



United Nations Environment Programme

Evaluation of the Chemicals and Waste Sub-Programme

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Acronyms

AMCEN	African Ministerial Conference on Environment
APELL	Awareness and Preparedness for Emergency at Local Level
BSP	Bali Strategic Plan
CAS	Chemical Abstract Service
CCS	Columbia Council on Safety
C&W	chemicals and waste
CCOL	Coordinating Committee on the Ozone Layer
ChP	Chemicals in Products
CoP	Conference of Parties
DCPI	UNEP Division of Communication and Public Information
DELC	UNEP Division of Environmental Laws and Conventions
DEPI	UNEP Division of Environmental Policy Implementation
DEWA	UNEP Division of Early Warning and Assessments
DRC	UNEP Division of Regional Cooperation
DTIE	UNEP Division of Technology, Industry and Economics
EA	Expected Accomplishment
EC	European Commission
EU-JUSSCANNZ	Japan, the US, Switzerland, Canada, Australia, Norway and New Zealand
FAO	Food and agriculture Organization
GAELP	Global Alliance to Eliminate Lead in Paint
GC	Governing Council (of UNEP)
GCC	Gulf Cooperation Council
GCO	Global Chemicals Outlook
GEAS	Global Environment Alert Service
GEF	Global Environment Facility
GPWM	Global Partnership on Waste Management
HSHW	Hazardous Substances and Hazardous Waste
ICCA	International Council of Chemical Associations
ICCM	International Conference on Chemicals Management
IETC	International Environment Technology Centre
IGO	Inter-Governmental Organisation
INC	Intergovernmental Negotiating Committee
IOMC	Inter-Organization Programme for the Sound Management of Chemicals
IPEN	International POPs Elimination Network
IRPTC	International Register for Potentially Toxic Chemicals
JPOI	Johannesburg Plan of Action
JTT	Joint Task Team
MARPOL	International Convention for the Prevention of Pollution from Ships
MEA	Multilateral Environmental Agreement
MSW	Municipal Solid Waste
MTR	Mid-Term Review
NAPA	National Adaptation Programme of Action
NGO	Non-Governmental Organization
NPJA	National Plans on Joint Action
ODS	Ozone depleting substances
OECD	Organization for Economic Cooperation and Development
PCFV	Partnership for Cleaner Fuels and Vehicles
PEI	Poverty and Environment Initiative
PEN	PCB Elimination Network

PIMS	Programme Information and Management System
PoW	Programme of Work
QAS	UNEP Quality Assurance Section
QSP	Quick Start Programme
ROA	Regional Office for Africa
ROAP	Regional Office for Asia and Pacific
ROWA	Regional Office for West Asia
SAICM	Strategic Approach to International Chemicals Management
SANA	Situation Analysis and Needs Assessment
SME	Small and Medium Enterprises
SPE	Sub-programme Evaluation
ToC	Theory of Change
ToRs	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Organization
UNITAR	United Nations Institute for Training and Research
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WCO	World Custom Organization
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

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SUMMARY OF FINDINGS AND RECOMMENDATIONS

Introduction

- i. The Evaluation of UNEP's Chemicals and Waste Sub-programme aims to assess the relevance and overall performance of UNEP's work related to chemicals and waste (C&W) from 2010 to 2014 according to standard evaluation criteria (relevance, efficiency, effectiveness, sustainability and impact). The Evaluation has a dual purpose: providing a basis for accountability on Sub-programme performance and drawing lessons from experience for programme improvement. The Evaluation considers whether, in the period under review, UNEP was able to contribute significantly to minimizing the impact of harmful substances and hazardous waste on the environment and human beings. It also assesses to what extent UNEP managed to promote compliance of countries with international regimes addressing chemical and hazardous waste-related issues; and to discourage the production and use of harmful chemicals.
- ii. In particular, the Sub-programme Evaluation (SPE) examines UNEP's C&W strategy and its delivery performance across its three main areas: (i) Support to C&W Multilateral Environmental Agreements (MEAs); (ii) Chemicals policy, scientific and technical support; (iii) Waste policy, scientific and technical support. The Evaluation also examines the effectiveness of management arrangements among UNEP Divisions for effective delivery of the Expected Accomplishments (EAs) and Programme of Work (PoW) Outputs defined for the Sub-programme. Partnerships with other UN bodies, Inter-Governmental Organizations and institutions (including MEAs), regional bodies, national governments, NGOs, scientific and environmental centres, and private sector organizations are also reviewed.

Strategic relevance of the Chemicals and Waste Sub-programme

- iii. The Sub-programme is relevant to global agreements such as the 1992 United Nations Conference on Environment and Development (UNCED) Agenda 21 and the 2002 World Summit on Sustainable Development (WSSD), where the 2020 goal of producing and using chemicals in ways that lead to the minimization of significant effects on human health and the environment was established in article 23 of the Plan of Implementation of the WSSD.
- iv. A vision statement which provides the common logic to which UNEP interventions are linked was articulated in the draft Sub-programme Strategy for the PoW 2010-11¹. UNEP Governing Council approvals of the Medium Term Strategies (UNEP/GC.25/12, UNEP/GC.26/13 and GC.27/9) as well as approvals of subsequent programmes, in and of themselves, are evidence of consistency with UNEP and member state priorities. There is a strong alignment between UNEP's C&W PoWs and UNEP's mandate, also derived from major GC decisions. The Sub-programme is consistent with UNEP's technological support and capacity building mandate as set out in the Bali Strategic Plan (BSP), especially at the PoW Output level. Technological support and capacity building interventions include the development of various tools and methodologies for the sound management of C&W, and strengthening environmental law institutions and judicial systems (particularly in the context of MEAs).
- v. The objectives of the Sub-programme are aligned not only with UNEP's mandate and programmatic objectives but also with the Millennium Development Goals (MDGs) 7 & 8 to ensure environmental sustainability, and develop global partnership for development etc. The new themes being developed in the area of Health and Environment seem consistent with GC requests and global concerns about linkages between Environment and Health.
- vi. With the exception of the Mercury Convention, which was under development over the period of the 2010-2013 Medium Term Strategy (MTS), this evaluation found that there is a perception of weak

¹Harmful substances and Hazardous Wastes Strategy for the Programme of Work 2010 – 2011, Draft, July 2nd2008.

cooperation and collaboration between the Sub-programme and the other C&W MEAs (Basel, Rotterdam and Stockholm Conventions). There is room to strengthen cooperation with the MEAs so that UNEP's efforts can better support the implementation of MEAs at global, national and regional level.

Recommendation 1: The evaluation recommends that linkages between the Sub-programme and the chemicals conventions that are anchored within UNEP, need to be given more prominence. Building on UNEP's convening power, the Sub-programme should also focus more on system wide approaches to convergence and cooperation on MEAs.

Effectiveness

- vii. The Sub-programme achieved positive results during the two biennia spanning 2010-13, in spite of challenges related to funding and the many changes in leadership of the Chemicals Branch and the International Environmental Technology Centre (IETC), and also of the Sub-programme Coordinator. There are positive indications that interventions have already contributed to the development/adoption of improved policies and practices. The Sub-programme's efforts to generate scientific knowledge, provide policy advice, develop approaches and methods, mainstream C&W into national development policies and convene stakeholders to catalyse international action on mercury and generally on the sound management of C&W seem to have been particularly effective. Described below are just but a few of the Sub-programme's accomplishments, as they contribute to five direct outcomes of the Sub-programme derived from a Theory of Change of the Sub-programme reconstructed for the purpose of this evaluation².

Direct outcome 1: Enhanced national awareness and information for environmentally sound production, management and use of chemicals and waste

- viii. The Sub-programme has been largely successful in providing information and raising national awareness for the production and use of C&W in an environmentally sound manner. As a means of providing access to early warning information on emerging C&W issues, UNEP's Global Chemicals Outlook (GCO) report, which was prepared during the period under review, recognized the importance of chemicals to sustainable development. The report notes, however, that sound chemicals management throughout their lifecycle is essential to avoid significant risks to human health and environment as well as substantial costs to national economies. The report, which attracted wide media interest and received attention and support at International Conference on Chemical Management (ICCM)³, was used to establish the rationale for sound chemicals management and formed the basis for many government interventions. Regarding awareness on environment and health risks of C&W, a report on the Chemicals in Products (CiP) Project to the third session of the ICCM3, mandated by ICCM2, was produced.
- ix. The Sub-programme has produced substantial quantities of publications and public information material, covering all aspects of the Sub-programme's work, the bulk of which can be found on the Branch's web page and in the offices. While these materials are also used in workshops and meetings organized by the Branch, there is a perception that they could be more effectively used to support better delivery of the Sub-programme and as a means to raise funds for the up-scaling of sub-programme activities. In this regard, Chemicals Branch staff indicated that support from the Division of Communications and Public Information (DCPI) in the creation of public awareness on C&W and their sound management was inadequate.

²The Evaluation reconstructed a Theory of Change of the Sub-programme based on the results statements in the different planning documents (MTS, PoW and Programme Framework Documents) and discussion with Sub-programme staff. More details on this can be found in the Inception Report and Main Report of this evaluation.

- x. The Sub-programme intended to support the regions for the implementation of SAICM through the exchange of relevant scientific and technical information by facilitating regional meetings with maximum multi-stakeholder participation and strengthening the scientific base of work in the countries. As a result of the lack of funds to operate the information clearinghouse, however, alternative methods were used to disseminate technical and scientific information related to SAICM implementation.
- xi. The continuing need to build capacity for sound chemicals management at national level was promoted through SAICM's Quick Start Programme which was supported, in part, through the UNEP-UNDP partnership to mainstreaming the sound management of chemicals in national development processes and UNEP's introduction of accident preparedness planning in a number of countries. The Sub-programme's initiative through the UNEP - WHO Health and Environment Initiative in Africa received wide endorsement at the 2012 meeting of AMCEN³.
- xii. Taken together, all the awareness-raising efforts described above which relate to the development of technical assessments and early warning information, access to knowledge and information related to C&W, general public awareness on the environmental health risks of C&W and national awareness-raising activities, represent a substantial volume of work produced by the Sub-programme. While some substantive results have been demonstrated in the areas of the phase out of leaded fuels and in the processes leading to the adoption, signing and ratification of the mercury convention, it is not clear the extent to which the Global Chemicals Outlook, for example, has influenced government decision-making granted the document was only released in 2012. Neither is it clear how the awareness-raising efforts have been helpful in mobilizing resources for the sound management of C&W. Indeed, there is a perception that the awareness-raising efforts need to be strengthened to support resource mobilization efforts for sub-programme implementation.

Recommendation 2: The evaluation recommends that the Sub-programme invests more in outreach and communication. Effective support from and collaboration with DCPI are required to promote the Sub-programme's outreach efforts.

Direct outcome 2: Enhanced national policy and strategic frameworks for environmentally sound production, management and use of chemicals and waste

- xiii. The building of national, legal and institutional capacity to enable governments to integrate the sound management of chemicals into national development strategies contributes to EA (a). Integrating the sound management of chemicals into sustainable development strategies involves integration in development assistance programmes including UNDAF processes and mobilizing resources to implement activities that lower chemical risks. The UNDP-UNEP Partnership Initiative implemented activities to mainstream the sound management of chemicals into national development processes. UNEP was responsible for developing the normative aspects of the work and played a supervisory role for the country implementation aspects while UNDP was responsible for national execution through the UNDP-UNEP Poverty and Environment Initiative (PEI). The initiative was piloted in 17 countries. Funding was provided by the SAICM Quick Start Programme (QSP) Trust Fund, as well as the Swedish Government (through the Swedish Chemicals Inspectorate – KEML). Among the key products and services delivered are the development of Vietnamese chemicals legislation, administrative structures and sustainable funding of the implementation and enforcement of the legislation through a partnership with the International Council of Chemicals Associations. The Government of Kazakhstan was also assisted in developing their chemicals legislation, administrative structures and sustainable funding of the implementation and enforcement of the legislation through the UNDP-UNEP partnership project on the mainstreaming of sound management of chemicals into their national development plan. Advisory services were also provided to the Government of Mauritius in developing their chemicals legislation,

³ African Ministerial Conference on Environment

administrative structures and sustainable funding of the implementation and enforcement of the legislation through a partnership project with UNDP on mainstreaming of sound management of chemicals into the national development plan

- xiv. The Cost of Inaction Report is an effort to produce a more complete global picture on the costs of inaction on sound chemicals management. The goal is to provide decision-makers at all levels of government with the information necessary to fully consider increasing investments in the sound management of chemicals, consistent with international agreements and decisions and to address national priorities to protect human health, the environment and the sustainability of development. In the first biennium of the 2010-13 MTS period, the first background analysis report on the cost of inaction was prepared and submitted to the Steering Committee of the Cost of Inaction Report. The Cost of inaction report was published in February 2013. The report was very well received and there was agreement to use the findings to develop some case studies in which the data will be used for global extrapolation of the cost of inaction. National workshops on methods for assessment of cost of inaction and development of legislative frameworks were carried out in three countries between October 2012 and June 2013. Both outputs of the reports were to be included in the Global Chemicals Outlook after their discussion and approval at the 4th Steering Committee meeting of the Cost of Inaction Report held on 7 December 2011.
- xv. As a means to enhance policy and strategic frameworks for managing C&W in a sound manner, the Sub-programme has clearly demonstrated the cost of inaction on the sound management of chemicals. The methods of assessment of the cost of inaction have been tested, providing the impetus for the mainstreaming of the sound management of C&W into national development processes. Integrating the sound management of chemicals into national development strategies involves integration in development assistance programmes including UNDAF processes and mobilizing resources to implement activities that lower chemical risks. The UNDP-UNEP Partnership Initiative was effective in supporting the development of chemicals legislation and administrative processes, in providing advisory services for sustainable funding of the implementation and enforcement of the legislation. These successful outcomes in developing national legislation and regulations in line with international treaties need to be further up-scaled and replicated.

Direct outcome 3: Enhanced national technical and methodological know-how for environmentally sound production, management and use of chemicals and waste

- xvi. The Sub-programme has developed, and continues to refine, risk assessment tools to assist governments, industry and civil society organizations to address priority concerns in the management of C&W. Key examples including guidance documents on chemicals in products as well as guidance on heavy metals in paint have been developed. From the first biennium of the 2010-13 MTS period to the present, up to 80 countries have been addressing chemicals issues as a result of UNEP risk assessment information and tools.
- xvii. In China, institutions and government authorities were supported in collecting lessons-learned on public participation on chemical accident prevention and preparedness. China is also using a UNEP-developed toolkit to promote the sound management of chemicals-in-products in its textile sector.
- xviii. In the area of waste, by the end of the first biennium of the 2010-13 MTS, a draft Compendium of Technologies on (a) destruction of hazardous waste arising from healthcare facilities, and (b) treatment and destruction of waste oils had been developed. The compendium covered data on waste oil generation and healthcare waste generation. Also, a step-by-step methodology for assessment of waste oil generation and healthcare waste generation was elaborated. Generic and specific technologies for the destruction of waste oils and healthcare waste were also compiled.
- xix. Criteria and methodology for technology assessments have been developed and are included in the compendium of technologies. At least 4 countries and 1 intergovernmental organization have tested the

utility of the compendium. Guidance for industries and facilities on waste oil destruction technology assessment, identification and testing was completed in at least 4 countries. In addition, guidance on healthcare facilities on healthcare waste destruction technology assessment, identification and testing was completed in at least 4 countries.

- xx. Besides work accomplished on the development of guidance on technological assessments and the compendia, limited additional work was accomplished in the area of waste. From the 2010-13 MTS period through the end of 2014 one of the key outputs related to the preparatory phase of the Global Partnership on Waste Management (GPWM) had not been accomplished as a result of funding constraints. While a project document had been developed to cover the Secretariat Services for the GPWM in consultation with the lead partners and other UNEP offices, no other substantive activities have been reported.
- xxi. In 2014, the Sub-programme has worked with governments, civil society groups and businesses to address priority waste issue using tools and innovative methods primarily on biomass waste generated from agricultural activities. For example UNEP assisted Cambodia, Costa Rica and India to develop strategies to convert waste agricultural biomass into energy with the collaboration of businesses to upscale biomass waste to appropriate energy technologies.

Direct outcome 4: Enhanced national institutions and infrastructure for environmentally sound production, management and use of chemicals and waste

- xxii. The Sub-programme undertook activities to combat environmental crime involving harmful substances and hazardous waste particularly in the Asia Pacific and West Asia. The objective was to strengthen the law enforcement response to, inter alia, ozone depleting substances (ODS), harmful substances and hazardous waste. In this respect this project directly concerns the Basel Convention which criminalizes illegal traffic in hazardous waste and the Montreal Protocol for ODS. A range of partners including MEA secretariats are involved.
- xxiii. China continued its tight control of illegal imports of wastes/e-wastes following its national campaign "Green Fence"; the Philippines Customs Agency has an environmental crime unit and the Vietnam Police has a division on E-waste related crime under its Police Department on Environmental Crime. This was a result of earlier capacity building activities undertaken by UNEP.
- xxiv. In 2013, Thailand reported 6 seizures in ODS cases. Up to June 2014, UNEP supported World Customs Organization (WCO) Operation DEMETER III focusing mainly on trans-boundary illegal shipments of hazardous and other waste covered by Basel Convention between Europe and Asia (including the GMS region). Demeter III resulted in 48 seizures and detentions with over 7,022 tonnes and 3,403 pieces of waste. The seized and detained waste ranged from textile waste, plastic waste, household waste, metal scrap, e-waste, to used vehicle parts and tyres.

Direct outcome 5: Coherent international information, policy and action for environmentally sound production, management and use of chemicals and waste

- xxv. The broad stakeholder engagement in SAICM continues to catalyze work towards sound chemicals management in industry. There has been an increase in the number of industries and industry associations engaging with UNEP. Negotiation towards a global legally-binding treaty on mercury was completed over the period covered by this evaluation. The UNEP Secretariat has facilitated this, other inter-sessional work, and regional consultations requested at INC4⁴. In enhancing cooperation with the C&W MEAs, the Chemicals Branch now has responsibility for coordinating the DDT Global Alliance and the PCB Elimination Network with the aim of facilitating the achievement of state obligations set out in

⁴The fourth session of the Intergovernmental Negotiating Committee to prepare a global legally binding instrument on Mercury.

the Stockholm Convention, including through the implementation of the GEF co-financed project portfolio.

- xxvi. A number of Secretariat activities related to the implementation of the Minamata Convention on Mercury have been carried out such as the organisation of the first workshop in support of the ratification and early implementation of the Minamata Convention in March 2014 in Kuala Lumpur, and the preparation of INC5 and INC6 which took place in January 2013 and November 2014, respectively. The SAICM Secretariat also completed a number of activities such as meetings for the EU-JUSSCANNZ⁵ region and the Asia-Pacific region, the QSP Executive Board and the ICCM bureau. A number of other activities related to health and environment, mainstreaming, Chemicals and Information Exchange Network, Endocrine Disrupting Chemicals, support to parties to the Stockholm Convention in areas of POPs monitoring and updating national implementation plans, waste, and chemicals in products were also completed.
- xxvii. A key driver to achieving the 2020 goals is a strengthened effort to further engage key partners from the private sector, in particular, from the mid-stream producers of consumer products which use chemicals in their composition. This is key to the implementation of SAICM. Lack of adequate resources for the provision of clearinghouse services as well as planning for regional meetings has been a challenge for SAICM. While a fundraising strategy was being developed to address funding issues even at the beginning of the new MTS, administrative procedures need to be streamlined for efficiency gains. This should include improved communication with donors about progress towards achievement of SAICM objectives. In spite of challenges faced in providing support to SAICM, taken together, the evaluation concludes that the level of delivery of the outputs related to SAICM implementation represents adequate secretariat support services to the ICCM and subsidiary bodies.
- xxviii. The Minamata Treaty which was adopted by governments in 2013 with UNEP support now has 128 signatories and 8 parties. As UNEP's support to the process of ratification, to date, seven awareness-raising workshops were held in three regions. Following the workshops, a number of countries went on to sign or ratify the Convention. The global mercury partnership, with increasing membership offered timely advice to negotiators and continues to assist in building capacity and facilitating early action. UNEP provides the Secretariat for the Minamata Convention during the interim period (i.e. prior to entry into force). UNEP also coordinates the eight partnership areas of the Global Mercury Partnership. At the end of 2013 the Partnership included 26 governments, five UN agencies and 98 companies. Technical assistance and financial support to the Partnership has been provided to 57 countries.
- xxix. At the end of 2013, the number of Parties that ratified the existing chemicals conventions is as follows: Basel Convention (180); Ban Amendment (76); Rotterdam Convention (154); Stockholm Convention (179); and the Montreal Protocol (197) for a total of 786 Parties. While ratifications of the already existing chemicals Conventions grew, it is not clear how this is attributable to the efforts of the Sub-programme as opposed to the work of the Secretariat to the Convention CoPs. These effects might be drivers for increased application of tools and methodologies for measurement etc. as opposed to direct results of the Sub-programme.
- xxx. UNEP contributed to the implementation of existing conventions in a variety of ways; by assisting the Secretariat and Parties to the Basel Convention in the preparation of technical guidelines on the environmentally sound management of mercury wastes adopted at the 10th CoP of the Basel Convention. In addition, UNEP implemented a portfolio of GEF co-financed projects to leverage financing for building capacity and promoting the implementation of the Stockholm Convention, particularly in the

⁵ This is a regional group coalition of the non EU developed countries, which acts as an information sharing and discussion forum. JUSSCANNZ stands for Japan, the US, Switzerland, Canada, Australia, Norway and New Zealand.

fields of reducing reliance on DDT for disease vector control (with WHO) and environmentally sound management and disposal of PCBs.

- xxxii. While the need exists to mobilize resources to implement some of the sub-programme activities, effective SAICM implementation, an established mercury convention with 128 signatories and 8 ratifications, a continuing Global Mercury Partnership with UNEP coordinating the eight partnership areas of the Partnership and strong support for the implementation and appropriate evolution of existing C&W MEAs represent coherent international information, policy and action for environmentally sound production, management and use of C&W by the Sub-programme

Likelihood of impact

- xxxii. As designed, the C&W Sub-programme is expected to assist countries to transition to sound management of C&W, which is an intermediate state towards minimizing environmental and health impacts of C&W. The Sub-programme's efforts focus on direct outcomes that include the building of national capacities to assess, monitor and manage risks to human health and the environment posed by C&W on different dimensions of information and awareness creation, development of policy and strategic frameworks, transfer of technical and methodological know-how, and the development of national institutions and infrastructure. The Sub-programme also sought to promote coherent international information, policy and action for environmentally sound production, management and use of C&W. The success of the Sub-programme in supporting countries to reach the desired transition to sound management of C&W (the intermediate state towards impact) depended, to a very large degree, on the extent to which the various dimensions of national capacity have been developed coupled with the presence of drivers and validity of assumptions made during sub-programme design. As is the case in most of UNEP's activities, the degree to which the stated direct outcomes can be achieved in the targeted countries with the associated changes in state, corporate and individual behaviours determines how progress is being made towards impact.
- xxxiii. The cluster of activities implemented to deliver the sub-programme objective are mostly normative and their impact is dependent on factors such as uptake by countries and other stakeholders in industry, the quality of the products and their practical application, which itself may involve the development of institutional frameworks and monitoring programmes. These are long term actions which require several years of monitoring in order to assess real impact. UNEP does not have country programmes in the area of C&W as it does in the Disasters and Conflicts Sub-programme. To that extent, the activities of the Sub-programme are diffuse and a "critical mass" of activities is often not undertaken in a single country. This makes the determination of country-level impact difficult. Nevertheless, specific programme activities undertaken by the Sub-programme have been shown to have the potential to cause the behavioural changes that will ultimately lead to impact. Indeed, there are signs of policy and regulatory outcomes which, over time, would lead to discernible impacts as a result of UNEPs work. For example Parties to MEAs will initiate action through mandating development of their own guidelines for use by their competent authorities and industry.
- xxxiv. This is consistent with UNEP's strategy to scale up the use of guidelines, tools and methods that are pilot tested, not through growing a financial base but by working with key partners from the start, in particular other UN agencies with a stronger country basis, to help mainstream such tools and methods into their own programmes. Leveraging the strengths of key actors in the field makes possible a significantly higher development impact than UNEP could achieve on its own.
- xxxv. A number of the projects and programme areas within the Sub-programme have been undertaken over longer time scales than the MTS. Expectations of impact on MEA implementation through MEA-related projects are quite high. In this context, the areas of work dealing with the Minamata Convention, waste destruction technologies and the project on combatting environmental crime have global application with a high probability of impact over time, provided sustained action to ensure implementation on the

ground is maintained. Continuing work to support convention secretariats and governments to ratify the existing and new treaties which imposes obligations on governments will go a long way to promote the sound management of C&W at the national level.

