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NOTE BY THE DIRECTOR GENERAL

REPORT OF THE ADVISORY PANEL ON FUTURE PRIORITIES OF THE ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

1. The report containing the recommendations agreed upon unanimously by the members of the Advisory Panel on future OPCW priorities is hereby circulated to States Parties. It is hoped that this document will provide a useful basis for States Parties' deliberations on the future of the Organisation.
2. The Advisory Panel was established in December 2010, with a geographically representative group of 14 independent experts on arms control and disarmament, the chemical industry, and science and technology. The work of the Advisory Panel was conducted in a fully independent manner, with individual members serving in their personal capacities. As explained by its Chairman, H.E. Mr Rolf Ekéus of Sweden, in the attached cover letter, the Advisory Panel held four plenary meetings in The Hague, the last of which was conducted from 27 to 29 June 2011, before finalising its report.
3. A list of Advisory Panel members is provided in Annex 3.

Annexes:

- Annex 1: Cover Letter to the Director-General from H.E. Mr Rolf Ekéus
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Annex 1

COVER LETTER TO THE DIRECTOR-GENERAL FROM H.E. MR ROLF EKÉUS

International Advisory Panel on the
Future of the OPCW

The Hague/p.t. Stockholm
15 July 2011

Dear Director-General,

In my capacity as Chairman of the International Advisory Panel on Future OPCW Priorities I have the honour to transmit to you a document containing the recommendations agreed upon unanimously by the members of the Panel on the 15 July 2011.

Between 14 December 2010 to 30 June 2011 the Panel members have met in four plenary sessions. I have maintained regular contacts with individual members in between the sessions and intensively so during the period between the ending of the last plenary session and the final moments of concluding the recommendations 15 July. Thus the findings have been subject to careful considerations by all the Panel members. It is my hope that the detailed scrutiny by the participants and the many specific proposals developed in that process by them will serve as something of a reform-agenda for the Participating States when they have to consider the future of the OPCW.

The quality of the recommendations is a reflection of the Panel members' unique skills, far-reaching experience as regards the Chemical Weapons Convention and of their deep engagement in the deliberations of the Panel. In addition it is a pleasure for me to mention the outstanding contributions by all the Panel members. The Panel's consultant, Ralf Trapp, and the secretary Daniel Feakes have both with the quality of their work and their huge workload been indispensable for the recommendations I can now send to you.

Yours sincerely,



Rolf Ekéus
Chairman
The International Advisory Board
on the Future of the OPCW

His Excellency Ahmet Üzümcü,
Director-General, OPCW.

Annex 2

I. INTRODUCTION

1. The Chemical Weapons Convention (the Convention) stands out as a successful model of a multilaterally negotiated non-discriminatory treaty that seeks to eliminate, under international verification, an entire category of weapons of mass destruction. Since its entry into force in 1997, the Convention has become a singular success. It is a cornerstone of the global disarmament and non-proliferation architecture and today has 188 States Parties. The Convention complements the 1925 Geneva Protocol and the 1972 Biological Weapons Convention, and works together with other global disarmament and non-proliferation regimes and initiatives.
2. The Organisation for the Prohibition of Chemical Weapons (OPCW), which is tasked to implement the Convention, is the only genuinely multilateral disarmament body with a global responsibility. It has become a respected international agency and has developed well functioning partnerships with a number of international organisations and agencies that are working towards curbing the proliferation of weapons of mass destruction. The OPCW Technical Secretariat has successfully and effectively carried out the verification measures provided for under the Convention. It has carried out other functions entrusted to it by the Convention, or delegated to it by the Conference of the States Parties, in such areas as assistance and protection against chemical weapons or fostering the international cooperation between States Parties in the peaceful uses of chemistry. The OPCW is the collective property and responsibility of the States Parties but at the same time has become a *global* public good.
3. Fourteen years after the entry into force of the Convention, the final deadline for the completion of the elimination of chemical weapons stockpiles, on 29 April 2012, is approaching. Almost three-quarters of the declared chemical weapons stockpiles have been destroyed and most of the former chemical weapons production facilities have been destroyed or converted for peaceful purposes. Three possessor States Parties have completed the elimination of their chemical weapons stockpiles. There are, however, delays in the elimination of chemical weapons stockpiles in the United States of America and the Russian Federation, that have declared the largest stockpiles and who have both indicated that they will need more time to complete their destruction programmes.
4. Notwithstanding these delays, the OPCW needs to prepare for a transition from mandates and efforts primarily characterised by the elimination of chemical weapons stockpiles and production facilities to an agency that will have as its main task to ensure that the menace of chemical warfare and the use of toxic chemicals for hostile purposes will never reappear, and that international cooperation and assistance in the field of peaceful uses of chemistry can flourish.
5. It is now time for the States Parties and the OPCW collectively to begin addressing this transition. The reduction in the number of chemical weapons destruction facilities in operation and the related drop in verification activity that is anticipated in the coming years will pose serious challenges for the OPCW. Adjustments of programme

priorities, staffing structure, as well as institutional capabilities will be inevitable. This should be change by design, not by default.

6. At the same time, the external environment in which the Convention operates has changed since 1992 when the negotiations of the Convention were concluded. Today's security environment is very different. Science and technology are advancing at an astounding pace, creating new opportunities but also new risks. The size and shape of world's chemical industry are undergoing profound change. All these developments create new conditions within which the Convention has to operate.
7. Consequently, in the autumn of 2010, the OPCW Director-General established an advisory panel of independent experts and requested it to make recommendations for future OPCW priorities, taking into account all relevant developments in international security, chemical industry and science and technology, consistent with the objectives of the Convention. The advisory panel was chaired by Ambassador Rolf Ekéus of Sweden.
8. The advisory panel's purpose has been to develop recommendations that aim at ensuring the relevance and viability of the Convention in the years and decades to come. The advisory panel does not propose amending the Convention or inventing new tasks for the OPCW. This report to the OPCW Director-General contains the conclusions of the advisory panel's deliberations, and its recommendations for how the OPCW and the Convention should adapt to the new challenges.

II. THE CHANGING ENVIRONMENT

9. The 20th century experienced the horrors of poison gas warfare—the number of victims is impossible to count. Efforts to ban poison gas after its widespread use during World War I led to the 1925 Geneva Protocol for the prohibition of use in war of asphyxiating, poisonous or other gases and of bacteriological methods of warfare. Yet, the gas chambers of the Second World War and the use of poison gas in Africa and in the Far East before and during the Second World War showed the limitations of a ban merely of the use of poison gas. During the Cold War that followed, both the former Soviet Union and the United States entered into an arms race in which both acquired huge chemical weapons stockpiles. These posed considerable threats in response to which bilateral as well as multilateral negotiations began—to control and eventually eliminate them. Then, during the 1980's, chemical weapons were used by Saddam Hussein's regime against Iran and against the Kurds. All these factors and the changing circumstances at the end of the Cold War created a window of opportunity for the adoption in 1992 of the Chemical Weapons Convention, a comprehensive ban not just of the use of chemical weapons, but also of their development, production, acquisition, stockpiling and transfer.
10. The Convention has now been in force for fourteen years. Its implementation, while incomplete, is widely regarded a success. Yet the world in which it is operating has changed, and continues to do so. The conditions that prevailed during its negotiations no longer characterise the environment in which it must function.
11. Firstly, conflict is no longer framed in the context of opposing military alliances in a bipolar world. The number of inter-State conflicts has declined yet the level of

violence has not. The borderlines between war, civil war, large-scale violations of human rights, revolutions and uprisings, insurgencies and terrorism as well as organized crime are blurred. In addition to traditional military forces, more non-State actors have appeared on the battlefield, i.e. paramilitary groups, warlords and their militias and volunteers, mercenaries and private military companies, terrorists and criminal groups. As a consequence, contemporary threat perceptions are also driven by attacks on populations and critical infrastructure, in addition to more traditional state-based threats. Furthermore, there are worries, in such types of conflict and with such actors, that the rules of international law applicable in armed conflict, and in particular the principles and rules of international humanitarian law, may be undermined.

