [month, year]. The Embassy remains open, with local staff working in Pyongyang. Our diplomatic staff stand ready to return to Pyongyang as soon as circumstances allow.

Over the first two decades of this millennium, [Member State 7] has consistently been one of the largest donors to international humanitarian organisations in the DPRK. [Member State 7]'s humanitarian assistance is strictly needs-based and adheres to the humanitarian principles of humanity, neutrality, impartiality and independence. Information obtained through the work of humanitarian partners and organisations in the DPRK has fed into the analysis below.

The Government of the DPRK has primary responsibility for the wellbeing of its people and the humanitarian situation in the country. The sanctions instituted by the UN Security Council follow from the illicit activities of the Government of the DPRK. Therefore, the root cause of any consequences of UN Sanctions is the policy of the Government of the DPRK. The Government of the DPRK is consistently obstructing transparency about in-country humanitarian needs. Given the lack of reliable data and the difficulty in disaggregating the effects of UN sanctions from DPRK policy on the humanitarian situation, the answers below are only fragments. Hopefully, these can feed into a more holistic analysis by the Panel of Experts.

1. Empirical data on the effect of sanctions are generally easier to extract from the time immediately following the imposition of the sanctions in 2017. Over the course of 2018, the price of petrol in Pyongyang rose around 250%, adjusting for exchange rates and inflation. This was an immediate effect following the cap of oil imports. The direct humanitarian effect of the spike in petrol prices, however, is harder to determine. Distribution, including of humanitarian assistance, and agriculture will have been affected. However, the indirect effect on food prices was less pronounced. The price of basic foods in Pyongyang was, in fact, relatively stable from 2017 through 2020. Given the fact that the majority of the population lives on domestic produce, their standard of living does not directly depend on the price of imports such as petrol. Rather, in relative terms, higher prices for petrol and imported goods will have affected the middle class in Pyongyang more.

   UN sanctions, in combination with explicit policy of the Government of the DPRK, may have created a pretext for the re-centralisation of economic activity in fewer enterprises and increased state control. In

2018, Air Koryo, the national air carrier, diversified and started selling petrol and consumption goods. Conversely, it seems to have been harder for smaller businesses controlled by private individuals to weather the effects of sanctions. This economic re-centralisation has later been compounded by the strict anti-epidemic measures of the Covid-19 era. Seeing as most people in the DPRK are dependent on income outside the State Distribution System, the increased centralisation of economic activity has most likely had a negative humanitarian effect. This negative effect would have been gendered, seeing as official power structures in the DPRK are male-dominated and women have played a comparatively larger role in informal trade.

On a more aggregate level, economic growth seems to have decreased from 4% in 2016 to 1,5% in 2017. Estimates about how much of this is attributable to sanctions vary. Official trade data suggest that annual, aggregate trade fell by USD 3 billion annually in the years 2018-2019. The most direct impact of sanctions on the livelihood of people in need seems to have been the operational hurdles created for humanitarian organisations.

2. One of the more direct impacts of UN sanctions seems to have been the operational constraints created for humanitarian organisations. The Panel of Experts will be aware of such constraints and [Member State 7] welcomes that the process for granting humanitarian exemptions has been streamlined and the processing time has been reduced. Furthermore, before the coronavirus pandemic, none of the larger humanitarian organisations expressed that they lacked capacity to absorb additional funds. This suggests that the UN sanctions, while unintentionally negatively impacting some humanitarian operations, have not precluded additional funds to humanitarian assistance in the DPRK.

The main obstacle to humanitarian operations due to the Governments policy, unintended effects of UN sanctions, compounded by the coronavirus pandemic and the cancellation of regular travel, seems to have been the absence of a banking channel through which humanitarian organisations could pay for operational expenses inside the DPRK. The difficulty in ascertaining that the Government of the DPRK does not divert resources from banks and financial institutions
to fund illicit activities has regularly led to the complete absence of means to make financial transfers to the DPRK. Even before the coronavirus pandemic, roughly 90% of humanitarian financing was spent outside the country. Cash had to be brought in to pay for e.g. salaries, rent and logistics. Fundamentally, the DPRK economy is cash-based and lacks a credible system of accountability. As such, the difficulty to pay for operational expenses inside the DPRK has limited the scope of technical assistance programmes to Pyongyang and its environs, even though financing for broader programmes was available.

3. Disaggregation of the causes of humanitarian outcomes in the DPRK remains extremely difficult, not least because of the general lack of reliable data from national authorities. Even so, it is clear that the DPRK's border closure has had a significantly larger effect on humanitarian outcomes than unintended effects of UN sanctions.

   The broad coverage pre-Covid of childhood vaccination programmes against measles, tuberculosis, polio and other preventable diseases has been reduced significantly as a consequence of the closed borders. Furthermore, the closed borders have also been followed by reports of acute shortages of medicine, insulin, and treatment for malnourishment. Significant food price spikes, even for domestic produce, were observed in 2020. Without international observers, it remains difficult to assess the humanitarian situation in the DPRK, especially outside Pyongyang.

4. As mentioned above, the absence of a banking channel has created significant operational constraints for humanitarian organisations in the DPRK. These constraints have been compounded by the coronavirus pandemic since cash can no longer be brought into the country. To maintain readiness to respond to a worsening humanitarian situation, it is important that UN agencies and humanitarian organisations can maintain structures such as offices and local staff in Pyongyang. Therefore, it would mitigate the unintended negative humanitarian impact of UN sanctions if the UN Security Council or other interested actors were able to aid the ongoing efforts to create a safe and sanctions-compliant means to make financial transfers to local offices of humanitarian organisations in the DPRK. It would also facilitate the continued provision of humanitarian assistance, however limited, that at present makes its way to the civilian population of the DPRK.

Member State 8

As you know, due to the self-imposed border closure of the country, very little reliable information is currently available on the situation in the DPRK. Due to this, we are unable to provide you with any empirical data. However, we would like to raise one major challenge, which is the transfer of cash to the country.

The challenges on cash transfers to the DPRK directly impacts both programmatic and operational aspects. For example, office running costs such as the procurement of fuel vouchers to support field monitoring by government and local staff, and for construction work, are normally paid locally with available cash. We and our international partners have to work on complex workarounds, which is timeconsuming and ultimately more expensive.

In the current circumstances of the country's border closure, there is no way to legally bring cash into the country. We and our international partners are therefore accumulating debts. Without cash we cannot pay local expenses to cover travel and subsistence allowances for local partners to undertake routine field monitoring, leaving us and international partners reliant on the goodwill of local partners to absorb the cost on an accrued basis — this leaves us open to the risk that partners may refuse to continue such arrangements, and leave us with no viable field monitoring system in place. We and our international partners cannot procure local supplies such as consumables (toner, papers, office materials etc.) for both our own office and for partners, without local cash availability. And we cannot hire local expertise to undertake specific programmatic work without the ability to pay them locally — thus constraining some aspects of our and our international partners' programs.

We deem the resolution of the issue of cash supply as a matter of priority to enable us and our international partners to pay back accrued debts and avoid the risk of the existing goodwill expiring, with a further detrimental impact on the programming capacity.

