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Countering the threat posed by improvised explosive devices

Report of the Secretary-General

Summary

The present report is submitted pursuant to General Assembly resolution 73/67, entitled "Countering the threat posed by improvised explosive devices", and places particular emphasis on awareness and prevention strategies.







I. Introduction

1. In its resolution 73/67, entitled "Countering the threat posed by improvised explosive devices", the General Assembly requested the Secretary-General to report to it at its seventy-fifth session on the implementation of that resolution, focusing on awareness and prevention strategies, acknowledging and taking into account existing efforts, both inside and outside the United Nations, and seeking the views of Member States. The present report is submitted pursuant to that request. Views received from Member States are posted to the web page of the Office for Disarmament Affairs.¹

II. Significant trends and developments

Humanitarian impact and devastating civilian casualties

2. Heavy urban fighting has become disturbingly commonplace, greatly exacerbating the danger posed to civilians. The use of improvised explosive devices in urban settings and against civilian infrastructure, including health-care systems, is alarming and requires an urgent response. This is particularly relevant in the light of the current global public health crisis. The novel coronavirus disease (COVID-19) pandemic is affecting the entire international community. Health-care systems in situations of armed conflict and violence are already fragile and under tremendous stress. The use of such devices and other explosive weapons will further weaken those systems, undermining their ability to treat patients of the pandemic and others in need of health care.

3. On 23 March 2020, the Secretary-General appealed for an immediate global ceasefire to help to create conditions for the delivery of humanitarian assistance, to open space for diplomacy and to bring hope to places among the most vulnerable to COVID-19. Protracted conflicts, often involving multiple armed actors utilizing asymmetric tactics, such as the deployment of improvised explosive devices, are especially alarming in the face of COVID-19.

4. Since the publication of the previous report on this topic (A/73/156), the impact of improvised explosive devices in conflict and non-conflict settings remains significant. Incidents involving the devices have been recorded in all regions and in the context of conflict, crime, political unrest and terrorism.

5. While incidents involving improvised explosive devices continue to affect countries from across regions, the most heavily affected States remain largely unchanged. Attacks using the devices continue to affect civilians, including in Burkina Faso, Libya, Mali, Nigeria, Somalia and Yemen. There have been cases of armed groups, terrorists and criminals exploiting the lack of rule of law and deliberately targeting populations to instil insecurity and force displacement, and protecting trafficking routes. Where improvised explosive device attacks against government institutions are carried out in urban or populated areas, civilians are increasingly bearing the brunt.

6. In 2019, civilian casualties in Afghanistan reached record heights, with improvised explosive devices as the leading cause of death. The United Nations recorded more than 10,000 civilian casualties for the sixth year in a row, with combined devices, both "suicide" and "non-suicide" devices, causing the majority of

¹ www.un.org/disarmament/ieds.

casualties by incident type.² The year 2019 saw the highest number of civilian casualties from non-suicide attacks since 2015.

7. Over a decade of violent conflict across north-eastern Nigeria has resulted in one of the most severe humanitarian crises globally. Civilians are significantly affected by improvised explosive devices, including person-borne devices and vehicle-borne devices deployed by some factions of Boko Haram. At the time of drafting of the present report, person-borne devices had killed 76 civilians and injured 150. In addition, the presence of vehicle-borne devices, also known as anti-personnel mines of an improvised nature, along main roads continues to disrupt humanitarian assistance.

8. In 2019, the Democratic Republic of the Congo saw an increase in incidents involving improvised explosive devices, in particular in the region of Beni, compared with 2017 and 2018, when only one incident was recorded. In response, the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo established an improvised explosive device threat mitigation working group supported by the Mine Action Service.

9. In Colombia, while the majority of incidents involving improvised explosive devices occur in rural settings with anti-personnel mines of an improvised nature, on 17 January 2019, the detonation in Bogotá of a vehicle-borne device killed 23 people and injured 68 others. The use of suicide attacks had been unprecedented in the country.

10. The widespread use of improvised explosive devices by Al-Shabaab continues to pose a critical security challenge in Somalia, not only endangering the lives of civilians but also undermining State-building and economic development. Such devices remained the weapon of choice for Al-Shabaab, which has acquired the capacity to manufacture them, no longer relying exclusively on remnants of war. Since 2018, there have been 3,279 casualties due to explosive remnants of war and incidents involving the devices in Somalia. In 2019, a significant increase in such incidents was recorded across the country, with Banaadir and Shabelle Hoose being the most affected regions. The primary targets of attacks using the devices remain international and local security forces, as well as government officials. However, civilians continue to suffer, sustaining the highest casualty numbers, often as bystanders of vehicle-borne attacks. Owing to a lack of counter-improvised explosive device training and equipment, local security forces have also experienced substantial casualties.

11. Yemen represents one of the few States that are affected by improvised explosive devices on land, in the air and at sea. Monitoring undertaken by civil society during the reporting period revealed that ongoing fighting has had a serious impact on civilian infrastructure, with, for example, bridges being destroyed with improvised explosives.³ Incidents affecting civilians resulting from landmines, improvised explosive devices and unexploded ordnance were up by 23 per cent from the previous year.

12. The conflict in the Syrian Arab Republic continues to inflict a heavy toll through civilian casualties and the destruction of vital infrastructure. The Independent International Commission of Inquiry on the Syrian Arab Republic has reported that children have been killed during the conflict as a result of the use of improvised

² See unama.unmissions.org/sites/default/files/afghanistan_protection_of_civilians_annual_report_ 2019_-_22_february.pdf.

³ Protection Cluster Yemen, "Civilian Impact Monitoring Project: 2019 annual report, 1 January– 31 December 2019", 2 March 2020.

munitions, such as barrel bombs and improvised rocket-assisted munitions, often used against civilian objects, including schools and hospitals (see S/2020/366).

13. In Burkina Faso, 116 incidents involving improvised explosive devices have been recorded since January 2016. There have been persistent armed attacks in the north and east regions of the country since 2018, and in the centre-north region more recently, with an increased frequency of incidents involving the devices. At the request of the respective United Nations Resident and Humanitarian Coordinators, the Mine Action Service deployed to Nigeria in July 2018 and to Burkina Faso in September 2019 to support those States in responding to, and protecting their populations from, the devices.