12. Given the specific characteristics of chemical weapons, there may be perceptions that chemical weapons are useful for these contemporary types of violent conflict. Whilst the threat of “traditional” chemical warfare with mass casualties has declined significantly since the implementation of the Convention began, other forms of chemical weapons might appear attractive for their capacity to cause terror, or appear useful in population displacement and social/economic destabilization. The possibility of the malicious use of toxic chemicals has been demonstrated by the Aum Shinrikyo sect in Japan and the detonation of chlorine trucks in Iraq. Such acts of terror cannot be deterred by the fact that the perpetrators may themselves die in the attack.
13. On the other hand, distinctions between law enforcement, counter-terrorism, counter-insurgency and low-intensity warfare may get blurred, and certain types of chemical weapons such as incapacitants may appear to offer tactical solutions to operational scenarios where civilians and combatants cannot easily be separated or distinguished.
14. Secondly, some States have still not formally committed themselves to the prohibition of chemical weapons by ratifying or acceding to the Convention. This implies that quantities of chemical weapons neither declared nor under international control, could be in existence, ready for use and sale. This does not mean that the States concerned would be legally free to use chemical weapons, since customary international law, reflected in the 1925 Geneva Protocol, is binding on all States. Furthermore, the United Nations Security Council, in its resolution 1540 (2004), has obligated all States to adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes. Resolution 1540 complements the Convention, although it lacks in certain respects its comprehensive scope and multilateral origins. But, the possibility remains that some States outside the Convention may be ready to resort to chemical warfare.
15. Thirdly, the globalization of the world economy, the emergence of new global actors in addition to States, the growing interdependence of the world as well as the production of and access to energy, food and medicines are fundamentally affecting chemical science and industry. There is a need for ever more advanced chemical technology to satisfy the needs of agricultural growth, economic development and public health, through the production of products such as insecticides, pesticides and medicines for humans and animals.

16. Whereas chemical industry was traditionally concentrated in North America, Western Europe and Japan, the world is now witnessing a migration of chemical production to new locations. Not only the emerging economic powers China, India and Brazil, but also other developing countries in Asia and Latin America, have seen an increase in investment in chemical industry. The industry's goal is to bring manufacturing closer to the raw materials in the Middle East and the huge markets in Asia and in Latin America. Furthermore increasing investment in chemical industry in Africa should be expected given the need of the African continent for agrochemicals, medicine and chemical products for industrial development.
17. These global trends are reflected in the distribution of chemical industry facilities declared to the OPCW by States Parties (see the table below). A comparison of the situation in 2001 (the year for which the OPCW first published a detailed breakdown) and in 2009 (the latest year for which such data are available) shows that, whilst the situation with regard to Schedule 2 and 3 plant sites has remained relatively constant, there is a clear change with regard to States Parties that have Other Chemical Production Facilities (OCPFs) operating on their soil. Whilst their number remained relatively stable in the African, Eastern European and the Western European and Others regional groups, the number of States Parties declaring OCPF plant sites in Asia and the Latin American and Caribbean regional groups more or less tripled over these 9 years.

	Change in the number of States Parties that have declared facilities, from 2001 to 2010 ¹		
	Schedule 2	Schedule 3	OCPF
Africa	0 >> 1	1 >> 1	4 >> 6
Asia	5 >> 5	6 >> 9	7 >> 22
Eastern Europe	4 >> 9	9 >> 9	15 >> 18
GRULAC	3 >> 3	4 >> 4	5 >> 13
WEOG	17 >> 20	13 >> 13	21 >> 21

18. This change in the regional distribution of the chemical industry means that more States Parties than in the past have to adopt specific regulatory measures to implement the Convention in their emerging chemical industries. The OPCW should support these countries in their efforts to adopt effective national implementation systems. The change has already led to an increase in the number of States Parties in Asia, Latin America and the Caribbean, and Africa that are liable to receive inspections under the Convention.
19. Accompanying this diffusion of chemical industry into new regions will be the broader dissemination of chemical technology, and a growth in the volume and value of chemical trade. At the same time, the production footprint of chemicals is changing. Production facilities are becoming more versatile, smaller in size, and highly adaptable—offering a range of different chemical products to customer specifications at short notice. Facilities are also becoming less polluting and more energy and material efficient. Alternatively, modern chemical plants can be huge and expansive (“world plants”). This diffusion of the capability to produce a wide range of

¹ Sources: Annual Report of the OPCW for 2001, document C-7/3, dated 10 October 2002 and Draft Annual Report of the OPCW for 2010, document EC-65/CRP.1, dated 4 May 2011.

chemical products will be extremely important for meeting the growing needs of society.

20. All these technological advances are necessary and beneficial for society. Given their dual-use character, they mean that an increasing number of States Parties will have to adopt specific implementation measures in the area of regulating chemical industry and trade. There is also a risk that know-how, materials and equipment could be misused for the acquisition of toxic chemicals for hostile purposes.
21. A fourth, and related, challenge comes from advances in science and technology. A pertinent example is the convergence between chemistry and biology which is particularly visible in the life sciences where researchers are pushing boundaries to better understand the esoteric functioning of biological systems. The aims of these advances are plentiful: trying to find new types of medicines for humans and animals, new methods of pest control, enhanced food production, or new means of energy production – to mention just a few.
22. These scientific advances create expectations for many beneficial applications. But again, they may also pose challenges to the way in which the Convention is being implemented. Furthermore, they call for answers with regard to the future relationship between the regimes that govern the ban, respectively, of chemical and biological weapons, and which have evolved separately in recent decades.

III. ACHIEVING THE COMPLETE ELIMINATION OF CHEMICAL WEAPONS

23. The core objective of the Chemical Weapons Convention is the complete and permanent elimination of all chemical weapons and their means of production under strict OPCW verification. To achieve this goal, (a) the possessor States Parties are obliged to complete the elimination of their stockpiles and former production facilities by the deadline established by the Convention, (b) the remaining States not Party need to be brought into the Convention and those that possess chemical weapons and/or production facilities must eliminate them in accordance with the provisions of the Convention, and (c) all old and abandoned chemical weapons need to be destroyed. **The OPCW and its Technical Secretariat must retain the competence and resources needed to provide the necessary verification for these disarmament measures, as well as to render technical advice to States Parties when so requested.**

Eliminating all chemical weapons stockpiles

24. The completion of the elimination of the declared stockpiles at the earliest possible date remains the primary task for the OPCW. The delays in the destruction programmes of the United States of America and the Russian Federation beyond the Convention's final deadline in April 2012 are matters of serious concern. The States Parties and the policy making organs need to remain seized of this matter, and adopt the necessary measures to ensure completion of destruction of these stockpiles as early as possible under strict verification.

25. The advisory panel took cognisance of the consultations currently being undertaken by the Chairman of the Executive Council aimed at resolving the legal and political issues caused by these delays. **The advisory panel stressed that determined and relentless efforts needed to be made by the possessor States Parties to rectify the situation at the earliest possible date.**
26. Global chemical weapons disarmament can only be achieved when all States of the world, and in particular those that have chemical weapons capabilities, have joined the Convention and eliminated any CW stockpiles and production facilities in their possession. Striving for universal adherence to the Convention therefore remains a central objective.
27. Efforts must be intensified to persuade the remaining States not Party to join the treaty.² This is no longer an issue of political campaigning. With only seven remaining States not Party (signatory States: Israel and Myanmar; non-signatories: Angola, Democratic People's Republic of Korea, Egypt, Somalia and Syrian Arab Republic), the success of universality efforts will depend on a well-tailored approach that takes full account of the specific security, political and economic conditions of each of the remaining States not Party. **The advisory panel strongly encouraged the Director-General to continue to explore in depth the relevant circumstances in each case and to recommend the steps to be taken to achieve universal adherence to the Convention; he should also consider appointing a Special Representative for Universality.**
28. **To achieve universal adherence, all possible avenues (bilateral, regional, international) should be pursued by the OPCW.** The OPCW should continue working with States not Party in a proactive way. It should respond positively to invitations to support initiatives to further the goal of universal adherence to the Convention.

Legacy issues including old and abandoned chemical weapons

29. The States Parties will have to continue dealing with the legacy of past chemical warfare programmes and activities for many years to come. They will continue to discover, recover and destroy old and abandoned chemical weapons left behind on battlefields of former wars and in locations previously associated with their production, storage, testing or disposal.³ These remnants of previous wars and military preparations pose serious risks to people and the environment. **Therefore, one of the future priorities of the OPCW in the field of chemical weapons destruction will be the destruction of old, and of abandoned chemical weapons.** It is important that these old and abandoned chemical weapons be destroyed as soon as possible and in a manner that is safe for workers, people and the environment.