Member State 9

Response from [Member State 9] to the Panel of Expert's Outgoing Communication #15 (reference S/AC.49/2022/PE/OC.15)

Thank you for your inquiry on the impact of sanctions on the humanitarian situation in the Democratic People's Republic of Korea (DPRK). The DPRK has for decades been the most self-isolated and opaque country in Northeast Asia. Following the Korean War (1950-1953), the DPRK adopted a communist development model similar to its allies in the region. These allies, however, eventually reformed their economic policies; integrated with the global economy; and improved the material lives of their people. Every country in the region has benefitted to some degree from this general economic transition over the course of the past three decades. Not only has the DPRK failed to make this transition, but in recent years it has made the choice to restore the failed economic policies of its past. We assess these policy choices have impeded the DPRK's economic growth; led to a deterioration of material well-being; and exacerbated humanitarian concerns. We also assess that deteriorating humanitarian conditions are of secondary concern to the DPRK's political imperative of protecting the Kim family regime, which drives its investment into its weapons of mass destruction (WMD) and ballistic missile program.

Following the December 2019 5th plenum of the 7th Central Committee of the Korean Workers' Party, and before the outbreak of the COVID-19 pandemic, DPRK leadership announced the country was failing to accomplish the goals of the five-year economic development strategy (2016-2020). The DPRK responded by launching a "head-on breakthrough offensive" (HOBO) to reinvigorate production. The HOBO was formalized and made part of a new five-year plan (2021-2025) at the subsequent 8th Party Congress in January 2021. The new five-year plan aims to crack-down on informal and decentralized economic activity and the private coping mechanisms that grew to support people's livelihoods after the famine of the 1990s. The end goal is to re-establish centralized party-state control over all significant economic activity; "indigenize" production to weaken foreign leverage; and reinvigorate the official public rationing system. This is a return to the failed orthodox-communist policies of the past. As part of this policy package, DPRK leadership also seeks to increase the isolation of the DPRK people from the outside world to prevent the outflow of information that could reveal the true state of the DPRK's internal conditions and to prevent the inflow of "corrupting" goods, information, and ideas that could weaken the leadership's political legitimacy. We assess these policies will result in continued economic stagnation, leading the DPRK to fall economically further behind its neighbors with each successive year. To compensate for these weaknesses, the DPRK will continue to rely domestically on isolation and repression of its people and internationally on its unlawful WMD and ballistic missile programs to sustain the personalized Kim family regime.

The COVID-19 pandemic, occurring after the DPRK had chosen this new direction, has probably helped the DPRK leadership as they implement these policies. Under their COVID-19 mitigation measures, the DPRK has significantly increased border security to record levels, contributing to a severe reduction in outward migration; reduced cross border trade with the People's Republic of China and the Russian Federation; and choked off remittances and communication from abroad. These measures have provided the central government the greatest control over the distribution of imported goods it has possessed for a generation. The DPRK has nurtured a fear of the coronavirus as a tool to control population movement and allowed the resident foreign non-governmental organization (NGO), aid, and diplomatic communities to wither. Today the DPRK is the most isolated it has been in three decades, the economy is perhaps as dysfunctional as it has been in three

decades, and the true state of humanitarian conditions in the DPRK is perhaps the most unknown as it has been in three decades. Despite the current state of affairs, we do not see any signs that the DPRK regime intends to change course.

Despite these formidable challenges, [Member State 9], private NGOs, and the UN continue to promote humanitarian engagement with the DPRK. [Member State 9] has streamlined the application process for [Member State 9] licenses and authorized numerous humanitarian projects sourced by our domestic NGOs along with charitable organizations in Europe and the Republic of Korea. Since the beginning of 2021, the 1718 Committee has approved sanctions exemptions for 12 projects and extensions or amendments for an additional 32. The international community has promoted the distribution of COVID-19 vaccines to the DPRK population. The vast majority of these overtures, however, have been ignored or rejected by the DPRK. [Member State 9] offered COVID-19 aid in early 2020, but the DPRK never responded to the offer.

Inquiry 1: *Empirical data (concerning incomes and employment, availability of food and other consumer goods, standards of living, healthcare, social benefits and any other relevant data) and assessment of the impact of UN sanctions on the humanitarian situation in the DPRK; this should include both the direct and indirect (through their effect on DPRK's socio-economic situation) impact of UN sanctions.) What are the sectors and population groups you consider most affected by UN sanctions? How has this impact changed over time, especially since the end of 2017, and what has been the cumulative effect? Please provide as many verifiable examples of this impact as possible.*

Given the DPRK's long-standing policy of denying the outside world access to information on its internal conditions, a policy that is even more effective following the decisions of the 8th Party Congress and the impact of the DPRK's anti-epidemic measures, we are unable to provide the requested data with the level of scientific rigor or confidence that would be required to make policy. There are currently only three ultimate sources of demographic/quality of life data for the DPRK:

1. Information provided by the DPRK government and published though its official media or released to the UN for publication;
2. Information systematically collected from recent defector arrivals in the Republic of Korea; and
3. Information in other media.

We assess the first kind of data to be helpful for informing policy analysis, but ultimately biased, unverifiable, and not independently collected. We assess that the second kind of data is currently unavailable since as of 2020 there are not enough recent DPRK defectors from which social scientists and policymakers can draw a scientific sample of current economic conditions. The third kind of data has been very helpful in assessing economic conditions in the DPRK, but it is too limited in scope and availability to make timely, confident assessments beyond general trends. Before the 8th Party Congress and the DPRK's anti-epidemic measures, we could rely more systematically on diplomatic reporting, UN and NGO reports, and greater media penetration, but these sources have all deteriorated since January 2020 as a result of DPRK policy.

Alternative data sources are also available, and we consider them all helpful, but each is flawed in ways that limit their consistent usefulness for policy application.

The Republic of Korea's central bank (the Bank of Korea) generates national income accounts for the DPRK (GNI/GDP), and while we find this work important, the underlying data are not public

and the methodology is not transparent or reproduceable. The DPRK has also released recent GDP figures to the UN, but we are skeptical of these numbers as we do not assess that the DPRK's Central Bureau of Statistics has the ability to generate sound GDP statistics, and the numbers appear to primarily serve as externally focused propaganda in the service of DPRK foreign policy goals.

As the DPRK does not publish trade statistics, we have historically looked at mirror trade statistics from the DPRK's trading partners to learn about trade composition and volume as an indicator of the DPRK's economic activity. These statistics are also flawed in many notable ways that limit their use for policy analysis. To begin with, illicit transactions, which are of vital importance to policy analysis, are nearly completely omitted from international trade databases. Humanitarian assistance to the DPRK is also frequently excluded. Although some of the DPRK's international trade data can be derived from publicly available mirror-statistics, we work to supplement it with our reports to the UN 1718 Committee, and we look forward to continuing to help the Committee fulfill its mission. Numerous other methodological problems also plague the use of trade statistics, such as establishing actual country of origin for cargo, reporting countries confusing the DPRK and the Republic of Korea, political manipulation of the data, human error, and difficulties assigning a change in data to a causal independent variable.

Collective UN measures adopted by the Security Council are targeted at individuals, organizations, and sectors that are involved in the sourcing, financing, and implementation of the DPRK's unlawful WMD and ballistic missile programs, and this is where the burden of UN sanctions probably most heavily falls. There is no evidence to credibly link DPRK natural resource exports to domestic wages or even standards of living in communities around DPRK mines. To take an extreme example, it is highly likely that some of the mines that produce anthracite coal for export from the DPRK's South Pyongan Province are in political prison camps, where prisoners will essentially be worked to death irrespective of how much coal is exported for hard currency versus being used in domestic power plants. A similar story can be told for DPRK overseas workers, who in many cases live in deplorable conditions, working exploitative hours, only to be forced to relinquish approximately 70% (or more) of their earnings to the Korean Workers' Party. The DPRK does not allow independent workers to travel overseas and earn an income for themselves. These overseas labor activities are specifically intended as a tool for acquiring foreign exchange to facilitate regime priorities.