14. For the sixth year in a row, the United Nations Multidimensional Integrated Stabilization Mission in Mali suffered the greatest number of peacekeeper deaths, including as a result of deliberate attacks carried out with improvised explosive devices. In 2018, 9 peacekeepers lost their lives while 83 sustained injuries as a result of incidents involving the devices. In 2019, the numbers reduced to 5 and 48, respectively. The threat posed by the devices in Mali remained significant, with the central regions being the most affected. Although civilians are not the main target of terrorist armed groups, they are increasingly the victims of attacks using the devices.

15. In 2019, Libya saw a significant decrease in civilian casualties resulting from improvised explosive devices compared with 2018, when the United Nations Support Mission in Libya documented 225 civilian casualties (43 people killed and 182 injured). The Mission verified at least 23 civilian casualties (3 people killed and 20 injured, including 7 children killed and injured) in the country in the period from 1 January 2019 to 18 May 2020. The vehicle-borne device that was detonated against a United Nations convoy in Benghazi on 10 August 2019 killed three United Nations staff members and injured two. Eight civilians (seven local men and a four-year-old child) who were present at the location of the incident were also wounded. The escalation of conflict in Libya in 2020 has seen the systematic use of devices in and around civilian residences in front-line neighbourhoods in Tripoli, resulting in a growing number of casualties. The sophistication of some devices confirms that knowledge has been transferred from other conflict areas and increases their potential lethality to individuals.

16. Attacks using improvised explosive devices against humanitarian aid workers have been well-documented.⁴ In 2019, 12 separate incidents involving improvised explosive devices in Afghanistan, the Democratic Republic of the Congo, Libya, Mali, Pakistan, Somalia and the Syrian Arab Republic were documented in the Aid Worker Security Database. Incidents were reported to have been involved vehicle-borne and roadside devices. Given the limitations of collecting relevant information on incidents involving aid workers, the numbers of attacks and casualties are likely to be considerably higher.

17. In populated areas affected by the use of improvised explosive devices, there is a severe impact on children, as they represent a large proportion of civilians. Explosions of the devices result directly in the loss of lives and limbs and in other long-term and painful physical and psychological effects. The devices also have tremendous indirect effects on children, such as hindering their access to education and basic services.

18. In situations of armed conflict, the use of improvised explosive devices exacerbates the scale of grave violations committed against children. United Nations verified data for 2019 shows that, of the 10,173 child casualties in armed conflict,

⁴ Humanitarian Outcomes, Aid Worker Security Database. Available at https://aidworkersecurity.org/incidents.

25 per cent resulted directly from the use of improvised explosive devices, explosive remnants of war and landmines (see A/74/845-S/2020/525). Attacks using the devices resulted in 1,215 child casualties in 2019, with 279 children killed (208 boys, 46 girls and 25 sex unknown) and 936 maimed (682 boys, 202 girls and 52 sex unknown), in Afghanistan, Cameroon, Iraq, Mali, Nigeria, the Philippines, Somalia, the Syrian Arab Republic, Yemen and the State of Palestine. Children were most affected in Afghanistan, where at least 1,027 children were killed or maimed by such devices in 2019 (712 by attacks using command-detonated devices, 241 by anti-personnel mines of an improvised nature and 74 by unknown devices). In Iraq and the Philippines, explosive remnants of war and improvised explosive devices were verified as the first cause of killing and maiming of children (70 per cent and 51 per cent, respectively, of all verified cases).

19. From July 2018 to the end of December 2019, improvised explosive devices were used in attacks on schools (66 incidents) and hospitals (22 incidents) and in the denial of humanitarian access (14 incidents) in Afghanistan, Iraq, Mali, Somalia and the Syrian Arab Republic.

20. The recruitment and use of children by non-State armed groups to act as carriers of person-borne improvised explosive devices, as well as to manufacture, transport and/or plant devices, remain of serious concern, particularly in Afghanistan, the Lake Chad basin and Yemen. In the Lake Chad basin, Boko Haram continues to use children, particularly girls, for such purposes. From 2018 to 2019, a total of 57 children, of which 45 (79 per cent) were girls, were used and killed as carriers for attacks using person-borne devices in north-eastern Nigeria alone. In April 2018, seven girls between the ages 11 and 17 years were used by Boko Haram as carriers of devices against a military outpost in Bille Shuwa, Borno State. The attack resulted in over 100 casualties, including the seven girls.

21. It has become increasingly clear that attacks using improvised explosive devices have gendered impacts, including distinct health effects and psychological and material harm for women and girls.⁵ Although more men and boys are victims of attacks using the devices, women and girls are uniquely affected by such violence, as they bear most heavily the long-term social, psychological and economic consequences of the incidents. The particular needs of women and girls are especially distinct in terms of emergency care and psychological support following explosive incidents, as they tend to have more limited access to the required services and are at a higher risk of being stigmatized and marginalized by their spouses and families because of their injuries. Displacement driven by the use of explosive weapons, including improvised explosive devices, also results in gendered impacts. In Yemen, for example, approximately 76 per cent of internally displaced persons are women and children, and nearly 21 per cent of households of internally displaced persons and host communities are headed by women below the age of 18 years.⁶

Humanitarian clearance in complex settings

22. Cities in Iraq and the Syrian Arab Republic, such as Raqqah and Mosul, have come to represent some of the deadliest battlefields worldwide. Intense urban war-fighting is destroying infrastructure and harming civilians at unimaginable rates. Such cities have suffered tremendous levels of contamination from improvised explosive devices. The scale and density of the contamination, compounded by the complexity

⁵ Reaching Critical Will, "Women and explosive weapons", 2014.

⁶ United Nations, Office for the Coordination of Humanitarian Affairs, 2019 Humanitarian Needs Overview: Yemen (2018).

of the devices, are posing challenges to humanitarian organizations, especially actors undertaking essential humanitarian clearance operations.