² The Republic of South Sudan became the 193rd Member State of the United Nations on 14 July 2011. With regard to the Convention, the new State can either notify the OPCW through the United Nations that it will join the Convention as a successor State, inheriting the obligations that Sudan has as a State Party, or the new State will have to accede to the Convention.

³ A recent example is the discovery in early July 2011, of an unexploded Iraqi chemical munition dating back to the Iraq-Iran war in the 1980s.

30. With regard to the verification of declarations and the destruction of old and abandoned chemical weapons, the responsibilities of the Technical Secretariat will continue until these remnants of previous programmes and wars have been destroyed. The advisory panel felt that the OPCW should approach these issues from the perspective of facilitating assistance and technical advice for States Parties that need it. The OPCW, for example, could promote studies and surveys into former dumping operations to get a better picture of the situation and the potential risks, and it could promote exchanges and cooperation between States Parties on technical issues related to old and abandoned chemical weapons and their recovery and destruction.
31. Also, sea-dumped chemical weapons will remain a reason for concern with regard to protecting the environment. States Parties are not required and may in their discretion decide whether to declare any such chemical weapons, and whether to apply to them the provisions of the Convention dealing with destruction and verification. As a consequence, the OPCW has had little practical exposure to issues related to sea-dumped chemical weapons. But that does not mean that it can ignore the matter altogether. There may be a need for technical assistance and advice if States Parties request it from or through the OPCW.

Maintaining competence to render technical advice to States Parties regarding chemical weapons issues

32. The continued destruction of chemical weapons under strict international verification, and even beyond the 2012 deadline, as well as of old and abandoned chemical weapons must remain a priority task for the OPCW. Furthermore, there will be a need to monitor the destruction of chemical weapons, declared by States, which have joined the Convention after April 2007⁴ or those that could be declared by States, joining the Convention in future. The resources allocated to verification of these destruction operations must be sufficient to meet these requirements.
33. The Technical Secretariat must continue to undertake effective and competent verification with regard to chemical weapons and related facilities, and to render technical assistance and advice to States Parties. It must also remain a source of knowledge, expertise and support to States Parties with regard to issues that may come up as a result of the possible discovery of hitherto-unknown remnants of previous chemical warfare activities. If so requested by States Parties, the OPCW needs to be prepared to provide or arrange assistance for them in such tasks as risk assessment and management, site surveying, recovery, temporary storage, and destruction.
34. The decrease in the verification effort due to the completion of destruction operations at several chemical weapons destruction facilities projected for the coming years must therefore not lead to a loss of competence and capacity to implement all requirements of the Convention with regard to chemical weapons. Considering that there remain many possible forms of misuse of toxic chemicals for non-peaceful purposes—there

⁴ According to paragraph 8 of Article IV of the Convention, States which join the Convention 10 years after its entry into force, i.e. after April 2007, should destroy any chemical weapons they may possess as soon as possible, under timelines and verification measures determined by the Executive Council.

continues therefore to be a need to minimize the risk of being unprepared for unforeseen events.

35. Even after the complete elimination of all chemical weapons stockpiles world-wide, **the OPCW should remain the global repository of knowledge and expertise with regard to chemical weapons disarmament, the verification of their non-possession and non-use, and a repository of knowledge about their destruction. The OPCW should find ways of ensuring continuity in its knowledge base and expertise in these areas.**

IV. UPHOLDING CHEMICAL WEAPONS DISARMAMENT AND PREVENTING NON-STATE ACTORS FROM ACQUIRING TOXIC CHEMICALS FOR HOSTILE PURPOSES

36. To ensure that the threat of chemical warfare will never recur, the States Parties have undertaken, under Article I of the Convention, not to engage in any of the activities prohibited to them under the treaty that could lead to the (re)acquisition and use of chemical weapons, and not to assist, encourage or induce in any way anyone to engage in such activities. States Parties are also required to adopt the necessary measures to ensure that toxic chemicals and their precursors are only used for purposes not prohibited under the Convention.
37. This all requires effective national implementation and enforcement of the Convention's provisions and prohibitions. National implementation also requires the active participation of all stakeholders including the chemical industry, the scientific and technological research community, and the military and police forces. At the international level, it calls for effective verification of compliance by the Technical Secretariat, close cooperation between States Parties, and regular reviews of how these fundamental undertakings are being implemented by the Conference of the States Parties as foreseen under paragraph 20 of Article VIII of the Convention. The Technical Secretariat should effectively coordinate its work with partner organisations which have mandates that relate to the implementation of the Convention.

The General Purpose Criterion

38. The most important legal protection provided by the Convention against the recurrence of chemical weapons is built into the definition of chemical weapons contained in Article II of the Convention: *any* toxic chemical and precursor chemical is to be considered a chemical weapon unless intended for purposes not prohibited by the Convention, as long as its types and quantities are consistent with such purposes (the "general purpose criterion"). The scope of this definition is thus not constrained by the Schedules of Chemicals, and it covers all toxic and precursor chemicals, even those that have yet to be synthesised or discovered. The general purpose criterion has been included by the negotiators so as to ensure that new developments cannot undermine the legal strength of the Convention's prohibitions.

National implementation

39. The goals of the Convention can only be fully achieved if all State Parties respect, realize and comply with their obligations under it. Thus, Articles VI and VII of the Convention require that all States Parties enact and enforce legislation to ensure that

toxic chemicals and their precursors are not used for prohibited purposes. Besides legislation, regulatory and administrative measures must be adopted to enforce the legislation. All States Parties are required to designate or establish a National Authority which must be empowered to work effectively and coordinate its work with other agencies, both nationally and internationally.

40. A key issue in this respect is to implement effective national controls over transfers (exports, imports, transits, transshipments, and re-exports) of relevant chemicals, equipment and technologies. Border control and law enforcement measures need to be applied by States Parties to detect, deter, prevent and combat illicit trafficking and brokering of chemical weapons, and of dual use goods that could be used for chemical weapons purposes. **The OPCW should assist and encourage States Parties in this regard and ensure that there will be a “level playing field” for such controls to avoid loopholes as well as discrimination.**
41. Compliance with the requirements of the Convention cannot merely be achieved by a regulatory approach from governments. It requires support by all stakeholders in chemical industry, research, academia and other relevant sectors of society. To this end, responsible professional conduct needs to be built into their governance systems, and synergies should be sought between the implementation of the Convention, and chemicals management systems such as the Strategic Approach to International Chemicals Management (SAICM) and the Globally Harmonised System of Classification and Labelling (GHS). Important synergies also exist with regard to the European Union's regulation for the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), and related initiatives and measures taken in other regions. The chemical industry itself has taken up these governance challenges in its salutary Responsible Care ® programme. All of these measures, in concert with regulatory and enforcement steps taken by governments under the Convention, should lead to the development of a culture of compliance based on adequate laws and regulations and underpinned by self-regulation and conscious participation in the implementation of the requirements of the Convention by all stakeholders.
42. **For the OPCW Technical Secretariat, providing tailored and sustainable technical assistance (“implementation support”) to States Parties should therefore remain one of the highest priorities.** Support to build national capacity could include, for example, the strengthening of National Authorities and systems involved in the Convention's implementation. The Technical Secretariat and States Parties with well-developed national implementation systems should actively provide assistance to States Parties with gaps in their national implementation, by offering legislative advice/assistance, financial and technical support. To this end, the Technical Secretariat should continue to develop work plans and provide platforms for exchange and cooperation through the organisation of workshops and meetings.
43. The OPCW should develop and design model structures in support of the strengthening of national capacity to apply the norms of the Convention. The Secretariat can help by providing technical and information support, especially by conducting simulations and assessing how different methodologies may affect implementation efforts of States Parties and verification results, based on declaration data submitted by the States Parties.