- xxxvi. It is more problematic to assess the likelihood of impact for reporting scheme initiatives, due partly to their more diffuse relationship with MEAs, having been less specifically targeted as a whole to them (e.g. with greater SAICM focus). The ability to measure their success may be hampered by the difficulty of differentiating them from the MEAs' own efforts in implementing reporting mechanism obligations for which a methodology is required. Impact can be enhanced by promoting strategies for up-scaling through partnerships, especially within the UN system, put in place from the start—a priority for further improving delivery.
- xxxvii. Regarding the role of SAICM in promoting the sound management of chemicals, this evaluation recognizes that most of SAICM's efforts that contribute to the direct outcomes of the Sub-programme have been focused on capacity building in the area of assessments, methodologies and tools, policy development and planning, and information and awareness-raising, through the implementation of project activities under the QSP. The direct outcomes can make countries transition to a more sound management of C&W production and use (the intermediate state). However, even if a "critical mass" of capacities were built in-country, it is unlikely that adequate financing and human resources as well as political will would exist in all sub-programme countries. Also, UNEP cannot assure that consumption patterns change in the various countries although UNEP's work related to Chemicals in Products through its Resource Efficiency Sub-programme, for example, is influencing consumption patterns. Successful awareness-raising efforts among governments, which we noted earlier, will go a long way to change attitudes and behaviours towards the production and use of chemicals in national economies.
- xxxviii. Improved coordination and collaboration on SAICM implementation among stakeholders at meetings of ICCM and subsidiary bodies, and in inter-sessional periods has been achieved. Coverage and engagement of SAICM has been broad. Projects funded by the QSP Trust Fund have contributed to the achievement of the 2020 goal of sound chemicals management by building national and regional capacity on sound chemicals management and supporting the implementation of SAICM objectives to reduce risk, disseminate knowledge and information and provide adequate governance.
- xxxix. Seventy (70) completed QSP projects have improved sound chemicals management in the areas of risk reduction, knowledge and information, and governance and SAICM stakeholders have increased access to central storage of information on chemicals management. The QSP has directly supported 10 countries in incorporating sound chemicals management into their national development plans, which has resulted, in some cases, in an increase in the volume of domestic resources dedicated to chemicals management. The evidence of SAICM's contribution to the Expected Accomplishment is clear. A sustained effort in capacity building, information and awareness is likely to result in the attitudinal changes likely to promote higher level results. This, of course, would require adequate human and financial resources as well as long-term political will to implement and upscale C&W projects and policies.
- xl. Indeed one of the key outcomes of the Sub-programme which involves "mainstreaming" of the sound management of C&W into national development strategies is also a strong driver for governments to allocate resources to chemicals management in the UNDAF processes. While UNEP can assist governments to develop legal and regulatory regimes, as it has done in several areas and countries, it cannot assure that governments implement these laws and ensure compliance. UNEP's partnerships (e.g. with UN-system partners including IOMC participating organizations such as with UNDP for 'mainstreaming' and WHO for the Health and Environment Strategic Alliance in Africa) continue to increase its ability to implement capacity building programmes. However, availability of resources – both financial and human, continues to be a constraint on UNEP's ability to support national efforts for sound chemicals management and reduced risk to human health and the environment.

- xli. A substantial amount of work has been accomplished during the MTS period in the area of tools and methodologies development for sound management of waste. However, the key outputs relating to the GPWM accomplished little. The key drivers for the delivery of the output in terms of human and financial resources were not in place. Without the delivery of the key outputs which will form the framework within which to assist governments to work towards the sound management of waste, it is unclear to this evaluation how outcomes can be achieved in the medium term.
- xlii. While the measurement of impact poses evidential challenges within the short term it would seem that, taken together, strengthened institutional capacity and continuing working on the mainstreaming of the sound management of chemicals into national development processes will produce sustainable impact in the long term.

Factors affecting sub-programme performance

Sub-programme planning & design

- xliii. A review of Sub-programme documents and staff interviews reveal that the Sub-programme results framework has not been based on issues and problem identification and analysis. It is quite clear from interviews with staff that considerable pre-packaging of old activities to fit the Expected Accomplishments defined in the MTS occurred. The internal logic in the 2010-11 and 2012-13PoWs seem flawed in some respects. The current 2014-15PoW is not any easier to understand conceptually and the linkages to the higher level results are not altogether clear. EAs have been reformulated and there is considerable rearrangement of PoW Outputs under the three new EAs. In addition, there seems to be a lack of understanding among some staff on the thinking behind Sub-programme design and how their projects and interventions fit within the Sub-programme architecture and, for that matter, the UNEP PoW, because there was little to no participation by programme officers in Sub-programme design. In fact, over half of staff survey respondents reported not to have been involved in the process.
- xliv. Projects represent the principal mechanism for delivering on the EAs defined in the Sub-programme, and as such are a critical dimension of the achievement of results. The finding in the 2012 MTS evaluation that “overall, the evaluation got the sense of life continuing as usual as far as the UNEP project portfolio was concerned, with existing projects simply being reorganised to fit within the new MTS results framework, and with only a limited number of new project ideas being prioritised” still seems applicable for the C&W Sub-programme today. Apart from the Sub-programme’s work to support the chemicals related conventions, the Sub-programme, in large part, seems to be responding mostly to donor interests and not based on any clearly articulated issue analysis / problem identification and this, perhaps, accounts for the perception of lack of coherence in the Sub-programme architecture.

Recommendation 3: The evaluation recommends that on the basis of the Global Chemicals Outlook and the upcoming Global Waste Management Outlook, the Sub-programme now has an opportunity to, and should, define its work based on sound issues analysis and problem identification.

- xlvi. The evaluation further notes that the mainstreaming work of the Sub-programme has the potential to educate donors about the global environmental concerns in the C&W sector and help orient the Sub-programme to respond to donor requests that are aligned to issues identified from coherent problem analysis.

Project portfolio design

- xlvi. There is considerable delay in the preparation and approval of the portfolio of projects intended to deliver the results of the Sub-programme. As of November 2014, the C&W Sub-programme had 25

projects approved at the concept stage. However, over the first year of the biennium, only four projects had been approved by the Project Review Committee (PRC)⁶. In order to facilitate resource mobilization and the delivery of results of the Sub-programme in the biennium, there is an urgent need to ensure that projects are designed early, perhaps in the first six months of the biennium so implementation can progress sooner.

Sub-programme management

- xlvi. As found in other Sub-programmes evaluated in UNEP, the processes for recruiting, procuring goods and services, and managing funds are quite bureaucratic and cumbersome, and have caused delays in programme delivery. The end of biennium 2012-13 Programme Performance Report notes “availability of resources – both financial and human, continues to be a constraint on the ability to support national efforts towards sound chemicals management and reduce risks to human health and the environment”. The ongoing transition to UMOJA is expected to harmonize and streamline Finance and Budget Management, Human Resources Management, Procurement and Logistics Management, and, in future even Programme and Project management.

Recommendation 4: The evaluation recommends that the Director of the Chemicals Branch expedites actions to fill the vacant posts in the Branch as a matter of urgency to enable UNEP fulfil its commitments under the Programme of work. Regarding the larger issues associated with bureaucratic and cumbersome processes for procurement, recruitment and the management of funds, the Director of the Branch, in consultation with the Director of the DTIE, should monitor these processes and, as appropriate, make suggestions to re-visit them once UMOJA has been running for a reasonable time.

Collaboration and partnerships

- xlviii. In general, the Sub-programme emphasizes the importance of working with UNEP’s partners for the successful implementation of Sub-programme activities. In this regard, the Sub-programme, through its outputs, promotes the establishment of national and regional networks, public and private partnerships, partnerships with other UN organizations, and partnerships for international cooperation and regional coordination. At the national and regional level, these partnerships can play an important role in catalysing action.

Recommendation 5: There is a need for the Sub-programme to build on existing partnerships, particularly civil society, through communication and knowledge sharing, to ensure greater impact of Sub-programme activities, and to promote UNEP’s role as a global leader in the sound management of chemicals and waste. The Chemicals Branch and IETC should use their unique expertise among the UN agencies to strengthen partnerships particularly among UN agencies and bilateral organizations, so that these agencies can solicit UNEP expertise and advice and, in return, provide UNEP with a wider reach and add weight to UNEP’s messages at the country level. The Sub-programme should gauge the success, relevance and impacts of existing partnerships and, using the UNEP Partnership Policy (2011) as the basis, develop its own strategy to strengthen its partnerships.

- xlx. Delivery through external partnerships has not only been very cost-effective but has also actively contributed to the strengthening of partnerships and increased interest from both industry and countries in UNEP’s technical tools, methodologies and strategic framework for reducing risks in the production, handling, use and disposal of harmful substances. For example, SAICMs collaboration with UNDP to mainstream the sound management of chemicals in national development plans through the

⁶ More than three quarters into the biennium, on 30 June 2015, 16 projects had been PRC approved out of 26 SMT approved concepts – or less than 62%.

implementation of Quick Start projects is particularly helpful to the goals of UNEP within of UNDAF and UNEP support to the MEAs.

Recommendation 6: The evaluation recommends that SAICM’s mainstreaming work should be up-scaled in UNEP’s PoW to cover the countries that require and are qualified for assistance in order to incorporate sound chemicals management into their national development plans. To this extent the sub-programme should define clear criteria for country prioritization based on global significance of the country and need for assistance (current capacity of government, strength of civil society etc.).

- i. Synergy and collaboration between the Chemicals and other DTIE Branches and UNEP divisions has been limited and takes place more on an ad hoc basis. There is lack of effective coordination and collaboration within the Branch and this is symptomatic of how it works generally within UNEP. There is obviously potential for synergy within the Sub-programme and with other related Sub-programmes but the “silo culture” within the Branch does not encourage broader collaboration. The programme and projects are designed and managed by individuals or small teams. While recognizing that the work is substantially driven by global initiatives, it is a key part of the delivery of UNEP’s Programme of Work.

Recommendation 7: The evaluation recommends that the Sub-programme should be more cohesive internally, and better integrated in the larger UNEP Programme of Work by ensuring that the Programme Framework document presents rigorous problem/issue analysis and identifies cross-connections into the Division and UNEP. There needs to be a clear mechanism and incentives to work with colleagues within the branches and from other UNEP branches and Sub-programmes in order to maximize the resources and expertise within UNEP and the Sub-programme.

Role of the Regional Offices

- ii. UNEP’s network of Regional Offices has a crucial role to play in the delivery of the C&W Sub-programme, especially with regards to the regional and country level priorities. UNEP has established a strong strategic and policy foundation to strengthen UNEP’s strategic presence and the role of UNEP’s Regional Offices in programme implementation.
- lii. While the 2012 Mid-term evaluation of the MTS notes a general improvement in the ROs role in programme planning in UNEP and points to significant challenges with respect to developing and implementing an appropriate role for the ROs in programme implementation, interviews carried out of Regional Office staff, during the present evaluation, suggest that while some progress has been made in involving the ROs in programme implementation, with few exceptions, the regions were not really involved in the design of the C&W Sub-programme. The engagement of the regions is primarily based on the efforts and initiatives of individual project managers. This engagement approach is not optimal for the advancement of the Sub-programme objectives at the national and regional levels with this resource and opportunity being currently underutilized. Many regional focal staff noted that they were engaged intermittently at best, and have limited resources to effectively perform their roles.

Recommendation 8: The Evaluation recommends that the Sub-programme should further strengthen the role of the Regional Offices by ensuring that the regions are involved in a more meaningful way in the design of the Sub-programme through better engagement and through increased consideration of regional priorities. There needs to be a clear mechanism and incentives to work with the Regional Offices in order to maximize the resources and expertise within UNEP and the Sub-programme. This would better facilitate the development of specific projects at the regional level, designed to respond to regional needs and priorities and establish regional synergies in the delivery of the respective sub-programme.

Human resources supporting sub-programme implementation

- liii. There has been a relatively low turnover rate of Professional and General Service staff and a minimal increase in absolute staff numbers as shown over the last two biennia. For instance, out of the 41 staff employed in the Sub-programme as at 31st December 2012, 34 (approximately 83%) were still employed under the Sub-programme as at 30th September 2014. Over the period, only 4 staff members had changed grade level within the Sub-programme. In addition, 8 new staff members were recruited in 2013-14. Staff appear to be competent, knowledgeable and enthusiastic; good energy and collegiality seems to exist within the Branch. However, there are a large number of unfilled vacancies and even if filled, it would seem that the “critical mass” of staff required to deliver the Sub-programme objectives would not be reached. Indeed, a general issue identified across the Sub-programme through interviews, staff survey and staff data analysis, is that human resource numbers are insufficient to meet the needs for sub-programme design and implementation resulting in staff frequently performing multiple roles and/or working overtime. Deliberate and urgent actions need to be taken to fill the remaining vacant positions to boost the effective implementation of the Sub-programme.
- liv. In addition, interviews conducted by this evaluation of Sub-programme staff, UNEP Management and project partners identified high turnover of the sub-programme leadership. For instance, in the past eleven years, there have been seven different heads of the Chemicals Branch with the current Chemicals Branch Director set to retire in the course of 2015. Similarly, IETC has had 3 branch heads in the period 2007 to 2014 and suffered from several periods with no branch head for example between 2007 and 2009 and between 2010 and 2011. More recently, the C&W Sub-programme Coordinator position also remained vacant for a period of 7 months.
- lv. Sixty-Five per cent (65%) of staff who took part in the survey noted that they were happy or very happy to come to work with reasons ranging from the high calibre and technical expertise of the Sub-programme staff, good working climate and inspiring supervisors, to satisfaction in tackling global issues and assisting member states to cope with the issues as well as influencing various policy fora. However, about one fifth (19%) of the staff were unhappy or very unhappy to come to work and highlighted the following as pertinent issues: the increase in and emphasis on organizational procedures that limit time to undertake technical work; excessive workload and undertaking multiple roles mainly attributed to understaffing; change in leadership and the resulting different management styles over time impacting on the Sub-programme and staff morale; ineffective communication within the Sub-programme and involved UNEP branches; and limited opportunities for promotion or lateral move of staff.

Resource mobilization and funding for Sub-programme implementation

- lvi. During the period of this evaluation, the C&W Sub-programme was implemented through a portfolio of 17 UNEP projects with a planned budget of USD 99.74 million and an estimated programmed budget of USD 95.10million (figures to be verified). There are an additional 14 GEF projects with an estimated budget of 98 million. The difference (5%) between the planned and programmed budgets can be attributed to ambitious budgeting by project managers during the project concept and approval stages. The budget shortfall is more evident over the period of the 2010-13 MTS with a 67% shortfall. The Sub-programme has consistently identified the availability of funds to be a constraint in carrying out its capacity building activities. This has resulted in diminished capacity to implement some key secretariat functions such as the servicing of its information clearing house, preparations for major meetings and processing of QSP projects. The evaluation found that the C&W Sub-programme does not have a coherent resource mobilization strategy.

Recommendation 9: The evaluation recommends that the C&W Sub-programme should develop a coherent resource mobilization strategy with the aim of supporting key activities that support the delivery of the Sub-programme objectives.

Programme monitoring, reporting and evaluation

- lvii. Like for other Sub-programmes previously evaluated, reporting has progressively improved over the period covered by this evaluation. Before 2010, programme performance reporting was undertaken routinely but in a rather mechanical manner and with an activity focus. Reporting, especially at the Expected Accomplishment level, was not based on milestones and did not reflect progress being made by the Sub-programme towards EAs. Reporting at the project level was lax. Progress reports for individual projects especially on waste are not easily found and where they exist, the reports often described progress on activities and outputs only; higher level results are hardly ever reported on. Reporting on the Sub-programme through IMDIS remains biannual and undertaken on a routine basis. Since 2010, quarterly progress reporting on projects in PIMS has also been undertaken against project milestones. Reporting is a shared responsibility between the project managers and the Sub-programme Coordinator. Programme Performance Reports, on the other hand, are coordinated by the Sub-programme Coordinator and are focused primarily on successes.
- lviii. While elements of a monitoring plan are included in the project documents they seemed to have been planned for implementation by staff without considering the cost implications. Milestones in most of the projects seemed adequate for measuring implementation progress. Resources, for the most part, are allocated for reporting and evaluation which seem adequate. However, project monitoring was not costed. Project monitoring was undertaken through the Project Information Management System (PIMS) and this evaluation has concluded that the information available in PIMS on project implementation has been quite useful. However the depth of the information in PIMS tends to vary from project to project. With little to no baseline information, poorly formulated Expected Accomplishment indicators, problems with attribution, and the lack of budgets for project monitoring, the task of monitoring accomplishments became a difficult one. Generally, the projects do not include baseline studies mainly because there is no funding for project design. The reports reviewed for this evaluation show that Sub-programme performance reporting is done mostly at the output level because output monitoring was an easier task and the achievement of outputs became a proxy for the achievement of EAs. Development of capacity at the national level, for example, often meant that training activities, workshops, seminars, meetings are organized and the successful completion of these meetings and workshops infer built capacity. The extent to which the workshops result in attitudinal changes that will lead to actions towards the sound management of chemicals is generally assumed.
- lix. Independent evaluative evidence for the projects in the C&W Sub-programme portfolio is very scarce. Even obligatory completion reports of a reasonable quality have not been prepared for most completed projects. Very few, perhaps two, of the completed projects in the C&W Sub-programme were subjected to evaluation over the past 5 years. The two projects were actually GEF projects which over the previous MTS period were not considered part of the UNEP Programme of work. Interviews conducted in the Branch show a trend of lack of evaluation of programme activities dating farther back than the evaluation period. It is not unreasonable to state; therefore, that the culture of evaluation of programme activities is quite poor and needs to be improved. Monitoring at the project output level together with the lack of independent evaluative evidence make it impossible to make any meaningful judgments about progress made in implementation towards outcomes and impact. This evaluation notes that as a programme that had operated independently for many years prior to its current status as a Sub-programme, a substantial effort is required to change the monitoring and evaluation culture in the Branch.

Recommendation 10: The evaluation recommends that the Quality Assurance Section, in collaboration with the Evaluation Office, should organize a week long training session in the Branch on the requirements and importance of monitoring, reporting and evaluation. In addition, the Heads of the Chemicals Branch and IETC should ensure that monitoring, reporting and evaluation are included in the individual work plans of the relevant project managers and effectively monitor them.

MAIN REPORT

1 Introduction and Background

1.1 Global context – chemicals and waste

1. Since the 1970s, the international chemicals industry has dramatically grown as a direct response to increasing global demand. The global chemical output (produced and shipped) was valued at US\$171 billion in 1970 and by 2010 it had grown to US\$4.12 trillion⁷. It is approximated that almost 250,000 chemical products are commercially available and subject to regulatory and inventory systems globally (CAS 2011⁸).
2. The chemicals industry is a major driver of economic growth and its performance is a leading indicator of economic development. In 2008 the global chemicals industry had an estimated turnover of about US\$3.7 trillion (OECD 2010a) and was growing at a rate of 3.5 per cent per year. More than 20 million people around the globe are employed by the industry directly or indirectly, and it is an intensive energy consumer and a ubiquitous generator of emissions.
3. Growth and development of economies and countries globally have fuelled this dramatic chemicals production and use. In 2011, the world chemicals turnover was valued at US\$3.82 trillion⁹ with Europe, Asia and the North American Free Trade Area accounting for 92.5 per cent of world chemicals turnover. Chemicals sales in Asia are currently more than double that of the European Union. While annual global chemical sales doubled over the period 2000 to 2009, the OECD's share decreased from 77% to 63% and the share of the BRIICS¹⁰ countries increased from 13% to 28%¹¹.
4. By 2020 developing countries are expected to lead the world in growth rate for high volume industrial chemicals, increasing their share of world chemicals production to 31% and potentially accounting for a third of the global consumption¹². The continued growth pattern of global production, trade and use of chemicals exerts an increasing C&W management burden on the developing countries and those with economies in transition that have the least capacities to deal with such complex challenges compounded by the high rates of poverty.
5. The proliferation of chemical substances produced and used in the world, has inevitably led to growing concern on the potential impact on human health, environment and economies if not properly managed. Chemicals contamination is wide-spread both on land and in water with people exposed to harmful chemicals at work and in daily life through inhalation, intake, ingestion and direct skin contact. Furthermore, there is an established link between poverty and increased risks of exposure to toxic and hazardous chemicals, as they affect predominantly the poor who routinely face unacceptably high risk of poisoning because of their occupations, living locations and lack of knowledge of proper chemicals management¹³.
6. The global economy is also seeing a rapid increase in the generation of hazardous wastes. Although most of the conventional hazardous wastes are produced in industrial and manufacturing operations,

7 Figures not adjusted for inflation or price changes. Source: http://www.unep.org/roap/Portals/96/Session%207%20-%20Sound%20Management%20of%20Chemicals%20and%20Waste_HHI%20and%20SEF.pdf

8 CAS (2011). Chemicals Abstract Service. www.cas.org

9 <http://www.cefic.org/Facts-and-Figures/Chemicals-Industry-Profile/>

10 Brazil, Russia, India, Indonesia, China and South Africa

11 Global Chemical outlook, Pg. 14 - http://www.unep.org/pdf/GCO_Synthesis%20Report_CBDTIE_UNEP_September5_2012.pdf

12 Global Chemical outlook, Pg. 9 - http://www.unep.org/pdf/GCO_Synthesis%20Report_CBDTIE_UNEP_September5_2012.pdf

13 Global Chemical outlook, Pg. 9 http://www.unep.org/pdf/GCO_Synthesis%20Report_CBDTIE_UNEP_September5_2012.pdf

significant amounts are also generated in non-industrial sectors, including sludge from waste water treatment plants, waste oils, electronic and waste batteries. These wastes not only pose risks and hazards because of their nature but also have the potential to contaminate large quantities of otherwise non-hazardous wastes if allowed to get mixed. Thus proper segregation, treatment and disposal of hazardous wastes are of paramount importance.

7. Sustainable use and disposal of C&W is therefore an issue that needs urgent attention in these countries so that they do not continue to pose hazards to the environment and the livelihoods and human health and the health of future generations.

1.2 UNEP roles and activities in the area of chemicals and waste

8. UNEP is a primary driving force in the UN system for international activities related to the sound management of chemicals. The aim is to promote chemical safety and provide countries with access to information on toxic chemicals. UNEP promotes chemical safety by providing policy advice, technical guidance and capacity building to developing countries and those with economies in transition, including activities on chemicals related to the implementation of the Strategic Approach to International Chemicals Management (SAICM).
9. UNEP was a founding and leading member of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) established in 1995 as the mechanism for initiating, facilitating and coordinating international action to achieve the 2020 goal of the Johannesburg Plan of Implementation (JOPI). Guidance was developed by participating organizations (UNEP, FAO, ILO, WHO, UNIDO, OECD, UNITAR, UNDP and World Bank) and is validated and shared by the community of agencies competent in C&W matters.
10. UNEP provided the secretariat function during the negotiations of the Rotterdam and Stockholm Conventions. With the conventions coming into force in 2004, the secretariat role moved to their self-standing secretariats (now a combined secretariat serving the Basel, Rotterdam and Stockholm Conventions). UNEP also played a key role in the development of the Strategic Approach to International Chemicals Management (SAICM) which is a cross-sectorial and multi-stakeholder initiative to protect human health and the environment through the sound management of chemicals throughout their life-cycle. SAICM was developed under the auspices of UNEP involving several other Inter-Governmental Organisations (IGOs) such as IOMC partners, UNDP and the World Bank, but also Governments, the private sector and public interest groups.
11. UNEP has also been involved in efforts to curb the thinning of the stratospheric ozone layer convening the first international meeting of experts in 1977 to examine the potential threat to the environment resulting from a possibly thinning ozone layer. This led to a World Plan of Action on the Ozone Layer which tasked UNEP to establish the Coordinating Committee on the Ozone Layer (CCOL) and produce annual assessments of ozone layer depletion and its impacts. In 1981 UNEP's Governing Council (GC) decided that UNEP should set up an ad-hoc Working Group of Legal and Technical Experts for the Preparation of a Global Framework Convention for the Protection of the Ozone Layer, which met for the first time in 1982.
12. UNEP was instrumental in the process leading up to the Vienna Convention for the Protection of the Ozone Layer signed in 1985, and coordinated the drafting of the Montreal Protocol on Substances that Deplete the Ozone Layer approved in 1987. With 197 parties, they are the most widely ratified treaties in United Nations history. UNEP hosts the Ozone Secretariat, which is the Secretariat for the Vienna Convention and for the Montreal Protocol, at its headquarters in Nairobi.
13. UNEP has also implemented numerous projects to support countries with meeting their Montreal Protocol obligations by reliable reporting, phasing out ozone-depleting substances (ODS), and more

recently, phasing out ODS alternatives with high global warming potential. A large proportion of these interventions was and continues to be funded by the Global Environment Facility (GEF).

2 Objectives, scope and approach of the evaluation

14. The aim of this evaluation is to assess the relevance and overall performance of UNEP's work in the area of C&W in the last five years (covering Programmes of Work 2010-11 and 2012-13 and the first year of PoW 2014-15) using the standard evaluation criteria - relevance, efficiency, effectiveness, sustainability and impact.
15. The Evaluation sought to assess whether UNEP was able to strengthen the ability of countries to contribute significantly to minimizing the impact of harmful substances and hazardous waste on the environment and human beings. In particular, the Evaluation assessed to what extent UNEP managed to promote compliance of countries with international regimes addressing chemical and hazardous waste-related issues and to discourage the production and use of harmful chemicals. Specifically, the evaluation attempted to:
 - Review and analyse the activities undertaken and results achieved in line with the objectives of the Sub-programme in three main areas defined by UNEP's Medium Term Strategy covering the period under review, namely: (i) Support to C&W multilateral environmental agreements (MEAs); (ii) Chemicals policy, scientific and technical support; (iii) Waste policy, scientific and technical support.
 - Assess the relevance, efficiency, effectiveness, sustainability and impact of the Sub-programme as applied to formulation/design, implementation, and results, respectively.
 - Identify success factors/enabling conditions, assumptions, limitations and risks towards sub-programme objectives;
 - Synthesize lessons learned and propose recommendations aiming to improve the Sub-programme's implementation and management; and
 - Cover the questions defined in the ToR (Annex 1) and areas for learning related to factors affecting sub-programme performance, including sub-programme design, organisation and management, collaboration and partnerships, reporting, and monitoring and evaluation (M&E).

2.1 Analytical Framework

16. Two main tools were employed for the purposes of analysis: i) the evaluation matrix and ii) the reconstructed Theory of Change.