23. Following the liberation of Raqqah from Islamic State in Iraq and the Levant (ISIL) forces in 2017, the United Nations assessed that 80 per cent of the city was uninhabitable, including as a result of extensive contamination from improvised explosive devices. In April 2018, the Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator underscored the severity of contamination from explosive ordnance and improvised explosive devices in this context.⁷ The high threat posed by the devices in such settings means that a coordinated survey effort is essential to address urban contamination.

24. New challenges of improvised explosive device clearance have resulted in the need for multiple new guidance documents within the International Mine Action Standards. A new standard on improvised explosive device disposal, Standard 09.31, was published in February 2019. The document focuses on terminology and device disposal capabilities. It also provides guidance on the clearance of devices for humanitarian purposes and in areas where active hostilities have ceased.

25. When conducting high-risk activities such as the clearance of devices in complex environments, it is imperative that operators have detailed information in order to safely plan clearance and disposal, thus minimizing risk.

Developments and trends in manufacture, design and deployment

26. In some countries, including the Democratic Republic of the Congo and Nigeria, the design of improvised explosive devices remains simple, with military or dual-use commercial components used. Nonetheless, an increase in the technical capacity of armed groups to diversify, design and deploy increasingly sophisticated devices has been observed in several countries. The growing sophistication of their design, compounded by standardization and mass production by some non-State actors, is therefore of concern.

27. The construction of anti-personnel mines of an improvised nature is flourishing and seriously harming civilians, causing the most recorded casualties of any mine or explosive remnant of war in 2018. According to the latest information from the Landmine and Cluster Munition Monitor, most casualties from anti-personnel mines of an improvised nature in 2018 occurred in Afghanistan (1,586) and the Syrian Arab Republic (1,076).⁸

28. In Nigeria, the design of improvised explosive devices, most of which are victim-operated and many of which are person-borne, is simple and has been limited to a few technical specificities. In the Democratic Republic of the Congo, the most prevalent and rudimentary design remains command-wire devices using recovered military and/or commercial explosives and detonators, as well as easily available containers, such as cooking pots.

29. Non-State armed groups continue to rely on the use of established supply routes to maintain a constant flow of the resources required to support an effective improvised explosive device campaign. The use of commercial products in the device production process increases both the chances of success and the overall effectiveness of the attack. Non-State armed groups also continue to pursue commercial or military energetic materials for their safety, reliability and explosive effects. Once acquired

⁷ See www.un.org/press/en/2018/sc13302.doc.htm.

⁸ Landmine and Cluster Munition Monitor, *Landmine Monitor 2018* (International Campaign to Ban Landmines and Cluster Munition Coalition, 2018).

by a group, such materials can be further distributed over a wider operational area, as evidenced by the seizure of identical military explosives documented in Bahrain, Iraq and Yemen.⁹

30. In West Africa and the Sahel, the similarities observed in terms of techniques, tactics and procedures between armed groups operating in certain countries demonstrate a capacity for regional transfer of know-how. There has been a marked increase in the use of improvised explosive devices by armed groups operating in the Sahel region, effectively targeting government forces, United Nations personnel, peacekeepers and international forces.

31. The relatively simple design of improvised explosive devices in Somalia, including vehicle-borne devices, relies on the availability of a variety of dual-use components and chemicals throughout the region, as well as of military explosives harvested from explosive remnants of war. However, recent evidence of Al-Shabaab using home-made explosives demonstrates that device construction methods have diversified.

32. Colombia has seen an increase in the use of command-initiated improvised explosive devices, which have been used to target not only military personnel but also civilians employed to support Colombian security forces in eradicating illicit drugs. Such diversification could indicate an increase in technical capacity among armed groups.

33. Through recent field research, non-governmental experts concluded that anti-personnel mines of an improvised nature and the main charges and pressure plates for improvised explosive devices have been standardized and mass-produced by forces in Yemen.¹⁰ The United Nations Development Programme in Yemen has documented new tactics in the design and deployment of victim-operated devices, including disguising devices as rocks to hinder their identification by clearance experts. Laid in their hundreds, devices have been armed by radio control and initiated using a passive infrared sensor, while secondary and tertiary means of initiation have also been incorporated. This seriously complicates render-safe procedures. Command-initiated devices present many problems to clearance operators globally and have been attributed to approximately 36 per cent of all operator deaths in the past two decades.¹¹

34. In the absence of commercial-grade products, non-State armed groups have reverted to manufacturing their own energetic materials in the form of home-made explosives. Although the process involves a number of variables that could adversely affect the end product, the use of commercial-grade chemicals and appropriate training can still produce extremely effective energetic materials. Such home-made materials can be used to further enhance the current capability of a non-State armed group by increasing the amount of available bulk energetic materials.

35. Non-State armed groups continue to source commercial off-the-shelf components to assist in mass production. Specifically, the use of commercial radio control transmitter and receiver combinations provides groups with a reliable system. With little or no modification, these components can be easily adapted for the firing switch within a radio-controlled improvised explosive device.

⁹ Conflict Armament Research, *The IED Threat in Bahrain: a Comparative Analysis of Components Documented in the Gulf Region* (London, 2019).

¹⁰ Conflict Armament Research, "Dispatch from the field: mines and IEDs employed by Houthi forces on Yemen's west coast", September 2018.

¹¹ Brigadier (retired) Gareth Collett, "IED clearance in the 21st century: thoughts for donors and implementers", *Explosives Engineering*, official journal of the Institute of Explosives Engineers (March 2020).

36. While commercial material serves as a reliable resource for the manufacture of improvised explosive devices, the increased use of and reliance on such material by non-State armed groups also provides security forces with an opportunity to trace the source of the material. The importance of tracing precursor material and electronic components cannot be overestimated; such tracing will prove a key factor in identifying individuals involved in the supply chain and eventually serve to stem the flow of these resources and thus decrease the ability of groups to manufacture the devices.

37. Some terrorist groups have learned to deploy improvised explosive devices using off-the-shelf unmanned aircraft systems and acquired the ability to manufacture improvised fixed-wing unmanned aerial vehicles as improvised explosive devices against military and political targets.

United Nations whole-of-system approach

38. In his Agenda for Disarmament, released in May 2018, the Secretary-General underscores the need for revitalized disarmament and arms control efforts in a deteriorating international security environment.¹² He emphasizes the need for focused efforts to mitigate the humanitarian impact of conventional weapons, including improvised explosive devices and other explosive weapons, particularly when used in populated areas.