44. Much more can be done through regional and global networking, assistance with awareness raising and building stakeholder relations, training of national implementation personnel and the sharing of best practices among States Parties. The Technical Secretariat should continue to help with technical assistance to promote peaceful chemical development among States Parties, and with the assessments of needs so as to better tailor technical assistance to the requirements and conditions of States Parties. Adequate budgetary and human resources for such programmes must be earmarked and the programmes designed so as to enable evaluation against the benchmarks set out in the Action Plan on Article VII.
45. The advisory panel noted that there are concerns in the chemical industry caused by misgivings about the uneven implementation of the Convention by different States Parties which causes gaps in declarations and unequal regulatory treatment of chemical companies in different States Parties. The support and engagement of the industry is essential for the OPCW to effectively implement its duties. Steps must therefore be taken to reinforce confidence of the industry in the Organisation. A non-bureaucratic and constructive partnership should be created, through an ongoing dialogue that respects the mutual needs of confidentiality and trust. The involvement of the National Authorities, with conscious respect for discretion and confidentiality, is essential for creating the broad dialogue that is required. **The Director-General may also consider setting up a group of experts from chemical industry to advise the OPCW on how to better interact with the chemical industry.**
46. A sustainable culture of compliance will require the continued strengthening of the relationship between the Technical Secretariat and the National Authorities—a genuine partnership that builds on national, regional and OPCW-wide networking, and the wide sharing of experiences in the practical implementation of the Convention.

Verification of compliance

47. Preventing the recurrence of the menace of chemical warfare is the second pillar of the Convention. Much progress has been made in setting up an effective verification system to ensure the accuracy of declarations, the completeness of chemical weapons destruction activities, and to provide confidence in the non-production of chemical weapons. The system has been adequate for the initial phase of treaty implementation, which had a strong focus on chemical weapons stockpile declaration and elimination.
48. To ensure the continued viability of the routine verification system under Article VI, the OPCW should now take a forward-looking approach. Verification is more than merely the conduct of inspections and the confirmation of declaration data. It is a process of gathering, validating and evaluating information that allows the independent assessment of how each State Party is implementing the treaty. In an era of globalisation with chemical industry spreading around the globe and chemical trade creating global partnerships and dependencies, and where information about chemical activities is available from an ever-expanding pool of authoritative sources on the Internet, it is difficult to comprehend why the Technical Secretariat does not make better use of open source information, particularly that from company websites and information that is officially provided to other international organizations such as the

UN. States Parties should consider providing additional information on a voluntary basis to reduce the likelihood of inspections at facilities that have no relevance to the Convention. **The policy-making organs of the OPCW should study the matter of using open source information for verification purposes and provide guidance to the Technical Secretariat so as to find acceptable ways to enhance the verification process.**

49. Inspections remain a central aspect of verification. The key to achieving confidence in compliance, however, does not lie solely in inspection numbers. The selection of facilities for inspection is equally important, and should be based on the risk posed to the object and purpose of the Convention, taking due account of the conditions stipulated in the relevant parts of the Convention's Verification Annex. What matters most is the quality of the inspection process. The Convention's general inspection aim under the Convention is to verify that the activities at an inspected facility are consistent with the information provided in declarations.
50. With regard to facilities which produce (process, consume) scheduled chemicals, much experience has been gathered by the OPCW and the conduct of inspections has provided a significant degree of transparency and confidence. Priority should be given to further increasing efficiencies and ensuring the independence and integrity of the verification process.

The Schedules of Chemicals

51. This leads into a consideration of the Schedules of Chemicals, which have remained unchanged since the adoption of the Convention. Given the role that they play in directing routine verification activities in the chemical industry, this constancy has "frozen" much of the industry verification system in the past. The system remains relevant with regard to the verification of non-production of chemical weapons as known from the Cold War. It reflects less and less, however, the emerging threats related to the possibilities of future hostile use of toxic chemicals.⁵
52. The OPCW has yet to review the composition of the Schedules in the light of developments in science, technology and industry. States Parties should be making efforts to update the Schedules to take account of risks that had not been considered in the negotiations as well as economic and verification-related implications, realising that any list-based control system will over time lose its relevance unless it is being regularly updated. **The advisory panel recommends that reviews of the Schedules should be undertaken on a regular basis by the States Parties. Such reviews could take place every fourth or fifth year and be prepared by the scientific unit proposed elsewhere in this report (see paragraph 78), together with the SAB and after consultations with stakeholders.**

⁵ Some of the concepts related to the previous text on other organisations having identified toxic chemicals that pose a risk in today's security environment given their toxicological and other properties and their availability in day-to-day life may be taken up in the section on assistance and protection.

Other chemical production facilities (OCPFs)

53. Requirements with regard to industry verification that are not covered by the Schedules are covered by the OCPF verification regime. This category of facilities is perhaps the most diverse with respect to the relevance of individual plant sites to the Convention. Experience gathered by the Technical Secretariat shows that whilst some of the OCPFs pose little or no risk to the object and purpose of the Convention, others are highly relevant to demonstrating that no chemical weapons are being produced. Also, when compared to facilities involved with scheduled chemicals, globalisation and advances in science and technology have the most profound impact in the OCPF category of plant sites. With regard to the verification system as it stands, however, the OCPF regime lacks focus given the very general nature of the data contained in the declarations. For all these reasons, OCPF inspections will remain important to maintaining the relevance of the routine verification system in the future, but should be made more effective. **To this end, the OPCW must find ways of directing inspections more consistently towards facilities of high relevance to the Convention, taking account of the applicable provisions of the Convention with regard to equitable geographic distribution and the overall ceiling of OCPF inspections per year and State Party.**
54. There are, in principle, several options as to how this could be achieved (and they can be combined): more specific data could be required in declarations to better characterise a declared facility and its activities (either within the existing legal framework or after technical change of relevant provisions of Part IX of the Verification Annex); the Technical Secretariat could use data it has acquired in its verification and other activities in addition to those contained in declarations (for example, data from previous inspections); States Parties could submit additional data on their facilities on a voluntary basis to reduce the likelihood of inspections at facilities that have no relevance to the Convention.
55. At the same time, the OPCW should be aware in its evaluation of verification results that mechanisms have been set up in chemical industry, for reasons other than implementing the Convention, that can nevertheless help prevent the misuse of toxic chemicals for hostile purposes. Examples of relevant complementary regulatory measures include the REACH programme in the European Union, and similar initiatives outside of Europe, such as GHS and SAICM. Within industry itself, self-regulatory mechanisms such as Responsible Care®, and the use of industry standards and quality assurance systems aim at enhancing regulatory compliance and responsible behaviour.

Verification tools and procedures

56. Effective verification requires effective verification tools. OPCW inspectors have at their disposal a suite of approved equipment ranging from analytical field instruments and sample collection and preparation kits to different types of non-destructive evaluation equipment, equipment for personal protection, agent detection and safety monitoring, and other tasks. The Technical Secretariat has put in place standard operating procedures to ensure the proper selection, certification and use of this equipment, and it maintains a high standard of training. Furthermore, with the help of

States Parties, the OPCW has set up a fully-validated analytical database of target chemicals for on-site analysis. The OPCW also has established a network of designated laboratories whose professional standard is regularly evaluated in proficiency tests. This network enables the off-site analysis of environmental samples. A similar capability for the analysis of biomedical samples is currently being developed.

57. At the same time, to provide extra protections with regard to confidential information unrelated to chemical weapons, certain practices have been adopted which are incompatible with the privileges and immunities which the Convention accords to inspection teams, or which could otherwise compromise the independence of the verification process (for example: copying of inspector notebooks at the end of an on-site inspection to the inspected State Party in spite of the Convention's stipulation that the records of inspector are inviolable,⁶ or restriction of the OPCW analytical database to scheduled chemicals only). Such practices can create scenarios where OPCW inspection teams will lack the ability to detect the presence or absence of certain chemicals relevant to compliance, or where their independence is compromised. **The policy-making organs and the Technical Secretariat should take measures to ensure that the verification processes of the OPCW enjoy the integrity and independence required under the Convention.**

V. RESOLUTION OF CONCERNS OF POSSIBLE NON-COMPLIANCE

58. Article IX of the Convention provides for a number of mechanisms to address and resolve non-compliance concerns, ranging from bilateral consultations between the parties concerned to mechanisms under the auspices of the Executive Council, and the clarification and resolution of non-compliance concerns by challenge inspection. Allegations about the use of chemical weapons as well as assistance requests in cases of use or threat of use of chemical weapons against a State Party are subject to investigative mechanisms under Articles IX and X of the Convention.
59. Furthermore, there have been situations when States Parties have failed to meet their obligations as a result of a lack of capacity or full understanding of all the requirements of the Convention. The OPCW has dealt with such situations through mechanisms under the Executive Council, subject to review by the Conference of the States Parties, that involved encouragement, transparency measures such as reporting of steps taken to improve the situation, as well as technical assistance by the Technical Secretariat and States Parties when needed.
60. As we move closer towards a world without chemical weapons, but one in which instabilities, threats to national and regional security and conflicts have not ceased, effective means of consultation, cooperation and fact-finding will continue to be essential in order to address and resolve non-compliance concerns within the framework of the Convention.