2.1.1 Evaluation matrix

17. The Evaluation matrix was prepared on the basis of the questions, information and structure proposed in the evaluation Terms of Reference. Therefore, it was divided into 3 main sections which corresponded to the key evaluation criteria: strategic relevance, performance, and factors affecting performance. The matrix (presented in the Inception Report) guided data collection. It defined the most relevant qualitative and quantitative indicators that informed the review.

2.1.2 Theory of Change

18. An explicit Theory of Change (TOC) to explain the Sub-programme's intended intervention logic, showing the causal chains from outputs to impacts and external factors influencing progress towards

impact, was not required at the time of the development of the PoWs covering 2010-13 – and none was developed. For the purpose of this evaluation, a draft Theory of Change has been reconstructed as a framework to gain a better understanding of the conceptual thinking behind sub-programme design and to assist with the assessment of sub-programme effectiveness, likelihood of impact, and sustainability.

2.2 Data sources and analytical techniques

19. The evaluation used a combination of tools for primary and secondary data collection. Primary data were obtained through qualitative and quantitative methods; including document review, surveys and semi-structured interviews. Secondary data were obtained mainly through review of reports obtained from the UNEP Evaluation Office, UNEP Nairobi and Geneva offices, as well as relevant partners and other organizations.
20. In-country missions enabled the Evaluation Team to meet with a variety of stakeholders involved in the Sub-programme including government officials, supporting organisations, other development partners, NGOs and local organisations. It also facilitated direct observation, where appropriate. Given limited resources for this evaluation, country visits were limited and selection was quite opportunistic and also based on several criteria including geographic representation and existence of country interventions.
21. Key project design and implementation documents were reviewed prior to field visits and interviews to gain a better understanding of the context and progress of implementation of the C&W Sub-programme to date.
22. Findings from the inception review further informed the methods used for this evaluation and enabled refinement of the evaluation framework by filling information gaps and helping to identify further data collection needs. The preliminary list of project documents reviewed by the evaluation team is contained in Annex 2. A limited number of phone and personal interviews (10 in total) were conducted with UNEP staff and managers across the C&W Sub-programme to help orient the Evaluation Team and inform the development of the Inception Report.
23. Subsequent interviews (see annex 3 for the list of interviewees) during the data collection phase were primarily semi-structured and conducted with programme stakeholders including programme staff in the Chemicals branch and IETC as well as staff in other sub-programmes and Divisions who work closely on C&W issues. These included: UNEP Geneva, Paris and Nairobi office staff and managers, staff of the IETC, cooperating partners in other UN and non-UN institutions, national and local government administrations involved in sub-programme projects (Ministries of the Environment), civil society organisations, NGOs, regional and local institutions, universities and research centres and other key informants as relevant.
24. The evaluation also conducted a Staff Survey. This was an online survey directed at all staff involved in the Chemicals and Waste sub-programme, including the regional focal points as well as four previous focal points. The purpose of the survey was to gain insights on staff perceptions regarding sub-programme leadership, working conditions, and relationships with other functional units and sub-programmes. The survey was sent to 67 staff members and 31 staff members responded (46.27% response rate).
25. Data triangulation was undertaken at several levels:
 - Methodological triangulation: through comparing and contrasting the data collected from documentary sources, interviews and survey sources
 - Reviewer triangulation: involving more than one reviewer in interviews and documentary review.
 - Data triangulation: by triangulating different stakeholder responses on the same issue.

- An e-survey: undertaken to triangulate information collected on factors affecting performance specifically on organization and management of the Sub-programme and issues related to human and financial resources and administration.

2.3 Emerging issues and methodological consequences

26. Interviews conducted during the inception phase revealed a number of issues that suggested a need to revise the proposed approach to this evaluation. The ToR initially assumed that significant work had been done in collaboration with the MEAs at the country level. However, it became evident that a focus at the country level would yield few results since project implementation at the country level was limited. While a broad review of the accomplishments of the Sub-programme was undertaken, the evaluation approached the assessment of results thematically and used project implementation as case studies to demonstrate the Sub-programme's work and accomplishments.
27. Several key areas have been considered including the Global Mercury Partnership/Minamata Convention, mainstreaming of sound management of chemicals in health and the environment, SAICM, and support to chemical and waste MEAs through capacity building. Country visits were undertaken only to the extent that they assisted the evaluation in demonstrating UNEP's work in the key areas stated above.

3 Overview of UNEP's Chemicals and Waste Sub-programme

3.1 Framework of operation: the Medium-Term Strategies 2010-13 and 2014-17

28. In 2008, the UNEP Governing Council accepted UNEP's Medium-Term Strategy (MTS) for the period 2010-13, and authorized the Executive Director of UNEP to use the MTS in formulating the Programmes of Work (PoW) 2010-11 and 2012-13, the main planning tools of UNEP. The MTS was based on UNEP's comparative advantages, mandate, scientific evidence, and an analysis of where UNEP could make transformative differences. Six cross-cutting thematic priorities were identified, namely: (i) Climate Change, (ii) Disasters and Conflicts, (iii) Environmental Governance, (iv) Ecosystem Management, (v) Harmful Substances and Hazardous Waste, and (vi) Resource Efficiency, with each having one or more responsible divisions based on the divisions' specialization and capacity.
29. The UNEP Harmful Substances and Hazardous Waste Sub-programme (called the Chemicals and Waste Sub-programme since the Medium-term Strategy 2014-17) was created in 2009 as a cross-divisional Sub-programme for the UNEP Medium-Term Strategy (MTS) 2010-13 with the objective "to minimize the impact of harmful substances and hazardous waste on the environment and human beings". The impact indicators for this objective were (i) increasing compliance with international regimes addressing chemicals and hazardous waste related issues; and (ii) the number of harmful chemicals for which production and use has been curtailed. The MTS further presented the Expected Accomplishments (EAs) for the period 2010-13, which were slightly revised between the first and second biennia of the period.
30. Under the new Medium-term Strategy for 2014-17, the Harmful Substances and Hazardous Waste Sub-programme has been renamed the C&W Sub-programme. The Sub-programme objective for the new period is relatively similar to, though at a lower results level than, the one from the previous MTS period, namely "to promote a transition among countries to the sound management of C&W to minimize impacts on the environment and human health". However, the major difference between the biennia was mainly identified in the EAs as further detailed in the section below.

3.2 Trends in Expected Accomplishments since 2010

31. The evaluation of UNEP's C&W Sub-programme focuses on UNEP's work during the last five years (2010 to 2014) across two four-year Medium-term Strategies of UNEP (the entire MTS 2010-13 and one year of the MTS 2014-17), and three biennial Strategic Frameworks and PoWs (the entire biennia 2010-11 and 2012-13, and the first year of biennium 2014-15). These strategic documents specify the higher level results for each of the Sub-programmes, from Sub-programme objectives to EAs to PoW Outputs.
32. The UNEP Programmes of Works (PoWs) describe the strategy of UNEP's C&W Sub-programme for each EA. EAs have remained broadly the same for the biennia 2010-11 and 2012-13 (under the MTS 2010-13) but were changed for the MTS 2014-17. Below is a summary of the Expected Accomplishments comparing the MTS 2010-13 and MTS 2014-17 (see also annex 4).

MTS 2010-13

- **Expected Accomplishment (a): States and other stakeholders have increased capacities and financing to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste.** UNEP was to help countries to increase their capacities for sound management of chemicals and hazardous waste within a life-cycle approach. The sub-programme support would cover data collection, the assessment and management of chemicals, the implementation of scientifically designed hazardous waste management systems and the strengthening of chemical and hazardous waste legislation and regulatory frameworks and mainstreaming of chemical safety in development agendas.
- **Expected Accomplishment (b): Coherent international policy and technical advice is provided to States and other stakeholders for managing harmful chemicals and hazardous waste in a more environmentally sound manner, including through better technology and best practices.** UNEP was to help advance the international agenda on chemicals through the implementation of the environmental component of the SAICM. The Sub-programme would provide policy and science-based advice and guidelines to Governments and other stakeholders on risk assessment and management; raise awareness of potential adverse effects of chemicals, including hazardous waste; and address emerging issues. It was also expected to contribute to the development of methodologies and tools for monitoring and evaluating progress in the sound management of chemicals and hazardous waste.
- **Expected Accomplishment (c): Appropriate policy and control systems for harmful substances of global concern are developed and being implemented in line with international obligations of States and mandates of relevant entities.** UNEP was to support the development of internationally agreed chemical management regimes, particularly for mercury but also for other metals if requested by Governments. The Sub-programme would also support the evolution of existing internationally agreed MEAs in the C&W cluster, by assisting countries, MEA secretariats and other stakeholders in their efforts to deal with highly hazardous substances. To contribute to the implementation of the principles defended by the three MEAs regarding the management of harmful substances and hazardous waste (Basel, Rotterdam and Stockholm Conventions), UNEP would help strengthen cooperation and coordination between the conventions and would continue to sustain the process under way to improve synergies among the three conventions.

MTS 2014-17

- **Expected Accomplishment A - Enabling environment: Countries increasingly have the necessary institutional capacity and policy instruments to manage C&W soundly including the**

implementation of related provisions in the MEAs. This EA focuses more on working to strengthen the institutional capacity and policy instruments, including regulatory frameworks, needed for the sound management of C&W and the implementation of the related MEAs. This will be achieved by facilitating international chemicals management through the provision of secretariat support, as agreed at ICCM3 to SAICM and its Quick Start Programme, as well as supporting the implementation of the Minamata Convention on Mercury.

- **Expected Accomplishment B - Chemicals: Countries, including Major Groups and stakeholders, increasingly use the scientific and technical knowledge and tools needed to implement sound chemicals management and the related MEAs.** With the focus for UNEP on supporting countries on request to assess and manage chemicals risks. UNEP will also bring relevant emerging issues for the sound management of chemicals to the attention of the international community. Priority actions will be supported through the development, dissemination and demonstration of the scientific and technical knowledge, tools and assessments needed to implement sound chemicals management. Activities will be closely coordinated with the Secretariats of the chemicals MEAs to ensure the cost-effective provision of assistance to countries in the implementation of these treaties, SAICM and other supporting international programmes such as the GPA.
- **Expected Accomplishment C - Waste: Countries, including Major Groups and stakeholders, increasingly use the scientific and technical knowledge and tools needed to implement sound waste management and the related MEAs.** UNEP will bring relevant emerging issues for the sound management of wastes to the attention of the international community and support national, regional and global efforts to minimize waste generation and to manage remaining wastes using environmentally sound means, ensuring synergy between work undertaken by UNEP on the sound management of chemicals. UNEP will work in close cooperation with the Secretariat of the Basel Convention and its regional centres and partnerships to support countries in developing their capacity to use technically sound advice and guidelines on waste management to implement waste-related MEAs, including by developing methods and tools to evaluate progress and identify priorities for action towards sound waste management, and by building countries' analytical capacity to fill information gaps.

3.3 Theory of Change of the Chemicals and Waste Sub-programme

33. The reconstructed Theory of Change enhances our common understanding of the underlying programme logic. It depicts what and how UNEP plans or intends to achieve under the Sub-programme and maps out the underlying intervention logic, identifying key drivers of impact and the underlying assumptions. The reconstructed Theory of Change of the Sub-programme seeks to define:
- the nature and scope of the changes to which the Sub-programme is expected to contribute to achieve its objectives and desired impact;
 - the cause-effect relationships between outputs delivered by the Sub-programme and expected higher-level changes (also called results chains or causal pathways);
 - the external factors and conditions that would allow the Sub-programme to achieve the expected higher-level changes. These are considered in two groups: assumptions (external conditions over which the Sub-programme has no influence or control) and drivers (external factors that the Sub-programme can influence with specific activities or outputs); and
 - the role of key stakeholders in making those changes happen.
34. Figure 1 below presents a diagram for the draft reconstructed Theory of Change of the Sub-programme based on the actual results statements (sub-programme objective, EAs and PoW Outputs) for the biennia 2010-11 and 2012-13 which have been “broken up” and re-arranged to better conform

to the current UNEP definitions of the different results levels and to show the theoretical cause-to-effect relationships. Theory of change diagrams developed for each Expected Accomplishment in the Sub-programme are attached as Annex 7.

35. The reconstructed Theory of Change shows how the UNEP C&W Sub-programme is centred on building national capacities to assess, monitor and manage risks to human health and the environment posed by C&W on different dimensions: awareness and information, policy and strategic frameworks, technical and methodological know-how, and national institutions and infrastructure. In parallel, the Sub-programme promotes coherent international information, policy and action for environmentally sound production, management and use of C&W. These are the direct outcomes expected from the Sub-programme against which effectiveness of the Sub-programme was assessed. Direct outcomes are expected to be achieved through a diverse set of outputs. These are presented at the bottom of the diagram, grouped along the direct outcomes they are expected to contribute to. As firm evidence of achievement of direct outcomes might be scarce, the effectiveness evaluation will partly rely on an assessment of the relevance, quality and timeliness of outputs delivered by the Sub-programme.
36. The sub-programme objective states that “Countries transition to the sound management of C&W”. This transition is expected to happen on different dimensions that correspond with putting to use the enhanced capacities achieved at the direct outcome level. The sub-programme objective is actually an intermediate state towards the desired impact of the Sub-programme, which is that “the impact of C&W on the environment and human health is minimized”.
37. For changes to happen along the causal pathways towards outcomes and impact a number of external conditions need to be met and several external factors need to be present. Key assumptions (red arrows in the diagram) made by the Sub-programme (assumptions are those external factors over which the Sub-programme has no influence) are that Governments have long-term political will and adequate human and financial resources to upscale/implement C&W policies, enforce laws and regulations etc. Another assumption is that consumer behaviour changes on a wide scale, transitioning to sustainable consumption patterns. Key drivers for change (external factors over which the Sub-programme can have limited influence) are that donor and UN agencies integrate C&W issues in their strategies and programmes to assist countries and use scientific and technical guidance and methodologies for C&W risk assessment and management promoted by UNEP. This is because UNEP heavily relies on those partners to support application, replication and up-scaling of norms and standards and policy and technical guidance it has developed. More importantly, and at a higher level in the causal pathways, the for-profit sector must have the proper incentives to transition to sound management of C&W.
38. The evaluation assesses the likelihood that the Sub-programme contributes to the desired impact by combining evidence about sub-programme effectiveness (i.e. contribution to direct outcomes), progress on the sub-programme objective (i.e. the intermediate state towards impact) and validity of assumptions and presence of drivers. The latter also provides the basis for assessing the likelihood of sustainability and up-scaling of sub-programme achievements.

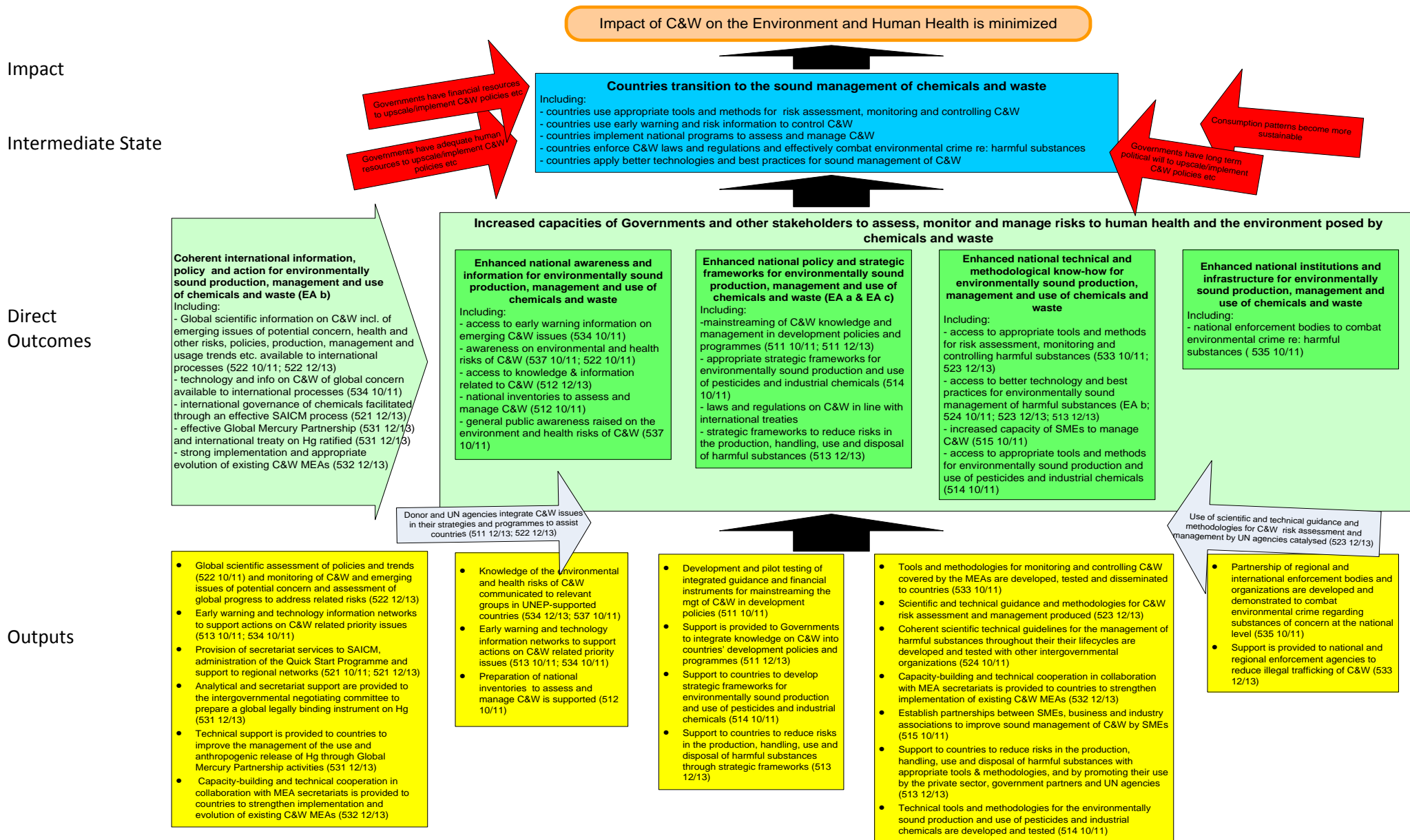


Figure 1: Reconstructed Theory of Change of UNEP's Chemicals and Waste Sub-programme over the period 2010-2014

4 Evaluation Findings

4.1 Strategic relevance of the Sub-programme

40. The strategy for the Harmful Substances and Hazardous Waste Sub-programme was developed based on UNEP's earlier work in addressing the environmental dimension of the management of harmful substances and hazardous waste, including in particular, activities related to the chemical and waste related MEAs (the Montreal Protocol on Substances that Deplete the Ozone Layer, Kyoto Protocol and UNFCCC, the Basel Convention, the Rotterdam Convention and the Stockholm Convention).
41. Several documents prepared in support of the PoW of the C&W Sub-programme attempt to articulate a strategy for the Sub-programme. The 2008 draft Strategy of the Harmful Substances and Hazardous Waste Sub-programme for the PoW2010-11 articulated a vision for UNEP "to be the leading global environmental authority for setting and providing the scientific, technical and policy agenda and responses related to the sound management of harmful substances and hazardous waste". The strategy further defined the scope of the Sub-programme, identified needs, challenges and drivers and stated UNEP's comparative advantage and strategic priorities as well as the activities required to deliver the expected outputs and the stated results.
42. The three programme frameworks prepared for each of the three Expected Accomplishments of the PoW2010-11 further captured the key elements outlined in the sub-programme strategy. The ideas in the programme frameworks were further elaborated in the project documents developed to implement the PoW. The UNEP Medium-Term Strategy for 2010-13, and the biennial Strategic Frameworks and Programmes of Work were more general and did not describe well what the strategy for the C&W Sub-programme actually was.
43. The strategy to achieve the objectives of the Sub-programme involved building partnerships and taking action in several areas. These included: servicing of the Strategic Approach to International Chemicals Management and the implementation of its environmental component; supporting the development and evolution of internationally agreed chemical management regimes; assisting countries in increasing their capacities for sound management of chemicals and hazardous waste; and supporting initiatives related to specific chemicals, such as mercury, heavy metals, chemicals covered by the MEAs, such as ozone depleting substances, and other chemicals of global concern¹⁴.
44. For the MTS 2014-17 a single programme framework document was prepared for each sub-programme. For C&W, this programme framework document brings together the essential elements of a sub-programme strategy even though there is still room for improvement. Some progress was made in better highlighting the key challenges/problems the Sub-programme is expected to address and in articulating a Theory of Change for the Sub-programme, but an appropriately detailed stakeholder analysis and robust resource mobilisation strategy, among other elements, are still missing as discussed later in this report.

4.1.1 Global political context

45. Chemicals have been high on the international political agenda since 1972. Pollution with toxic and dangerous substances was a central issue at the United Nations Conference on the

14 United Nations Environment Programme Medium-term Strategy 2010–2013 Environment for Development UNEP/GCSS.X/8

Human Environment (1972). The problems associated with chemicals were specifically addressed in 1992 by the United Nations Conference on Environment and Development with the adoption of Chapter 19 of Agenda 21¹⁵ and again at the World Summit for Sustainable Development in 2002, where the 2020 goal of producing and using chemicals in ways that lead to the minimization of significant effects on human health and the environment was established in article 23 of the Plan of Implementation of the WSSD.

46. The Strategic Approach to International Chemicals Management (SAICM) was developed as a cross-sectorial and multi-stakeholder initiative to protect human health and the environment and promote sustainable development. SAICM was developed under the auspices of UNEP involving several other IGOs (IOMC organizations, UNDP and the World Bank), Governments, the private sector and public interest groups and later also the Governing Bodies of several other IGOs. Its secretariat is hosted by UNEP. The overall objective of SAICM is the sound management of chemicals throughout their life cycle so that, by 2020, chemicals are produced and used in ways that minimize significant adverse impacts on human health and the environment. This target to achieve sound management of chemicals by 2020 was adopted by the WSSD in 2002 as part of the Johannesburg Plan of Implementation.
47. In line with the Plan of Implementation of the World Summit for Sustainable Development, the Marrakech Process, the International Panel for Sustainable Resource Management and requests made at the eighteenth session of the Commission on Sustainable Development, UNEP, in collaboration with partners, intensified and strengthened its activities in the field of waste management focusing on actual delivery at the national and local levels and on the scientific understanding of synergies between resource augmentation and waste management to decouple waste generation and environmental impacts from economic growth. IETC has developed a portfolio on waste management since 2005, covering specific waste streams- Waste Electrical and Electronic Equipment (WEEE), waste agricultural biomass, healthcare waste, waste oils, waste plastics, and disaster debris. These activities were mandated to be further scaled up by GC 25/8.

4.1.2 UNEP mandate

48. UNEP's work in the C&W area is justified by the evolving global context, environmental trends and the need for the sound management of C&W. The work on the sound management of C&W is fully aligned with UNEP's global mandate as well as several Governing Council decisions and the previous and current MTS. The sub-programme objectives are also in line with several UN General Assembly Resolutions.
49. The overarching chemicals policy framework and agreements directly related to UNEP include the following:
 - SAICM: overarching policy framework for global chemicals management ;
 - UNEP Governing Council (GC) decisions: cover lead, cadmium, mercury, POPs, and support for MEA implementation, waste, including hazardous waste reflected in a number of decision i.e. GC 19/13 C, GC 22/4 V, GC 23/1I, GC 23/9 I – IV, GCSS.IX/1, GC 24/3;
 - MEA decisions (including those addressing synergies and cooperation between MEAs): the Montreal Protocol on Substances that Deplete the Ozone Layer, Kyoto Protocol and

¹⁵Agenda 21, United Nations Conference on Environment and Development. Rio, Brazil, June 3-14, 1992.
<https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

UNFCCC, the Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Conventions on Persistent Organic Pollutants, the Minamata Convention on Mercury;

- Bali Strategic Plan: UNEP's overall framework for capacity building;
 - GEF: policies for financing of projects in relevant sectors (e.g. C&W, ozone layer, and persistent organic pollutants); and
 - The Global Programme of Action for the Protection of the Marine Environment from Land Based Activities.
50. In 2009, the UNEP GC, in Decisions 25/8 and 26/8 authorised the Executive Director to provide more intensive capacity building and technology demonstration projects, in particular in urban areas, to promote the "3Rs" (reduce, reuse and recycle) approach in developing countries; to enhance cooperation with all relevant United Nations bodies, including the Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and other international institutions.

4.1.3 UNEP comparative advantages and strategic priorities

51. Among UNEP's key comparative advantages are its demonstrated convening power, its ability to identify and assess C&W issues, and its ability to facilitate the development of global frameworks for addressing them.
52. UNEP sought to implement the harmful substances and hazardous waste priority programme based on its competencies in 4 key areas: a) Sound science for decision-makers involving early warning, monitoring and assessment, emphasizing the strategic needs for adaptive, legal, institutional and market frameworks; b) awareness-raising, outreach and communications to promote environmental actions and innovations; c) capacity building and technology support to better meet the needs of governments and partners; d) cooperation, coordination and partnerships to engage the United Nations entities, other international institutions, MEAs, bilateral aids agencies, civil society and the private sector.
53. With regards to assessments and sound science in relation to the C&W Sub-programme, UNEP's has not only produced the Global Chemicals Outlook, a document which explores patterns and trends over time in production, use and disposal of industrial organic and inorganic chemicals, selected metals, and agricultural chemicals, but has also contributed to the Fifth Global Environment Outlook, by peer reviewing the chapter on chemicals and waste. Other key outputs are UNEP's monthly GEAS bulletins and awareness-raising products on hazardous C&W through the SAICM initiative, its Cleaner Consumption and Production activities and its work to support the Chemicals MEAs.
54. UNEP's competencies enable it to develop guidance materials and other tools to assist countries in addressing the issues related to C&W management. While other IGOs have mandates and programmes that address chemicals in their field of competence (e.g. public health, industry and agriculture), UNEP's capacity to place chemicals issues within the broader context of environment and development, along with its network of regional offices and its relation with UNDP for national delivery, is a unique asset. With the normative functions including technical assistance and programme delivery roles for the sound management of chemicals being performed by many of the participating organizations, the need to provide coherence and synergy was evident. UNEP plays this coordinating role.