39. Pursuant to action 18 of the implementation plan for the Agenda, extensive consultations were held and a mapping of United Nations entities engaged in matters related to improvised explosive devices was produced. Subsequently, the Mine Action Service established a coordinating task force on a whole-of-system approach to improvised explosive devices. In bringing together representatives of security, political, humanitarian, development and counter-terrorism entities, the task force is facilitating a common understanding of the threat and enhancing consistency in the use of related terminology. It constitutes a dedicated forum for sharing internal data, as well as doctrines, operational principles, technical knowledge and best practices.

40. In maintaining an inventory of United Nations resources and skills across the spectrum of improvised explosive device prevention, protection, threat mitigation and law enforcement, the Mine Action Service will continue to make available a toolbox that facilitates cross-pillar cooperation and dialogue, enhances synergies through the sharing of resources, data and expertise, and provides United Nations entities with consolidated information related to the devices. It is essential that the United Nations system enhance its capacity to respond to threats posed by the devices with stronger cooperation, comprehensive political and security analyses and evidence-based planning of humanitarian responses and peace operations.

III. Awareness-raising

Risk education

41. The severity of the challenges posed by improvised explosive devices, particularly humanitarian risks, necessitates commensurate awareness-raising efforts. While such devices are not new weapons, their increased use and deployment, particularly in conflict-affected settings, are posing new and complex challenges to communities. Risk education is a crucial component of the global response to counter

¹² See www.un.org/disarmament/sg-agenda/en/.

the threat posed by the devices. Increasing the understanding of relevant threats, especially among the civilian population, is essential to protecting and saving lives.

42. The year 2019 marked a turning point for explosive ordnance risk education.¹³ For the first time, such education was prioritized in the five-year Oslo Action Plan adopted by 164 countries at the fourth Review Conference of the States Parties to the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction. In addition, a new advisory group was formed to steer efforts related to explosive ordnance risk education within and beyond mine action.¹⁴ The new International Mine Action Standard 12.10 on explosive ordnance risk education coordinated by the United Nations Children's Fund (UNICEF) focuses more on improvised explosive devices and was submitted to the International Mine Action Standards Review Board in February 2020. It is expected to be adopted by the Inter-Agency Coordination Group on Mine Action in 2020.

43. In Nigeria, the Mine Action Service developed explosive ordnance risk education materials tailored to internally displaced persons, refugees, returnees and host communities covering victim-operated and other types of improvised explosive devices. The risk education campaign resulted in an increase in reporting of the presence of explosive ordnance, which in turn enabled dangerous items to be neutralized. In Iraq, the Mine Action Service partnered with national and international civil society to provide risk education, using in-person sessions and mass media campaigns through radio, television and social media platforms. It also developed new risk education materials that enhance awareness of the devices, such as a children's storybook, video clips and virtual reality clips.

44. In 2019, the World Food Programme collaborated with the Mine Action Service to include explosive hazard risk education materials in food packages in Libya. The Mine Action Service worked with several United Nations and Libyan agencies to raise awareness following an incident in April 2019 in which hundreds of families fled from aerial bombardments and indiscriminate shelling in Tripoli. Risk-awareness training was also provided to vulnerable communities in Tripoli and Tawurgha.

45. In Burkina Faso, the Mine Action Service provided risk-awareness training to law enforcement and security forces, non-governmental organizations and United Nations personnel. The Service conducted risk education sessions in the region of Beni, Democratic Republic of the Congo, where a spike in the use of improvised explosive devices was reported. In Mali, the Mine Action Service developed an improvised explosive device risk-awareness course for drivers from humanitarian organizations and private sector companies operating in central and northern regions affected by devices placed on main roads.

46. In 2019, UNICEF contributed to protecting civilians from the effects of improvised explosive devices in Afghanistan, Colombia, Chad, Iraq, Libya, Myanmar, the Niger, Nigeria, Pakistan, the Syrian Arab Republic, Ukraine, Yemen

¹³ The term "explosive ordnance risk education" refers to activities that seek to reduce the risk of death and injury from explosive ordnance (including improvised mines and unexploded and abandoned improvised explosive devices) by raising the awareness of women, girls, boys and men in accordance with their different vulnerabilities, roles and needs, and by promoting behavioural change. Core activities include public information dissemination, education and training, and community liaison.

¹⁴ The advisory group comprises Danish Church Aid, the Danish Demining Group, Foundation suisse de déminage, the Geneva International Centre for Humanitarian Demining, the Halo Trust, Humanity and Inclusion, the International Campaign to Ban Landmines and the Cluster Munition Campaign, the Mines Advisory Group, Norwegian People's Aid, the United Nations Development Programme, the United Nations Children's Fund, the Mine Action Service, the International Organization for Migration (associate), the Office of the United Nations High Commissioner for Refugees (associate) and the International Committee of the Red Cross (observer).

and the State of Palestine through integrated programmes that included risk education, child-focused victim assistance and injury surveillance. As a result, approximately 3.8 million children received risk education.

47. To complement the child-focused explosive ordnance risk education work of UNICEF in the Syrian Arab Republic, the Mine Action Service developed comprehensive, country-specific risk education materials tailored to age, gender and social occupation that also address different types of devices.

48. In the framework of the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-traps and Other Devices as Amended on 3 May 1996 (Amended Protocol II) annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, the High Contracting Parties to Amended Protocol II have addressed the matter of improvised explosive devices since 2009, including aspects of risk education. The High Contracting Parties have dedicated substantial time to such discussions and have continued to voluntarily exchange information during the meetings of their Group of Experts. At their Twenty-first Annual Conference, the High Contracting Parties decided that, with a view to ultimately compiling guidelines based on existing best practices, recommendations and lessons learned on methods to educate civilians to the risk posed by such devices, the Group of Experts would continue its voluntary information exchange on risk education methods, campaigns or practices (see CCW/AP.II/CONF.21/5).

