

**United Nations Environment Programme  
International Environmental Technology Centre**



# **Major International Waste Management Programmes and Projects**

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**Global Partnership on Waste Management (GPWM)**

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## LIST OF ACRONYMS

- ADB***- Asian Development Bank
- AfDB***- African Development Bank
- EBRD***- European Bank for Reconstruction and Development
- E-Waste***- Electronic Waste
- FAO***- Food and Agriculture Organization
- GEF***- Global Environment Facility
- GIZ***- German Society for International Cooperation, Ltd.
- GPWM***- Global Partnership on Waste Management
- HW***- Hazardous Waste
- HCW***- Healthcare Waste
- IADB***- Inter-American Development Bank
- IFC***- International Finance Corporation
- I-Waste*** – Industrial Waste
- JICA***- Japan International Cooperation Agency
- OECD***-Organization for Economic Cooperation and Development
- KOICA***- Korea International Cooperation Agency
- ML*** - Marine Liter
- MSW***-Municipal Solid Waste
- OW*** – Organic Waste
- SIDA***- Swedish International Development Cooperation Agency
- UN Habitat***- United Nations Human Settlements Programme
- UNDP***- United Nations Development Programme
- UNEP-IETC***- United Nations Environment Program-International Environment Technology
- UNESCAP***- United Nations Economic and Social Commission for Asia and the Pacific
- USAID***- United States Agency for International Development

***SIDA***- Swedish International Development Cooperation Agency

***WAB***- Waste Agriculture Biomass

***WP*** – Waste Plastic

***WW***- Waste Water

# I. OVERVIEW

## A. Introduction

1. In November 2010 the Global Partnership on Waste Management (GPWM) was launched to enhance cooperation among stakeholders and coordinate waste management activities to identify areas for improvement that promote resource conservation and efficiency through information exchange, awareness raising, political will and capacity building. The GPWM is an open-ended partnership for international organizations, governments, business, academic institutions, local authorities and non-governmental organizations. The International Environmental Technology Center (IETC) serves as the secretariat of the GPWM.
2. The first report on the Mapping of Current Activities was focused on waste management capacity building initiatives of international organizations during the period 2011-2012. The Second Report is Mapping of Current Activities and Completed Projects on Waste Management. It is a follow-up report of that focuses on the assessment of select completed waste management projects and narratives of ongoing initiatives from 2012-2016.
3. The Second Edition contains information on 188 waste management projects conducted by 17 major international organizations. It also considers the concept of Waste Streams. Waste is generally regarded as something that does not have use or value which paves the way in the concept of resource. Things which do not have use or value are wastes and those still have utility are considered resources. Based on the Guidelines for National Waste Management Strategies Moving from Challenges to Opportunities of UNEP 2013, looking into the aspect of waste streams is important as it provides significant information as to the identification of waste sources (generation), its collection, treatment and disposal as well as provide inputs in policy formulation and program development. For instance, building and demolition operations are the main sources of construction and demolition waste, packaging waste comes from multiple sources like households, public facilities, offices retail operations, etc. Waste streams are composed of different materials and have different health and environmental impacts. Interesting to mention that waste is usually divided into hazardous and non-hazardous waste. Consequently, the methods by which various waste streams are collected, recovered, processed, treated or disposed of may vary broadly. Hence, the policy applied to each waste stream will need to recognize and take into account these differences in order to achieve the relevant policy objective.
4. The purpose of this report is to complement supply with the demand in waste management services around the world, to provide stakeholders opportunities for projects partnerships and to harmonize efforts and avoid duplication. The

report highlights projects of international organizations and UN Bodies with focus on, but not necessarily limited to, waste management.