55. Given its central role in the UN system, UNEP is regarded as the neutral and independent technical voice on environmental issues. Among other things, UNEP has, over the years, worked to achieve coherence through its participation in numerous inter-agency mechanisms and multilateral processes and the partnerships it has forged to undertake its mandate. UNEP's convening power allows it to establish networks with Governments, United Nations entities, international institutions, civil society and the private sector. UNEP has extensive and tested experience in collaborating with the scientific community. It has established partnerships with numerous collaborating centres of excellence and developed and hosted numerous partnerships. Its network of Regional Offices provides the link to the regional and national level in the implementation of its mandate and initiatives. These and other issues are discussed further in the sections on performance and impact of the Sub-programme as well as in the sections on collaboration and partnership.

4.1.4 Relevance to global and country needs

56. UNEPs current work in the area of C&W is judged relevant to global and country needs by the evaluation. The increasing production and use of chemicals in national economies require that policies are put in place for sound management throughout their life cycle (from extraction from the natural environment, raw material processing, manufacture of intermediates and products, their use, recovery and disposal). Chemicals pose significant risks to human health and the environment and result in substantial costs to national economies. However, regulation and policy often lag behind rapid changes taking place in the global production and distribution of C&W. In the absence of adequate quantitative data and while the potential life-cycle hazards of both old and new materials are incompletely understood, the challenge to protect human health and the environment from the undesirable effects of chemicals remains.
57. Many national governments have enacted laws and established institutional structures with a view to managing the hazards of this growing volume of chemicals. Leading corporations have adopted chemical management programmes and there are now many international conventions and institutions for addressing these chemicals globally. But unsound waste management practices remain widespread, particularly in developing countries and countries in transition, due to increasing generation of waste and complexity of waste composition, globalisation and lack of knowledge and infrastructure to deal with ever more complex waste streams.
58. The increasing variety and complexity of chemicals and the ever longer and more intricate chemical supply chains and waste streams lead to a situation where the scientific understanding of impacts of chemicals and the regulatory schemes used to manage them lag behind technological and economic developments. There are serious gaps, lapses and inconsistencies in government and international policies and corporate practices.
59. Furthermore, there is a serious shortage of reliable data on existing chemicals, and there are, so far, no standard indicator sets to collect time-series data that can be used to measure the status and trends of C&Ws. With the exception of limited data submitted through reports to the Secretariat of the Basel Convention providing information on hazardous waste that is subject to international movement, data on waste generation, treatment and recycling is generally lacking.
60. One of the key initiatives of the C&W Sub-programme over the period of the last MTS was to develop a Global Assessment – the Global Chemical Outlook (GCO) in line with UNEP's key mandate to keep the global environment under review. The report examines trends in global production, use and disposal of chemicals, and in their health and environmental impacts.

Chemicals used in industry, agriculture and incorporated into products were also considered in this report. The GCO presented issues that fall within the scope of SAICM and have the potential to be addressed through that framework. The report makes the economic case for the sound management of chemicals at the national level through its cost of inaction analysis and identifies the institutional barriers for sound chemicals management. The report also assessed the risk of the absence of effective chemicals management to investment and presents options for the mainstreaming of sound chemicals management into national development processes. To that extent, it is relevant to the needs of countries and their aspirations to not only protect human health and the environment but also to the economic bottom line.

61. The need for a multi-stakeholder process with high political endorsements for the safe production and use of chemicals has been demonstrated. The UNEP strategy in this regard addresses assessments; risk reduction; knowledge and information; governance; capacity building; development of tools and methodologies; and institution building while relying on key public-private partnership in managing chemicals globally. SAICM was initially implemented within the Chemicals Branch as an initiative. However, it has since evolved not only to support international agreements and initiatives but also to mainstream the chemicals agenda into national development processes. This is accomplished through the development and strengthening of national chemicals management institutions, plans, programmes and activities to implement SAICM. The initiative has also supported the mainstreaming of sound management of chemicals through undertaking analysis, interagency coordination, and public participation activities directed at enabling the implementation of SAICM by integrating – i.e. mainstreaming – the sound management of chemicals in national strategies, and thereby informing development assistance cooperation priorities that has very little relationship with other initiatives going on in the organization. While this is the case it is puzzling that the sub-programme frameworks for the MTS 2010-13 were developed with SAICM contributing to a different Expected Accomplishment than the other international processes such as the Chemicals MEAs and the Minamata convention.
62. The Global Partnership on Waste Management (GPWM) was launched in November 2010 with the goal of creating a voluntary coordinating mechanism among different waste sectors and related activities, in the form of an umbrella partnership. The GPWM is expected to support the development of work plans to facilitate the implementation of integrated waste management at national and local levels to overcome environmental, public health, social and economic issues inflicted by waste and its impact. The GPWM would also support policy dialogue and other activities to exchange experiences, practices, and other information. It is expected to facilitate enhanced awareness-raising and capacity building, and to contribute to enhance the funding base available to support waste management and tackle identified waste-related challenges at local, national and sub-regional levels.

4.1.5 Strategic focus

63. As designed under the MTS 2010-13, the C&W Sub-programme was organized into three programme frameworks with corresponding Expected Accomplishments (EAs). The first Programme Framework addressed Expected Accomplishment (a) related to the “capacities and financing of States and other stakeholders to assess, manage and reduce risks to Human Health and the Environment posed by Chemical and Hazardous Waste are increased”. The focus of this framework was on 1) financial instruments for mainstreaming the management of harmful substances and hazardous waste; 2) technical tools, methodologies and strategic frameworks for the environmentally sound production and use of pesticides and industrial chemicals; 3) information networks are established and demonstrated to support regional-

level actions on chemical related priority issues; 4) national programmes and inventories to assess and manage harmful substances and hazardous waste are implemented; 5) partnerships with SMEs, business and industry associations to improve sound management of harmful substances, chemicals in products and hazardous waste.

64. The second Programme Framework focused on developing “coherent international Policy and technical advice for managing harmful substances in a more environmentally friendly manner including through better technology and best practices are provided to states and stakeholders”. This Programme framework addressed Expected Accomplishment EA (b). The focus of this programme framework was on 1) the SAICM process, 2) the development of methodologies for chemical risk assessments including global assessments, 3) the development and testing of coherent scientific technical guidelines for the management of harmful substances throughout their lifecycles and 4) the development of tools and methodologies for monitoring, evaluating and reporting progress in sound management of life.
65. The third Programme framework which covered Expected Accomplishment (c) dealt with the development and use of appropriate policy and control Systems for harmful substances of global concern. The focus here was on related areas of the 1) framework for action to minimize the availability, accessibility and use of mercury is developed; 2) support to existing conventions through the development of tools and methodologies for monitoring and controlling C&W covered by the MEAs; 3) Actions to further operationalize regional seas and ozone conventions; 4) development of a partnership of regional and international enforcement bodies and organizations to combat environmental crime regarding substances of concern; and 5) awareness-raising and action regarding the environmental and health risks of Harmful Substance and hazardous Waste. In the subsequent biennium covering the PoW period 2012-13, some changes were made to the way the sub-programme framework was organized.
66. For the MTS 2014-17, the objective of the Sub-programme was modified somewhat by nuancing the original objective of minimization of the impact of harmful substances and hazardous waste on the environment and human beings to reflect the sound management of C&W. While the combination of chemicals and hazardous waste in 2010-13 made perfect sense because the policy processes were similar, in 2014, C&W are combined only in EA (a) which concerns international policies and national enabling environments (including mainstreaming, regulatory frameworks, economic instruments etc.) for sound management of both C&W. It is not really clear why C&W have been put together here, because they are separated out completely at the output level with one output being produced solely by waste management activities.
67. The Medium-Term Strategy period (2010-13) the Chemicals Branch focused on managing the SAICM process, implementing work to assist in bringing chemicals-related MEA parties into compliance and aiding SAICM 'parties' to address priorities. This work was boosted by the integration of the GEF chemicals portfolio after the Division for GEF Coordination was dismantled in 2011. The Sub-programme also supported the process leading to the adoption of the Minamata Convention on Mercury in October 2013 and is currently hosting the Interim Secretariat for the Convention.
68. The focus of the Sub-programme substantive and technical support including guidelines, tools methodologies in support of the three Chemicals MEAs namely: Basel, Rotterdam and Stockholm under the synergies initiative. Rotterdam is jointly shared with FAO; policy and strategic frameworks; promotion and ratification of the conventions; co-operation in the development of initiatives to prevent illegal traffic, in particular the Green Customs Initiative

seem to be the right focus for UNEP's Chemicals work. The Sub-programme's work also includes development of the international policy framework on mercury, leading to the agreement of the Minamata Convention on Mercury.

69. This thematic grouping overlaps the other themes dealing with chemicals more broadly, such as SAICM or non-hazardous waste (as they also do for other Sub-programmes e.g. Governance and SCP). The MEAs are independently driven by the conventions' obligations and parties' decisions. These are mandated by the MEA's Conferences of the Parties (CoPs), when a convention is in force. The involvement of MEAs is therefore an integral part of the Sub-programme with the need for UNEP to continue to provide substantive backing to the C&W related MEAs while exerting greater influence on the behaviour of the public, the private sector and government policy-makers. The projects developed to implement the Sub-programme for the 2010-13 MTS seemed to reflect an even distribution across the EAs.
70. Waste encompasses many sub-categories such as (non-hazardous) industrial manufacturing waste, mining and mineral extraction waste, agricultural waste, treated sludges from water and waste water treatment and some healthcare waste. The focus in a UNEP context is often on Municipal Solid Waste (MSW i.e. not liquid but may include sludges- interpretations of the term vary) that poses specific challenges for developing countries, countries with economies in transition and developed countries alike with expanding urban environments. Their municipalities face logistics, public health and resource conservation and recovery issues that have an impact on living conditions and human health and the environment. Such solid waste is typically generated, recovered and disposed of (although not necessarily always now with globalization of materials recycling from MSW sources) within the country in which it is produced, as opposed to that covered by the Basel Convention which deals predominantly with trans-boundary movements of hazardous waste. There is a connection. The Basel Convention focuses on national application of the standards of waste management in order to support sound management of international movements of waste at their destination, the obligation to ensure environmentally sound management (ESM). The obligations of the Basel Convention on Parties therefore extend to implementation of control systems that ensure ESM including standards, monitoring and compliance at the State level.
71. The totality of UNEP's interventions with respect to waste are not, however, restricted to the C&W Sub-programme. Waste is a cross-cutting issue combining factors associated with potentially harmful and polluting substances with impact on human health and the environment (even though it does not fall within a classification of hazardous, the capacity to pollute and do harm to the environment remains), and the effects on natural resources, consumption and production, management and disposal. Issues relating to waste will inevitably overlap internally within the Sub-programme and other areas. It is also addressed within the context of Climate Change, Disasters& Conflict, Ecosystem Management, Environmental Governance, as well as Sustainable Consumption and Production. While there is no binding instrument for waste as a whole, many of the activities mandated by the Conferences of the Parties (CoPs) of relevant MEAs are also relevant for the waste component, as well as those not covered by the MEAs. UNEP thus has the potential to fill possible gaps in binding commitments through voluntary programmes (in the same way as is done with chemicals though SAICM for example). This Sub-programme therefore has to take these matters into account, in coordination with MEA Secretariats and their CoP decisions, as well as the UNEP MTS and PoW in determining the scope and extent of the projects undertaken within this Sub-programme.

4.2 Performance of the Chemicals and Waste Sub-programme

4.2.1 Effectiveness

72. The assessment of performance involves the determination of the extent to which stated outcomes have been achieved. The assessment is organized according to the direct outcomes that the C&W Sub-programme attempts to achieve as defined in the Sub-programme's reconstructed Theory of Change. The key direct outcomes include the building of national capacities to assess, monitor and manage risks to human health and the environment posed by C&W on different dimensions: awareness and information, policy and strategic frameworks, technical and methodological know-how, and national institutions and infrastructure. In parallel, the Sub-programme promotes coherent international information, policy and action for environmentally sound production, management and use of C&W. While systematic evidence on the achievement of direct outcomes is limited, there is sufficient information on the quality and timeliness of the delivery of outputs (services and products delivered by UNEP) under the Sub-programme to allow the evaluation to make an informed judgement about likely progress on the achievement of direct outcomes.

4.2.1.1 Achievement of Direct Outcomes

Direct outcome 1: Enhanced national awareness and information for environmentally sound production, management and use of chemicals and waste

73. The Sub-programme has been largely successful in providing information and raising national awareness for the production and use of C&W in an environmentally sound manner. As a means of providing access to early warning information on emerging C&W issues, UNEP's Global Chemicals Outlook (GCO) report, which was prepared during the period under review, recognized the importance of chemicals to sustainable development. The report notes however that sound chemicals management throughout their lifecycle is essential to avoid significant risks to human health and environment as well as substantial costs to national economies. The report which attracted wide media interest and received attention and support at ICCM3 was used to establish the rationale for sound chemicals management and formed the basis for many government interventions.

- *Countries access early warning information on emerging chemicals and waste issues*

74. Based on the recommendations of the GCO, ICCM3 renewed its commitment to emerging policy issues such as lead in paint, involving the promotion of coordinated international lead poisoning awareness events in 2013. In the area of chemicals in products, a voluntary international programme for supply-chain information systems has been promoted. Others include: hazardous substances within the life cycle of electrical and electronic products; nanotechnology and manufactured nanomaterials; and perfluorinated chemicals. Work on perfluorinated chemicals involved increased awareness through a global group formed by UNEP and OECD. Following a UNEP proposal, actions on endocrine-disrupting chemicals that interfere with important developmental processes in humans and wildlife were also agreed.

75. The monthly GEAS bulletins provide succinct overviews of emerging environmental issues, with the objective of providing an interface between important policy matters and up-to-date findings. Issues covered by the bulletins are chosen based on their relevance to current environmental trends and the availability of the latest science. In August 2011, GEAS highlighted issues related to the decommissioning of nuclear reactors and their environmental

consequences. The bulletin was distributed within UNEP, the UNEP Committee of Permanent Representatives, and to the wider audience via the UNEP website. In one month the bulletin had 79,900 visits covering 205 countries and territories. Other relevant emerging issues include the changing face of waste with specific focus on solving the impending scarcity of strategic minerals and avoiding electronic waste. Additional issues include artisanal mining, the need for new approaches to minimizing the risks of novel technologies and chemicals and growing hypoxia.

76. The Global Partnership on Waste Management (GPWM) supports policy dialogue and other activities to exchange experiences and practices, facilitating enhanced awareness-raising and capacity building. Several of the focal areas of the GPWM contribute information that assist with risk management. The waste and Climate Change Workplan aims to offer a portfolio of proven practical and costs effective technologies which can contribute to GHG mitigation (ISWA Dec 2011). The draft workplan of the Working Group on Climate Change and Waste Management for 2013 identified a range of networking activities, training programmes, information exchange, academic research, case study example candidates and carbon footprint assessment actions to assist in reducing GHG emissions from waste. The Waste Minimisation focal area aims to strengthen awareness and share information on practices for reducing waste. The latter is a cross cutting issue that is led by DTIE's Sustainable Consumption and Production Branch under the direction of IETC.

- *Access to knowledge and information related to chemicals and waste*

77. The Sub-programme intended to support the regions for the implementation of SAICM through the exchange of relevant scientific and technical information by facilitating regional meetings with maximum multi-stakeholder participation and strengthening the scientific base of countries. As a result of the lack of funds to operate the information clearinghouse, however, alternative methods had to be used to disseminate technical and scientific information related to SAICM implementation, such as through regional meetings and information documents on the SAICM website. Technical Information sessions were held during the SAICM Regional meetings providing slots with technical presentations and workshops related to SAICM implementation, including on SAICM emerging policy issues.

78. Among the numerous training activities undertaken to provide knowledge and information for the sound management of C&W was training provided to Sri Lanka of government officials under UNEP's Flexible Framework Initiative for Chemical Accident Prevention and Preparedness. With in-kind technical support provided by the Swiss Federal Office for the Environment, preparations for the training of government officials in Tanzania were also undertaken.

- *Countries are aware of environmental and health risks of chemicals and waste*

79. The Sub-programme has produced substantial quantities of publications and public information material, covering all aspects of the Sub-programme's work; the bulk of which can be found on the Branch's web page and in the offices. While these materials are also used in workshops and meetings organized by the Branch there is a perception that they could be more effectively used to support better delivery of the Sub-programme and as a means to raise funds for the up-scaling of sub-programme activities. In this regard, Chemicals Branch staff indicated that support from the Division of Communications and Public Information (DCPI's) in the creation of public awareness on chemicals and their sound management was inadequate.

80. Regarding awareness on environment and health risks of C&W, a report on the Chemicals in Products (CiP) project to the third session of the International Conference on Chemical Management (ICCM3), mandated by ICCM2, was produced. The report elaborated activities, findings and recommendations for further actions from the Chemicals in Products project to the SAICM ICCM3 (Nairobi, September 17-21, 2012). In support of the recommendations, a side event was held during ICCM3, presenting the proposed way forward and the proposed activities
81. As part of UNEP's support to the process of signing and ratification of the mercury convention, awareness-raising workshops were held in three regions, with seven workshops held to date. Indeed, up to 87 countries had been reached by the end 2014 through the awareness-raising workshops. Following the workshops, a number of countries went on to sign or ratify the Convention
82. Awareness-raising activities for countries to take decisions to minimize the risk of lead and cadmium continues to be a key element for the successful implementation of the Partnership for Cleaner Fuels and Vehicles (PCFV), Global Alliance to Eliminate Lead Paint (GAELP) and the support provided to governments and industry. In particular, the GAELP Business Plan, with its relevant milestones and targets, has paved the way to its achievement as a contribution to paragraph 57 of the Plan of Implementation of the WSSD. While the last 6 countries still using leaded petrol all have political conflict or are not open to international partners, there is need for continued focus on these countries through the implementation of activities in stable neighbouring countries to ensure complete global elimination of leaded petrol. Also, a regional approach is to be followed, where a regionally agreed cleaner fuels road map will be developed. Governments participating at the first universal session of the Governing Council in February 2013 acknowledged the efforts made to address risks posed by lead and cadmium, in particular, through the PCFV and the GAELP. In May 2013, Kenya carried out a follow-up blood lead testing to compare the results with those prior to the phase out of leaded petrol. The results show a significant drop in blood lead levels.
 - *National inventories to assess and manage chemicals and waste developed*
83. UNEP provides expertise and capacity building to help developing countries to assess and take action towards environmentally sound management of C&W and to meet their reporting requirements related to legally binding instruments. It also supports Parties' implementation of their obligations under the Stockholm Convention on Persistent Organic Pollutants (POPs). At the end of 2014 sixty-eight (68) countries had developed national inventories on dioxin and furan releases that complement the global monitoring plan for POPs. Cambodia, for example, has updated its national dioxin/dibenzofuran inventory using UNEP's toolkit. UNEP guidance for the Global Monitoring Plan on POPs and the Dioxin/Furan Toolkit used to develop national release inventories have been adopted for use under the Stockholm Convention. The work to develop national inventories is largely funded by the GEF, with four regional projects focused on implementing the global monitoring plan for POPs.
84. Taken together, all the awareness-raising efforts described above which relate to the development of technical assessments and early warning information, access to knowledge and information related to C&W, general public awareness on the environmental health risks of C&W and national awareness-raising activities, represent a substantial volume of work produced by the Sub-programme. While some substantive results have been demonstrated in the areas of the phase-out of leaded fuels and in the processes leading to the adoption, signing and ratification of the mercury convention, it is not clear the extent to which the Global Chemicals Outlook, for example, has influenced government decision-making granted the document was only released in 2012. Neither is it clear how the awareness-raising efforts

have been helpful in mobilizing resources for the sound management of C&W. Indeed, there is a perception out there that the awareness-raising efforts need to be strengthened to support resource mobilization efforts for sub-programme implementation.

Direct outcome 2: Enhanced national policy and strategic frameworks for environmentally sound production, management and use of chemicals and waste

- *Sound management of chemicals and waste mainstreamed into national development processes*
85. The Cost of Inaction Report is an effort to produce a more complete global picture on the costs of inaction on sound chemicals management. The goal is to provide decision-makers at all levels of government with the information necessary to fully consider increasing investments in the sound management of chemicals, consistent with international agreements and decisions and to address national priorities to protect human health, the environment and the sustainability of development. In the first biennium of the 2010-13 MTS period, the first background analysis report on the cost of inaction was prepared and submitted to the Steering Committee of the Cost of Inaction Report¹⁶. The Cost of inaction report¹⁷ was published in February 2013. The report was very well received and there was agreement to use the findings to develop some case studies in which the data will be used for global extrapolation of the cost of inaction. National workshops on methods for assessment of cost of inaction and development of legislative frameworks were carried out in Kyrgyzstan, Kazakhstan, and Mauritius between October 2012 and June 2013. Both outputs of the reports were to be included in the Global Chemicals Outlook¹⁸ after their discussion and approval at the 4th Steering Committee meeting of the Cost of Inaction Report held on 7 December 2011.
 86. During the biennium 2012-13, support on methodologies for assessing the cost of inaction was provided to Burkina Faso, Kyrgyzstan, Mauritius, Uganda and Zambia. A workshop on mainstreaming of sound management of chemicals and assessment of the cost of inaction was carried out for 25 African countries 2-4 July 2013. Guidance on the cost of inaction was developed and used in Burkina Faso, Kazakhstan, Kyrgyzstan, Nigeria, Mauritania, Mauritius, Uganda, Vietnam, and Zambia. Substantial progress was made in the SAICM QSP Trust Fund funded project through the UNDP-UNEP partnership initiative on integration of sound management of chemicals into national development policies with UNDP country offices as executing agencies and UNEP providing technical advice. Mauritania had delivered the socio-economic analysis. Kyrgyzstan and Mauritius initiated the process and were conducting the assessments by the end of the biennium. Kazakhstan had also initiated a project under the Partnership Initiative. Burkina Faso developed a cost of inaction assessment based on the Cost of Inaction approach. Liberia finalized its mainstreaming project in November 2013.
 87. The Cost of Inaction of pesticides use in Sub-Saharan Africa was developed and the baseline report was finalised over the period of the MTS. National workshops on methods for the assessment of cost of inaction and development of legislative frameworks were carried out in 3 countries between October 2012 and June 2013.

16 <http://www.unep.org/chemicalsandwaste/UNEPsWork/Mainstreaming/CostsofInactionInitiative/SteeringCommittee/tabid/56398/Default.aspx>

17 UNEP Chemicals, 2013. Costs of Inaction on the Sound Management of

Chemicals. <http://www.unep.org/chemicalsandwaste/UNEPsWork/Mainstreaming/CostsofInactionInitiative/tabid/56397/Default.aspx>

18 UNEP Chemicals, 2013 GCO: Global Chemicals Outlook, Towards Sound Management of Chemicals, Synthesis Report for Decision Makers.

88. Revised integrated guidance on the implementation of national plans was prepared and sent out to a number of countries, industry organizations and NGOs for comment. The guidance was discussed at an African regional meeting, 2-4 July, 2013 with participation of 27 African countries. A global meeting was organized from 12-13 November 2013 to finalize the guidance.

▪ *National laws and regulations in line with international treaties developed*

89. The building of national, legal and institutional capacity to enable governments to integrate the sound management of chemicals into national development strategies contributes to EA (a). Integrating the sound management of chemicals into sustainable development strategies involves integration in development assistance programmes including UNDAF processes and mobilizing resources to implement activities that lower chemical risks. The UNDP-UNEP Partnership Initiative implemented activities to mainstream the sound management of chemicals into national development processes. UNEP was responsible for developing the normative aspects of the work and played a supervisory role for the country implementation aspects while UNDP was responsible for national execution through the UNDP-UNEP Poverty and Environment Initiative (PEI). The initiative was piloted in 17 countries, including: Belize, Burkina Faso, Cambodia, Ecuador, Honduras, Kazakhstan, Kyrgyzstan, Liberia, FYR Macedonia, Mauritania, Mauritius, Moldova, Nigeria, Suriname, Uganda, Viet Nam and Zambia. Funding was provided by the SAICM Quick Start Programme (QSP) Trust Fund, as well as the Swedish Government (through the Swedish Chemicals Inspectorate – KEML). Among the key products and services delivered are the development of Vietnamese chemicals legislation, administrative structures and sustainable funding of the implementation and enforcement of the legislation through a partnership with the International Council of Chemicals Associations. The Government of Kazakhstan was also assisted in developing their chemicals legislation, administrative structures and sustainable funding of the implementation and enforcement of the legislation through the UNDP-UNEP partnership project on the mainstreaming of sound management of chemicals into their national development plan. Advisory services were also provided to the Government of Mauritius in developing their chemicals legislation, administrative structures and sustainable funding of the implementation and enforcement of the legislation through a partnership project with UNDP on mainstreaming of sound management of chemicals into the national development plan.

90. During the first half of 2011 the Joint Task Force for the Health and Environment Strategic Alliance developed proposals for implementation of the Strategic Alliance in Africa on harmful substances and climate change. The integrated guidance on legislation, infrastructure and sustainable funding was used in a number of countries and will become a part of the IOMC toolbox. Needs assessments carried out in the countries provide the basis for further development of the national integrated programmes on environment and health.