Awareness-raising in the private sector

49. It is critical to increase awareness of the need for action to mitigate the acquisition of dangerous precursor materials, including in the private sector. It is also important to increase engagement by relevant private sector actors in limiting the flow of explosive precursors to unauthorized end users. Various initiatives have been undertaken with a view to sensitizing relevant industries and corporate actors of the challenges posed by certain precursor materials that could be used in the manufacture of improvised explosive devices.

50. In 2017, the United Nations Institute for Disarmament Research (UNIDIR) facilitated an informal consultative process with representatives of private industry, including chemical manufacturers, agrochemical and fertilizer manufacturers, semiconductor and microchip manufacturers, commercial explosive institutes and manufacturers, and mining and resource extraction corporations. The value of awareness-raising relevant to chemical security was underscored throughout this process, and several good practices were shared, including the development of codes of conduct and ethics.¹⁵ These discussions revealed that awareness-raising is important not only for industry with regard to the supply chain, but also within respective Governments and national regulatory authorities.

51. Since 2018, the International Criminal Police Organization (INTERPOL) has hosted an annual Global Congress on Chemical Security and Emerging Threats. The Congress serves as a forum for sharing applied case studies, information and experiences to raise awareness and protect against chemical and explosive threats around the world. Bringing together representatives of law enforcement, the military,

¹⁵ United Nations Institute for Disarmament Research (UNIDIR), "Examining the roles, responsibilities and potential contributions of private sector industry actors in stemming the flow of improvised explosive devices and related materials", summary of the informal private sector consultative meeting, Geneva, March 2017.

Governments and industry, the Congress is an innovative platform for information exchange, cooperation and the formation of private-public partnerships.

52. Since 2011, Programme Global Shield of the World Customs Organization has raised awareness within customs and border agencies of the chemical and explosive threat around the world. The Programme has provided field test equipment and training in the identification of precursor chemical and improvised explosive device components to customs and border security administrations. In addition, it runs an outreach programme for local chemical wholesale and transport industries.

Data collection and information exchange

53. Mechanisms for reporting incidents related to improvised explosive devices are critical to generating the data and analysis required to inform policies, programmes and activities to counter this threat. As noted in the previous report (A/73/156), information-sharing among States, international organizations and the private sector is central to effectively tackling the issue of improvised explosive devices. There is still a need for deepened information-sharing, as well as expanded data collection. While existing mechanisms and platforms of a range of relevant actors continue to contribute to awareness-raising and better-informed policymaking, the coordination of such initiatives remains a necessity.

United Nations system

54. In support of a whole-of-system approach to information-sharing and the identification of effective responses, the Mine Action Service coordinated the development of a road map for smart improvised explosive device threat mitigation technology that aims to bring together the latest information on threats posed by the devices and the technology and equipment available to detect and mitigate them.¹⁶ The information is compiled in a searchable database. The Mine Action Service also improved its own information management system, based on the Improvised Explosive Device Lexicon published in 2016, to enable the standardization of reporting on the devices, including information on components and tactics. Furthermore, the International Mine Action Standard on information management was updated in March 2020 to incorporate data on the devices to ensure improved and standardized reporting.

55. In 2019, the United Nations Development Programme initiated a number of information management improvements, which have enabled national authorities to identify explosive events that were related to improvised explosive devices. Improved data capture enabled the Programme to single out mine strikes that were incorrectly attributed to improvised explosive devices and to effectively scrutinize reported incidents. More accurate data collection allows for a better overall understanding of the threat and thus better awareness of the actual risk.

56. In 2019, the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo established a threat mitigation working group. A database will be used to centrally record all information on the location, types and victims of improvised explosive devices to enhance the Mission's awareness of the threat. The United Nations Multidimensional Integrated Stabilization Mission in Mali, with the support of the Mine Action Service, has increased strategic knowledge-sharing on events involving the devices, which has provided analysis to inform mission planning and decision-making.

¹⁶ See https://smitmit.unmas.org/.

57. The threat from terrorist use of improvised explosive devices is addressed under the umbrella of the United Nations Global Counter-Terrorism Coordination Compact, which brings together 40 United Nations entities, as well as INTERPOL, the World Customs Organization and the Inter-Parliamentary Union. The Working Group on Border Management and Law Enforcement relating to Counter-Terrorism of the Counter-Terrorism Compact Task Force is developing guidelines on the implementation of Security Council resolution 2370 (2017) concerning the prevention of the acquisition by terrorists of weapons, including improvised explosive devices and unmanned aircraft systems. The Working Group on Emerging Threats and Critical Infrastructure Protection has been facilitating the sharing of expertise related to the protection of vulnerable targets, including major sporting events, religious sites, urban centres and major touristic venues, through local engagement and public-private partnerships.

Amended Protocol II to the Convention on Certain Conventional Weapons

58. The High Contracting Parties to Amended Protocol II to the Convention on Certain Conventional Weapons continue to update and utilize the compilation of existing guidelines, best practices and other recommendations in the framework of the Convention to exchange information among States. The meetings of the Group of Experts also continue to facilitate the sharing of information on national situations and general observations by the High Contracting Parties. The meetings also allow the High Contracting Parties to keep appraised of relevant developments in other forums addressing the threat posed by improvised explosive devices, with a view to ensuring complementarity of efforts. The High Contracting Parties also continue to share information by means of a voluntary questionnaire on international cooperation in countering improvised explosive devices, aimed at enhancing international cooperation and assistance and strengthening national capacities.

INTERPOL initiatives

59. Project Watchmaker is an INTERPOL initiative to enhance the capacity of INTERPOL member countries to locate, identify and arrest individuals who are known to be or suspected of being involved in activities related to improvised explosive devices, and to support their ability to prevent and respond to attacks using such devices by gathering, analysing and sharing intelligence on bomb makers, devices, materials and systems.

60. In addition, INTERPOL, in cooperation with the Office of Counter-Terrorism, is conducting a regional strategic threat study of non-State actors and their potential use of chemical, biological, radiological or nuclear materials. The study will also consider the capabilities, organizational approach, activities and objectives of non-State actors as they relate to the use of explosive weapons, including improvised explosive devices. This will provide insight into the regional use of explosive weapons by non-State actors, enhancing opportunities for law enforcement and government stakeholders to develop tailored countermeasures and responses in line with the threat environment.