Inquiry 2: *Assessment indicating any negative influence of UN sanctions on international humanitarian assistance to DPRK, or on the work of international and non-governmental organisations carrying out assistance and relief activities in the DPRK. Please provide as many verifiable examples of this impact as possible.*

To the best of our knowledge, UN and other bilateral sanctions are not having any significant impact on humanitarian projects in the DPRK. The UN 1718 Committee has worked diligently to approve and extend approval for humanitarian exemption requests. However, nearly all of these projects have been unable to fulfill their missions due to the DPRK government's isolation and COVID-19 mitigation policies. The DPRK has even repeatedly refused COVID-19 assistance, such as vaccines, and is one of two countries worldwide to not provide its population with any vaccines to protect against COVID-19.

Inquiry 3: *What other factors have had an influence on the humanitarian situation in DPRK, particularly since 2017, and what has been their relative importance to that situation? How have your relevant authorities disaggregated their effect from that of UN sanctions? Please provide as many verifiable examples of this disaggregation as possible.*

Given the current state of DPRK data and available statistical tools, we are unable to disaggregate the relative weights of sanctions, or any other policy, on DPRK economic performance. We have no reliable metrics of DPRK economic performance. This, again, is primarily due to the DPRK's policy of hiding its information from the outside world.

Given the quantitative and qualitative data that is available, we assess that the two most significant factors that negatively affect humanitarian conditions in the DPRK today are the DPRK's own domestic economic policies, which have resulted in some of the lowest observed living standards in the region for decades, and the DPRK's anti-epidemic measures, which have resulted in boosting isolation to record levels compared with the previous two decades. Moreover, rather than addressing the humanitarian situation, the DPRK continues to focus its resources on advancing the size and sophistication of its WMD and ballistic missile programs and orchestrating sophisticated sanctions evasion activities through a network of illicit actors.

Humanitarian assistance potentially can play a role in mitigating some of the DPRK's problems, but substantial economic reforms, implemented over the course of decades, will be required to bring DPRK living standards up to regional levels. Looking just at the supply of food, according to the World Bank, the DPRK's arable land per capita = 0.09 hectares. This puts it on par with UK, Portugal, China; and above Vietnam (0.08). The ROK's arable land per capita = .03 hectares. DPRK agricultural failure is a consequence of policy, not resource endowments. Closing the gap in agricultural production between the DPRK and its neighbors will require reforms to the DPRK's outdated and failed cooperative farming and agriculture rationing schemes.

Sanctions relief will not likely boost the livelihoods of the neediest individuals in the current DPRK policy environment. We are currently unable to even determine who the neediest people in the DPRK are. However, given what we collectively know about the dynamics of the DPRK regime, we assess the benefits of sanctions relief in the current environment are more likely to result in channeling increased hard currency revenue into regime priorities, which include the

Inquiry 4: *Could you propose ways in which the UN Security Council and other UN organisations might act to mitigate any negative humanitarian impact of UN sanctions?*

1. The UNSC could increase data on the 1718 Committee website as to what aid has been offered to the DPRK (i.e., project approvals) and the status of project completion (i.e., whether the aid has been delivered) to improve awareness of what humanitarian projects are ongoing and in what areas.
2. UN organizations could increase in-country presence to better assess the impact of sanctions on humanitarian conditions as well as the overall economic situation in the DPRK.
3. The UN 1718 Committee could develop a humanitarian aid "effective practices" document that lays out guidance on aid provision, monitoring, and evaluation that could help guide organizations in planning aid projects for the DPRK (and other countries).

Annex 69: Question of Panel's survey to NGOs

The Panel continued its previous practice, started in 2020, and in June 2022 surveyed around 40 organizations (including both UN and non-governmental aid organizations), most of which applied for exemption requests, either directly to the 1718 Committee or through a Member State, as well as some other organizations with record of activity in DPRK, suggesting the following questions:

1. What is your assessment of the impact of UN sanctions on the humanitarian situation in the DPRK and how has that impact changed over time?

2. How has the current COVID 19 outbreak in DPRK and restrictions related to the COVID-19 pandemic affected the economic and humanitarian spheres, and in what way have they influenced the overall humanitarian situation? If possible, please include information or examples that support your assessment.

3. Please provide detailed information and data on your organization's current and planned work related to DPRK COVID 19 outbreak and any reductions in operational capacity due to issues related to quarantine measures in the DPRK.

4. Please provide detailed information about how the implementation of UN sanctions may have impacted your organizations COVID 19 response.

5. If your operations require humanitarian exemption approvals from the 1718 Committee, has the approval process met your needs?

6. What, if anything, could be further improved in the exemption process, or in the implementation of UN sanctions, to better meet your operational needs and objectives?

7. Could you propose ways in which humanitarian and UN sanctions actors might enhance mutual understanding of each other's objectives and methodologies?

Annex 70: Replies from NGOs

The following quotes have been compiled from the responses to the Panel's survey to NGOs.

NGO 1

[NGO 1] has no activities ongoing in DPRK since 2020 and therefore no new developments have occurred which might provide information for the panel.

NGO 2

Since our last correspondence of [Date and Document No.] we have observed almost no changes regarding the situation with our project activities in North Korea. Since January 2020 our aid supplies (including test-sets for Covid) are stuck at the border and despite all our efforts this remains unchanged. Contacts into the country remain sparse; it is nearly impossible to get any information beyond what is already known through the media. Still, they seem to confirm the worrying situation in regards to food security and the spread of Covid.

NGO 3

- UN sanctions are taking a serious toll on the daily lives of North Koreans. It appears to be having adverse effects that completely go against the purpose of the 'Leave No One Behind' of the UN SDGs

- [COVID-19 outbreak]is reducing the vitality and productivity of North Koreans in their daily life. It seems that they are increasing their will to overcome the difficulties on their own without external support due to antipathy to sanctions.

- Due to the prolonged border blockade for more than two years, the North Koreans are getting tired of the blockade. There are North Korean organizations that say they can cooperate if they can receive food aid informally from outside, but it seems difficult to make a formal request for external aid in North Korea

- A collaborator who was carrying out humanitarian aid to North Korea became unable to visit North Korea due to the corona virus. As he took a break from his activities, it was difficult to collect any more internal news about North Korea that he had been collecting through him.

- Humanitarian aid to North Korea has shrunk by reducing the number of personnel in charge of humanitarian aid at our institution.

- UN sanctions aroused a negative public perception of not only the response to COVID-19, but also humanitarian aid activities in general.

- We don’t have any opposition to approval process. However, sanctions themselves cause negative impact on humanitarian aid. We also request that the approval letter should strengthen the effect of exemption, which guarantees the practical support to DPRK after the approval.

- When applying for sanctions exemption for humanitarian aid to DPRK, materials that are not subject to sanctions (food, medicine, etc.) are considered a bundle of project implementation, and for all aid items, specific specifications must be researched and documents must be prepared to apply for exemption. As a result, manpower and administrative requirements increase, and difficulties arise such as a decrease in efficiency in preparing and executing our organization's operations and humanitarian projects. The suggestion is that materials classified as not subject to sanctions by the HS code are excluded from the application for exemption or the document is simplified by submitting the product name and HS code.