⁶ This was requested by the Executive Council in 1997, at the beginning of the inspection operations when there was limited practical experience with OPCW inspection conduct and protection of confidentiality.

61. The emphasis in resolving non-compliance concerns among States Parties has so far been on bilateral mechanisms. The First and Second Review Conferences (in 2003 and 2008 respectively) recognised the value of such bilateral clarifications and encouraged States Parties to continue resolving concerns about possible non-compliance amongst themselves. It should be noted that such bilateral consultations, whilst they have value for resolving concerns amongst States Parties directly involved, remain non-transparent for other States Parties.

Clarification procedures under the Executive Council

62. Many of the multilateral mechanisms foreseen in Article IX have not been activated since the entry into force of the Convention. Only recently have certain compliance issues been brought before the Executive Council.
63. **It would be desirable for the Executive Council to devote a part of its substantive work to promoting and applying the mechanisms of the Convention to address and resolve concerns about possible non-compliance.** Consistent with the procedures of the Convention, clarification procedures under the Council could involve a whole range of measures from clarification requests through the Council, to the Council requesting the Director-General to establish a group of experts to examine all available information and data relevant to the situation causing the concern, to the possibility that a State Party could request the Council to clarify a situation that has given rise to concerns about its own compliance (the latter could for example be accomplished by an inspection by invitation of a suspected facility or location, to allay concerns and demonstrate that no violation has occurred). **The Conference of the States Parties should strengthen its oversight function, and States Parties should collectively use annual sessions of the Conference to review the compliance status of the Convention.**

Challenge inspection

64. The right of each State Party to request an on-site challenge inspection for clarifying questions concerning possible non-compliance is an ultimate assurance that all States Parties implement their obligations under the Convention. When the Convention was negotiated, great care and attention was given to the formulation of the relevant treaty language in order to make the provisions unambiguous and easy to implement. However, since the entry into force of the Convention, no State Party has requested a challenge inspection. While this reflects a welcome mutual respect among the States Parties and a determination to use whenever possible consensual means to resolve issues, the non-use of challenge inspections might erode its deterrence effect.
65. States Parties should look upon the mechanism of challenge inspections as a necessary safeguard of the Convention that, in order to deter violations, must be operational. The Convention requires that the Director-General inform the Executive Council of situations when a challenge inspection cannot be executed in a timely manner, so that action can be taken to improve the situation. **It is therefore essential that the Technical Secretariat maintain the resources, technical competence, operational readiness and professional skills needed to implement a challenge inspection if one is invoked.**

66. At the same time, the States Parties themselves should further develop and maintain a good understanding of the procedures of challenge inspection. Past experience with national as well as multilateral trial challenge inspections has shown the benefit of such trials for national preparations to receive and effectively conduct a challenge inspection. **The OPCW could help States Parties develop and maintain their practical understanding of these requirements by organizing workshops and exercises.** States Parties should also attempt to finally settle the remaining unresolved issues related to challenge inspection.

Investigations of alleged use of chemical weapons

67. The capacity of the Technical Secretariat to investigate allegations of the use of chemical weapons will likely become more important in the future as new threats relating to the deliberate release of toxic chemicals emerge. These new threats may call for a re-thinking of operational procedures and a review of how the OPCW interacts with host nations, the United Nations and other actors that are likely to appear on the scene of such an event.
68. Maintaining this capacity will be a challenge as it depends on a critical mass of well-trained inspectors with the right mix of technical skills and expertise. As the overall demand for inspectors with chemical weapons expertise and skills related to work in chemical warfare environments declines given the decline in chemical weapons destruction activity, **the Technical Secretariat may have to develop new concepts for how it can maintain readiness to conduct investigations of alleged use** (such as stronger reliance on expertise outside the Inspectorate; more reliance on the Qualified Experts designated by the Director-General for investigations of alleged use, as envisaged by the Convention).
69. With regard to investigations of alleged use by the United Nations Secretary-General in States not Party to the Convention or in territory not under the control of a State Party, it is important that the general provisions contained in the UN-OPCW Relationship Agreement on coordination and cooperation with regard to such investigations be underpinned by operational arrangements and that information is shared on such issues as rosters of experts, laboratories available for off-site analysis, and standard operating procedures. In such events, the OPCW should be able to immediately mobilize and dispatch competent chemical warfare specialists from the Technical Secretariat.
70. The roster of experts and laboratories available to the Secretary-General's investigation mechanism in relation to the 1925 Geneva Protocol, as well as related procedures, have recently been updated. **Close coordination between the OPCW and the United Nations Secretary-General mechanisms will be essential, taking into account that the OPCW provides the primary international investigation mechanism with regard to the alleged use of chemical weapons.** Furthermore, the OPCW - through its network of National Authorities, wide inspection experience, and functioning links with chemical industry - has an unmatched overview of chemical weapons-related capabilities on a global scale. At a minimum, both mechanisms need to be developed towards procedural inter-operability, similar technical and procedural standards and operational coordination.

VI. MONITORING AND EVALUATING ADVANCES IN SCIENCE AND TECHNOLOGY

71. The Convention's objective—to ban comprehensively and permanently the development, production, possession, transfer and use of chemical weapons—will only be successfully achieved and maintained if advances in science and technology are effectively monitored and evaluated. To achieve this, the OPCW, building on its accomplishments so far, should improve and widen the scope of monitoring and evaluating developments in chemical science and technology and, at the same time, make full use of these developments to improve the quality of its own work. This is recognised by the provisions in Article VIII of the Convention which require the OPCW to consider measures to make use of these advances for verification purposes, the establishment of a Scientific Advisory Board (SAB), and the need to review the impact of these advances on the operation of the Convention through periodic Review Conferences.
72. The OPCW needs good science advice and effective mechanisms to review and evaluate the impact of scientific advances on the Convention. Since its establishment in 1998, the SAB has played an important role in this respect. But there have been deficiencies in how the OPCW has called for science advice as well as how it has incorporated such advice into its operations. There should be more clarity about the purposes of SAB advice to the OPCW, in accordance with the requirements of the Convention and the SAB's terms of reference. The advisory panel suggests that these purposes could include:
- ⤴ The provision of information and technical assessments to allow the evaluation of risks associated with new chemicals and technologies
 - ⤴ Proposals for the improvement of existing and the adoption of new verification methods and types of inspection equipment
 - ⤴ Advice on the need to adapt verification methods in light of new technological and scientific developments that affect the conduct of verification
 - ⤴ Technical advice in the context of fact-finding measures
 - ⤴ Technical advice on new issues that may affect the operation of the Convention, for example the convergence between chemistry and biology
 - ⤴ Technical advice regarding preparedness for response to releases of toxic chemicals, and with respect to remedial measures after such releases
 - ⤴ Identification of opportunities in science and technology to improve international cooperation among States Parties in the peaceful uses of chemistry
 - ⤴ Sharing of information and experience with regard to technologies for the destruction of (in the future predominantly non-stockpile) chemical weapons.
73. Progress in science and technology affects the Convention in several ways. It can change the technological environment within which the OPCW functions (e.g., in