IV. Prevention

National assessments and strategies

61. Various parts of the United Nations have provided support and developed tools to support national authorities in their preparedness to counter and respond to improvised explosive devices and develop corresponding strategies.

62. The Mine Action Service has provided support to national authorities in developing standards and strategies related to improvised explosive devices. It has supported the Iraqi Mine Action Authority in developing national standards on device disposal and the clearance of rubble and residential areas. Similarly, since 2018, the Mine Action Service has supported the Federal Government of Somalia in developing national strategies for preventing the use of such devices. It has advised the Government on controlling and restricting dual-use components of the devices through the drafting of legislation to license and restrict the importation or procurement of explosives and explosive precursor chemicals.

63. The availability of munitions and other explosive remnants of war can be exploited by armed groups to produce improvised explosive devices. The Mine Action Service assisted the Libyan national authorities in building capacity in explosive ordnance disposal, which resulted in the removal of approximately 200 tons of munitions and remnants of war in Misratah.

64. The United Nations Counter-Terrorism Centre of the Office of Counter-Terrorism and the United Nations Office on Drugs and Crime (UNODC), in collaboration with the Counter-Terrorism Committee Executive Directorate and the Office for Disarmament Affairs, launched a project entitled "Addressing the terrorism-arms-crime nexus: preventing and combating illicit trafficking in small arms and light weapons and their illicit supply to terrorists". Under this project, the United Nations is working with Central Asian countries to prevent and counter the respective threats, including illicit trafficking in improvised explosive device components, and to promote effective international cooperation and information exchange, inter alia, through the deployment of needs assessment missions to assess regional and national situations.

65. Pursuant to paragraph 20 of General Assembly resolution 71/72, UNIDIR has developed a counter-improvised explosive device capability maturity model and self-assessment tool to assist States in identifying gaps and challenges in their national regulation and preparedness regarding improvised explosive devices. The tool provides States with an overview of their current counter-improvised explosive device capability maturity level and thus assists them by indicating areas where attention is required to enhance national capabilities.¹⁷ The tool has been piloted in Yemen, providing donors and implementers with an understanding of the potential scale and likely cost associated with threat mitigation and the areas in which maximum impact can be delivered.

66. The model divides components of capability into two categories: upstream activities, which are aimed at deterring or preventing events involving improvised explosive devices from taking place; and downstream activities, which are associated with the response to a particular event or mitigating an event should it occur.

¹⁷ UNIDIR, Counter-IED Capability Maturity Model and Self-Assessment Tool (2020).

Upstream counter-improvised explosive device activities	Downstream counter-improvised explosive device activities
Policy, national legislation and regulations	Development of improvised explosive device countermeasures
Security and control of explosives	Judicial process
Improvised explosive device risk education	Identification of perpetrators
Counter-improvised explosive device capability development	Technical exploitation of recovered devices
Border controls	Information management
Control of improvised explosive device precursors	Recovered evidence analysis
Regional and international cooperation and information-sharing	Improvised explosive device response – scene exploitation
Intelligence-led operations	Improvised explosive device response – render safe

UNIDIR counter-improvised explosive device capability maturity model and self-assessment tool

Monitoring and reporting

67. The Security Council continues to play an important role in addressing and monitoring the ways in which improvised explosive devices impede international peace and security, including through its thematic work, namely, its resolutions concerning children and armed conflict, and through its country- and region-specific work. For example, in Somalia, to help to combat the devices, a ban on related components was added to the sanctions regime against Somalia under resolution 2498 (2019), with the aim of preventing the direct or indirect sale or supply of precursors where there is evidence or a significant risk that they may be used in the manufacture of the devices.

68. The Security Council continues to underscore the importance of the adoption of national legislation and other measures to criminalize the illegal manufacture, possession and stockpiling of, and trade in, all types of explosives, whether military or civilian, as well as other military or civilian materials and components that can be used to manufacture improvised explosive devices. In July 2019, it adopted resolution 2482 (2019) concerning links between organized crime and terrorism, in which it urged States to take related action.

69. The Analytical Support and Sanctions Monitoring Team pursuant to Security Council resolutions 1526 (2004) and 2253 (2015) concerning Islamic State in Iraq and the Levant (ISIL), Al-Qaida and the Taliban and associated individuals and entities, was mandated by the Council to consult with Member States and the private sector to promote awareness of, and enhance compliance with, the arms embargo, with a particular emphasis on measures to counter the use of improvised explosive devices and the procurement of related components, including trigger mechanisms, explosive precursors, commercial-grade explosives, detonators and detonator cords (Council resolution 2368 (2017), annex I, para. (y)). Member States are encouraged to provide the Monitoring Team with information on the latest trends in the use of the devices by terrorist organizations in order to allow the relevant sanctions committee of the Council to identify and designate individuals and entities implicated in the facilitation of the acquisition by terrorists of device components.

70. The Monitoring Team continues to report trends relating to improvised explosive devices and to make recommendations to Member States on measures to counter them. The Monitoring Team continues to highlight the importance of public-private partnerships in detecting suspicious patterns of procurement for home-made explosives, including on online platforms (see S/2018/705). The utility of such partnerships has also been stressed in relation to building the interdiction and incident exploitation capacities of Member States to counter the use of unmanned aircraft systems for terrorist purposes (see S/2019/50).

71. Member States have reported to the Monitoring Team that the diversion of detonators and chemicals intended for legitimate uses remains a problem. These instances of diversion were often related to the use of fraudulent, incomplete or misleading end user certificates at border points. A small number of Member States also reported incidents of illicit networks co-opting border and customs officials to facilitate the diversion of stocks used for improvised explosive devices. The issue of weapons and materiel diversion underscores the importance of adhering to internationally recognized standards regulating export documents, end user certification and end user statements. Wide inconsistencies in standards and language within these documents reportedly persist, and a recent study analysing end user documents highlighted cases of poorly completed forms containing incomplete or inadequate information, with inconsistent language that in some cases obfuscates the commitments to provide exporters with proof of delivery and to legally prevent re-export to third parties.¹⁸

Capacity-building

Response and investigation

72. The United Nations prioritizes the development of sustainable and robust capacities in improvised explosive device threat mitigation. The Mine Action Service has provided such support to Iraq, Libya, Nigeria and Somalia, as well as the African Union. Technical assistance and training have covered explosive ordnance first response, emergency first aid, improvised explosive device search and disposal operations, clearance of explosive remnants of war to prevent armed groups from gathering military explosives, device incident scene management and the development of national action plans.