- After the approval of sanctions exemption, it is necessary to remit money for the purchase and transportation of goods, but due to the financial sanctions of the United States, banks are also refusing or avoiding remittance of humanitarian aid to North Korea.

- For humanitarian aid materials that have been approved for exemption by the United Nations, it must be recognized that they have been approved inclusive of the sanctions regulations of individual countries. The effect of sanctions exemption approval should be strengthened so that the humanitarian situation of North Koreans can be improved

- We propose that the United Nations meet and discuss with stakeholders and humanitarian organizations on the moratorium of UN sanctions in order to improve the humanitarian situation to North Korea

- It is proposed to apply the ‘Oil-Food Program’ adopted by the United Nations for humanitarian aid to Iraq in the past to humanitarian aid to North Korea.

- Please review and implement a program to export North Korea's coal by introducing the tentative name ‘Coal-Food Program’, and to provide food and medicine with the export proceeds

NGO 4

- It is true that UN sanctions against the DPR Korea have impacted the regime in many aspects. They have impacted the production of daily necessities and also food shortage among North Koreans, the latter of which has been exacerbated by economic crisis to reach a stage of a food crisis. The crop productivity of North Korea stands at only 50-60% of that of its southern counterpart, which is attributable to the poor supply of an agricultural materials. It is a well-known fact that in 2018 when North Korean sanctions became tighter, food production in the DPR Korea dropped to the 9-year lowest of 4.95 million ton. For North Korea, in particular where damages from natural disasters including flood are serious, providing related materials and goods is quintessential to help with active response. However, most aid materials are subject to North Korean sanction regulations, and thus have to obtain exemption approval. We are going to mention this again later – even though the period required for exemption approval got shortened, several attempts had to miss an opportune timing due to working-level arrangements that needed to be made. In addition, NGOs must follow approval procedures of their own countries for shipping out materials for North Korea, which translates into more time and cost. In sum, the bigger the burden on North Korean aid organizations get, the more serious the humanitarian situation of North Korea will be.

- The COVID-19 outbreak has made it extremely challenging to provide medicine and medical supplies as well as humanitarian aid. Finding ways itself to enter the North Korea has become difficult, and even if the aid was approved, the materials had to stay at [border] customs office for a long time. Also, selecting materials including medicine and medical supplies is demanding, definitely contributing to the existing difficulties in humanitarian situation.

- [Project in DPRK] has still not resumed since it stopped in [month, year]. Back then, the percentage of completion stood at [percentage], with the exterior of the [project] being built to some visible extent. To restart the project, however, [diagnosis] needs to be conducted by [entities] considering that more than [number of years] have passed. To this end, [NGO 4] delivered a message in [month, year] that it would send [entities] across the North Korean border, to which the North Korea answered on [date, year] that it would invite a [entity] when the COVID situation gets better.

- So far, the [entities] visit mentioned by the North has not been realized yet because the COVID situation has not gotten any better. Furthermore, the [NGO 4] obtained sanction exemption on [date, year] to resume the [project], only to find itself stuck in failure to bring in [materials]. [Months] have already passed since the obtainment of sanction exemption. [NGO 4] had several rounds of consultation with related personnel from North Korea to resume [project]. But the COVID situation has since prevented the plan from staying on track.

- We are grateful for the exemption approval for the [materials] for [project], and fully agree that the time has significantly shortened from the submission of exemption applications to approvals. However, we had to provide information on approximately [number of goods and materials] for the application. We had to collect detailed information including HS CODE of each item not to mention the standards and size, which took us [number of months] in total.

In other words, the time required by the approval process definitely became shorter, but extra time spent arranging things at a working level still does and will remain the same as long as there exists sanctions against the North Korea, which is likely to increase the cost burden of aid organizations.

- The current methods of exemption seems to be in need of change. For example, sanction exemption lists have to be made for each and every item, but a little bit of flexibility would seem to streamline the process. We propose that a whitelist be kept to allow the items on it to be semi-automatically approved to be sent to the North without separate exemption applications having to be submitted. And each State is able to be responsible for whitelist-designated items aid, so new procedures would be needed capable of sending humanitarian-sensitive items more quickly and more smoothly.

- To have better understanding about the objective and methodologies among different actors, more opportunities are needed among related stakeholders to meet on a regular basis. All organizations and groups just receive one-way information regarding UN resolutions. Therefore, continued communication is required to help aid organizations better understand newly amended guidelines or newly adopted resolutions.

NGO 5

[NGO 5] would like to stress the importance of transparency and access in enabling civil society organizations (CSOs) such as [NGO 5], to evaluate the impact of UN sanctions on the Democratic People Republic of Korea (DPRK)'s humanitarian situation. Considering the reported COVID-19 outbreak in the DPRK and subsequent restrictions enforced by the DPRK government, it has become difficult to accurately determine the impact of UN sanctions in relation to the Panel's questions.

The aim of this correspondence is to request the UN Panel of Experts' support in allowing officials such as the Special Rapporteur on the situation of human rights in the Democratic People's Republic of Korea and representatives of the Office of the UN High Commissioner for Human Rights with unimpeded, in-person access inside the DPRK. Their presence, as well as the Panel's endorsement of their efforts, is the only way to provide some semblance of transparency amidst stringent restrictions imposed by the DPRK since the onset of the COVID-19 pandemic.

We noted in our previous correspondence that a repeat of the great famine of the 1990s was unlikely for three reasons: (1) the development of informal markets (*jangmadang*) in North Korea; (2) the work of CSOs in obtaining information from North Korea; and (3) agricultural reforms under Kim Jong-un that slightly improved food security. All three elements have been weakened during the COVID-19 pandemic.

Under the pretense of enforcing a "zero-COVID" policy, the DPRK government has chosen to crack down on markets, cross-border trade, and information flows into and out of the country. It has imposed punishments against North Korean nationals involved in market activities or exchanging information with the outside world. In December 2020, the DPRK passed a new "Anti-Reactionary Thought Law," which "forbids the use, storage, and distribution of foreign cultural content…that is not state-approved." There has been a further tightening of border security during the pandemic. This has drastically reduced the number of North Korean escapees entering the Republic of Korea, with only [figures] arrivals in 2021 relative to a peak of [figures] in 2009.

Such policy decisions by the DPRK, as well as the departure of most foreign diplomats and international aid workers from North Korea since the onset of the pandemic, have made it extremely difficult to ascertain the impact of UN sanctions on the humanitarian situation in the country. In its December 2021 report, the World Food Programme (WFP) noted that its country director for the DPRK had left the country in March 2021. Since then, "there has been no UN international staff present" in the DPRK.

Some analysts, beginning from the assumption that "sanctions and funding gaps were the chief reason for UNICEF and WFP's inability to reach their targeted population," estimated in August 2019 that sanctions may have contributed to "between 1,122 and 2,772 preventable deaths." However, such estimates are based on assumptions and statistics that cannot be independently verified, due to the DPRK leadership denying access to reliable statistical data and target areas, presumably to conceal the extent of the crisis and systemic redirection of aid and resources to the elite.

Past UN reports have attributed North Korea's chronic food shortages to "shortages of arable land, lack of access to modern agricultural equipment and fertilizers, and recurrent natural disasters." These are ancillary factors at best. The main factors contributing to the dire humanitarian situation in the DPRK are as follows:

- The DPRK relies heavily on domestic sources of food supply despite chronically unfavorable agricultural conditions. It has persistently refused to adopt an export-oriented growth strategy, which is necessary to "earn the foreign exchange needed to import bulk grains on a commercially sustainable basis and reduce the country's reliance on aid." Contrary to claims that the DPRK leadership had, on multiple occasions, attempted to liberalize its economy only to be discouraged by international sanctions, it has consistently advocated "self-reliance" (*Juche*) as its guiding state ideology. The DPRK was one of the first countries in the world to seal its borders in response to the outbreak of COVID-19.