▪ *Strategic frameworks for the production, use and disposal of chemicals and waste developed*

91. Two programmatic frameworks for action at the country level on climate change health adaptation and on chemicals management to reduce risks to health and the environment were developed by the WHO-UNEP led Joint Task Team (JTT). The Task Team now benefits from the participation of the UNFCCC and the African Development Bank. A climate change Framework was finalized and endorsed by the 61st Session of the WHO Regional Committee for Africa, and subsequently adopted by the 4th Special Session of the African Ministerial Conference on Environment (AMCEN). A chemicals management framework was submitted for consideration by ministers of environment meeting in 2012 as well as to the WHO Regional

Committee for Africa. Twenty-two (22) African countries have established their Country Coordination Committees to initiate implementation of the Libreville Declaration.

92. A Situation Analysis and Needs Assessments (SANA) process led to the first-ever continental report on the status of environmental determinants and management systems for human health and ecosystems integrity in Africa. In November 2010, National reports on SANAs from 12 countries were reviewed and summarized in a document entitled “Environmental Determinants and Management Systems for Human Health and Ecosystem Integrity in Africa”. This document was the main discussion paper at the Second Inter-ministerial Conference. Angola, Benin, Botswana, Burundi, Cameroon, Comoros, Congo, Democratic Republic of Congo, Eritrea, Ethiopia, Gabon, Guinea, Ghana, Kenya, Lesotho, Madagascar, Mozambique, Mali, Nigeria, Seychelles, Sierra Leone and Tanzania. South Africa and the Gambia have expressed their interest to start.
93. Indeed, an evaluation of the implementation of the Libreville Declaration found that countries have integrated the management of health and environment issues into their development plans through adaptation of their legislation and their policies on health and environment. However, the implementation of the eleven priority action items set in the Libreville Declaration remains variable at the country level. The country coordination committees (CTTs) are not yet established in all the countries. Similarly, a number of countries have yet to complete their SANA exercise as well as the development of their National Plans of Joint Action (NPJA). Capacity building is being undertaken in a number of countries and monitoring and evaluation of priority programmes needs to be strengthened.
94. The evaluation also found that while UNEP has satisfactorily undertaken its normative functions as requested by ministers in the Libreville Declaration and the Luanda Commitment, progress at the country level had been variable. In 2014 the SANA process has been initiated in 39 countries and completed in 19. Inter-sectorial action reports have been finalized in 8 countries assessing 18 projects and programmes for improving inter-sectorial collaboration between health and environment sectors.
95. As a means to enhance policy and strategic frameworks for managing C&W in a sound manner, the Sub-programme has clearly demonstrated the cost of inaction on the sound management of chemicals. The methods of assessment of the cost of inaction have been tested, providing the impetus for the mainstreaming of the sound management of C&W into national development processes. Integrating the sound management of chemicals into national development strategies involves integration in development assistance programmes including UNDAF processes and mobilizing resources to implement activities that lower chemical risks. The UNDP-UNEP Partnership Initiative was effective in supporting the development of chemicals legislation and administrative processes, in providing advisory services for sustainable funding of the implementation and enforcement of the legislation. These successful outcomes in developing national legislation and regulations in-line with international treaties need to be further up-scaled and replicated.

Direct outcome 3: Enhanced national technical and methodological know-how for environmentally sound production, management and use of chemicals and waste

- *Access to appropriate tools and methods for risk assessment, monitoring and controlling harmful substances*
96. The Sub-programme has developed and continues to refine risk assessment tools to assist governments, industry and civil society organizations to address priority concerns in the management of C&W. Key examples including guidance documents on chemicals in products

as well as guidance on heavy metals in paint have been developed. From the first biennium of the 2010-13 MTS period to the present, up to 80 countries have been addressing chemicals issues as a result of UNEP risk assessment information and tools.

97. In China, institutions and government authorities were supported in collecting lessons learned on public participation on chemical accident prevention and preparedness. China is also using a UNEP-developed toolkit to promote the sound management of chemicals-in-products in its textile sector. Manufacturing industries and business associations such as the International Council of Chemical Associations (ICCA) and civil society organizations have been working to address priority chemical issues using the risk assessment and management tools developed by UNEP. By the end of 2013, an expert guidance on environmental risk assessment was tested in agriculture dependent economies. An expert network on endocrine disruptors was developed and awareness was raised among decision-makers in developing countries. Expert guidance on environmental risk assessment was tested in agriculture dependent economies in Tanzania, Zambia and Ghana. Workshops on endocrine disruptors were carried out back to back with SAICM meetings in the LAC, CEE and the African regions.
98. The CiP programme (the major project output for the biennium ending 2013) was completed in 2014. Piloting is contingent on the availability of funds. Work on the development of frameworks for providing coherent guidance materials for the sound management of industrial chemicals was abandoned as a result of inadequate human resources to continue further work on the component.
 - *Access to better technology and best practices for environmentally sound management of harmful substances*
99. In the area of waste, by the end of the first biennium of the 2010-13 MTS, a draft Compendium of Technologies on (a) destruction of hazardous waste arising from healthcare facilities, and (b) treatment and destruction of waste oils had been developed. The compendium covered data on waste oil generation and healthcare waste generation. Also, a step-by-step methodology for assessment of waste oil generation and healthcare waste generation was elaborated. Generic and specific technologies for the destruction of waste oils and healthcare waste were also compiled.
100. Criteria and methodology for technology assessments have been developed and are included in compendium of technologies. At least 4 countries and 1 intergovernmental organization have tested the utility of the compendium. Guidance for industries and facilities on waste oil destruction technology assessment, identification and testing was completed in at least 4 countries. In addition, guidance on healthcare facilities on healthcare waste destruction technology assessment, identification and testing was completed in at least 4 countries.
101. Besides work accomplished on the development of guidance on technological assessments and the compendia discussed above, limited additional work was accomplished in the area of waste. From the 2010-13 MTS period through the end of 2014 one of the key outputs related to the preparatory phase of the Global Partnership on Waste Management (GPWM) had not been accomplished as a result of funding constraints. While a project document had been developed to cover the Secretariat Services for the GPWM (hosted by IETC) in consultation with the lead partners and other UNEP offices, no other substantive activities have been reported.
102. In 2014, the Sub-programme has worked with governments, civil society groups and businesses to address priority waste issue using tools and innovative methods primarily on

biomass waste generated from agricultural activities¹⁹. For example, UNEP assisted Cambodia, Costa Rica and India to develop strategies to convert waste agricultural biomass into energy with the collaboration of businesses to upscale biomass waste to appropriate energy technologies.

103. UNEP contributed to support the implementation of existing conventions in a variety of ways; by assisting the Secretariat and Parties to the Basel Convention in the preparation of technical guidelines on the environmentally sound management of mercury wastes adopted at the 10th COP of the Basel Convention. In addition, UNEP implemented a portfolio of GEF co-financed projects to leverage financing for building capacity and promoting the implementation of the Stockholm Convention, particularly in the fields of reducing reliance on DDT for disease vector control (with WHO) and environmentally sound management and disposal of PCBs.
104. In support of the Stockholm Convention, 20 training courses have been held under four GEF projects to train developing country laboratories in the analysis of persistent organic pollutants. Two networks consisting of 167 samplers in 32 developing countries to monitor ambient air (for the core matrix air) and 30 samples of mothers' milk (core matrix) have generated an abundance of national quantitative data to be reported to the COP in compliance with article 16 of the Stockholm Convention.
 - *Access to appropriate tools and methods for the environmentally sound production and use of pesticides and other industrial chemicals*
105. At the end of 2013, a second round of the biennial global inter-laboratory assessment for POPs was successfully implemented. One hundred and three (103) laboratories registered and 94 laboratories delivered results for at least one matrix and one class of compounds. This represented the largest inter-laboratory assessment for POPs laboratories undertaken so far with respect to participating laboratories and test samples offered. The following samples were analysed: (1) standard solutions for POPs pesticides, dioxin-like POPs, indicator PCB, PBDE, PFOS, each; (2) sediment sample, (3) human milk sample, (4) human blood, (5) fish, (6) air extract, (7) surface water sample, (8) transformer oil. Sample test results were in-line with previous assessments. Dioxin laboratories performed best for new POPs. While comparatively low, the participation of laboratories was deemed encouraging.
106. Developing country partners interviewed for this evaluation have unanimously expressed the need for assistance in developing or upgrading selected POPs laboratories in the various regions to facilitate regional and local capacity to undertake sampling and analysis of the higher level POPs (dioxins and dibenzofurans). The current practice of sending samples to labs in Europe for analysis, they argue, is not sustainable and does not, in the long run, develop the capacities required in the developing regions to undertake these analyses. Indeed, the need for the delivery of spare parts for lab equipment on time, harmonization of analytical protocols, adequate supplies of reference materials and support for clearance during procurement of equipment were expressed. Interviewees noted that as new chemicals get listed, countries will increasingly depend on the existing POPs laboratories.
 - *Capacities of SMEs to manage chemicals and waste increased*
107. Project activities were pursued to build capacity of cleaner production centres in Sri Lanka, Kenya, Uganda, Rwanda, and Tanzania in the application of UNEP's Responsible Production approach for Chemical Hazards Management in Small and Medium Enterprises (SMEs). Upon

¹⁹ United Nations environment Programme, Programme performance Report, June 2015

the request from the Colombian Council of Safety (CCS), UNEP conducted a workshop on Responsible Production within the context of the 46th Congress on Health, Safety and Environment, in June in Bogota, Colombia. The session, entitled "Responsible production: minimizing the impact of the use of chemical substances" focused on the following themes: i) introduction on UNEP's work on Promoting Safer Production through Responsible Production and APELL; ii) introduction to Responsible Production tools with concrete cases from industry; and iii) the case of APELL implementation in Barranquilla (Colombia). The CCS and other national counterparts showed high interest in supporting the dissemination of Responsible Production and the Flexible Framework, in the context of the implementation of the National Disaster Risk Management Systems in Colombia.

Direct outcome 4: Enhanced national institutions and infrastructure for environmentally sound production, management and use of chemicals and waste

- *Environmental crimes related to harmful substances combatted by national enforcement bodies*
108. The Sub-programme undertook activities to combat environmental crime involving harmful substances and hazardous waste particularly in Asia Pacific and West Asia. The objective was to strengthen the law enforcement response to ODS, harmful substances, and hazardous waste, among other things. In this respect this project directly concerns the Basel Convention which criminalizes illegal traffic in hazardous waste and the Montreal Protocol for ODS. A range of partners including MEA secretariats are involved. Through the Regional Office for Asia and the Pacific (ROAP), six training courses were organized in 2013 with the participation of border officers from five Greater Mekong Sub region (GMS) countries (Cambodia, Lao PDR, Myanmar, Thailand and Vietnam). In addition, two joint cross-border training seminars (Myanmar-Thailand, Cambodia-Vietnam) were held in 2013. Cooperation between Regional Office for West Asia (ROWA) and KISR (Kuwait Institute for Scientific Research) resulted in a joint meeting in Kuwait for targeted countries on the synergizing 3 conventions (Basel, Rotterdam & Stockholm) with the goal of strengthening cooperation amongst the Gulf Cooperation Council (GCC) countries. China continued its tight control of illegal imports of wastes/e-wastes following its national campaign "Green Fence"; the Philippines Customs Agency has an environmental crime unit & Vietnam Police has a division on anti-E-waste related crime under its Police Department on Anti-Environmental Crime. This was a result of earlier capacity building activities undertaken by UNEP.
 109. Crime simulations were conducted with the participation of law enforcement officers in all training courses. Topics discussed during each training include: roles and responsibilities of BLOs, relevant nation laws on ODS, ODS smuggling techniques and identification, identifying fake documents, information management, behavioural assessment, investigative interviewing and informants handling. Results from evaluations after training courses were mostly positive (mostly more than 4 out of 5); however. The pass rates for the tests given before and after individual training courses to gauge the level of understanding vary from country to country in a range of 52% (Cambodia) to 93% (Thailand).
 110. In 2013, Thailand reported 6 seizures in ODS cases. Up to June 2014, UNEP supported World Customs Organization (WCO) Operation DEMETER III²⁰ focusing on mainly on trans-boundary

²⁰Operation Demeter III was a joint global Customs initiative across Europe and the Asia Pacific region targeting mainly illicit maritime consignments of hazardous and other waste transported from Europe and other waste producing regions to the Asia Pacific region,

illegal shipments of hazardous and other waste covered by Basel Convention between Europe and Asia (including the GMS region). Demeter III resulted in 48 seizures and detentions with over 7,022 tonnes and 3,403 pieces of waste. The seized and detained waste ranged from textile waste, plastic waste, household waste, metal scrap, e-waste, to used vehicle parts and tyres.

111. Sub-programme implementation in the area of the building of institutional structures for the sound management of C&W was limited over the period of this evaluation. While the limited activities in the trans-boundary illegal shipments of hazardous and other waste as well as training national enforcement officials in environmental crimes of were successfully implemented in a few counties in Asia and the Pacific in the opinion of this evaluation there is need to expand the scope of these activities into other regions.

Direct outcome 5: Coherent international information, policy and action for environmentally sound production, management and use of chemicals and waste

- *International governance of chemicals facilitated through an effective SAICM process*
112. Regarding coherent international information, policy and action, this evaluation observes that a substantial portion of the planned results were achieved over the period covered by the MTS. SAICM has engaged a wide variety of stakeholders and promoted discussion on a range of issues, with specific focus on issues which fall outside the purview of legally binding agreements. Coverage and engagement of SAICM has been broad which, at the time of drafting this report, includes 175 Governments (158 Governments represented by environment or foreign affairs ministries, and 17 by health, labour or agriculture ministries) and 85 non-governmental organizations, including a broad range of representatives from industry and civil society.
 113. The December 2014 Secretariat report to the Open ended Working Group of the ICCM notes that, in general, institutional capacity has been strengthened at the national level in some countries, and also at regional and global levels . Over 80% of the projects funded under the QSP trust fund have contributed to the development and strengthening of national chemicals management institutions, plans, programmes and activities to implement SAICM. The QSP has directly supported 10 countries in incorporating sound chemicals management into their national development plans, which has resulted in an increase in the volume of domestic resources dedicated to chemicals management.
 114. While resources were not available to fund new projects several meetings of the of the Quick Start Programme (QSP) Trust Fund Implementation Committee were held the latest being in Rome, on 26 November 2014.
 115. In May 2014, the QSP Executive Board met in Geneva. During the meeting, organised and facilitated by the Secretariat, the Board mainly discussed the status of the QSP projects, the draft Terms of Reference for the QSP impact evaluation and the future of the QSP. The round of regional meetings in the inter-sessional period was completed with the EU-JUSSCANNZ (Paris, 14 February 2014) and Asia-Pacific (Kuala Lumpur, 23-27 March 2014) meetings. In

which is increasingly becoming a dumping ground for this sort of unwanted waste. Initiated by China Customs and organized by the World Customs Organization (WCO), Demeter III was carried out with the support of the Secretariat of the Basel Convention and the United Nations Environment Programme's (UNEPs) Regional Office for Asia and the Pacific.

these meetings, SAICM stakeholders exchanged technical information. In addition, the reporting on SAICM implementation had been opened until 7 June 2014 and the analysis on the reports received has been initiated. As part of the Secretariat support to the ICCM, meeting documents were prepared for the meetings of the QSP governing bodies to report on the implementation of the QSP. The first report on SAICM implementation was developed and presented to ICCM3. This served as the basis for assessing SAICM implementation and decisions to reach the 2020 Goal of sound management of chemicals.

116. In support SAICM implementation, revised guidelines for the preparation and implementation of projects under the QSP were developed by the Secretariat and endorsed by the Executive Board. As a result of lack of funding for the operation of the Secretariat's information clearinghouse, dissemination of technical and scientific information was done through one-day sessions and workshops during SAICM regional meetings and through the posting of reports on the SAICM web page.
117. Regarding the efficient management of the Quick Start programme, a number of project proposals were received and screened before submission to the QSP Trust Fund Implementation Committee in the biennium 2010-11. During the 2012-13 biennium, the Secretariat processed 15 projects amendments, 3 new projects and screened 36 applications. Project update reports were prepared and submitted to the QSP Implementation Committee and also provided to the QSP Executive Board meetings.
118. As of October 2014, out of 168 approved projects, 109 projects had completed their activities and 59 had been fully completed with the submission of all required deliverables. The remaining 50 of the 109 projects were in the process of submitting their final reports and receiving final payment. The direct outputs produced by the completed projects included the following: (a) developing national chemicals profiles; (b) developing national capacity assessments; (c) setting priorities for activities for the implementation of the Strategic Approach; (d) developing risk assessment methodologies; (e) mainstreaming issues pertaining to the sound management of chemicals into the national development plans of the participating countries; (f) improving cohesion and implementation of existing international agreements; (g) developing national awareness-raising campaigns on sound chemicals management; (h) developing SAICM implementation plans; and (i) building capacity on non-chemicals alternatives. Projects funded by the QSP Trust Fund seemed to have contributed to the achievement of the 2020 goal of sound chemicals management by building national and regional capacity on sound chemicals management and supporting the implementation of SAICM objectives to reduce risk, disseminate knowledge and information and provide adequate governance.
119. Adequate support to Regional networks for the implementation of SAICM was to be achieved through exchange of relevant scientific and technical information by facilitating regional meetings with maximum multi-stakeholder participation, and strengthening the scientific base of regional networks. As a result of the lack of funds to operate the information clearinghouse, however, alternative methods were used to disseminate technical and scientific information related to SAICM implementation, such as through regional meetings and information documents on the SAICM website and during SAICM-related meetings. For example, a one-day technical information session was held during the SAICM Regional meetings providing six slots with technical presentations and workshops related to SAICM implementation.
120. In the biennium 2010-11, regional meetings were facilitated with maximum multi-stakeholder participation with over 70% participation by government stakeholders. For the biennium 2012-13, three regional meetings for LAC, Africa and CEE were held between August 2013 and

December 2013. A sub-regional meeting for South East Asia was also held in June 2013 in collaboration with WHO.

121. The 4th LAC regional meeting was held in Mexico City on 19-22 August 2013 with 83 participants including NGOs and IGOs. The 5th SAICM CEE regional meeting was held in Skopje, Macedonia on 23-26 September, and the 5th SAICM Regional meeting was held in Pretoria, South Africa, on 18-22 November 2013. Exchange of scientific and technical information occurred through the review by participants of progress in SAICM implementation, discussion of technical issues, gap identification, and the establishment of priority actions to pick up the pace of SAICM implementation. Regional inputs were collected for the development of the overall orientation and guidance of the Strategic Approach to be presented to the ICCM4 for consideration and possible endorsement.
122. A key driver to achieving the 2020 goals is a strengthened effort to further engage key partners from the private sector, in particular, from the mid-stream producers of consumer products which use chemicals in their composition. This is key to the implementation of SAICM. Lack of adequate resources for the provision of clearinghouse services as well as planning for regional meetings has been a challenge for SAICM. While a fundraising strategy was being developed to address funding issues even at the beginning of the new MTS, administrative procedures need to be streamlined for efficiency gains. This should include improved communication with donors about progress towards achievement of SAICM objectives. In spite of challenges faced in providing support to SAICM, taken together, the evaluation concludes that the level of delivery of the outputs related to SAICM implementation represents adequate secretariat support services to the ICCM and subsidiary bodies.
 - *Effective Global Mercury Partnership and ratified international treaty on mercury*
123. The Minamata treaty which was adopted by governments in 2013 with UNEP support now has 128 signatories and 8 parties²¹. Following the awareness-raising activities and workshops, a number of countries went on to sign or ratify the Convention. The global mercury partnership, with increasing membership, offered timely advice to negotiators and continues to assist in building capacity and facilitating early action. UNEP provides the Secretariat for the Minamata Convention during the interim period (i.e. prior to entry into force). UNEP also coordinates the eight partnership areas of the Global Mercury Partnership. At the end of 2013 the Partnership included 26 governments, five UN agencies and 98 companies. Technical assistance and financial support to the Partnership has been provided to 57 countries.
124. As required under the Convention, the second meeting of the expert group saw good progress on the development of draft guidance documents by the working groups within the expert groups. As anticipated in the work plan, no guidance documents would be finalized prior to consideration of the drafts by the fourth meeting expected in September 2015. The interim Secretariat has continued to provide support to meetings of the intergovernmental negotiating committee (INC). By December 2014, 27 countries had completed initial assessments (MIAs) for the convention with additional 12 countries with MIAs in the pipeline. The process for these initial assessments has been supported by UNDP, UNEP and UNIDO²².

21 United Nations Environment Programme, Programme performance Report, June 2015

22 United Nations Environment Programme, Programme performance Report, June 2015, p.51

- *Strong implementation and appropriate evolution of existing chemicals and waste MEAs*
125. At the end of 2013, the number of Parties that ratified the existing chemicals conventions is as follows: Basel Convention (180); Ban Amendment (76); Rotterdam Convention (154); Stockholm Convention (179); and the Montreal Protocol (197) for a total of 786 Parties. While ratifications of the already existing chemicals Conventions grew, it is not clear how this is attributable to the Sub-programme as opposed to the work of the Secretariat to the Convention CoPs. These effects might be drivers for increased application of tools and methodologies for measurement etc. as opposed to direct results of the Sub-programme.
 126. The implementation of the PCB Elimination Network (PEN) and the DDT Global Alliance continued under new leadership. PEN facilitates information exchange on the sound management of PCB. The Global Alliance assists in coordinating International Action to assist in developing and deploying cost-effective alternatives to DDT. The Alliance identifies gaps in existing initiatives, improve coordination among groups working to deploy alternatives and takes advantage of the global scale of the Stockholm convention to raise awareness and share information on best practices²³.
 127. While UNEP helps countries improve their overall management of harmful chemicals and hazardous waste, in some cases it was necessary to target specific chemicals of high concern for example, heavy metals such as lead, which is one of the top ten chemicals of major health concern. The Global Alliance to Eliminate Lead in Paint, led by UNEP and the World Health Organization (WHO) and with 27 participants, aims to phase out the manufacture and sale of paints containing lead. By the end of December 2014, legal and regulatory regimes had been put in place in 44 countries²⁴ to control the manufacture, import, export, sale and use of leaded paint and products coated with leaded paint up from 35 countries in 2013. This represents a 25% increase in one year.
 128. While the need exists to mobilize resources to implement some of the sub-programme activities, effective SAICM implementation, an established mercury convention with 128 signatories and 8 ratifications, a continuing Global Mercury Partnership with UNEP coordinating the eight partnership areas of the Partnership and strong support for the implementation and appropriate evolution of existing C&W MEAs represent coherent international information, policy and action for environmentally sound production, management and use of C&W by the Sub-programme.

4.2.2 Likelihood of impact

129. As designed, the C&W Sub-programme is expected to assist countries to transition to sound management of C&W, which is an intermediate state towards minimizing impacts on the environment and human health by chemicals and waste. The Sub-programme's efforts focus on direct outcomes that include the building of national capacities to assess, monitor and manage risks to human health and the environment posed by C&W on different dimensions of information and awareness creation, development of policy and strategic frameworks, transfer of technical and methodological know-how, and the development of national institutions and infrastructure. The Sub-programme also sought to promote coherent international information, policy and action for environmentally sound production, management and use of C&W. The success of the Sub-programme in supporting countries to transition to sound management of C&W depended, to a very large degree, on the extent to

²³ Routledge Handbook of Global Environmental Politics, page 418, By Paul G. Harris

²⁴ United Nations environment Programme, Programme performance Report, June 2015

which the various dimensions of national capacity have been developed coupled with the presence of drivers and validity of assumptions made during sub-programme design. As is the case in most of UNEP's activities, the degree to which the stated direct outcomes can be achieved in the targeted countries with the associated changes in state, corporate and individual behaviours determines how progress is being made towards impact.