## **II. Methodology**

5. The Second Edition Report was based on the review of the maiden report looking into what the waste management initiatives that have been completed, ongoing and in the pipeline. A matrix of waste management initiatives by the major international organizations was prepared. The information in the matrix were validated from the websites of the respective international organizations. The matrix was updated and revised eventually.
6. The report also conducted an updating of the online mapping of activities report, which contains a more comprehensive list of completed and ongoing waste management activities and programmes have been represented graphically through an online mapping exercise. The maps are accessible on the GPWM website. (<http://www.unep.org/gpwm/InformationPlatform/Mapsofongoingactivities/tabid/104456/Default.aspx>)
7. This report will present the ongoing and in the pipeline waste management projects of the international organizations during the period 2012-2016.

## **III. Completed and On-Going Initiatives and Partnerships on Waste Management (2012-2016)**

8. For the second assessment, a total of 188 waste management projects implemented by 20 international organizations are included. Of this total, sixty-nine (69) or 36.7% have been completed, sixty (60) or 31.91% are on-going and fifty-nine (59) or 31.38% are still in the pipeline (see Figure 1)
9. Among the completed waste management initiatives, municipal solid waste projects have the most number (35%), followed by hazardous waste projects (22%). Very minimal are initiatives on industrial waste projects (0%) have been recorded as ongoing waste management initiatives among international organizations. (See Figure 2)



Figure 1. Project Status

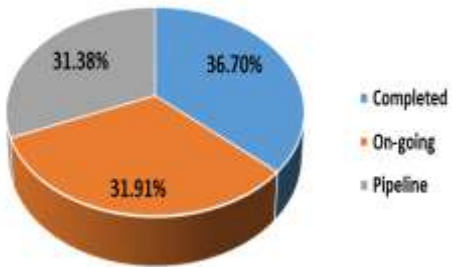


Figure 2. Waste Stream (GPWM)

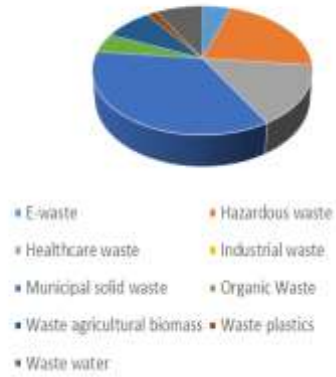


Table 1 presents a detailed summary of the waste management projects. During the period 2012-2016, a total of 60 waste management projects implemented by international organizations are ongoing while 59 projects are still in the pipeline. The GEF has 27 ongoing waste management projects out of 60. Likewise, 56 of the 59 waste management projects in the pipeline are with GEF.

**Table 1. Ongoing and In the Pipeline Waste Management Projects by Funding Agency**

Funding Agency	On-Going	%	Pipeline	%
ADB	2	3%	1	2%
AfDB	2	3%	1	2%
EBRD	1	2%	1	2%
FAO	1	2%	0	0%
GEF	27	45%	56	95%
GIZ	5	8%	0	0%
IADB	1	2%	0	0%
IFC	2	3%	0	0%
UN Habitat	1	2%	0	0%
UNDP	3	5%	0	0%
UNEP IETC	8	13%	0	0%
World Bank	7	12%	0	0%
<b>TOTAL</b>	<b>60</b>	<b>100%</b>	<b>59</b>	<b>100%</b>

Table 2 presents the waste streams of the different ongoing and in the pipeline waste management projects during the period 2012-2016. In the said table, the waste management projects are focusing on municipal waste management (21 or 35%) followed by hazardous wastes with 13 ongoing projects. Interesting to note that the waste management in the pipeline have 53 projects in the pipeline out of 59.

**Table 2. Project Status by Waste Stream (GWMP)**

Waste Stream	Funding Agency	Ongoing	%	Pipeline	%
E-waste		3	5%	0	5%
	UNDP	1			
	UNEP	2			
Hazardous waste		13	22%	53	22%
	GEF	12		53	
	World Bank	1			
Healthcare waste		9	15%	2	15%
	AfDB			1	
	GEF	7		1	
	IADB	1			
	UN Habitat	1			
Municipal solid waste		21	35%	3	35%
	ADB	2		1	
	EBRD	1		1	
	GEF	2		1	
	GIZ	3			
	IFC	1			
	UNDP	1			
	UNEP	6			
	World Bank	5			
Organic Waste		3	5%	1	5%
	GEF	3		1	
Waste agricultural biomass		5	8%	0	8%
	FAO	1			
	GEF	2			
	IFC	1			
	UNDP	1			
Waste plastics		1	2%	0	2%
	World Bank	1			
Waste water		5	8%	0	8%
	AfDB	2			
	GEF	1			
	GIZ	2			
TOTAL		60	100%	59	100%