73. In Iraq, the Mine Action Service has provided national bodies with expert advice and training, including a series of first responder training courses for Iraqi police. In addition, 59 police personnel were trained in explosive ordnance disposal and 34 in improvised explosive device disposal. In Sinjar, the Mine Action Service is training communities, including those still living in camps for internally displaced persons, to search for and dispose of the devices.

74. In Libya, to assist judicial prosecution, the Mine Action Service trained 32 male and female forensic police officers in device incident scene management, stressing the importance of the collection of gender-disaggregated casualty data and gender mainstreaming within police and security services.

75. In March 2020, the Mine Action Service established an improvised explosive device threat mitigation mobile training team to support the uniform application of the United Nations Improvised Explosive Device Disposal Standards by regional

¹⁸ Conflict Armament Research, *Diversion Digest*, No. 2 (London, August 2019).

training centres, bilateral and other partners, and troop- and police-contributing countries. The adoption and implementation of internationally recognized standards will ensure a consistent and high-quality response in peace operations deployed to threat environments involving such devices, improve the safety and performance of peacekeepers and increase their ability to protect civilians, and develop sustainable national capacities for responding to the threat.

76. In Yemen, the United Nations Development Programme has delivered critical device disposal training to the national authorities in Hadramawt and Shabwah Governorates, providing interim capacity while longer-term capabilities are developed. The training has focused on the provision of semi-remote capabilities to preserve life and property within affected communities. Since the implementation of the training in January 2020, there has been no loss of life within any explosive ordnance disposal team in over 133 incidents involving the devices, compared with 2019 when the casualty rate in those Governorates was one team member killed per 13 incidents.

77. INTERPOL continues to support specialized capacity-building and training in post-blast investigation and forensic recovery in chemically or biologically contaminated environments to strengthen the ability of member countries to manage, process and forensically retrieve exhibits with integrity and in compliance with the chain of evidence. The chemical investigation, examination and forensics course developed by INTERPOL is a global effort to support member countries in their investigation of conventional and contaminated explosive incidents. The course highlights the importance of scene preservation and the development of investigative capabilities to identify those involved in bomb-making. It also encourages the sustainable and effective collection of intelligence for the Project Watchmaker database to assist with the prosecution of offenders. In addition, the course assists law enforcement and responding authorities in countering threats posed by improvised explosive devices by using a multi-agency approach to prevent and disrupt bomb makers.

78. Within the framework of the INTERPOL Chemical Risk Identification and Mitigation Programme, structured training activities help to improve the specialist knowledge and awareness of government ministers, senior law enforcement personnel and key figures within the chemical industry. The initial joint development of a country risk profile creates a tailored programme to raise awareness of all areas of the chemical manufacturing process, including marking, storage, sale and transport, thus enabling the development of realistic and sustainable mitigation measures to reduce national and transnational threats.

79. Through assessments in cooperation with relevant States, the Counter-Terrorism Committee Executive Directorate has identified good practices in response and investigation. In Southern Africa, the forensic laboratories of neighbouring States have shared expertise to strengthen the conduct of analysis relating to ballistics and explosives. Other good practices identified relate to the successful use of battlefield evidence in prosecuting terrorist cases, including the recovery of fingerprints from fragments of improvised explosive devices.

80. The Office of Counter-Terrorism launched a global programme on countering terrorist threats against vulnerable targets in April 2020. The Office will assist Member States in developing comprehensive and collaborative approaches to protect urban centres, touristic venues, religious sites and sporting events from the threat posed by unmanned aircraft systems. Together with the Counter-Terrorism Committee Executive Directorate, the United Nations Alliance of Civilizations, the United Nations Interregional Crime and Justice Research Institute and INTERPOL, the Office will support Member States in detecting and assessing threats, developing

strategies and procedures to respond to attacks, and promoting public-private partnerships and interoperability in security and crisis management.

81. The programme on national inter-agency coordination mechanisms known as "fusion cells", launched in January 2020 by the Office of Counter-Terrorism in cooperation with the Counter-Terrorism Committee Executive Directorate, the Department of Peace Operations and INTERPOL, will support the efforts of Member States to address terrorist threats, including those posed by the use of improvised explosive devices. Training and mentoring focused on threat assessment, informed decision-making, preparedness and response measures are provided under the programme.

82. Under the UNODC Global Programme against Money-Laundering, Proceeds of Crime and the Financing of Terrorism, training has been delivered on the use of financial investigation tools to identify improvised explosive device networks and understand the nature of the threat in specific areas in Afghanistan, Central Asia the United Arab Emirates, West Africa and Somalia.

Border security

83. The components of improvised explosive devices, including precursor chemicals, often have legitimate uses and are thus diverted from the complex supply chain. The delivery of the Container Control Programme of UNODC and the World Customs Organization includes targeting and risk analysis, combined with commodity identification, to intercept suspect shipments that could contribute to an improvised explosive device programme. Examples include the interdiction of fireworks and other components associated with the production of the devices.

84. Programme Global Shield of the World Customs Organization continues to raise awareness among front-line border control officers in relation to 14 of the precursor chemicals most commonly used in improvised explosive devices, as well as components such as detonators, detonating cords and transmitters. The Programme delivers capacity-building training on a regional basis, currently in the Asia-Pacific region and East, West and Central Africa. This includes national training and the development of local training networks, and the provision of portable Raman spectrometers and chemical field test kits and training in their use. Over the past 12 months, detection operations focused on precursor chemicals have been conducted in the Asia-Pacific region and West and Central Africa, with an operation planned in East Africa later in 2020.