130. The cluster of activities implemented to deliver the sub-programme objective are mostly normative and their impact is dependent on factors such as uptake by countries and other stakeholders in industry, the quality of the products and their practical application, which itself may involve the development of institutional frameworks and monitoring programmes. These are long term actions which require several years of monitoring in order to assess real impact. UNEP does not have country programmes in the area of C&W as it does in the Disasters and Conflicts Sub-programme. To that extent the activities of the Sub-programme are diffuse and the "critical mass" of activities is often not undertaken in a single country, this makes the determination of country impact difficult. Nevertheless, specific programme activities undertaken by the Sub-programme have been shown to have the potential to cause the behavioural changes that will ultimately lead to impact. Indeed, there are signs of policy and regulatory outcomes which over time would lead to discernible impacts as a result of UNEP's work. For example Parties to MEAs will initiate action through mandating development of their own guidelines for use by their competent authorities and industry. The Basel Convention, interacting with the Stockholm Convention, has published a suite of guidelines on POPs waste treatment and has, within the MTS period, adopted updated guidelines on mercury waste treatment that links to the Rotterdam Convention and SAICM.,
131. This is consistent with UNEP's strategy to scale up the use of guidelines, tools and methods that are pilot tested, not through growing a financial base but by working with key partners from the start to help institutionalize such tools and methods into their own programmes. Leveraging the strengths of key actors in the field makes possible a significantly higher development impact than UNEP could achieve on its own. The likelihood of impact may therefore be judged by the potential for the outputs to generate actions that have such effects.
132. A number of the projects and programme areas within the Sub-programme have been undertaken over longer time scales than the MTS. Expectations of impact on MEA implementation of MEA-related projects could be considered to have high likelihood of being delivered. In this context, the areas of work dealing with the Minamata Convention, waste destruction technologies and the project on combatting environmental crime have global application with a high probability of impact over time, provided sustained action to ensure implementation on the ground is maintained. Continuing work to support convention secretariats and governments to ratify the existing and new treaties which imposes obligations on governments will go a long way to promote the sound management of C&W at the national level.
133. It is more problematic to assess likelihood of impact for reporting scheme initiatives, due partly to their more diffuse relationship with MEAs, having been less specifically targeted as a whole to them (e.g. with greater SAICM focus). The ability to measure their success may be hampered by differentiating the MEAs' own efforts in implementing reporting mechanism obligations for which a methodology is required. Impact can be delivered by promoting strategies for up-scaling through partnerships, especially within the UN system, put in place from the start—a priority for further improving delivery.
134. Regarding the role of SAICM in promoting the sound management of chemicals, this evaluation recognizes that most of SAICM's efforts that contribute to the direct outcomes of

the Sub-programme have been focused on capacity building in the area of assessments, methodologies and tools, policy development and planning, and information and awareness-raising, through the implementation of project activities under the QSP. Under given assumptions and with appropriate drivers in place the direct outcomes can make countries transition to management of production and use of chemicals in a sounder manner. The challenge will be to have a “critical mass” of the activities occurring in countries in which UNEP works to enable this transition. Given the nature of the assumptions identified and the drivers required to move the project outputs to the Expected Accomplishments, it is unlikely that UNEP will be in a position to ensure that adequate financing and human resources as well as political will exists in all sub-programme countries. UNEP cannot assure that consumption patterns change and business and industry in the various countries also transition to sound management of chemicals. However, UNEP’s work related to Chemicals in Products through its sustainable consumption and product programme, for example, is influencing consumption patterns. In addition, successful awareness-raising efforts among governments, which we noted earlier, will go a long way to change attitudes and behaviours towards the production and use of chemicals in national economies.

135. Improved coordination and collaboration on SAICM implementation among stakeholders at meetings of ICCM and subsidiary bodies, and in inter-sessional periods has been achieved. Coverage and engagement of SAICM has been broad. Projects funded by the QSP Trust Fund have contributed to the achievement of the 2020 goal of sound chemicals management by building national and regional capacity on sound chemicals management and supporting the implementation of SAICM objectives to reduce risk, disseminate knowledge and information and provide adequate governance.
136. Seventy (70) completed QSP projects have improved sound chemicals management in the areas of risk reduction, knowledge and information, and governance and SAICM stakeholders have increased access to central storage of information on chemicals management²⁵. The QSP has directly supported 10 countries in incorporating sound chemicals management into their national development plans, which has resulted, in some cases, in an increase in the volume of domestic resources dedicated to chemicals management. The evidence of SAICM’s contribution to the Expected Accomplishment is clear. A sustained effort in capacity building, information and awareness is likely to result in the attitudinal changes likely to promote higher level results. This, of course, would require adequate human and financial resources as well as long term political will to implement and upscale C&W projects and policies.
137. Indeed one of the key outcomes of the Sub-programme which involves “mainstreaming” of the sound management of C&W into national development strategies is also a strong driver for governments to allocate resources to chemicals management in the UNDAF processes. While UNEP can assist governments to develop legal and regulatory regimes, as it has done in several areas and countries, it cannot assure that governments implement these laws and ensure compliance. UNEP’s partnerships (e.g. with UN-system partners including IOMC participating organizations such as with UNDP for ‘mainstreaming’ and WHO for the Health and Environment Strategic Alliance in Africa) continue to increase its ability to implement capacity building programmes. However, availability of resources – both financial and human, continues to be a constraint on UNEP’s ability to support national efforts for sound chemicals management and reduced risk to human health and the environment.

25 Open-ended Working Group of the International Conference on Chemicals Management Second meeting Geneva, 15–17 December 2014 Item 3 of the provisional agenda* Progress and gaps towards the achievement of the 2020 goal of sound management of chemicals: Analysis by the Inter-Organization Programme for the Sound Management of Chemicals of efforts to implement the Global Plan of Action of the Strategic Approach to International Chemicals Management and key issue papers. SAICM/OEWG.2/INF/5

138. A substantial amount of work has been accomplished during the MTS period in the area of tools and methodologies development for sound management of waste. However, the key outputs relating to the GPWM accomplished little. The key drivers for the delivery of the output in terms of human and financial resources were not in place. Without the delivery of the key outputs which will form the framework within which to assist governments to work towards the sound management of waste, it is unclear to this evaluation how outcomes can be achieved in the medium term.
139. While the measurement of impact poses evidential challenges within the short term it would seem that, taken together, strengthened institutional capacity and continuing working on the mainstreaming of the sound management of chemicals into national development processes will produce sustainable impact in the long term.

4.2.3 Efficiency

140. Efficiency is a performance issue concerning how cost-effective and timely the execution of the planned contributions was for the achievement of C&W objectives. These could include positive contributions to performance such as: cost and time saving measures; use of existing systems to support project design/activity; and fullest use of human and financial inputs; as well as negative contributions to performance such as: administrative delays and management delays.
141. To a significant extent, the sub-programme built on tools and methodologies developed in previous biennia. For example, awareness-raising activities for countries to take decisions to minimize the risk of lead and cadmium continues to be a key element for the successful implementation of the Partnership for Cleaner Fuels and Vehicles (PCFV), Global Alliance to Eliminate Lead Paint (GAELP) and the support provided to governments and industry. This partnership predated the biennia covered by this evaluation. Also, the sub-programme's efforts to develop capacities of SMEs to manage chemicals and waste in Cleaner Production Centres in Sri Lanka, Kenya, Uganda, Rwanda, Tanzania and Columbia in the application of UNEP's Responsible Production approach for Chemical Hazards Management in Small and Medium Enterprises (SMEs) were based on methods developed as part of UNEP's earlier work on promoting safer production through responsible production and disaster risk management systems (APELL). There are numerous examples of the use of UNEP tools and methods in the discussion of effectiveness in this report.
142. The extensive use of partnerships contributed to both effectiveness and efficiency. The role of partnerships in sub-programme implementation is described quite exhaustively in section 4.3.4. The design of the projects supporting the GPWM (52-P2 and 52-P6) drew largely on the internal expertise of UNEP and external stakeholders to provide efficiency and effectiveness in execution. In general, efficiencies are either built into project design or have been realised through the application of pilot projects prior to roll-out of a project to a wider stakeholder group and the customisation of training programmes. For example project 53-P4 on combatting environmental crime assessed training needs through interviews to customize training programmes with country specific technical assistance. It also served to provide baseline data for measuring results. Similarly, needs assessments were conducted for 20 training courses undertaken for four GEF projects to train developing country laboratories in the analysis of persistent organic pollutants in support of the Stockholm Convention. Use of existing networks, a stepwise approach, emphasised linkages to enable better implementation of existing MEAs. The close involvement of Regional Offices, in some cases, increased

efficiency as project implementation benefited from their better regional knowledge, contacts and experience.

143. Inefficiencies involved slow project start-up for a variety of reasons including lateness in project approvals, administrative delays in access to systems, efficiency challenges in the level of support that professional officers have access to within the Chemicals Branch, that can lead to professionals having to undertake some of the administrative work themselves, delays in organising travels and insufficient funds. Underlying some of these challenges may also be staff shortages, which might have been offset through, for example, increased cooperation with Regional Offices or more effective use of partnerships. These delays were common to the two biennia. The final biennium report illustrated the likely effect, at least in part, of reduced staffing as total expenditure (45m USD) on the sub-programme reached 79% of the budget (57m USD). Funds may also be less of a limiting factor where resources can be amplified through increased use of partnership. Strategies to overcome the challenges consisted of maintaining partner interest although funding delays also delayed Steering Committee meetings. Other challenges relate to overambitious timelines in legal agreements and reporting delays due to PIMS functionality. For some projects, delayed funds transfers were substantial with consequences on implementation efficiency and the meeting of reporting deadlines. Attempts to improve efficiency involved flexibility in managing resources by rescheduling to take account of funding challenges and project design weaknesses. Some temporary budget reallocation to enable preparatory work appears to have been undertaken for projects such as the GWMP.
144. The level of feedback from MEA secretariats to UNEP may be insufficient to identify successes, challenges, needs and next steps. MEA Secretariat (BRS) have given the impression that interaction was not commonplace although it is clear that some level of coordination has been undertaken and continues to be carried out within the “synergies” agenda and programmatic cooperation.

4.2.4 Sustainability

145. Sustainability is understood as the extent to which outcomes and impacts derived from sub-programme implementation are likely to continue after external funding and assistance end. Factors and conditions affecting sustainability have been considered in four clusters: socio-political factors, financial conditions, institutional conditions and environmental factors.

4.2.4.1 Socio-political sustainability

146. An essential component of socio-political sustainability relates to ownership by state and non-state actors. The C&W Sub-programme is focused on creating awareness and building capacity at the national level. Government agencies and institutions are primary beneficiaries of the capacity building efforts. For example, the mainstreaming effort of the Sub-programme and the partnership with UNDP is designed to ensure that capacity is built within countries and that chemical and waste programmes are integrated into national development planning processes. As designed, SAICM is a multi-stakeholder and multi-sectorial endeavour with high political endorsements for the safe production and use of chemicals. It has participation from governments, nongovernmental organizations including the private sector. The strong partnership formed between institutions with different agendas provides the driving force for action. Collaboration with a high level of political support indeed provides a measure of sustainability because the political will is there to continue work towards the 2020 goal.

147. Ownership, awareness and capacity built within government agencies are likely to continue in the long term. This evaluation observed that the Sub-programme's interventions are quite narrowly focused on few institutions and reached just a limited number of national staff and this could pose a risk to sustainability should the trained capacity move to other assignments within the bureaucracy as they often do.

4.2.4.2 Financial sustainability

148. The availability of financial resources was already discussed above as an assumption that is required to transform policy, plans, regulations and skills into action. Availability of funds continues to be a constraint in carrying out capacity building activities and has resulted in diminished capacity to implement activities under the Expected Accomplishment. Delivery of technical support activities through partnerships and synergy with partner projects promotes outreach to priority sectors. UNEP has continued its successful partnership with the International Council of Chemical Associations (ICCA), leveraging funds and in-kind expertise.
149. Also, the participation in the Health and Environment Strategic Alliance, in particular, of the African Development Bank and UNFCCC provides an opportunity to leverage funding from these institutions and their funding mechanisms to expand the country level mainstreaming work. The development of a GEF project proposal for financing of the African regional programme on sound management of chemicals under the Health and Environment Strategic Alliance, for example, takes advantage of validation by the two development institutions. Mainstreaming of the sound management of chemicals into national development strategies is closely related to UNDAF processes and should take advantage of resources available within UNDAF and national government sources to further strengthen mainstreaming efforts.

4.2.4.3 Institutional framework

150. This dimension of sustainability addresses the issue of the sustenance of results and onward progress towards impact dependent on factors relating to processes, policies, national agreements, sub-regional agreements, legal and accountability frameworks and governance structures. At least three out of five direct outcomes discussed under effectiveness in this report have a direct bearing on this dimension of sustainability. As discussed in greater detail in the assessment of effectiveness above, the building of national, legal and institutional capacity to enable governments to integrate the sound management of chemicals into national development strategies contributes to the effort to enhance national policy and strategic frameworks for environmentally sound production, management and use of C&W. Mainstreaming the sound management of chemicals into sustainable development strategies involves integration in development assistance programmes including UNDAF processes and mobilizing resources to implement activities that lower chemical risks. The UNDP-UNEP Partnership Initiative was an effective means to achieve that objective.
151. With the objective of strengthening law enforcement response to ODS, harmful substances and hazardous waste, the Sub-programme undertook activities to combat environmental crime in Asia Pacific and West Asia. In this respect, the work directly concerns the Basel Convention which criminalizes illegal traffic in hazardous waste and the Montreal Protocol for ODS. By partnering with the relevant convention secretariats, the capacities of law enforcement institutions at the borders in the Great Mekong region (Cambodia, Lao PDR, Myanmar, Thailand and Vietnam) were strengthened. In addition, two joint cross-border training seminars (Myanmar-Thailand, Cambodia-Vietnam) were undertaken.
152. International governance of chemicals was facilitated through an effective SAICM process. At the global level, SAICM has a very robust institutional structure. As a multi-stakeholder

process, the initiative with its secretariat nested within UNEP, has a governing body, the ICCM which is made up of governments, inter-governmental organizations, and non-governmental organizations from such sectors as agriculture, environment, health, industry, and labour. The private sector is a key component of the governing structure. Nine participating organizations of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) provide support for the implementation of SAICM. Its overarching policy frameworks are the Dubai Declaration of 2006 and the earlier Johannesburg Plan of Implementation (to achieve the safe production and sound management of chemicals by 2020) of the World Summit on Sustainable Development. The financial mechanism, the QSP, is overseen by an Executive Board which provides operational guidance and reports to the ICCM. The QSP Trust Fund Implementation Committee reviews and approves applications for support from the Fund.

153. In countries where SAICM funds projects, established national institutions collaborate with intergovernmental organizations and non-governmental organizations for project implementation through Memoranda of Understanding. The relative success in the implementation of the QSP projects attests to the robustness of the processes used for programme implementation. Indeed, established national institutions do not only provide a means of national resources either in cash or in kind for the mainstreaming efforts but are also a potential means of retaining developed country capacity to sustain project benefits.
154. Again as noted above under the section on sub-programme effectiveness, an effective Global Mercury Partnership resulted in the Minamata treaty which was adopted by governments in 2013 with UNEP support. The treaty now has 128 signatories and 8 parties. Strong support to existing treaties through the development of tools, guidelines, methods and technologies has contributed to promoting the appropriate evolution of the existing conventions.

4.2.4.4 Environmental sustainability

155. This dimension addresses factors, positive or negative, that can influence the future flow of sub-programme benefits. It assesses programme outputs or higher level results that are likely to affect the environment which, in turn, might affect sustainability of benefits.
156. The WSSD goal that, by 2020, chemicals should be produced and used in ways that minimize significant adverse impacts on human health and the environment is an environmental objective in and of itself. While the production of chemicals is an environmental risk factor, support to governments in meeting their obligations under the relevant multilateral environmental agreements as well as projects funded by the QSP TF under SAICM that mainstream the sound management of chemicals into national development processes are aimed at mitigating this risk. Indeed, all the sub-programme activities to create awareness, develop tools and methods, and build capacity are aimed at mitigating the risk to human health and the environment of the production and use of chemicals.

4.2.5 Replication and up-scaling

157. The potential exists for replication and up-scaling of many activities undertaken by the Sub-programme especially because of the normative nature of the outputs produced by the Sub-programme. The use of financial instruments and guidance to mainstream environmentally sound management of C&W into national development strategies has been adequately demonstrated in a number of developing countries and provides a means not only to sustain sub-programme activities because they are embedded in national development processes but is also replicable if the necessary financial resources can be mobilized. Indeed, mainstreaming of the sound management of C&W has been implemented in a number of countries through the UNDP-UNEP partnership with funds from the Quick Start TF.

158. The production of compendia of destruction technologies for harmful substances and hazardous waste has wide application potential as most countries with developed or partially developed infrastructure for transport and healthcare will also have need for the sound disposal of waste oils and clinical waste. Further potential exists for additional guidelines /compendia for other waste streams where gaps exist in the Basel and Stockholm Convention guidelines, a number of which have already been published on a range of technologies.
159. Well-designed guidance and reporting schemes that address identified gaps and offer practicable solutions are replicable through their utility value and will be taken up. The risk is that technical documents, such as the Compendia, offer best practice (BAT/BEP) at a cost without transitional steps and present a potential implementation barrier in a development setting.
160. The negotiating process for the Minamata Convention is clearly a positive result. Replication of this experience for other harmful substances (such as for lead) is not necessarily the way forward for UNEP. The large number of chemicals placed on the market as identified by the GCO suggests caution in following this example to generate new instruments without convincing justification. UNEP would need to determine and document the successful approaches and practices adopted in this negotiation process for possible replication.

4.3 Factors affecting sub-programme performance

4.3.1 Sub-programme design

4.3.1.1 Analysis of the overall results framework

161. A comparison of the sub-programme results constructs for the MTS 2010-13 and MTS 2014-17 and the reconstructed Theory of Change allows this evaluation to draw a number of conclusions related to the design of the sub-programme outcomes and indicators, project logic, critical success factors and risks, strategy for sustaining benefits, project governance and supervision arrangements, project financing, gender, and monitoring and evaluation.
162. In general, under the MTS 2010-13, the Expected Accomplishments for the Sub-programme seem to have adequately covered the C&W Sub-programme activities. Expected Accomplishments (a) and (b) were clearly stated and pitched at the appropriate levels. EA (a) which involved increasing “capacities and financing of States and other stakeholders to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste” captured the direct outcomes of UNEP’s intended efforts through the development of methodologies, tools and guidance and the mainstreaming of such tools, guidance and methodologies in national development strategies. It also involved the development of networks and partnerships with small and medium scale enterprises to improve the management of C&W.
163. While pitched at the direct outcome level the EA (a) consisted of two related parts. 1) Increased capacities of Governments and other stakeholders to assess risks to human health and the environment posed by C&W and 2) Increased capacities of Governments and other stakeholders to manage risks to Human Health and the Environment posed by C&W. Among the specific outcomes required to progress towards the intermediate states and ultimately to impact were the following: Countries have customized methodologies for chemical risk assessments; Countries have knowledge and information related to C&W; Countries have inventories to assess and manage C&W; Management of C&W is mainstreamed in national development policies; Governments and industry have appropriate technical tools and methodologies for environmentally sound production and use of industrial chemicals and; Increased capacity of SMEs to manage C&W in a sound manner.
164. MTS 2010-13 Expected Accomplishment (b) was that “Coherent international policy and technical advice is provided to States and other stakeholders for managing harmful chemicals and hazardous waste in a more environmentally sound manner, including through better technology and best practices”. The EA consisted of two related parts 1) coherent international Policy for managing harmful substances in a more environmentally friendly manner and 2) countries have access to coherent technical advice for managing harmful substances in a more environmentally friendly manner, including through better technology and best practice. Both elements were correctly pitched at the direct outcome level. The specific outcomes required along the causal chain from immediate results through the intermediate states to impact included: a) governments develop and/or improve C&W laws and regulations in line with international treaties; b) countries enforce C&W management Laws and Regulations; and c) countries apply better technologies and best practices to manage C&W.
165. MTS 2010-13 Expected Accomplishment (c) was focused on appropriate national policy and control Systems (laws, regulations, infrastructure, processes etc.) for harmful substances of global concern in line with States’ obligations. The specific outcomes include among others: an established and ratified Treaty on Mercury; countries have access to appropriate tools and

methodologies for risk assessment, monitoring, management and controlling C&W; countries having access to and using technology and Early Warning information on specific and emerging issues to control C&W of global concern; countries have capacity to and have brought under tighter control the release of C&W of international concern with regards to trans-boundary rivers, marine environment, and the ozone layer, and public actions mobilized on the environment and health risks of C&W.

166. While changes were made to the results framework between the 2 biennia of the MTS period, they were primarily intended to better align the PoW outputs to the delivery of the Expected Accomplishment. The sum total of what the Sub-programme intended to achieve remained the same.
167. The sub-programme indicators were clearly linked to the Expected Accomplishment. The units of measure in some instances did not reflect what the indicator was designed to measure. For example, the numbers of networks established to support sound management of chemicals do not necessarily translate into increased capacities to assess, manage and reduce risks to human health and the environment posed by the release of hazardous chemicals. At best, it is a very indirect measure. The issues of attribution were discussed at length in the Formative Evaluation of the Programme of Work 2010-11. Needless to say, for EA (a) the determination that UNEP's activities, indeed, led to the establishment of market-based incentives and trade policies would require an evaluation. Did countries that promoted one environmentally friendly approach and those who promoted multiple approaches have the same weight and count equally?
168. For indicator EA (b) (i) it was not clear what types of guidelines and tools would be developed and what other "stakeholders" meant. This made the indicator quite vague. Again: did countries that applied one tool and those that applied multiple tools have the same weight? The indicator should perhaps have been stated in terms of the percentage of governments targeted by UNEP that applied a specific (or defined set) of UNEP-derived guidelines.
169. Indicator EA (c) (i) while a good measure for the Expected Accomplishment should have explained what "being addressed at the global level" meant. To the extent that the chemicals being on the international agenda were placed there on the initiative of UNEP, the indicator would have been a satisfactory measure of the Expected Accomplishment. But while measuring progress towards the EA, the indicators did not necessarily measure UNEP's performance.
170. The strategy for the Hazardous Substances and Hazardous Waste Sub-programme for 2010-11 clearly described the linkages between activities, outputs and outcomes. The strategy narrative identified challenges as well as drivers and internal and external factors expected to affect sub-programme implementation. However, while some of the PoW outputs contributed to multiple Expected Accomplishments, this was neither clearly identified in the strategy narrative nor in the Programme of Work itself.
171. For the MTS 2014-17, some progress was made in better highlighting the key challenges/problems the Sub-programme is expected to address (Transboundary impacts of chemicals, inadequate governance at national level, and lack of awareness and evidence of full costs of improper management of C&W), and in articulating a Theory of Change for the Sub-programme, though an analysis of causal relationships between challenges/problems, on which the TOC and formal results framework should be based, is still lacking. Cause to effect linkages in the results framework, between individual PoW outputs, dimensions of country capacity (direct outcomes) and aspects of countries transitioning to sound C&W management (Sub-programme objective) appear logical. The Sub-programme seems to have been quite clearly designed with "one output per project" in mind. While this might be right for some

projects/outputs (e.g. secretariat support provided to a particular MEA or global partnership), this leads to overly vague outputs in other cases (the output then expresses more an intent rather than an exact type of good or service provided by UNEP).

172. The three newly formulated EAs are organized in an awkward way, seemingly in an attempt to separate them out on two dimensions: policy vs. information and technology on the one hand, and chemicals vs. waste on the other. No explanation is given for this re-arrangement which, frankly, doesn't make understanding of the overall sub-programme structure any easier. Chemicals and waste are combined in EA (a) which concerns international policies and national enabling environments (including mainstreaming, regulatory frameworks, economic instruments etc.) for sound management of both C&W. It is not really clear why C&W have been put together here, because they are separated out completely at the output level (in fact only one output concerns waste management). EA (b) and EA (c) respectively concern chemicals only and waste only. They both include science and information for decision-making, technology transfer, consumer awareness and civil society action, which are quite distinct elements to be all lumped together in a single EA. In addition, by separating C&W at the EA level, they are automatically separated at the output level and opportunities for synergies are hereby lost (e.g. assessments and awareness campaigns could, to an extent, present C&W issues together; technology transfer to industries could include both C&W management technologies). This separation could be reflective of the silos that still exist among agreements, partnerships and initiatives that all tend to deal separately with one very specific issue (mercury, ODS, marine pollution from land-based sources, e-waste etc.).

4.3.1.2 Project design

Project logic

173. In the 2010-13 MTS period the projects were generally designed to deliver PoW outputs that contribute to achieving the Expected Accomplishment. However, the link between project outputs and PoW outputs/Expected Accomplishments is not always clear and straightforward. The log-frame template considers both PoW outputs and EA as project outcomes: some project outputs were directly linked to PoW outputs; others are set at higher levels.
174. Project output indicators were mostly well formulated. A few were pitched at a higher level than the output, basically at the project objective level: e.g. Output 1 for 52-P2 involves the development of the Global Chemical Outlook. The indicator which is stated as "better understanding by governments and industry of the trends and changes affecting the industry including its economic implications related to Health and environment impacts and enhanced capacity to promote the sound management of chemicals" is not only not an indicator but the ideas in the text are at a higher level than the output statement. Performance indicators related to the production and distribution of information products are generally well defined. However, they are mostly quantitative measures which do not usually assess the quality of support provided or the actual enhancement of capacities of stakeholders.
175. Most project concepts for the 2014-15 biennium presented in the programme framework document contain a short problem statement and a clear description of expected outputs and intended results. The project concepts indicate to which EA and PoW Output the project is expected to contribute and this makes sense in most cases. In general, each project only delivers one output. However, some outputs are delivered by more than one project. This is not necessarily a problem because, most PoW Outputs are rather vague and express more an intent than a type of product or service provided by UNEP. However, if the UNEP definition was applied (i.e. outputs were specific products or services delivered by UNEP) then this one project – one output relationship would not make any sense even when a project is

apparently one-dimensional (e.g. Secretariat services to the Strategic Approach to International Chemicals Management and its financial mechanism). Even in those cases the types of goods and services delivered by the project can be very diverse.

176. Many projects in the Sub-programme are global in scope with wide application. However, country needs with regards to sound C&W management vary widely so that interventions must be tailored to national circumstances. An important change in the Sub-programme for the years 2014-17 are statements indicating “improved coherence and coordination of regional and national delivery.” Apart from these statements, no specific strategy or criteria are proposed for regional or country targeting of interventions. Responsiveness to specific regional or country needs is not spelled out at sub-programme level, but is expected at the project level.

Critical success factors and risks

177. For the most part, critical success factors have been identified and seemed to have been adequately considered. Risk analysis tables were included in most of the project documents. Some critical risks related to the ability to mobilize the required resources to undertake the projects seemed to have been understated in the current world financial environment. This is also a critical factor not only for the delivery of project outputs and outcomes but also for its sustainability.
178. In general, the difference between risks and critical success factors was not fully understood and the two are in some cases considered synonymous. The issue of financial sustainability, i.e. the ability to mobilize enough resources beyond initial project funding, is very important but has not been addressed at all as a critical risk factor. The ability to find qualified technical people to undertake the preparation of the compendia, for example, is within the control of the project and should be treated as success factor.