- The DPRK leadership exploits foreign aid to curtail currency outflows from commercial imports. Since the 1990s, a pattern has emerged wherein the North Korean regime's commercial food imports decrease whenever foreign aid increases. The most plausible explanation for this phenomenon is that the leadership uses aid as a balance-of-payments support to conserve resources for other policy priorities, including its weapons programs. In other words, rather than complementing aid with commercial food imports to alleviate food shortages, the DPRK has deliberately chosen to prioritize the regime's security at the expense of the population's health and well-being.

- The DPRK's continued development of nuclear weapons and ballistic missiles in violation of multiple UN Security Council resolutions, as well as a lack of transparency in the monitoring and assessment of aid provision, have affected donors' willingness to provide aid. Decreases in foreign aid have historically coincided with periods when the DPRK leadership conducted nuclear tests or ballistic missile launches, which, along with purchases of luxury goods, account for a significant portion of state expenditures.

As noted in our previous communication to the Panel, if there is a causal relationship between sanctions and the precarious food situation, it remains to be verified and should be rigorously investigated through on-the-ground factfinding by the UN and humanitarian organizations, in cooperation with the DPRK.

In our previous correspondence dated [date, year], we warned about the humanitarian risk stemming from the COVID-19 pandemic, including a deficient healthcare infrastructure, food insecurity, and an economic crisis. The DPRK officially admitted to an outbreak for the first time on May 12, 2022 and announced the first death from COVID-19 a day later. It had denied the existence of any cases for the preceding two years. Apparently due to the lack of COVID-19 testing capacity, new cases have been referred to by state media as "individuals with a fever."

Authorities have since claimed that the outbreak has been brought under control. Official statistics indicate a cumulative total of 4.7 million cases in a country of 25 million, but only 74 deaths have been reported as of July 7. Experts have questioned the accuracy of these statistics, as they would imply an exceedingly low fatality rate when compared to that of countries with robust public health institutions and a high vaccination rate. It is not possible to determine whether the spread of the disease has truly been contained.

Given widespread malnutrition from food insecurity and the lack of a nationwide vaccination campaign, the consequences of COVID-19 in the DPRK are almost certainly more severe than disclosed by the authorities.

The public health infrastructure in the DPRK is fragile, especially outside of Pyongyang and other major cities. Even if the number of cases has indeed fallen, the DPRK is still vulnerable to a resurgence of the disease. Public health experts have noted that the country's healthcare system is not equipped to deal with a COVID-19 outbreak. During the supposed height of the outbreak in May, state TV ran infomercials about "home remedies such as honey tea" and advised people to "see doctors if they have breathing problems, spit up blood or faint." [name], a North Korean escapee who now lives in the Republic of Korea, noted that "the government is asking people to contact doctors only if they have breathing difficulties, which means just before they die."

Regrettably, the inability to conduct independent assessments of the public health situation creates obstacles for countries, institutions, and aid organizations seeking to provide humanitarian assistance in an effective fashion. Both the United States and the Republic of Korea have offered to provide medical aid, but the DPRK has so far refused to accept foreign assistance. Pyongyang has also rejected offers of vaccines from the WHO-led COVAX initiative.

Adding to the impact on the healthcare system in the DPRK, COVID-19 threatens to worsen food insecurity. Lockdowns further constrained the population's ability to obtain food, and there have been scattered reports of deaths from starvation. In his final report to the UN Human Rights Council in March 2022, Tomás Ojea Quintana, the outgoing UN Special Rapporteur on the situation of human rights in the DPRK, noted that "prolonged border closures and restrictions on movement in-country have decimated the market activity that has become essential for the general population to access basic necessities." There were reports in late June that restrictions on in-country movement had been relaxed for the time being.

Furthermore, rainfall in April and May was only 70% of what the country typically receives, with worrying consequences for the country's food supply, which is heavily reliant on its summer crops. Natural disasters have long posed seasonal threats to the DPRK, and a major natural disaster could have profound economic and humanitarian consequences. In mid-June, there were also official reports of an unspecified enteric disease in South Hwanghae Province, a key agricultural area. While the details of this outbreak are unknown, it is likely to exacerbate the country's food situation. The country's agricultural industry is heavily reliant on human labor, and reports suggest that the COVID-19 outbreak created difficulties with mobilizing enough people to plant crops in May.

In this vein, Resolution 49/22 adopted by the UN Human Rights Council in April 2022 called on the DPRK in paragraph 30 to “allow international staff to operate in the country so that the international community can provide assistance based on independent needs assessments, including of vulnerable populations in detention centres, and a monitoring capacity, consistent with international standards and humanitarian principles and in accordance with relevant Security Council resolutions.” As noted at the beginning of this letter, independent assessments of the humanitarian situation in the DPRK could begin with in-country visits by the Special Rapporteur on the situation of human rights in the DPRK or representatives of the UN Office of the High Commissioner for Human Rights. Such officials could also include, for example, the UN Special Rapporteur on the right to food and the UN Special Rapporteur on the right to health.

NGO 6

Over time sanctions have made the cost of providing humanitarian aid to the DPRK higher and higher. NGOs are forced to spend increasingly greater amounts of time and energy navigating the sanctions regime in order to keep programmes running. Aid budgets are eaten up by administrative processes in order to stay sanctions compliant, leaving fewer resources available to be spent on humanitarian needs.

Banking channels are becoming fewer and more difficult to navigate, and NGOs work under a constant fear that their bank accounts could be frozen or closed. For this reason [NGO 6] do not use [NGO 6's] local bank account for any DPRK work.

[NGO 6] don't have any direct information about the current humanitarian situation in the DPRK. All [NGO 6's] projects were paused indefinitely when the COVID-19 induced border closure started. [NGO 6's] local partners have said that it is too difficult to send anything by ship or train currently (and throughout the pandemic) so we have decided to wait until the border reopens before restarting our work.

The humanitarian exemption approval process is too cumbersome and places too great a burden on NGOs, so [NGO 6] designed [NGO 6's] projects to avoid the need to work through the UN system.

Anything to simplify the exemption process would be welcomed.

It would be helpful if the UN sanctions committee could publish a lay language guide in English and Korean setting out which activities require an exemption and which do not, and what organisations need to do to obtain a sanctions exemption. The Korean language version should not be written in the "South Korean" language, but efforts should be made to use "North Korean" language. There is a language barrier in dealing with the UN system for many people in the Korean diaspora conducting humanitarian work in the DPRK who do not have a strong command of English.

Exemptions should be expanded to allow for livelihood activities and legitimate business activities. In the DPRK, many people on the bottom rungs of society have lost their jobs in the garment industry and other manufacturing industries due to sanctions. These people should be allowed the opportunity to earn a livelihood. At a garment factory owned and run by people with disabilities, [NGO 6] personally witnessed the worsening economic circumstances (including food insecurity) which resulted from the sanctioning of the garment industry in 2017.

Better communication between UN sanctions actors and humanitarian NGOs could enhance mutual understanding. To be brutally honest, all foreign actors operating in the DPRK whether they are diplomats, humanitarian agencies, or private NGOs, break sanctions on a small scale all the time. It would be impossible not to. The sanctions regime has created a climate of fear making people reluctant to talk about what they do.