- chemical industry); create new risks for the potential misuse of toxic chemicals; improve means of protection against toxic chemicals; bring about more effective means and methods of verification; and create new opportunities for international cooperation among States Parties in the peaceful uses of chemistry.
74. Firstly, with the finalization of the destruction of existing chemical weapons stockpiles as well as the destruction of old and abandoned chemical weapons, **attention must be directed towards the potential spread of chemical weapons capabilities to governmental and non-governmental actors.** In that context, developments in electronic communications may make chemical weapons information more accessible. Compared to nuclear and certain types of biological weapons, the technological hurdles before the synthesis of toxic chemicals and the improvisation of delivery system are much lower in the case of improvised chemical weapons.
 75. At the same time, it is important not to overstate the risks associated with these advances in science and technology—in the absence of dedicated weapons programmes, the various developments of chemical weapons-relevant technology will remain several long and costly steps away from the construction and production of a usable weapon.
 76. Secondly, **there should be genuine exchanges involving the technical as well as policy communities of the Convention, including the SAB, government experts and policy makers, to clarify what scientific advice is needed.** There should then also be a strong relationship between the SAB and the wider science, technology and industry communities to ensure that its advice is based on a thorough understanding of what is happening at the frontiers of science and technology.
 77. With regard to the chemical sciences community, the OPCW and the SAB have developed a productive relationship with the International Union of Pure and Applied Chemistry (IUPAC), the global international science union in the field of chemistry. It is important to make this partnership constant, both in order to solicit authoritative and broad-based science advice for the OPCW, and to help governance mechanisms within the scientific community to improve awareness of the Convention's goals and requirements and ensure respect for its norms.
 78. But even with an expanded role for the SAB and an enhanced relationship with IUPAC, the Organisation's scientific competence must be strengthened further. **Therefore, resources should be set aside for the creation within the Technical Secretariat of adequate capacity to manage and support the systematic monitoring of relevant scientific developments. This could for example be a Science Adviser, or a small unit or part of an office working directly under the guidance of the Director-General and at the same time having access to all Divisions of the Technical Secretariat.** Such a function could also serve as a permanent secretariat of the SAB and assist with the proposing and drafting of the agenda of the SAB and the compilation of documentation on scientific matters under review by the SAB. Furthermore, it could assist the Director-General and the Executive Council in assessing scientific and technological information made available to the Organisation, including the findings of the SAB.

79. A relatively new issue is the convergence between chemistry and biology.⁷ This convergence calls for a closer interaction in the implementation of the Convention, and the Biological Weapons Convention. Convergence in the sciences does not in itself lead to convergence of the regimes, but **exchanges of experience and joint technical reviews could be helpful to understand how it affects the implementation of both treaties at the interface between chemistry and biology.** That is particularly pertinent as there is an overlap between the two treaties with regard to the prohibition of toxin weapons.
80. An important partner in these conversations must be the chemical industry. The chemical industry was constructively involved in the design of the Convention's verification regime during the negotiations, and contributed to the preparatory work before the entry into force of the Convention, including by helping with the training of future OPCW inspectors.

VII. PREPAREDNESS FOR AND RESPONSE TO EVENTS INVOLVING THE RELEASE OF TOXIC CHEMICALS FOR HOSTILE PURPOSES

81. Article X of the Convention makes provision for the strengthening of national capacities of States Parties to prepare for and respond to attacks with chemical weapons or their threatened use. Article X includes provisions for expert advice through the OPCW on how to enhance national protection against toxic chemicals, and access to the OPCW data bank which contains information on various means of protection against chemical weapons. It also establishes an international response mechanism through the OPCW (directly by States Parties, bilaterally or through the OPCW, as well as by the OPCW itself) to respond to a threat or actual use of chemical weapons and to mitigate the consequences of such attacks. Although these provisions were intended to deal with chemical warfare threats posed by States, they can also be employed if non-State actors such as terrorists use chemical weapons (to be understood as the use of any toxic chemical for hostile purposes).
82. As stated earlier in this report, the threats associated with traditional chemical warfare have been gradually declining after the entry into force of the Convention. At the same time, new risks have emerged. Terrorist organisations have attempted to acquire,

⁷ On the one hand, biological science is increasingly making use of chemistry, to the point where it has become possible to chemically synthesize components of biological systems and simple biological agents such as viruses. The chemical synthesis of more complex living organisms such as bacteria has yet to be accomplished but research to this end is well under way. This trend blurs the borderlines between what should be considered a chemical agent, and what is a biological one. At the same time, the manufacturing of some chemical products makes use of biological processes. Examples include the use of bio-catalysts in chemical synthesis or even the use of living organisms (plants and animals) as production vessels for certain chemical products (for example, certain medicines and biofuels). Similarly, biological systems are used in chemical analysis. Last but not least, the approach in the search for new biologically active chemical compounds (for example medicines or pest control agents) is changing. When in the past, chemical synthesis would provide large numbers of chemical compounds derived from certain lead molecules which would then be screened for their biological effects, the trend is now towards investigating in detail the chemical structure, configuration and functionalities of the biological targets and on that basis to design chemical structures that can specifically interfere with these biological functions. As this approach in the life sciences gains ground, it will increasingly become meaningless from a scientific point of view to distinguish between chemical and biological agents.

and some have actually used, chemical warfare agents and improvised dissemination devices. There have also been concerns about the possible use of toxic chemicals in intra-State conflicts. Assistance and protection no longer aims primarily at saving lives in classic cases of chemical weapons use on the battlefield. Other objectives have become equally if not more pressing: the protection of non-combatants following the deliberate release of toxic chemicals, by whichever actor(s) and in a variety of possible scenarios. This threat is more complex than “traditional” chemical warfare. It can involve chemical, biological, radiological and nuclear (CBRN) materials; it can be instigated by States but also non-State actors such as terrorists; and it is often directed at civilians rather than military forces.

83. The responsibility to counter these new threats lies primarily with governments, who exercise this responsibility within their own jurisdiction as well as collectively in a (sub)regional context and globally under relevant UN Security Council resolutions. Chemical industry also is making its contribution to ensuring the safety and security of its facilities, and voluntary codes of conduct are being put in place worldwide to enhance the safety and security of chemical installations. The OPCW, at the same time, has recognised its responsibility to contribute to the global fight against terrorism. One of its contributions relates to helping States Parties build capacity in the area of prevention and response to deliberate release of toxic chemicals by terrorists, including to possible attacks on chemical installations and transportation.
84. For the development of effective preventive strategies, it is important to recognise a change in the chemical risk spectrum associated with these new threats. Traditional chemical warfare agents are not necessarily the primary concern (although the experience of Tokyo in 1995 has shown they must not be ignored). Terrorist chemical weapons threats are driven by accessibility and opportunity. The deliberate release of toxic industrial chemicals as well as the ad hoc synthesis of chemical agents using readily-available chemicals, including simple household goods, cannot be ignored. Delivery methods may include not only improvised dissemination devices but also attempts to poison food or drinking water. The objective may not be mass casualties but mass terror. Although these threats are much smaller in scale than those of traditional chemical warfare, in a world of spreading industrial capacity, intensive trade and the broad diffusion of chemistry into daily life, an “all-risks approach” will be needed.
85. In this changing environment, the nature and format of assistance and protection under the Convention should be adapted to meet these new requirements. Building resilience at the local and national level and improving strategic and operational (sub)regional cooperation are of critical importance. The OPCW should contribute to this based upon its competence, its access to expertise of States Parties, and its global reach.
86. **This could, for example, include OPCW support for the establishment, in regions or subregions where such capabilities are lacking, of regional centres to prepare for and respond to threats related to releases of toxic chemicals** (for example, by expert advice, training, or the facilitation of cooperation with other such centres and relevant institutions of other States Parties). Providing assistance and expert advice to

such regional initiatives would enable broader regional buy-in and facilitate donor contributions.

87. With this shift in emphasis towards stronger support for regional, subregional and national preparedness, the future role of the OPCW in response to requests for assistance in case of use or threat of use of chemical weapons should be reviewed. The OPCW mechanism will remain important whenever national and subregional response systems lack capacity, in particular in the event of multiple attacks with toxic chemicals. But any such international assistance can only back up the response at the local level—it is the ability to take effective measures immediately, within hours, that matter in scenarios involving the release of toxic chemicals.
88. To strengthen local, national and regional capacities to prevent, prepare for and respond to chemical incidents, States Parties will require tools (nonbinding guidelines and decision making tools, for example), as well as practical advice that helps them with needs assessment and contingency planning, training and different forms of exercises. The OPCW has already developed a portfolio of programmes and projects in this regard and it should continue offering such measures to States Parties. At the same time, other international and regional organisations are providing similar support, and it is important for the OPCW to coordinate its activities with these other actors. The Technical Secretariat could for example explore the possibilities of cooperation with the World Health Organisation, including, as appropriate, joint workshops, databases and action to support surviving victims.⁸
89. In addition, **the international community will continue to expect the OPCW to maintain the professional competence and operational capability to investigate allegations of the use of chemical weapons.** These issues have already been discussed under heading V. It should be recalled here that the OPCW investigation mechanism is today the primary international mechanism to investigate allegations of the use of chemical weapons.