85. Access by terrorists to precursor materials for improvised explosive devices can be facilitated by weak border control. Under the United Nations Global Counter-Terrorism Strategy, Member States are obliged to improve border and customs controls in order to prevent and detect the illicit traffic of, inter alia, conventional ammunition and explosives. Through its global programme for border management and security, the Office of Counter-Terrorism supports the efforts of Member States to prevent the illicit trafficking and cross-border movement of dual-use materials, including chemical precursors used to manufacture devices. The Programme also promotes the responsible use and sharing of biometrics among Member States to identify non-State actors and terrorist organizations using the devices.

Physical security and stockpile management

86. Unsecured ammunition stockpiles and the presence of explosive remnants of war, ranging from small arms ammunition to air-dropped bombs, provide a readily available source of explosives to construct improvised explosive devices. The diversion of explosives and conventional ammunition that can be used to manufacture devices remains a serious concern. Terrorist and other non-State armed groups

frequently use large-calibre, high-explosive ammunition as the main charge in devices, including victim-operated devices that function as anti-personnel mines.

87. At the request of the General Assembly, the United Nations developed, in 2011, the International Ammunition Technical Guidelines, which provide practical guidance on the safe and secure management of ammunition stockpiles. To enhance the capacity of interested States in preventing the diversion of ammunition from stockpiles, the Office for Disarmament Affairs, through the United Nations SaferGuard programme, continues to support interested States in utilizing the Guidelines, including by developing and maintaining implementation support tools and practical guides.¹⁹ In addition, in 2019, the Ammunition Management Advisory Team was established as a joint initiative of the United Nations and the Geneva International Centre for Humanitarian Demining to provide expert, technical support to States in ammunition management in line with the Guidelines.²⁰

V. Conclusions and recommendations

88. Improvised explosive devices remain a significant concern to the international community and are a cross-cutting challenge that requires a multifaceted approach. This challenge also requires that solutions be sought to the root causes of the manufacture and proliferation of such devices, including by resolving societal grievances through dialogue and other peaceful means. In this regard, the following actions are recommended:

(a) States are encouraged to strengthen their efforts in existing multilateral forums, including the General Assembly, the Security Council and the meetings of the High Contracting Parties to Amended Protocol II to the Convention on Certain Conventional Weapons, to address this cross-cutting issue from multiple angles, including the protection of civilians, disarmament and international security, humanitarian mine action and counter-terrorism;

(b) States are encouraged to consider threat mitigation measures during the earliest stages of planning and programming in peacekeeping operations and special political missions, where appropriate, as well as humanitarian emergency responses, taking into account relevant gender- and age-specific considerations, particularly in survey methodology, victim assistance and risk education. Language encouraging peace operations to systematically document evidence of the devices could be included in resolutions on this topic;

(c) The Security Council is encouraged to ensure, where appropriate, that peace operations are equipped, informed and trained to reduce the threat posed by improvised explosive devices. States are encouraged to make use of the United Nations Improvised Explosive Device Disposal Standards, as well as available United Nations and other relevant capacities, to train and mentor troopcontributing countries and national security forces.

89. Loss of lives and life-changing injuries of survivors have had a devastating impact on families and communities. Improvised explosive devices continue to have a grave impact on schools and hospitals, disrupting children's education and access to health care, as well as impeding the delivery of humanitarian assistance to children. The respective needs of girls and boys have to be considered in this context, beginning with emergency and specialized medical treatments, as well as health, psychosocial and socioeconomic integration support services. Against the backdrop of the COVID-19 pandemic, the protection of civilians and civilian infrastructure,

¹⁹ See www.un.org/disarmament/ammunition.

²⁰ See www.amat.gichd.org.

especially health-care facilities, is even more crucial. In this regard, States are encouraged:

(a) To consider the prioritization of tailored and appropriate awareness and risk education campaigns for communities affected by improvised explosive devices, including children;

(b) To enhance victim assistance, including emergency care immediately after an incident involving explosive ordnance or improvised explosive devices.

90. National approaches to countering the threat posed by improvised explosive devices would benefit from an overarching policy that defines a whole-of-government approach to preventing and mitigating the effects of the devices. An effective strategy requires a coordinated, cross-governmental approach, ideally led by a suitably resourced and empowered single government ministry or department. Effective security sector governance and compliance with the rule of law are fundamental to addressing the root causes and ensuring successful counter-improvised explosive device activities. The UNIDIR counter-improvised explosive device capability maturity model and self-assessment tool enables States to assess their own readiness to respond to existing or emerging threats. In this regard, States are encouraged:

(a) To support and implement the development of the national capacity of first responders to address improvised explosive devices;

(b) To promote cooperation among customs, law enforcement and border agencies to identify and share good practices and strategies in combating the illicit diversion and trafficking of materials for improvised explosive devices, as well as to consider joint investigations and other enforcement activities related to illicit shipments of such materials;

(c) To use the UNIDIR tool to assess the priority for the design, implementation and review of national measures to counter improvised explosive devices. States and specialized organizations that are in a position to provide technical assistance to interested States in utilizing the UNIDIR tool are encouraged to do so. Such assistance could take the form, for example, of assisting in national counter-improvised explosive device baseline assessments.

91. The United Nations will continue to pursue a more coherent whole-of-system approach to countering the threat posed by improvised explosive devices, with a focus on enhancing information-sharing and cross-sector cooperation. The United Nations will regularly review and update relevant policy to ensure effective responses and support for States. Given the evolving threat posed by improvised explosive devices, States are encouraged to sustain their support for a whole-of-system response by the United Nations, including through the provision of extrabudgetary contributions to entities of the coordinating task force established by the Mine Action Service.

92. Countering the threats posed by improvised explosive devices requires robust international cooperation and assistance, including requisite capacity-building and knowledge transfer. There is a need for specific capacity-building and training on preventive measures, including the control of movements of precursors and components, threat mitigation, including the detection and disposal of devices, and law enforcement to handle, process and analyse evidence. Cooperation between States, international and regional organizations and the private sector should be further strengthened. In this regard, States are encouraged:

(a) To contribute information to the road map for smart improvised explosive device threat mitigation technology, including trends and technological

mitigation solutions, to improve information-sharing on the threat posed by the devices and the technologies available to mitigate the threat.

(b) Where relevant, to develop regional strategies to mitigate the threat posed by the proliferation of improvised explosive devices.