NGO 7

1. The humanitarian situation in the DPRK is characterized by chronic food insecurity and a lack of access to essential lifesaving services, including quality healthcare, with profound effects on the most vulnerable people. In addition, the country remains highly susceptible to natural disasters, including cyclones, floods, and drought, further exacerbating humanitarian needs amongst the most vulnerable.

The 2021 Humanitarian Response Plan (HRP) for DPRK estimates that 10.6 million people (over 4 out of 10 persons) are in need of humanitarian assistance. Humanitarian operations in the DPRK are a critical lifeline for millions of people suffering from food insecurity and malnutrition and lacking access to quality and essential health services, clean water, and sanitation facilities.

The major causes of scaled-back humanitarian assistance by [NGO 7] to the DPRK population remain the lack of funding, limited access to cash, the physical absence of international staff in the country and the challenges on importation of certain critical commodities or equipment, all of which have been exacerbated by the Covid-19 related restrictions imposed by the Government.

1.1 Funding shortfall and lack of cash in country

In 2020, UN agencies in the DPRK mobilized only a third of the total humanitarian requirements. On average, [NGO 7] requires [figure] each year for its humanitarian interventions but could only secure less than 50% of funding needs, resulting in a sharp drop in support towards ending maternal mortality and morbidity in the country.

Since 2006, the DPRK has been subjected to the UN Security Council sanctions (S/RES/1718), which has become more stringent over the years to cut-off funding for Pyongyang's ballistic missile and nuclear tests. The Sanctions Committee has provided an exemption of the DPRK bank for the UN-related transactions, but the channel has mainly remained ad hoc.

With a dysfunctional international banking channel and no alternative avenues approved for cash transfers and related transactions, UN ongoing programmes delivery is impacted negatively, making it highly challenging for timely humanitarian responses. Concurrently, UN agencies face a unique financial situation due to the dearth of cash in the country to implement local programme activities and sustain operations. This impasse results in prioritizing select activities rather than the full-fledged implementation of programmes.

1-2. Procurement of equipment

UN Sanctions Committee guidelines articulate that single - and dual/multiple-use items containing metal components must be referred to the 1718 Sanctions Committee for exemption approvals. [NGO 7] has been diligently following the directives of the Sanctions Committee. However, a significant proportion of… procurement of health equipment and commodities have metal components, e.g., copper for intrauterine devices (IUDs). Over the years, the process of securing exemption approvals for these items has often resulted in delays or cancellation of related procurements.

Procurement compliance has changed after the 2017 directives, focusing on single and dual/multiple-use items, which hindered financial support for dual or multiple-use equipment/instruments. Prior to implementing sanctions on the DPRK, [NGO 7] supported strengthening health facilities through procurement of equipment for health facilities, especially patient wards, operating theatres, and maternity rooms. However, given long years of use and due to the restrictions on single-use, this equipment is now in poor conditions, and [NGO 7] has not been able to replenish the items, contributing to an adverse health outcome for the health of women in the DPRK.

Furthermore, UN humanitarian programming requires a strong humanitarian needs overview substantiated by evidence and data generation, which, in turn, rely on modern IT-related equipment. For instance, in 2019, [NGO 7] could not support the DPRK census exercise due to the challenges of getting exemption approvals for the required IT equipment from the 1718 Sanction Committee and the U.S. Department for U.S. patented items, e.g., IT equipment. Similarly, the time required for processing the exemption approvals was out-of-sync with the timeline defined by the DPRK government. This delay resulted in the government conducting the census solely without meeting international standards accordingly.

Although an expedited consideration of specific humanitarian requests has been in effect since November 2020, [NGO 7] has had limited experience in seeking exemptions due to the border closure imposed by the DPRK authorities as part of the COVID-19 pandemic response measures, resulting in subsequent paralysis of imports - however with one exception in August 2021 for already-procured life-saving commodities.

2. The significant scale-back of humanitarian support in agriculture, nutrition, water and sanitation, health, and the socio-economic impacts of the COVID-19 pandemic, combined with the strict preventive measures and in-country mobility restrictions put in place by the Government, is having reverberating effects on the scarce humanitarian interventions.

For the health sector, [entities including NGO 7] are dealing with substantial demurrage charges due to the extended quarantine period to import critical life-saving commodities and equipment stuck in [one of the bordering Member States] for over a year. As a result, the country experienced a stock-out of all essential life-saving medical supplies, including sexual and reproductive health (SRH) medicines, child immunization vaccines, and other health-related commodities. This situation adversely impacts the UN's capacity to address the humanitarian needs in the DPRK while the country

continues to claim zero cases of COVID-19 since the pandemic outbreak and has rejected two offers from COVAX for the supply of vaccines.

This situation means that those in need of assistance have not received the necessary support from the UN. To the extent possible, the continuation of the delivery of life-saving assistance, including the provision of medical goods and supplies, has relied mainly on prepositioned stocks in-country. In the case of [NGO 7], the prepositioned stock of oxytocin, which is critical in averting maternal morbidity and mortality, lasted until mid-July 2021.

In July/August 2021, the DPRK government allowed some UN shipments for life-saving commodities to enter the country.

For the rest of the orders with running shelf life, [NGO 7] had to cancel some orders where possible (contraceptives, pharmaceuticals, and emergency kits) and diverted a majority of the orders to other countries that could make good use of the products (pharmaceuticals, medical devices, vehicles, and so on). In addition, [NGO 7] had to utilize funds to cover some of the costs of the diverted products.

3. As mentioned above, COVID-19 related restrictions in the DPRK, especially the closure of the international borders since January 2020 and the progressive departure of UN international staff members until March 2021, have hampered humanitarian operations on the ground. [NGO 7] international staff are still unable to return to the DPRK, and humanitarian supplies could not enter the country for over a year until the government's communication in August 2021, when a one-off approval was granted. Furthermore, there is still no clarity on whether the resumption of regular trans-shipments would continue, and [NGO 7] is awaiting a response from the government to this query.

Despite repeated requests by [NGO 7] to the MoFA counterparts, there has been no indication DPRK authorities will grant additional exemptions to import life-saving commodities. [NGO 7] has, therefore, decided to suspend any further procurement of supplies to the DPRK until the DPRK government provides a formal authorization.

As a result of the COVID-19 related restrictions, all international [NGO 7] staff members have worked remotely outside of the DPRK. The physical absence of international staff members in the country and other restrictions of internal mobility have posed challenges to programme implementation and field-based monitoring. On the programmatic front, significant activities related to the evaluation of the SRH strategy and development of the new SRH strategy, upscaling of the undergraduate midwifery education, and evaluation of the undergraduate course in demography that needed international facilitation was deferred. In addition, [NGO 7] postponed capacity-building activities related to family planning, urban SRH strategy development, and strengthening of the health logistics systems.

[NGO 7] had to prioritize activities and factor in the depleting in-country cash. As a result, local activities were kept to a minimum in 2020, and innovative ways were explored to pursue the mandate in 2021.

[NGO 7] had proposed conducting an extensive social, economic, and demographic health survey (SDHS) in 2021. Resource mobilization efforts were underway when the COVID-19 restrictions were imposed. However, the efforts are now stalled due to the uncertainties of a return to normal operations in the country.