## ANNEX

### **Narratives of Waste Management Project Initiatives by International Organizations**

This section discusses the SWM Projects by agency by status focusing on the needs per thematic area. The sequence of agency presentation is alphabetically arranged.

#### **A. Asian Development Bank (ADB)**

10. Six (6) SWM projects funded by ADB implemented// being implemented for the period 2010 to 2017 from five (5) Asian countries. All the six (6) projects focused on *municipal solid waste (MSW)*, the status of which are as follows: three (3) completed, two (2) on-going and one (1) still in the pipeline.

#### 11. On-Going (2) ADB projects

- a. Multi-tranche Financing Facility Republic of Armenia: Solid Waste Management Improvement Investment Program- Armenia (Asia)

The project has a total funding of USD 750,000.00 which implementation commenced in February 2012 until end of June 2016. This project aims to improve the health, hygiene and sanitation standards of people living in the regional / urban centers of Lake Sevan, Ararat Valley, Gyumri, Stepanavan, Noyumberyan, Vanadzor, Ljevan, Chambarak and Yerevan with focus on MSW. The project is expected to provide efficient and well established modern SWM systems operating based on international standards and practices. The project outputs include assistance in development and implementation of national SWM strategy, sector-wide institution building, SWM infrastructure rehabilitation and improvement and development of Public Private Partnerships (PPP) modalities.

- b. Solid Waste Management Improvement Project – Uzbekistan (Asia)

This project has a total funding of USD 76 Million which started in December 2014 and will end in June 2019. The project supports the government's priority in improving Tashkent's SWM system through an investment package that will accelerate waste minimization and recycling initiatives, upgrade and rehabilitate the city's MSW collection and transfer

systems, and develop a new sanitary landfill (SLF) to potentially serve the city until at least the year 2060. Expected outcome from this project is improved SWM services in Tashkent City. Specific outputs include rehabilitation and expansion of SWM system, strengthening its operational capacity and accomplishment of National SWM strategy and management in Tashkent city.

12. Pipeline (1) ADB Projects.

a. Solid Waste Management Project for Intermediary Cities - Azerbaijan, (Asia)

The proposed project with total funding of USD 50 Million shall be implemented from September 2016 to May 2017. The proposed project under evaluation is expected to improve SWM services and management in the selected area. The expected outputs include defined Institutional arrangement, established SWM system in the Lower Caucasus Economic Zone and Nakhchivan Autonomous Republic, and strengthened operational capacity.

Table 3 presents the summary of ADB Waste Management Projects which focused on Municipal Solid Waste which were implemented in Nepal, Philippines, Armenia, Uzbekistan and Azerbaijan.

**Table 3. List of ADB Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING ADB PROJECTS</b>					
Asia	Armenia	MSW	4. Multi-tranche Financing Facility Republic of Armenia: Solid Waste Management Improvement Investment Program	Feb 2012-Jun 2016	750,000
Asia	Uzbekistan	MSW	5. Solid Waste Management Improvement Project	Dec 2014-Jun 2019	76,000,000
<b>PIPELINE ADB PROJECTS</b>					
Asia	Azerbaijan	MSW	6. Solid Waste Management Project for Intermediary Cities	Sep 2016-May 2017	50,000,000

## **B. African Development Bank (AfDB)**

13. Four (4) waste management projects were funded by AfDB during the period 2010 to 2016 in five countries. (Table 6) The projects focused are as follows two (2) healthcare wastes (1 completed and 1 pipeline), two (2) waste water (on-going)