VIII. FOSTERING INTERNATIONAL COOPERATION IN THE FIELD OF PEACEFUL USES OF CHEMISTRY

90. Fostering international cooperation in the field of peaceful uses of chemistry is an important goal of the Convention. Article XI sets out the basic principles to this end, and Article VIII assigns responsibility to the Conference of the States Parties to promote international cooperation among States Parties.
91. This objective will gain in importance among OPCW priorities in the future. For many States Parties, it is and will remain a major incentive to stay engaged with the Convention and the OPCW. There are two aspects of international cooperation: not hampering the economic and technological development of the States Parties, and

⁸ One of the areas that may require more attention from the OPCW is the treatment of chemical casualties, irrespective of whether they result from the use of chemical weapons, accidents with old and abandoned chemical weapons, terrorist use of toxic chemicals or other incidents. Specific and quite different methodologies are required to save lives immediately after exposure and to manage long term, chronic effects from which many victims are still suffering today. The OPCW is not a medical institution, but it has some relevant expertise.

developing attractive OPCW programmes to promote international cooperation among States Parties.

Transfer controls and the economic and technological development of the States Parties

92. In today's globalised environment, rapidly growing chemical trade is indispensable for economic development. **To ensure that the trade in dual use chemicals, equipment and technologies will only serve legitimate purposes and not contribute to the re-emergence of chemical weapons threats, the OPCW must use its institutional competence to help States Parties implement effective national controls**, without hampering the economic and technological development of all States Parties.
93. Furthermore, **the OPCW should provide assistance to National Authorities to better understand and meet their responsibilities** under the Convention in this regard. For example, the OPCW could develop voluntary guidelines on how best to control chemical trade, offer practical technical assistance to help States Parties adapt these guidelines to their specific national conditions, and provide training, implementation tools and other forms of implementation support.
94. An informal group of 40 States called the Australia Group has, since its inception in 1985, contributed to international security by regulating and controlling exports of chemicals which could be used in the production of chemical weapons. When the Convention was adopted in 1992, a statement was made on behalf of the Group to the effect that, after the entry into force of the Convention and in light of its implementation, each participant in the group would undertake to review the measures they have taken to prevent the spread of chemical substances and equipment for purposes contrary to the objectives of the Convention, with the aim of removing such measures for the benefit of States Parties acting in full compliance with their obligations under the Convention.
95. Today, after 14 years of functioning of the Convention, it can be concluded that the implementation of the Convention has generally met the expectations of its States Parties. The OPCW up to this date has in most cases successfully carried out its duties as defined by the Convention, including the effective prohibition of any transfer of chemical weapons. The remaining tasks are clearly defined (enduring enforcement of the prohibitions with regard to non-transfers of chemical weapons and the undertaking not to assist, encourage or induce any activity prohibited under the Convention; further strengthening of national implementation systems including in the area of transfer controls as required by the Convention; reviews of existing national regulations in the field of trade in chemicals in order to render them consistent with the object and purpose of the Convention). The OPCW appears well equipped and ready to deal with these issues—it has already taken them up in the context of its Article VII Action Plan.
96. To move this process further, **the OPCW could seek to promote dialogue between export licensing organisations and customs authorities where they have not to date interacted and cooperated**, for example to identify elements of the Australia

Group guidelines that can help the National Authorities to better monitor transfers of dual use chemicals of relevance to the Convention.

97. Nevertheless, whether justified or not, the continuation of Australia Group measures vis-à-vis States Parties of the Convention has given rise to resentment. Such resentment is not a healthy or propitious development, and efforts should be made to correct it. A way in which cases of transfer denials might be addressed is through consultation and cooperation within the framework of the OPCW. This has not happened in the past. **The advisory panel recommends an approach whereby any State Party feeling discriminated against over transfer denials could address a complaint to the Director-General, who might use his good offices to bring the parties together to discuss and if possible resolve the matter including by addressing the reasons that have led to the denial. Such a mechanism might increase transparency and help to dispel concerns.**

Fostering international cooperation in the peaceful uses of chemistry

98. With regard to the OPCW's programmes to promote international cooperation in the peaceful uses of chemistry, some progress has been made since the entry into force of the Convention. However, these programme areas have received inadequate resources in the past. With the release of resources from chemical weapons-related verification in the future, greater attention should be provided for the implementation of Articles XI. Effective implementation of this important Article, which involves the entire membership of the Convention, will contribute to the overall objective of enhancing compliance. **To the extent possible, Article XI programmes should not be primarily dependent on voluntary contributions which by nature will be ad hoc, but programmes should be strengthened through the regular OPCW budget as well.**
99. **In developing future cooperation programmes, the OPCW should link these to its own technical competence and strengths. Thereby the OPCW should make full use of its knowledge base and of its networks with National Authorities, various organisations, institutions and experts in the States Parties.** This would give further legitimacy and appeal to these programmes, and make them distinct from international cooperation programmes offered by other international organisations. What the OPCW can bring to the table is its specific technical understanding and competencies related to toxic chemicals, its experience with regard to assisting States Parties with national implementation measures, its ability to network and connect partners, and its global reach.
100. Examples for programme initiatives that draw from these strengths include:
- Improving the regulatory framework in States Parties – technical assistance with regard to legislation, regulations and enforcement;
 - Chemical safety and security – development of guidelines for States Parties and help with promoting implementation practices and standards;
 - Issues related to facilitating trade in chemicals, chemical equipment and technologies;

- Support to States Parties regarding their efforts to prevent illicit trafficking in chemical dual use goods, including by supporting the work of customs organisations, and export/import licensing;
 - Training and exercises related to the issues mentioned above;
 - Education and awareness raising with regard to the norms and requirements enshrined in the Convention, the adoption of self-regulatory measures (codes of conduct, guidelines, compliance initiatives in industry and the like), and the promotion of international cooperation in full compliance with the requirements of the Convention.
101. New opportunities for the OPCW have been identified in the Article XI workshop organised by the OPCW in November 2010, and could include *inter alia*:
- Setting up a facility to trace and evaluate incidents involving toxic chemicals;
 - Facilitating technology transfers for the development of peaceful uses of chemistry;
 - Promoting risk assessment and clean-up programmes related to old and abandoned chemical weapons;
 - Promoting risk assessments and other measures related to mitigate the risks regarding sea-dumped chemical weapons;
 - Developing other risk assessment and management tools that States Parties could use; and
 - Promoting the ethical dimension of chemical weapons disarmament and the rendering of support to initiatives to categorize as a crime against humanity the hostile use of toxic chemicals.
102. Government policies are important in creating and maintaining a regulatory context that invites and accommodates scientific, technological and economic development. **A contribution that the OPCW can make to economic development, therefore, is to help States Parties create and maintain regulatory frameworks that fully implement the Convention thereby furthering conditions for economic development and international exchanges.**
103. **The OPCW should also strengthen its managerial approach towards its international cooperation programmes.** Efforts are needed to develop and use more tailored and reliable tools for assessment of needs, programme impact and results. This will be necessary to ensure that the contribution of the OPCW to international cooperation remains relevant and sustainable for States Parties. Models for such managerial systems and experiences with their application exist in other international technical assistance programmes; these should be looked at with a view to adapting their lessons-learned to the OPCW context.