In-country mobility restrictions are still in place and have limited the UN national secondees from undertaking field monitoring visits. Consequently, the data provided by the Central Bureau of Statistics on administrative statistics related to the utilization of services and quality of services rendered during the clients' interaction with the health providers are hard to verify and validate. This also applies to the distribution of the pre-positioned life-saving supplies where validation and reconciliation have not been possible.

On the other hand, despite these restrictions, programmatically, the [NGO 7] has managed to roll out SRH and population and development-related capacity-building initiatives to ensure maximum impact and cost-effectiveness. For example, online capacity-building workshops were initiated throughout the year in priority regions of the programme, including developing and updating essential Sexual and Reproductive Health and Population Dynamics manuals/guidelines. Similarly, remote monitoring of capacity-building initiatives has been undertaken through video recording, pre and post-test assessments, documentation, and feedback from the participants (an innovation in the DPRK).

Exceptional clearance for the participation of national secondees has been provided by the DPRK government. The clearance - to an extent - helped in fulfilling the basic requirements of monitoring during the training sessions. However, the DPRK government has expressed appreciation for the continuous supply of pre-positioned lifesaving SRH medicines and the introduction of online-based training.

[NGO 7] appreciates the 1718 Sanctions Committee for reducing the turnaround time for exemption approvals and increasing the validity period of those exemptions. Flexibility in considering cases on a one-to-one basis is also highly appreciated.

To facilitate and strengthen the presence of UN agencies on the ground, it is nevertheless imperative to establish a viable banking channel for funds to be transferred to the DPRK to enable the UN agencies to implement their respective programmes and respond to emerging humanitarian needs.

Since early 2021, all UN agencies operating in Pyongyang have had to stop paying the salaries of their national staff, fuel, and all office expenses, due to the shortage of cash in the country. They are accruing debts of several hundred thousand dollars to the government.

In addition to the dysfunctional banking channel, UN agencies have to approach the 1718 Sanctions Committee for items containing metal components, given the clause related to single/multiple-use. Until the exemptions are received, the procurement process cannot be initiated despite the fast-tracking process adopted by the Committee. Therefore, consideration for a waiver or a blanket approval of approved standardized SRH, Inter-Agency Reproductive Health Kits (emergency kits), and other medical kits that the inter-agency task force has cleared at UN HQs would ensure better cost-efficiency and more flexibility for UN agencies to respond to humanitarian needs.

Given the nature of the interactions between humanitarian and development nexus, consideration of development activities that have a bearing on humanitarian programming could enable pursuing programmes more holistically. For example, there is a need to strengthen the statistical capacities of the statistical institutions. Furthermore, with the advancement in Information Technology (IT), there is a need to upgrade the hardware and software for these institutions to collect, compile, process, and disseminate data for humanitarian and development programming. Therefore, strategic exemption with a broader consideration for humanitarian and development nexus would facilitate the efforts of the UN agencies in fast-tracking programmatic initiatives for achieving the 2030 agenda in the unique context.

The broader context of the humanitarian-development nexus and its implications on programming needs further exploration from the perspective of the 2030 Agenda so that bilateral partners and the donor community are not restricted exclusively to supporting humanitarian initiatives.

Annex 71: COVID-19 related imports of DPRK 2020-2021

* Data based on partner reported data / ITC Trade Map

Unit : USD thousand

* yellow highlighted are items that are restricted from being imported to the DPRK

Code	Product label	COVID-19 related	Imported value in 2020	Imported value in 2021
220710	Undenatured ethyl alcohol, of actual alcoholic strength of 80%	Alcohol solution	740	0
220890	Ethyl alcohol of an alcoholic strength of 80%	Alcohol solution	81	21
2847	Hydrogen peroxide, whether or not solidified with urea	Hydrogen peroxide in bulk	5	0
290512	Propan-1-ol, propan-2-ol	Propyl alcohol, isopropyl alcohol	2	0
291821	Salicylic acid and its salts	Salicylic acid and its salts	1	21
300490	Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic purposes, put up in measured doses	Hydrogen peroxide presented as a medicant	15088	9193
300510	Adhesive dressings and other articles having an adhesive layer, impregnated or covered with pharmaceutical substances or put up for retail sale for medical, surgical, dental or veterinary purposes	Surgical tape and transparent adhesive plaster	47	64
300590	Wadding, gauze, bandages and the like, e.g. dressings, adhesive plasters, poultices, impregnated or covered with pharmaceutical substances or put up for retail sale for medical, surgical, dental or veterinary purposes	Wadding, gauze, bandages etc	35	12
340111	Soap and organic surface-active products and preparations, in the form of bars, cakes, moulded pieces or shapes, and paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent, for toilet use, incl. medicated products	Soap, bar form	473	51
340120	Soap in the form of flakes, granules, powder, paste or in aqueous solution	Soap, liquid or powder form	1300	4435
340130	Organic surface-active products and preparations for washing the skin, in the form of liquid or cream and put up for retail sale, whether or not containing soap	Liquid or cream hand or skin washes	37	2
380894	Disinfectants, put up in forms or packings for retail sale or as preparations or articles	Hand sanitizer and other disinfectant preparations	42	18
3822	Diagnostic or laboratory reagents on a backing and prepared diagnostic or laboratory reagents whether or not on a backing, other than those of heading 3002 or 3006 certified reference materials	Test kits	660	353
3821	Prepared culture media for the development or maintenance of micro-organisms "incl. viruses and the like" or of plant, human or animal cells	Swab and Viral transport medium set	7	0
392329	Sacks and bags, incl. cones, of plastics (excluding those of polymers of ethylene)	Plastic hazardous waste disposal bags	231	0
392620	Articles Of Apparel And Clothing Accessories (including Gloves, Mittens, And Mitts), others, of plastics	Plastic gloves	280	3
392690	Articles of plastics and articles of other materials of heading 3901 to 3914	Plastic face shields, urine bags, body bags, tents	1844	177
401519	Gloves other than surgical, of rubber	Other rubber gloves	57	88
401590	Articles of apparel and clothing accessories, for all purposes, of vulcanised rubber	Protective unisex garments	55	0
481890	Toilet paper and similar paper, cellulose wadding or webs of cellulose fibres, of a kind used for household or sanitary purposes, in rolls of a width not exceeding 36 cm, or cut to size or shape; handkerchiefs, cleansing tissues, towels, table cloths.	Paper masks, boot covers, paper bed sheets	867	0
5603	Nonwovens, whether or not impregnated, coated, covered or laminated	Absorbent pads	643	431
611610	Gloves, mittens and mitts, impregnated, coated, covered or laminated with plastics or rubber	Knitted gloves impregnated with plastic or rubber	599	360
621010	Garments, Made-up Of Fabrics Of Felts And Nonwovens	Protective garments for surgical/medical use	309	0
630622	Tents of synthetic fibres	Synthetic fibres tents	2	0
630629	Tents of textile materials	Textile material tents	0	12
630790	Made-up articles of textile materials, incl. dress patterns, n.e.s.	Textile face-masks, single use drapes	461	362
6505	Hats and other headgear, knitted or crocheted, or made up from lace, felt or other textile	Disposable hair nets	38	0

* yellow highlighted are items that are restricted from being imported to the DPRK