Strategy for sustaining outcomes and benefits

179. Most of the projects do not show any explicit strategy to sustaining results. Neither do they articulate an exit strategy. While it is clear that the tools and guidelines for monitoring and reporting need to be adopted by the COPs of the chemicals MEAs, SAICM and others to become “official” and compulsory, the project documents do not elaborate on how this will be achieved. The narrative in some projects referred to the diffusion of the reporting guidelines through MEAs, SAICM and the Mercury process, but it is not clear how this will be done. Information products are sometimes presented to stakeholders in workshops, after which results at policy and decision-making levels are assumed/expected to follow.

Project governance models, supervision arrangements, and partnerships

180. The description of Project Governance models is variable. In some cases the governance structure diagram is comprehensible and there is a fairly clear presentation of the specific roles and responsibilities of the project management functions. In other projects e.g. 52-P5, the project document only presents a diagram with the names of the main stakeholders. There is no narrative on the project governance model and roles and responsibilities are not clearly defined. In some cases, the governance model clearly shows that the project is an assembly of different (some pre-existing) activities e.g. Project 51– P3: Building capacities for environmentally sound production and use of chemicals, technical tools, methodologies and strategic framework where the Business and Industry Unit of the Resource Efficiency Sub-programme had responsibility for managing component 2 of the project with its own management structure. Each component has its own governance model and thus coordination

will be tricky. The roles to be played by other sub-programmes in project implementation were not clearly spelled out. This raised some concern especially regarding the distribution/outreach strategy of the project outputs. While most projects were to rely, to a significant extent, on inputs from consultants and already existing information sets, the lack of detail on the linkages among different projects was identified as a matter of concern.

Financing

181. The capacity to mobilize adequate funding for the implementation of project activities is the main critical success factor. Some of the projects had open budget lines with minimum amounts (e.g. 100/200 USD), in the hope that funds will be raised. For example, development and testing of the guidelines and tools can be accomplished within the period of the PoW. However, with only 8% of the total resources mobilized at project approval in some instances, the ability to deliver the outputs within the biennium will depend on the capacity of the project to mobilize the resources early in the biennium. Indeed some of the project activities had to be cancelled because of the inability of the projects to mobilize the required resources. For example, “coordinated and coherent national programmes”, an output under the project “Integrated guidance and financial instruments for mainstreaming and support national programmes to manage substances and hazardous waste”, could not be delivered because the required resources could not be mobilized. In the same way the lack of funds to operate the information clearinghouse, meant that SAICM had to look for alternative methods to disseminate technical and scientific information related to SAICM implementation, such as through regional meetings and information documents on the SAICM website during SAICM related meetings. Some budget proposals do not include a line for communication and project output dissemination activities.
182. As stated in the section on sub-programme performance above, from the 2010-13 MTS period through the end of 2014 one of the key outputs related to the preparatory phase of the Global Partnership on Waste Management (GPWM) had not been accomplished as a result of funding constraints.

Gender

183. Most project documents mention that attention will be paid to gender equality issues in data collection/analysis and policy formulation, without any detail being provided. Women and children were often seen as primary victims of harmful substances and hazardous waste and the ability to better manage the latter will reduce their negative effects on the former, but women and children are not considered as potential actors in the projects. There was certainly a case for gender (and age) disaggregated bio-monitoring for the presence of toxins in humans but the project documents did not mention disaggregated bio-monitoring.

Project monitoring & evaluation

184. No coherent, costed M&E plans are provided in the project documents. Elements of a monitoring plan are included though, but they seemed to be planned for implementation by staff without cost implications. Milestones seem adequate for measuring implementation progress. Resources, for the most part, are allocated for reporting and evaluation which seem adequate. However, monitoring is not often properly costed at project design.

4.3.2 Sub-programme organization and management

185. UNEP operates under the broad framework of the UN Secretariat with the UNEP PoW, which includes the biennial budget estimate, undergoing a statutory approval process. The rules and regulations defined by the UN Secretariat for human resources management, performance measurement, reporting and financial audits are binding on UNEP²⁶.
186. The C&W Sub-programme (previously referred to as the Harmful Substances and Hazardous Waste Sub-programme) was created as one of UNEP's six sub-programmes (seven since the MTS 2014-15) set as an interdisciplinary and cross-divisional sub-programme to implement the UNEP MTS.

4.3.2.1 Sub-programme management

187. Under the "Matrix structure" that was adopted from the MTS 2010-13 onwards, the Division of Technology, Industry and Economics (DTIE) was assigned as the lead Division for the C&W Sub-programme. From the MTS 2014-17 onwards, there are no "Lead Divisions" anymore but "Lead Division Directors". However, the sub-programme engages other Divisions across the organization in what is referred to as the "matrix structure". This structure is aimed at fostering collaboration and synergies within UNEP and leveraging expertise across the organization, a departure from the historical divisional silos.
188. Most of the activities in the C&W sub-programme are managed by the Chemicals Branch based in Geneva and the International Environmental Technology Centre (IETC) based in Osaka. Although the DTIE Director is the lead Division Director for the C&W Sub-programme, other Divisions and Branches implement C&W activities including the Division of Environmental Policy Implementation (DEPI) which is implementing a C&W project on marine litter through the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) and Regional Seas Programme as a platform for dialogue, policy making and actions at national, regional and global levels. The Division of Environmental Law and Conventions (DELIC) assists the C&W Sub-programme in negotiating the MEAs and works in close cooperation with the Secretariats providing support towards the implementation of MEAs. However, greater efforts are required to enhance cross-divisional and cross-sub-programme implementation and partnership as C&W touch on every aspect of life and environmental management envisaged in UNEP's planning documents. Deliberate efforts need to be made specifically by the Sub-programme Coordinator and project staff to actualize this vision.
189. The OzonAction Branch of DTIE is based in Paris and operates with extra-budgetary funding from the Multilateral Fund for the Implementation of the Montreal Protocol. It is running a clearinghouse function and the regional ozone networks – its interventions were not included in UNEP's PoWs and therefore technically not part of the Sub-programme and this evaluation. However OzonAction activities will be integrated into the future C&W PoW.
190. As is clear from the above, the main hubs where the Sub-programme is implemented are based away from the UNEP headquarters in Nairobi. The distance between these offices and UNEP's headquarters has been identified as a challenge in undertaking the administrative functions of the Sub-programme. The previous Sub-programme Coordinator was based in Geneva until his retirement in December 2013. The new Sub-programme Coordinator who joined in August 2014 is based in Nairobi – a potential and valid challenge for the effective

²⁶ http://www.unep.org/eou/Portals/52/Reports/UNEP_MTE%20of%20MTS_HR_Finance.pdf Parag. 3

management of the Sub-programme. This is compounded by the fact that the lead Division Director is based in the Paris Office meaning that all three strategic positions of the Sub-programme are located in three different duty stations which inevitably results in coordination being even more challenging.

191. The new procedures under the results planning framework has significantly changed the operational and programme management processes in UNEP. The programme is therefore facing challenges with regards to the administration of projects and other organizational procedures. This was identified repeatedly as a challenge by the project managers in interviews and the staff survey and is reiterated in the PIMS sub-programme summary (Figure 2).

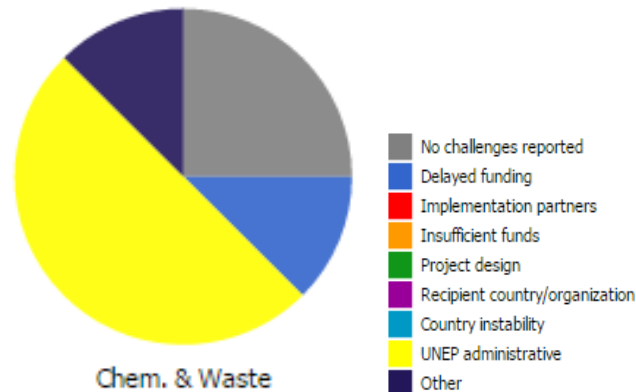
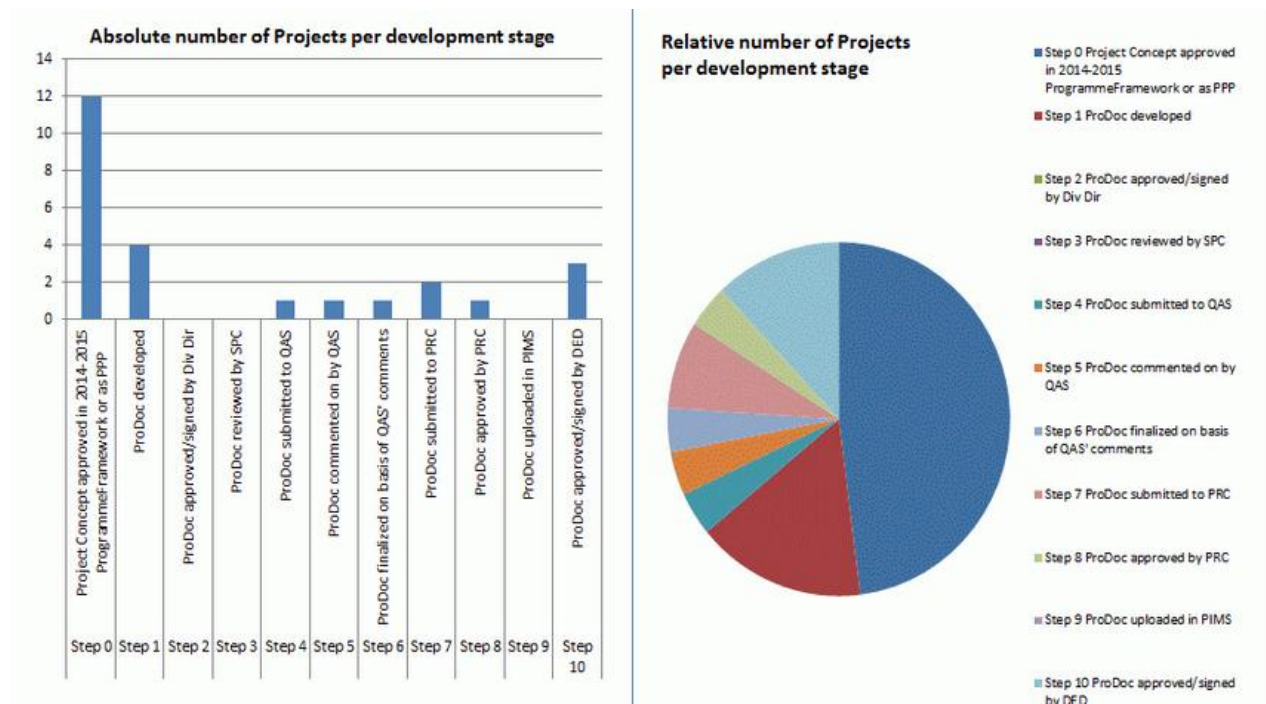


Figure 2: Staff survey results concerning project implementation challenges for the C&W Sub-programme

192. As at November 2014, the C&W Sub-programme had 25 projects approved at the concept stage. However, over the year, only four projects had been approved by PRC as illustrated in figure 3 below²⁷.



²⁷ More than three quarters into the biennium, on 30 June 2015, 16 projects had been PRC approved out of 26 SMT approved concepts – or less than 62%.

Figure 3: C&W - From Project Concept to Deputy Executive Director's ProDoc Approval (as at 12/11/2014)
(Source: Chemical's and Waste Sub-programme Coordinator)

193. This trend is one of grave concern and should be noted by management as it can threaten the function, performance and sustainability of the Sub-programme. More staff in the Sub-programme should be trained or empowered to operate the system effectively – adapting to the current operational and programme management process. This may require hiring additional mid-level professional staff to undertake such roles and essentially strengthen the Sub-programme's fund-raising efforts. The UNEP Regional Offices also provide support to a number of sub-regional and country-level projects. For instance, the Regional Office for Asia Pacific (ROAP) is implementing a project that seeks to combat environmental crime involving harmful substances and hazardous waste in the Asia-Pacific and West Asia regions. The C&W Sub-programme should better engage the regional offices in the implementation of these activities as envisioned in the MTS 2014-17 and future MTS's to expand the delivery of UNEP's results while increasing the presence, recognition and influence of UNEP at the regional and national levels.
194. Divisional implementation of C&W projects is key to building synergies and cooperation within the organization. Identification of synergies are generally undertaken in planning and design documents however staff from other branches, divisions and regions are hardly involved in the project design process. There is a clear gap and need for more robust collaboration and involvement in project planning across the organization.

4.3.2.2 MEAs and International Treaties

195. UNEP has facilitated the negotiations of a number of international treaties on C&W, and hosts the secretariats of different conventions. UNEP's activities related to the support of MEAs are identified with input from C&W related MEA secretariats.²⁸
196. The C&W related MEAs include: the Stockholm Convention²⁹ - a global treaty to protect human health and the environment from persistent organic pollutants (POPs); the Rotterdam Convention³⁰ - a multilateral treaty to promote shared responsibilities in relation to importation of hazardous chemicals; and the Basel Convention³¹ - on the control of trans-boundary movements of Hazardous Wastes and their disposal. The three MEAs – Basel, Rotterdam and Stockholm Conventions – are all managed under one secretariat in an effort to maximize on synergies, cooperation and coordination.³²
197. In addition, UNEP hosts the Vienna Convention for the Protection of the Ozone Layer³³ and the corresponding Montreal Protocol on Substances that Deplete the Ozone Layer³⁴ – an international treaty designed to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion. Most recently, UNEP was involved in facilitating negotiations and hosting the interim secretariat for the Minamata Convention on Mercury³⁵ - an international treaty designed to protect human health and the

²⁸http://www.unep.org/annualreport/2013/docs/environmental_governance.pdf

²⁹ Stockholm Convention website - <http://chm.pops.int/default.aspx>

³⁰ Rotterdam Convention website - <http://www.pic.int/>

³¹ Basel Convention website: <http://www.basel.int/>

³²http://www.unep.org/pdf/UNEP_2010-11_End_of_Biennium_PPR_%20GC_12th_session.pdf Pg. 84

³³The Ozone Secretariat: http://ozone.unep.org/new_site/en/about_the_secretariat.php

³⁴Note: The activities under the Vienna Convention and the Montreal Protocol are handled by the Ozone Secretariat based in Nairobi and are independent of the Chemicals and Waste sub-programme in the biennia under review (2010/11-2013/14).

³⁵ Minamata Convention website - <http://www.mercuryconvention.org/>

environment from anthropogenic emissions and releases of mercury and mercury compounds.

198. UNEP also plays a lead role in the Strategic Approach to International Chemicals Management (SAICM) which is a policy framework to foster the sound management of chemicals, providing the overall administrative support for the Secretariat. The Global Partnership on Marine Litter, whose secretariat is based in IETC, is a voluntary and collaborative relationship between various international stakeholders in which all participants agree to work together and coordinate activities in a systematic way to enhance international cooperation and avoid duplication of efforts.

4.3.3 Human and financial resource management

199. Human and Financial Resource Management are recognized in the UNEP operational strategy as key pillars to enable UNEP to better deliver its services, and achieve its objectives and projected results in the MTS 2010-13 and MTS 2014-17. UNEP's Programme Performance Reviews (PPRs) have also continually highlighted the importance of aligning financial and human resources planning with the results of UNEP³⁶. In UNEP's biennial and support budget submissions for 2010-11, UNEP proposed the establishment of an Office of Operations (OFO) in order to consolidate and rationalize administrative services³⁷. The Office of Operations combines the Quality Assurance Section³⁸ with sections dealing with finance, human resources, information and communication technology and resource mobilization under one umbrella. The move to the new programmatic framework resulted in significant organizational restructuring aimed at aligning strategic planning with programme and project review, finance, information and communication technology and human resources for the MTS period 2010-13 and 2014-17 and their associated PoWs³⁹.

4.3.3.1 Human resources

200. UNEP aims to build a highly qualified workforce that is multi-skilled, efficient and competent, possessing the highest degree of integrity and representative of geographic diversity and gender balance⁴⁰. Following the programmatic restructuring further detailed in the design section of this report (see paragraphs 154 - 176), UNEP staff were realigned according to their skill set against the new programmatic priorities as recommended in the Dahlberg Review (2006). This evaluation does not however make any evaluative judgements about the competencies of staff in the Sub-programme because this falls outside of the scope of the evaluation and therefore the evaluation did not set out to collect hard data about staff competencies. The evaluation uses information from existing staff data and interviews to draw broad conclusions.

C&W staff numbers and turnover

201. The C&W Sub-programme has a relatively small team of 41⁴¹ staff members out of which only 25 are professional staff (see tables 1 and 2 below). As depicted in table 3 below, there are more female employees in the Sub-programme than male employees. However, over 60% of

³⁶ MTS 2014/17 page 30.

³⁷ <http://usun.state.gov/documents/organization/159736.pdf>

³⁸ The Quality Assurance Section is responsible for programme quality at planning and monitoring stages in the programme cycle.

³⁹ http://www.unep.org/eou/Portals/52/Reports/UNEP_MTE%20of%20MTS_HR_Finance.pdf Parag. 3

⁴⁰ http://www.unep.org/eou/Portals/52/Reports/UNEP_MTE%20of%20MTS_HR_Finance.pdf

⁴¹ These staff numbers do not include the Regional Focal Points, Consultants and the staff working on the DELC and DEPI led projects

the female staff are General Service (GS) staff. In comparison, over 90% of male staff fall under the Professional category. The ratio of male/female Professional staff has slightly improved between 2012 and 2014.

Table 1: C&W Sub-programme staff by category and gender

	Professional			GS			Total Female	Total Male	Total No. of Staff
	P Male	P Female	P Total	GS Male	GS Female	GS Total			
31 Dec 2012	18	8	26	1	14	15	22	19	41
31 Dec 2013	18	9	27	1	14	15	23	19	42
30 Sept 2014	15	10	25	1	15	16	28	13	41

(Source: UNEP Staff Data)

Table 2: Professional staff distribution by grade⁴²

	2014			2013			2012		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
D1	1	1	2	2	0	2	2	0	2
P5	3	1	4	4	2	6	4	2	6
P4	4	4	8	3	4	7	3	4	7
P3	5	3	8	8	2	10	8	0	8
P2	2	1	3	1	1	2	1	2	3
TOTAL	15	10	25	18	9	27	18	8	26

(Source: UNEP Staff Data)

202. The C&W Sub-programme Professional staff are perceived to be qualified and experts in their fields. The staff survey (annex 8) and partner interviews reinforced this, applauding the technical rigor and invaluable support provided during the project implementation cycle. However, a general issue identified across the Sub-programme from interviews, staff survey⁴³ and staff data analysis is that human resource numbers are insufficient to meet the needs of sub-programme implementation, resulting in staff frequently “wearing multiple hats” and/or working overtime. Staff shortages have continued and, if left unabated, will affect the performance and effectiveness of the Sub-programme.
203. Compounding this, there has been high turnover of the sub-programme leadership. For instance, in the past eleven years, there have been seven different heads of the Chemicals Branch with the current Chemicals Branch Director set to retire in the course of 2015⁴⁴. Similarly, IETC has had 3 branch heads between 2007 and 2014 and has suffered from prolonged periods without a Branch Head between 2007 and 2009, and between 2010 and 2011. More recently the C&W Sub-programme Coordinator position remained vacant for a period of 7 months.
204. Differences in understanding and perception of issues, priority setting and management style of the different heads over time seem to have affected operations of the Sub-programme and branches and to have contributed to delays in work and work plan implementation and the attainment of the Sub-programme objectives. Forty-two (42%) per cent of staff who took part in the survey agreed or strongly agreed that the changes in leadership have affected their work directly. This is an area that requires attention by UNEP management as it has and

⁴²Data for the years 2011 and 2010 were not readily available

⁴³53% of staff survey respondents perceived that they were understaffed

⁴⁴ The Director of the Chemicals Branch retired in February 2015. As of August 2015, the current Deputy Director of DTIE – himself a former Director of the Chemicals Branch – is acting as Director of the Chemicals Branch awaiting recruitment of a new Director.

continues to impact the strategic direction of the branches and the Sub-programme in general.

Staff recruitment and funding

205. Seventeen (41%) members of staff were funded through the Environment Fund; 16 (39%) through trust funds directly supporting UNEP; 4 (9%) through counterpart contributions; and, 2 (4%), 1 (2%) and 1 (2%) supported through Programme Support Costs, Regular Budget and the GEF Trust Funds respectively. At the end of September 2014, there were 12 vacant positions in the Chemicals Branch, of which 2 were scheduled to be filled in the short term. Recruitment of sub-programme staff is done through UNON following the UN Secretariat rules and regulations. As of September 2014, a vast majority of the staff are hired on renewable contract basis under Fixed Term contracts with only 30% under permanent/continuing contracts. Approximately half those under permanent contracts are Professional staff. As of December 2014, the Sub-programme had contracted nine consultants (inclusive of two GEF consultants) to assist in the delivery of Sub-programme outputs and objectives. It should be noted that short contract periods and the insecurity regarding renewals can and do affect work motivation of staff in the Sub-programme.
206. However, there has been a relatively low turnover rate of Professional and General Service staff and a minimal increase in absolute staff numbers as shown in table 2. For instance, out of the 41 staff employed in the Sub-programme as at 31st December 2012, 34 (approximately 83%) were still employed under the Sub-programme by 30th September 2014. Over the period, only four staff members increased in grade within the Sub-programme. In addition, 8 new staff members were recruited from 2013 to 2014. Deliberate and urgent actions need to be taken to fill the remaining vacant positions in the Sub-programme to boost the effective implementation of the Sub-programme. In addition, a staff analysis should be undertaken to map priorities for hiring staff and filling the staff gaps in an efficient and effective manner. This is important in order to leverage the appropriate mix of staff for effective implementation rather than just an increase in number of staff in the Sub-programme. The evaluation recognizes that increase in staff capacity is subject to availability of funding. However, if staffing issues are not addressed with urgency, the Sub-programme would continue to have limited capacity to design and implement project activities and attain the Sub-programme Expected Accomplishments.

Staff distribution

Table 3: Staff distribution by duty station (2014)⁴⁵

Staff based in Geneva	28
Staff based in Osaka	9
Staff based in Nairobi (includes staff implementing DEPI and DELC projects)	8
Staff based in Bangkok (DELC Project)	2
Consultants	9
UNEP Regional Focal Points	8
TOTAL	64

(Source: Survey distribution list)

⁴⁵The survey included 4 former regional focal points not included in table 4

207. The majority of the sub-programme staff are based in Geneva with others situated in Osaka, Nairobi, Bangkok and the UNEP Regional Offices as summarized in table 3 above. As noted in the MTS formative evaluation, most staff in UNEP typically split their time between two or more sub-programmes. For example, staff implementing C&W activities/projects from DELC are also involved in other environmental conventions and international agreements in other sub-programmes such as the Environmental Governance. However, most of the C&W Sub-programme staff work almost exclusively under the Sub-programme. This has its advantages with regards to dedication and focus on Sub-programme activities and objectives.
208. The average staff age in the Sub-programme over the 2012-2014 periods is 47.42 years⁴⁶. Staff distribution between developed and developing countries over the years between 2012 and 2014 is detailed in the table 5 below.

Table 4: Staff distribution by nationality over developed and developing countries

Year	Developed	Developing
2014	23	18
2013	25	17
2012	25	16

(Source: UNEP Staff Data)

Regional Office engagement

209. There are eight focal points that assist in the implementation of C&W activities in the respective regions and countries. Over 60% of the survey respondents noted that they interact with Regional Offices often or always as detailed in table 6 below.

Table 5: Interactions with regional offices

Always (more than once a month)	28%
Often (once a month)	36%
Sometimes (Once every few months)	20%
Rarely (less than four times in a year)	16%
Never	0%

(Source: Staff Survey)

210. The engagement of the regions is however primarily based on the efforts and initiative of project managers. This engagement strategy is not optimal for the advancement of the Sub-programme objectives at the national and regional levels with this resource and opportunity being currently underutilized. Many regional focal staff noted that they were engaged intermittently at best, and have limited resources to effectively undertake their roles. The dissolution of the Division of Regional cooperation (DRC) changed the operation of the Regional Offices within the sub-programmes. With regards to Sub-programme-5, output responsibility previously assigned to DRC as the lead division were reassigned to other Divisions undertaking C&W related activities. However, the commensurate funding for these outputs was not left with the RO's possibly reducing their ability to engage on sub-programme issues, a concern rose in the staff survey. There need to be a clear mechanism and incentives to work with colleagues from other UNEP branches, Sub-programmes and more importantly with the Regional Offices in order to maximize the resources and expertise within UNEP and the Sub-programme.

⁴⁶2014 – 47.37 years , 2013 – 48.00 years and 2012 – 46.90 years

Job satisfaction

211. Sixty-Five per cent (65%) of staff who took part in the survey noted that they were happy or very happy to come to work with reasons ranging from the high calibre and technical expertise of the Sub-programme staff, good working climate and inspiring supervisors, to satisfaction in tackling global issues and assisting member states to cope with the issues as well as influencing various policy fora. However, 19% of the staff were unhappy or very unhappy to come to work and highlighted the following as pertinent issues: the increase in and emphasis on organizational procedures that limit time to undertake technical work; excessive workload and the performance of multiple roles mainly attributed to understaffing; frequent changes in leadership and the resulting different management styles over time impacting on sub-programme and staff morale; ineffective communication within the Sub-programme/branches; and limited promotions or lateral moves of staff.

Working conditions

212. As depicted in table 6 below, approximately 48% of the respondents noted that they often or always had time to do their work effectively. About 23% of staff indicated that they rarely had enough time to do their work effectively. In contrast, only 25% thought that they often or always had adequate resources to undertake their work effectively, while 26% indicated they rarely or never had adequate resources. This is in line with the difficulties the sub-programme has encountered during the biennium 2010-11 to mobilize funding for their new projects (see next section).