104. The future OPCW international cooperation programme needs to strike the right balance between programmes to enhance States Parties' capacity with regard to toxic chemicals in general, and their capacity to fully and effectively implement the Convention. Both directions should be pursued in parallel. **The advisory panel recommends that OPCW programmes should be directed towards enhancing and promoting the interaction among National Authorities, and between National Authorities and the OPCW.**
105. As previously discussed, a stronger regional approach would benefit both the States Parties and the OPCW. **Regional or subregional cooperation centres could be set up, perhaps starting with one or more pilot projects, where demand and need exist. This could be done with technical support from the OPCW, in partnership with other international and regional organisations, active participation of the States Parties from the region or subregion, and with voluntary sponsorship by other donors.** These centres would eventually have to become self-sufficient and independent of external financial support to be sustainable. At the same time, they would allow the region or subregion, with advice and technical support from OPCW, to develop projects and cooperation mechanisms among the States Parties of the region or subregion that meet their specific needs and conditions, whilst being able to tap into expertise and support from other States Parties from outside the region.
106. Furthermore, the OPCW's international cooperation programmes need to be developed with the clear understanding that the OPCW is only one of several actors on the international scene that promote cooperation in the field of peaceful uses of chemistry. It is important to embed the OPCW and its international cooperation programmes in that broader domain of international cooperation in the chemical field, through programme coordination, networking, the development of partnerships, and the exploitation of synergies.

IX. MANAGING THE TRANSITION

107. The OPCW has become the global repository of knowledge and a centre of operational and technical expertise with regard to the prevention of chemical warfare, the elimination of chemical weapons, and international verification. This capacity will also be relevant in the future. Even after all chemical weapons stockpiles have been eliminated, attention needs to be paid to emerging threats associated with the possible hostile use of toxic chemicals. Also, old and abandoned chemical weapons will continue to need to be destroyed subject to the provisions of the Convention. Furthermore, sea-dumped chemical weapons constitute risks to people and the environment and the OPCW can make contributions to mitigating these risks. The sooner the existing chemical weapons stockpiles can be eliminated, the greater the prospects for the OPCW to make its transition to a world without chemical weapons.
108. The adoption of new priorities will require institutional change and managerial adaptation. It is essential for the future of the Convention and the OPCW to find effective and acceptable ways to adapt—the alternative could be institutional fossilisation. The Convention provides sufficient flexibility for institutional change through policy development, decision making by the policy-making organs, gradual modifications of work and operational practices. In doing so, the OPCW should make

full use of principles such as its inclusive approach, transparency, non-discrimination and consensus building.

109. How exactly the new priorities will affect the future size, structure and functioning of the Technical Secretariat goes beyond the scope of this report. The Director-General has appointed a consultant to review the structure of the Technical Secretariat, and to report to him later in 2011. However some general principles should be highlighted, emphasizing that transition and reform should be controlled and gradual.
110. **Institutionally, the OPCW needs to preserve its independence and competence to remain both relevant and credible.** Micromanagement would be counterproductive and should therefore be avoided. Also, the OPCW's staffing levels with regard to qualified and well-trained staff need to be retained above a "critical mass" in relation to all future programme priorities.
111. Changing circumstances and priorities will require some degree of restructuring. It is also apparent that particular vulnerabilities may exist with regard to maintaining an inspectorate that matches the routine tasks in hand after near completion of chemical weapons stockpile elimination, and that is nevertheless strong enough to meet requirements of a less frequent nature such as challenge inspections or investigations of alleged use. **The Technical Secretariat must maintain adequate levels of verification resources to ensure that the destruction of chemical weapons remains subject to international verification as required by the Convention, and to make certain that the verification regime as a whole remains credible.** There will be a need for some flexibility within the structure of the Technical Secretariat to create a reserve that is engaged in routine programme delivery, but that can be relied upon when special demands in the verification areas occur. This will pose managerial challenges with regard to the protection of confidentiality. Robust procedures will be needed to ensure that the OPCW can maintain its high standards in this regard.
112. **Another key requirement is the preservation and expansion of institutional competence, knowledge and professionalism.** The implementation of the OPCW's tenure policy is already under review and it appears that additional flexibility will be required in the manner in which the policy is applied. Learning and training mechanisms should also be further improved.
113. **The shift in priorities may also require a review of the OPCW's budget structure.** The Convention requires that the OPCW divide its budget into two chapters: chapter I for verification costs and chapter II for all other costs including administration. Chapter II contains key elements of programme delivery, including assistance and protection against chemical weapons, implementation support to National Authorities, and international cooperation programmes.
114. Ever since the entry into force of the Convention, practice has been to maintain parity between both Chapters. With the reduction of chemical weapons-related verification activity, this should no longer be so. At the same time, the current budget format combines programme delivery expenses with administrative costs under a single chapter.

115. **The OPCW programme and budget structure should be changed to better reflect the different types of contributions that the OPCW programme outputs make.** These should be clearly separated, to the extent possible, from the administrative costs needed to run the OPCW and to support the work of its policy making organs.
116. With regard to budget allocation, it has already been observed in this report that greater attention should be given to Articles X and XI. In this context, it will be important to ensure that future OPCW programme delivery will not become dependent on voluntary contributions—these are welcome but core business should be funded from the regular budget. At the same time, voluntary contributions by States Parties and other donors such as the EU should be encouraged to expand the possible margins of programme delivery.
117. In this context, **a move to a two-year budget cycle should also be considered, so as to ensure stability and predictability in programme output.** This could be important to increase impact and sustainability of OPCW programmes.
118. Needless to say, States Parties should pay their dues on time. It remains a serious concern that at the end of 2010 a total of 81 States Parties were in arrears with their annual contributions that year. The Working Capital Fund, designed to meet short-term liquidity problems, would allow the OPCW to manage cash flow problems. **The policy making organs should keep this matter under their purview to ensure the timely and effective use of the Working Capital Fund with regard to full programme delivery.**
119. The engagement and contribution of the Convention's stakeholders is becoming ever more important. Their role (with the exception of chemical industry) was limited at the beginning of the Convention's operation—when the focus was on the elimination of State programmes—but is bound to increase and become more critical as the focus moves to prevention and cooperation. More efforts should be made by the OPCW to engage with chemical industry. Also, there have been some initial contacts with the Biological Weapons Convention given the underlying trends in science and technology; these should be strengthened. **The Technical Secretariat should establish a liaison (e.g., a point of contact) with the BWC implementation process.**
120. **Furthermore, a much stronger engagement with civil society will be needed, and the advisory panel supports the Director-General's efforts to enhance public diplomacy by the OPCW.** Externally, what is needed is for the OPCW to further develop an effective networking approach to reach out to the different stakeholder communities, and also to reach back into their expertise as new implementation challenges emerge. Internally, the Technical Secretariat should consider splitting the functions of media relations and public diplomacy.
121. The transition of the OPCW to a renewed set of mandates, new programme priorities and an adapted staffing structure of the Technical Secretariat, create an opportunity to also look carefully at other conditions that affect its work. The Hague as the seat of the OPCW has certain advantages but at the same time lacks the *in-situ* interaction with an international diplomatic and expert community in the arms control, non-

proliferation and disarmament field. It also lacks the presence of a strong NGO community with a focus on disarmament, and the opportunity of a daily interaction with other international agencies that work in fields relevant to the future mission of the OPCW. The OPCW has had to work around these and other constraints. But as the transition to a new mission focus gets under way, States Parties may wish to use this as an opportunity to study how these constraints can be overcome. One option could be to review and if necessary renegotiate aspects of the relationship with the Host Country. Another option, which is not an alternative to the first one, could be creating an OPCW presence in the UN centres where there is a need for joint programming and coordination. **The advisory panel proposes that a full range of options be carefully studied, from the perspective of opportunity costs and benefits, with a particular focus on what sort of environment the OPCW requires for the long-term future.**

Annex 3

LIST OF MEMBERS OF THE ADVISORY ON FUTURE OPCW PRIORITIES

Chair: H.E. Mr. Rolf Ekéus (Sweden)

H.E. Ms Noor Farida Ariffin (Malaysia)

H.E. Mr Sergei Batsanov (Russian Federation)

H.E. Mr Marcos de Azambuja (Brazil)

Mr Claude Eon (France)

H.E. Mr Roberto Garcia Moritan (Argentina)

Mr Juesheng Gu (China)

H.E. Mr Abuelgasim Idris (Sudan)

H.E. Mr Eric Javits (United States of America)

Ms Patricia Lewis (United Kingdom of Great Britain and Northern Ireland)

H.E. Mr Abdul Minty (South Africa)

Mr Bunro Shiozawa (Japan)

H.E. Mr Rakesh Sood (India)

Mr Ralf Trapp (Germany)

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