Code	Product label	COVID-19 related	Imported value in 2020	Imported value in 2021
701790	Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated	Laboratory, hygienic or pharmaceutical glassware	1	0
841319	Pumps for liquids, fitted or designed to be fitted with a measuring device	Infusion pumps	13	0
8703	Motor cars and other motor vehicles principally designed for the transport of persons	Ambulances	86	0
900490	Spectacles, goggles and the like, corrective, protective or other	Protective spectacles and goggles	64	1
901811	Electro-cardiographs	Electrocardiograph	9	0
901812	Ultrasonic scanning apparatus	Ultrasoundmachines	150	0
901831	Syringes, with or without needles, used in medical, surgical, dental or veterinary sciences	Syringes with or without needles	958	291
901832	Tubular metal needles and needles for sutures, used in medical, surgical, dental or veterinary sciences	Tubular metal needles and needles for sutures	79	67
901839	Needles, catheters, cannulae and the like, used in medical, surgical, dental or veterinary sciences	Nasal prongs and catheter	957	364
901890	Instruments and appliances used in medical, surgical or veterinary sciences,	Laryngoscopes, Magil intubatoin forceps etc	242	73
901920	Ozone therapy, oxygen therapy, aerosol therapy, artificial respiration or other therapeutic respiration apparatus; parts and accessories thereof	Oxygen therapy equipments	16	0
9020	Other breathing appliances and gas masks, excluding protective masks having neither mechanical parts nor replaceable filters	Gas masks	32	0
902519	Thermometers and pyrometers, not combined with other instruments	Infrared and digital thermometers	1734	16
902680	Instruments or apparatus for measuring or checking variables of liquids or gases	Flowmeter, thorpe tube for oxygen 0-15L	31	0
9027	Instruments and apparatus for physical or chemical analysis	Diagnostic test instruments and apparatus	120	34
902820	Liquid meters, incl. calibrating meters therefor	Electronic drop counter	0	68
940290	Operating tables, examination tables, and other medical, dental, surgical or veterinary furniture	Medial or surgical furniture	77	0
		TOTAL	28473	16517

Source : ITC Trade Map, annotated by the Panel

Annex 72: Consolidated list of Recommendations

Maritime

On re-configured cargo ships illicitly importing oil cargo

1. **The Panel recommends maritime authorities of Member States be aware of the DPRK's deceptive practice of re-configuring its cargo ships to carry refined petroleum and conduct the necessary ship inspections when DPRK cargo ships call at their port / port areas. Relevant maritime actors should further take appropriate preventive measures to guard against potential illicit oil procurement in such a manner.**

2. **The Panel recommends that Member States disseminate to ship repair yards and associated ship brokers this deceptive practice and the risk of their facilitation role in the event such cargo ships are exported to the DPRK.**

On vessel identity tampering and AIS manipulation

3. **The Panel reiterates that Member States and ship registries add to their ship circulars information pertaining to detected cases of vessel identity laundering or tampering and ensure wide dissemination. Such information would include:**

   - **Identifiers of ships in their registry that have transmitted cover identities**
   - **Identifiers of ships in their registry that may have had their identifiers exploited by other vessels**
   - **Names of ship registrants whose vessels have transmitted fraudulent identifiers**

4. **The Panel reiterates that flag States should possess the requisite tools available to identify and investigate suspected fraudulent use of the MMSI where it is detected and share the results of their investigation with other maritime authorities, as well as with the Panel.**

On addressing the DPRK's vessels acquisition

5. The Panel recommends to flag registries that for Single Delivery Voyages, checks are put in place on full AIS monitoring, vessel checks to confirm conformity to restricted conditions of sail, and additional verification checks on the vessel's delivery with recipient.

6. The Panel recommends that Member States encourage sellers to verify information including, but not limited to, the final destination and end-users (owner and charterer) of the vessel, the identity of related broker(s), and previous records of transactions.

7. The Panel recommends that Member States encourage sellers to obtain a Statement of Confirmation upon vessel sale from buyers that assures the vessel will not be transferred in any way to the DPRK or to anyone affiliated with the DPRK, that the buyer will not facilitate any DPRK sanctions violations, and that the buyer shall be responsible if /when such a case arises.

8. The Panel recommends that Member States encourage sellers, buyers and brokers to report to their respective authorities following vessel transfer should any information regarding the vessel's potential violation of Security Council resolutions come to light.

Trade and Customs

9. The Panel recommends that appropriate measures be taken by the International Organization for Standardization and Member States to prevent erroneous usage of country codes for the DPRK and the Republic of Korea (KP and KR, respectively).

10. The Panel recommends that Member States streamline their export and import control lists, using as supportive material the informal list of prohibited commodities.

11. The Panel recommends that customs authorities of Member States use the above-mentioned list to inform trading agents in their jurisdictions for due diligence purposes, in particular when dealing with such commodities in the vicinity of sanctioned jurisdictions.

12. The Panel recommends, with regards to the Member States requiring assistance with the issue of the sectoral ban, that the Committee consider information outreach.

Implementation of Luxury Goods Ban

13. The Panel reiterates its recommendations that Member States consider updating their export control lists to reflect their lists of prohibited luxury goods in a manner consistent with the objectives of Security Council resolutions 1718 (2006), 1874 (2009), 2094 (2013), 2270 (2016) and 2321 (2016), avoiding unnecessary broadening of their scope in order not to restrict the supply of unprohibited goods to the civilian population or have a negative humanitarian impact once trade restarts.

14. The Panel reiterates its recommendation that Member States encourage their business entities and nationals exporting luxury goods to include a contractual provision to prevent transshipment to the Democratic People's Republic of Korea.

Finance

15. The Panel recommends Member States advise relevant national actors, including financial institutions, businesses, and VASPs, to adopt appropriate education, training, information sharing, and advisory materials for individuals across all levels of the workforce, from executives to part-time employees.

16. The Panel recommends that Member State agencies, as well as financial institutions, businesses, and VASPs devote appropriate attention to increased cyber hygiene by requiring of all crypto users attempting access to a cryptocurrency exchange set a higher default threshold, such as a two-factor authentication of transaction.

17. The Panel recommends that any entity suffering a cyber-attack report this to and engage with the proper legal authorities as soon as possible, issue a public announcement of the incident, and engage with agencies relevant to the event including blockchain analysis firms, in order to increase the prospects for recovery of some stolen assets.

18. The Panel recommends that Member States consider legislation or establishing directives for cyber companies to enforce "know your customer" protocols and to tighten procedures for VASP registration.

19. The Panel recommends the Member States strengthen cooperation, facilitate dialogue and enhance information-sharing in order to address the growing intelligence and financial threat of cybercrime.

20. The Panel recommends that Member States implement as soon as possible the Financial Action Task Force (FATF) guidance on virtual assets, which seeks to prevent financing of WMD proliferation by placing anti-money laundering and counter-terrorism financing requirements on these assets and VASPs.

Unintended Impact of Sanctions

21. The Panel reiterates its recommendations that the Committee consider more active outreach with civil society providing humanitarian assistance to the DPRK to help substantiate its future decision-making and to better understand the humanitarian situation.

22. The Panel notes the recent arrangements for transferring funds to UN humanitarian organisations in DPRK but reiterates the urgency of re-establishing a more durable banking channel.

23. The Panel highly values the biannual briefings by the relevant United Nations agencies on the unintended impact of sanctions and recommends that the Committee continue this practice.

24. The Panel recommends that the Security Council continue to address issues and processes that mitigate the potential unintended adverse impact of sanctions on the civilian population of the Democratic People's Republic of Korea and on humanitarian aid operations to benefit the country's vulnerable population and overcome the consequences of the COVID-19 pandemic.

25. The Panel recommends that the Committee and other relevant stakeholders consider the idea of exempting selected exports currently under sanctions, the proceeds of which might be used to finance humanitarian supplies.