Table 6: Factors affecting effective work

	Adequate time to do job effectively	Adequate resources to do job effectively
Always	3%	6%
Often	45%	19%
Sometimes	16%	35%
Rarely	23%	16%
Never	0%	10%
No answer	13%	13%

(Source: Staff Survey)

4.3.3.2 Financial resources

213. The majority of UNEP's funding comes from member states' direct, voluntary contributions with a small proportion allocated through the UN regular budget. The UNEP budget sources can be categorized as: (i) the Environment Fund (non-earmarked funding), (ii) earmarked contributions and (iii) UN Regular Budget. UNEP's Programme of Work and Budget is agreed upon by the United Nations Environment Assembly (UNEA) – previously referred to as the UNEP Governing Council – on a biennial basis. In June 2014 UNEA approved the revised PoW and Budget for 2014-15 in the amount of USD 245 million and for 2016-17 in the amount of USD 271 million (both amounts refer to the Environment Fund)⁴⁷.

⁴⁷<http://um.dk/en/~media/UM/English-site/Documents/Danida/About-Danida/Danida%20transparency/Consultations/2014/2nd%20half%202014/Draft%20Organisation%20Strategy%20UNEP%202014-17.pdf>

214. The evaluation could not establish the exact financial position of the C&W Sub-programme projects and activities due to incomplete and inconsistent data available through PIMS. The evaluation therefore makes broad analysis and conclusions based on the projects planned and programmed budgets as well as expenditure data provided by the FMOs and information derived from UNEP reporting documents. It should be noted that this issue is not unique to the C&W Sub-programme but is an issue that cuts across the seven sub-programmes.
215. Within the period covered by this evaluation, the C&W Sub-programme was implemented through a portfolio of 17 UNEP projects with a planned budget of USD 99.74 million and an estimated programmed budget of USD 95.10 million⁴⁸ (see table 7 below). There are an additional 14 GEF projects with an estimated budget of 98 million (see annex 6).
216. Projects that commenced in the 2010-11 and the previous biennia⁴⁹ account for over 90% of the planned and programmed budget. Only 10%⁵⁰ of the current budget can be attributed to projects that commenced in the 2012-13 and 2014-15 biennia. As shown in table 7 below, out of the 17 projects in the evaluation period, 10 projects worth approximately USD 41.45 million⁵¹ (programmed budget) have already been completed meaning that the Sub-programme is currently operating on an extremely small budget.

Table 7: C&W Sub-programme completed projects

Project start (Year)	Number of Projects	Total Planned Budget	Total Programmed Budget	Difference (US\$Million)	Difference (%)	Number of Ongoing Projects (as at Jan. 2015)	Total Planned Budget	Total Programmed Budget
Pre 2010	2	60.97	82.17	21.20	35%	1	35.53	52.57
2010-11	10	38.72	12.88	- 25.84	- 67%	2	5.92	3.20
2012-13	1	0.05	0.05	0	0%	0	0	0
Total	13	99.74	95.10	- 4.64	- 5%	3	41.45	55.77
2014-15	4	11.88	Not Available	-	-	4	11.88	Not Available
Grand Total	17	111.62	-	-	-	7	53.33	-

(Source: Project documents and FMOs)

217. As shown table 7 above, for the pre-2010 projects there was 21.20 million USD (35%) more mobilized than initially planned. This was because projects were kept open to accommodate additional funding from donors, going beyond the original intent of the project. Instead of designing new projects, old projects were used to receive additional donor funding. However,

⁴⁸The programmed budget for 4 projects approved in 2014 is not included as the programmed budget figures are not available. The 4 projects have a total planned budget of approximately \$11.88 million. Similarly, the recently integrated OzonAction projects of total planned of \$11.76 million were not included.

⁴⁹The projects considered are those that commenced prior to 2010 but were still being implemented in the period under evaluation.

⁵⁰This figure does not include the OzonAction projects

⁵¹These figures do not include the 2013/2014 project budgets

in the 2010-11 biennium there was a deficit in mobilized funding of 25.84 million USD (67%) showing that projects designed for the PoW 2010-11 were over-ambitious in terms of what resources could be expected vis à vis what could actually be raised. But this also shows the increasing difficulties that the Sub-programme has had to mobilize funding. In the following biennium, as projects for the PoW 2010-11 were seriously underfunded, there was little incentive to design new projects. There has, however, been a marked improvement in fundraising efforts in the current biennium 2014-15.

218. Fundraising for the Sub-programme is generally dictated by the PoW which is a biennial strategy document to support the attainment of the MTS. Fundraising is however done for specific projects in the Sub-programme and therefore limited fungible resources are available to initiate new innovative activities.

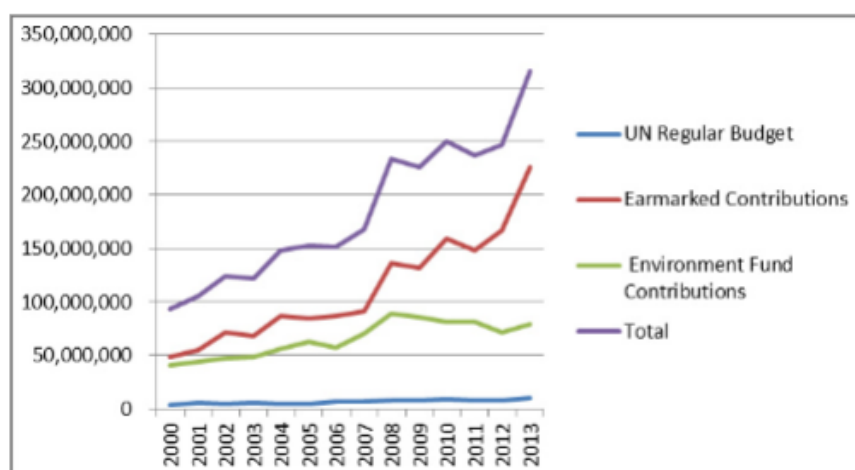


Figure 4: UNEP contributions 2000-2013 by source of funding⁵²

219. Between 2000 and 2013, environment funds have minimally increased while earmarked contributions have seen a sharper rise for the whole of UNEP depicted in the figure above. In the period 2010 and 2011, the C&W Sub-programme's funding was largely drawn from trust funds and earmarked contributions. The C&W Sub-programme is one of the Sub-programmes that substantially benefits from GEF Funds. GEF activities have been incorporated into the PoWs for the biennium 2014-15 cognisant of and respecting GEF criteria, procedures and review and approval process.⁵³
220. As shown in figure 5 below, approximately USD 36 million was expended from trust funds and earmarked contributions in comparison to USD 15 million and USD 0.4 million expenditure from the environment funds and regular budget respectively.

⁵²<http://www.unep.org/about/funding/SourcesofFunding/Overview/tabid/131421/Default.aspx>

⁵³ Source : MTS 2014/2015 pg. 36

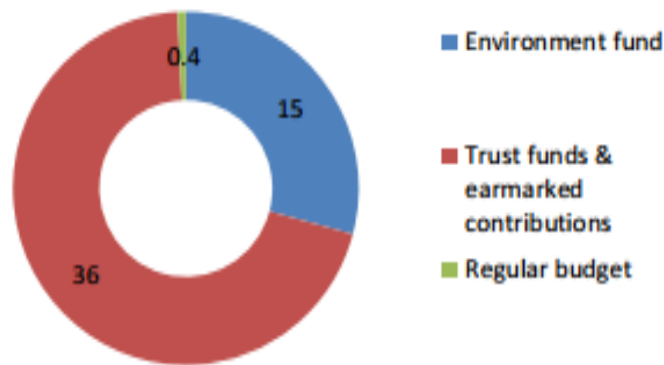


Figure 5: C&W Sub-programme 2010-11 actual expenditure in USD Million (Source: UNEP MTS 2014-17⁵⁴)

221. Similar to the entire organization, it is hard for the C&W Sub-programme to predict the extra budgetary funds (XB). Dependence on extra-budgetary funding equals donor dependence by the Sub-Programme. The challenge with such dependence can include less control of the strategic direction of the Sub-programme; taking on areas of marginal relevance to the Sub-programme that align with donor priorities. That said, current funding generally is largely in line with the Sub-programme priorities. Funding and expenditure levels in the C&W Sub-programme is however low in comparison to other sub-programmes as shown in figure 6 below.

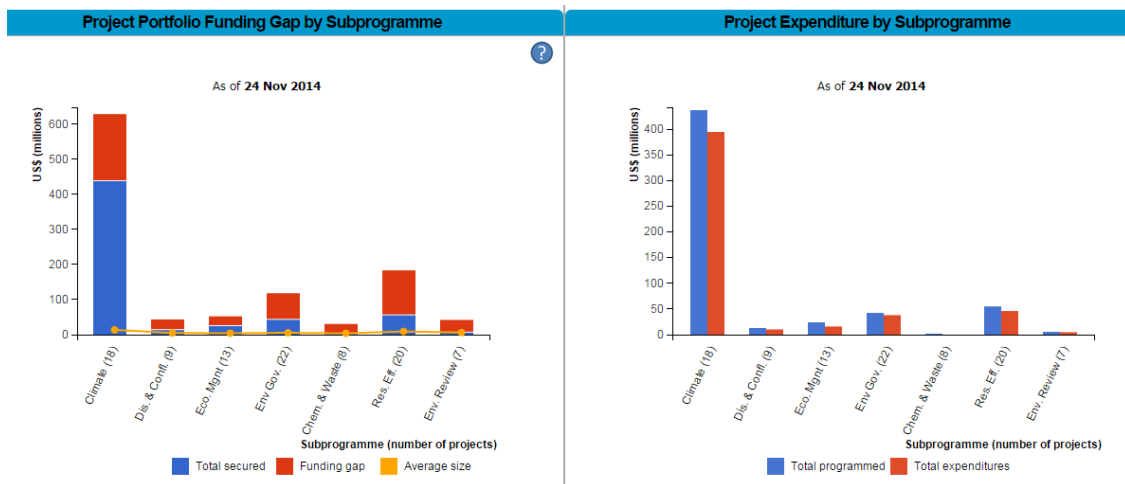


Figure 6: UNEP Sub-programmes Project Portfolio Funding and Expenditure

222. The Sub-programme needs to diversify its areas of focus taking advantage of sectors funded by less traditional donors such as the private sector and industry in order to stay relevant and increase cash flow. To achieve this, the Sub-programme should draft an effective resource mobilization strategy. They should also hire or train staff to fundraise within the structures and guidelines provided by QAS. As noted in the organization and management section, in 2014, the Sub-programme was only able to successfully put through 4 out of 25 projects through the project approval process with some stuck at the concept preparation stage – this brings to question the short and long term viability and sustainability of the Sub-programme.

⁵⁴http://www.unep.org/pdf/MTS_2014-17_Final.pdf

Lower levels of funding could and will indeed lead to the inability of the Sub-programme to retain its staff and achieve its mandate within UNEP.

4.3.4 Cooperation and partnerships

4.3.4.1 Internal collaboration

223. Several UNEP Divisions are involved in C&W related activities. However, the vast majority of projects are managed by the Chemicals Branch of the Division for Technology, Industry and Economics (DTIE). DTIE is the Lead Division for the C&W Sub-programme.
224. UNEP Regional Offices provide support to a number of sub-regional and country-level projects, including hosting some DTIE staff in the regions. They also manage projects to combat illegal trafficking in chemicals & waste and the development of the Health and Environment linkage was delivered at the national level by UNEP Regional Offices in partnership with the WHO Regional Offices
225. The Division of Communications and Public Information (DCPI) was accountable for delivering one cross-cutting output related to awareness-raising and the mobilization of action on the environment and health risks of harmful substances and hazardous waste. However, this project was later moved to the Division of Environmental Law and Conventions (DELC).
226. The Division for Early Warning and Assessment (DEWA) was initially expected to manage a project on reporting progress in sound management of C&W but this project is in reality managed by the DTIE Chemicals Branch. DEWA however contributes indirectly to the C&W Sub-programme objectives by taking C&W up as key environmental themes in several high-profile assessments and publications such as the GEO-5 report and the UNEP Year Books. It is unfortunate though that DEWA was not involved in the preparation of the Global Chemicals Outlook. Neither is it clear the extent to which the Chemicals Branch has participated in developing DEWA's products. Incidentally, over the period when the GCO was being prepared the Fifth Global Environment Outlook (GEO5) was also under preparation. However, the two processes ran in parallel and there was minimal interaction and synergy between the two processes.
227. The OzonAction Branch of DTIE operates with extra-budgetary funding from the Multilateral Fund for the Implementation of the Montreal Protocol and is running a clearinghouse function and the regional ozone networks – its interventions are not included in UNEP's PoWs.

4.3.4.2 Collaboration with Regional Offices

228. In general, the Sub-programme collaborates with regional offices to deliver its work programme. However, the level of collaboration varies from region to region. UNEP chemicals programme officers are located in some regional offices in e.g. ROA-Nairobi, ROE-Geneva, ROLAC-Panama and ROAP - Bangkok. Interviews with regional office staff show that while project implementation responsibilities are shared at the regional level, regional office staff are often not involved in programme planning activities.
229. In some regions e.g. Regional office for Africa, Regional Office for Latin America and the Caribbean and the Regional Office for Europe technical expertise is available in the RO to influence programming. In Africa, projects including POPs capacity building activities, PCB and Mercury assessment projects were all implemented through the ROs. The Regional Office for Africa also provided inputs into the Global Waste Outlook and the Environment and Health Initiative. In the Regional Office for Europe, while expertise and experience exists in the RO in e.g. Environment and Health initiative (UNEP has been involved in the European process on

Environment and Health for the duration of the initiative through the active participation of the UNEP Regional Office for Europe), the ROE is not involved or even consulted on the current UNEP initiative on Environment and Health.

230. The UNEP Regional Offices also provide support to a number of sub-regional and country-level projects. For instance, the Regional Office for Asia and the Pacific (ROAP) is implementing a project that seeks to combat environmental crime involving harmful substances and hazardous waste in the Asia-Pacific and West Asia regions. In other regions, the role of Regional Offices has been more limited. In the Regional Office for West Asia for example, no focal point exists. Work on C&W is carried out on the initiative of the Multilateral Fund Programme officer who has actually been directed not to work on C&W issues.
231. The C&W Sub-programme should better engage the regional offices in the implementation of activities as envisioned in the MTS 2014-17 and future MTS's to expand delivery of UNEP's results while increasing the presence, recognition and influence of UNEP at the regional and national levels.

4.3.4.3 External collaboration

232. Key sub-programme activities like SAICM and UNEP's work with Multilateral Environmental Agreements are built on multi stakeholder processes which require partnership with many different groups of stakeholders. The main stakeholders in SAICM for example are Governments, regional economic integration organizations, intergovernmental organizations, non-governmental organizations and individuals involved in the management of chemicals throughout their life-cycles. SAICM uses the informal regional structure of the United Nations General Assembly comprising the following: African region; Asia-Pacific region; Central and Eastern; European region; Latin American and Caribbean region; Western European and Others Group. Each region operates through a regional focal point. SAICM focal points include 175 Governments (158 Governments represented by environment or foreign affairs ministries, and 17 by health, labour or agriculture ministries) and 85 non-governmental organizations, including a broad range of representatives from industry and civil society.
233. Seven participating organizations of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) provide support for the implementation of SAICM. They are: Food and Agriculture Organization of the United Nations (FAO); International Labour Organization (ILO); Organisation for Economic Co-operation and Development (OECD); United Nations Environment Programme (UNEP); United Nations Industrial Development Organization (UNIDO); United Nations Institute for Training and Research (UNITAR); World Health Organization (WHO). The United Nations Development Programme (UNDP) and the World Bank are observer organizations in the IOMC.
234. SAICM also collaborates with and supports the secretariats of chemicals- and waste-related multilateral environmental agreements (the Basel, Rotterdam and Stockholm Conventions and the Montreal Protocol) and the United Nations Office on Drugs and Crime and others. Civil society and the private sector are also key implementing partners including the Pesticide Action Network, the International Council of Chemical Associations; the International Council on Mining and Metals; the Society of Environmental Toxicology and Chemistry; the International Union of Pure and Applied Chemistry; the World Chlorine Council, the World Wide Fund for Nature; Zero Mercury Working Group and others. It has developed a partnership with UNDP to mainstream the sound management of chemicals in national development processes and forged a partnership with WHO to implement the environment and health initiative.

235. Partnership working is a standard expectation and is evidenced in a number of cases especially for the major project on the mercury partnership /convention development. Areas that might have benefitted more from similar approaches are in forging closer cooperation and communication with the established MEA secretariats (BRS) and with Regional offices. Discussions with representatives of these groups indicated that, at least currently, the coordination and exchange of information and involvement in projects throughout their lifetime could be advantageously increased. The MEA Secretariats also can provide communication routes to Regional Centres, Focal Points and other significant stakeholders.
236. The distinction between stakeholders and partners is sometimes blurred. While there is inevitably some overlap, a distinctive role of a partner as opposed to a stakeholder needs to be articulated. In the project 52-P4 concerning waste destruction technologies the International Solid Waste Association (ISWA) is described as both partner and stakeholder, with emphasis on expert involvement via expert workshops to develop and review drafts. MEA Secretariats are identified as a route to channel information via CoPs - and could also have been identified e.g. as brokers for project sustainability and potentially introduce useful feedback mechanisms for compendium drafting. MEA Secretariats are “core actors” in CIEN and arguably important as partners for delivery mechanism via MEAs (CoPs) yet they are missing in some key components of the project design. It is not clear how the MEA focal points are involved, their role enables them to assist in implementation. The Basel Convention Regional Centres could also provide a useful conduit in product dissemination.
237. The Global Mercury Programme created extensive partnerships both to assist in the INC process for the mercury instrument negotiations and for the development of a knowledge base to assist in the reduction of mercury. The indicator to achieve a 0% (zero) change in mercury emissions by the end of the biennium might have been better expressed as establishing a baseline (as the publication of emissions explains) as otherwise it appears as an easily achieved target.
238. In the area of risk reduction, UNEP continues to partner with different stakeholders including national governments, national cleaner production centres, universities and private sector associations to reduce risks in the production, handling, use and disposal of harmful substances. This is accomplished through the development of new and the dissemination of existing tools and through awareness-raising among government partners and private sector institutions.
239. Over the period covered by this evaluation, the global partnership on Waste Management did not seem to have taken off beyond the circulation of a concept note to lead partners as a result of delayed funding.
240. Delivery through partnerships did not only allow the Sub-programme to deliver its planned activities but intuitively would have contributed to increased interest from both industry and countries in UNEP's technical tools, methodologies and strategic framework for reducing risks in the production, handling, use and disposal of harmful substances.
241. In all areas of the Sub-programme's work, partnerships at the national level were used to develop and test tools and methods, as well as to raise awareness and build capacity. Country level partnerships do not only provide a means of ensuring ownership but also assure that programme sustainability is achieved through uptake by national institutions of the tools and methods being developed and tested. For example, the tools and methods deployed in the sampling and analysis of POPs and U-POPs including PCBs, dioxins and dibenzofurans in support of the Stockholm convention are embedded in government institutions and universities. In Kenya the University of Nairobi maintains the analytical laboratory for POPs analysis while the Environment Ministry supports and has been a strong partner for UNEP in

its SAICM activities. In Mozambique a strong partnership exists between UNEP and national partner institutions in the implementation of Stockholm convention POPs capacity building activities.

242. In the few country level interviews conducted for this evaluation, interviewees were generally appreciative of the support provided by the Branch in the implementation of project and programme activities and were generally happy with the level of collaboration with the Chemicals Branch. In Africa, there was call for more capacity building activities since African countries are still yet to reach the same level as other regions because the subject of chemicals has not been given high priority by African governments; therefore there has been little to no budget allocation for Chemicals work.
243. The Sub-programme's work to mainstream the sound management of chemicals was planned to be delivered through partnerships, key among which is the UNEP-UNDP partnership initiative on mainstreaming the sound management of chemicals in national development processes. UNEP was to be responsible for developing the normative aspects of the project and was to play a supervisory role for the country implementation aspects while UNDP was responsible for national execution through the Poverty and Environment Initiative (PEI). The Health and Environment linkage was slated for delivery by UNEP Regional Offices and at the national level in partnership with the WHO Regional Offices. In implementing the Health and Environment component of mainstreaming, the capacities developed by the Chemicals Information Exchange Network (CIEN), an initiative of SAICM, were to be used. Implementation of the Libreville Declaration on Environment and Health has involved strong partnership with a large number of African countries including the African Ministerial Council on Environment (AMCEN). A partnership initiative between UNEP, UNICEF and WHO in the area of children's environmental health established during the run-up to the WSSD works to create awareness and transfer knowledge and build capacity at the country-level, particularly through the mix of normative and operational activities
244. Civil society organizations (CSOs) were also instrumental in the implementation of sub-programme activities through their participation in the chemicals convention activities and in SAICM. CSOs were also instrumental in the development of the Minamata process and the ultimate establishment of the Minamata convention. NGOs were involved in the implementation of Quick Start projects at the national level in a number of countries.
245. Collaboration with external partners is a key strength of sub-programme delivery. Collaboration with internal partners like Divisions and Regional Offices as well as convention secretariats seems to be weak and needs to be strengthened.

4.3.5 Monitoring, reporting and evaluation of the Sub-programme

4.3.5.1 Monitoring & reporting

246. Like many of the sub-programmes previously evaluated, progress reporting on the Sub-programme has progressively improved over the period covered by this evaluation. Reporting especially at the Expected Accomplishment level however was not based on milestones and did not reflect progress being made by the Sub-programme towards Expected Accomplishments. Compliance with reporting requirements at the project level was lax. Progress reports for individual projects are not easily found and where they exist, the reports often describe activities and outputs. Higher level results are not frequently reported on. Reporting on the Sub-programme through IMDIS is biannual and undertaken on a routine basis. Quarterly progress reporting on projects in PIMS is also now undertaken twice a year and is done against project milestones. Reporting is a shared responsibility between the

project managers and the Sub-programme Coordinator. Programme performance reports, on the other hand, are coordinated by the Sub-programme Coordinator.

247. While elements of monitoring plans are included in the project documents they seem to have been planned for implementation by staff without cost implications. Milestones in most of the projects seem adequate for measuring implementation progress. Resources, for the most part, are allocated for reporting and evaluation which seem adequate. However, project monitoring was not costed. Project monitoring was undertaken through the Project Information Management System (PIMS) and this evaluation has concluded that the information available in PIMS on project implementation while useful, fails to report, for the most part, on areas where implementation has not been as successful. PIMS reporting is limited and may not have given as full an account of the progress and issues encountered throughout the stages of the projects.
248. With little to no baseline information, poorly formulated Expected Accomplishment indicators, problems with attribution, and the lack of budgets for project monitoring, the task for monitoring sub-programme accomplishments became a difficult one. Generally, the projects do not include baseline studies mainly because there is no funding for project design.
249. The sub-programme reports reviewed for this evaluation show that sub-programme performance reporting is done mostly at the output level because output monitoring was an easier task and the achievement of outputs became a surrogate for the achievement of EAs. Development of capacity at the national level for example was often reported as training activities, workshops, seminars or meetings organized inferring -but not proving- built capacity. The assumption is made –but no evidence is provided- that the reported training workshops and meetings will result in knowledge, skills and/or attitudinal changes that will lead to sounder management of chemicals.
250. Immediate outcome and outcome monitoring is difficult for several reasons: there is usually little baseline information, EA indicators are inadequate, there are significant attribution problems and there is usually no separate provision for monitoring in project budgets. Generally, the projects do not include a baseline study, mainly because there is no funding for project design and baseline data collection.
251. Interviews conducted show that programme officers do not seem to be undertaking financial monitoring of their projects. For example, there was a 6-month dormancy where no financial updates were done because no administrative/fund management officer was available to produce the reports, yet expenditures were being made.

4.3.5.2 Evaluation

252. Independent evaluative evidence for the projects in the C&W sub-programme portfolio is very limited. Even obligatory completion reports of a reasonable quality have not been prepared for most completed projects. Very few, perhaps two, of the completed projects in the C&W Branch were subjected to evaluation over the past 5 years. The two projects were actually GEF projects which over the previous MTS period were not part of the UNEP Programmes of work. Interviews conducted in the Branch show a trend of lack of evaluation of programme activities dating farther back than the MTS period.
253. In SAICM, while annual monitoring reports have been prepared, there is, overall, little independent evaluative evidence for the projects in the SAICM QSP portfolio. Out of 70 QSP projects that have been completed, there is no evidence that they have been evaluated independently. However a mid-term review of the QSP was undertaken in 2012 and presented

to ICCM3.⁵⁵ Also an evaluation of the effectiveness and efficiency of the QSP is planned (decision taken by the EB at its 8th meeting).⁵⁶

254. Based on the foregoing, it is not unreasonable to state, therefore, that the culture of evaluation of programme activities is quite poor and needs to be improved. Monitoring at the project output level together with the lack of independent evaluative evidence make it impossible to make any evidence-based judgements about the progress sub-programme implementation has made towards impact. It is important therefore that all projects in the Sub-programme are independently evaluated soon after project completion.

⁵⁵http://www.saicm.org/images/saicm_documents/iccm/ICCM3/Meeting%20documents/iccm3%209/SAICM_ICCM3_9_EN.pdf

⁵⁶http://www.saicm.org/images/saicm_documents/iccm/ICCM3/Meeting%20documents/iccm3%208/SAICM_ICCM3_8_EN.pdf

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