14. On-Going (1) AfDB projects:

a. Kampala Sanitation Program - Kampala (Africa)

The project is being implemented since the year 2010 with funding of USD 35 Million. The project seeks to protect the Inner Murchison Bay of Lake Victoria through improved sanitation and sewerage in the city of Kampala. The overall objective is the sustainable protection of Lake Victoria from pollution in order to preserve its water quality for the production of drinking water. The project outcomes include improved waste water collection system that will provide improved sanitation in Kampala area that consequently reduced risk of disease caused by micro-organism in the waste water; improved water quality in Lake Victoria which would in turn have positive impact on fishing; improved sewerage network; better sanitation and industrial connection that is likely to be enforced because of more accessibility to sewer network system and new jobs created through construction and operation of the system.

b. Zanzibar Water and Sanitation Program - Tanzania (Africa)

The project was implemented since the year 2012 and ends in 2016 with funding of USD15.6 Million. The project seeks to improve quality of life through provision of safe water and sanitation. Expected outcomes are improved access to water supply, sanitation, and institutional capacity

15. Pipeline (2) AfDB Project

a. Lakes Edward and Albert Natural Resources MGT Project - Uganda and DRC (Democratic Republic of the Congo), Africa

The project has USD 6.0 Million budget targeted to implement in 2016. The project intends to develop, manage and utilize the LEA basin water and fisheries resources in a sustainable manner. The project outcomes include jobs

created for local communities in the Lakes' regions (5000 jobs directly created, 20,000 indirect with 50% of these benefiting the women); improved regional and local consultation/cooperation for integrated natural resources management and intra-regional trade in fish product as well as address the social dimensions of resilience, leading to reduce potential sources of local conflict.

**Table 4. List of AfDB Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING AfDB PROJECTS</b>					
Africa	Kampala	WW	2. Kampala Sanitation Program	2010	35.0 M
Africa	Tanzania	WW	3. Zanzibar Water and Sanitation program	2012-2016	15.6 M
<b>PIPELINE AfDB PROJECTS</b>					
Africa	Uganda and DRC	HCW	4. Lakes Edward and Albert Natural Resources MGT Project	2016	6.0 M

### **C. European Bank for Reconstruction and Development (EBRD)**

16. Three (3) MSW projects funded by EBRD were implemented in a single country Georgia for the period 2014 to 2016. One is completed, another one is ongoing and still another one is in the pipeline.

17. On-Going (1) EBRD Project

a. Kvemo Kartli Solid Waste Project in Georgia (Asia).

This project was implemented since May of 2015 with a total funding of USD 10 Million. The project financed the construction of an EU compliant regional sanitary landfill and relevant infrastructure in Marneuli municipality to serve the participating municipalities. The project also included the acquisition of vehicles, waste containers and other equipment for waste management activities; support institutional development of the Company and the

Participating Municipalities. The project intended to support the subsequent closure of the official dumpsites maintained by the Solid Waste Management Company that would eventually benefit not only the public and worker health and safety but also the environment.

18. In the Pipeline (1) EBRD Project

a. Georgia Solid Waste Project (Asia)

The project was loaned to the State of Georgia and Municipalities by EBRD to finance the acquisition of a new fleet of solid waste collection vehicles, solid waste containers and related equipment; as well as support Municipalities to prepare Waste Management Plans and implement Stakeholder Participation Programmes. The project aims to support the overall improvement of waste management practices and enhance people's daily lives by reducing health hazards caused by unsanitary waste handling by established transparent and contractual arrangements for municipal service provision; commercialization and improved financial sustainability of solid waste collection services; and enhanced public awareness.

**Table 5. List of EBRD Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING EBRD PROJECTS</b>					
Asia	Georgia	MSW	2. Kvemo Kartli Solid Waste Project	May 2015-	
<b>PIPELINE EBRD PROJECTS</b>					
Asia	Georgia	MSW	3. Georgia Solid Waste Management Project	2016-	

**D. Food and Agriculture Organization (FAO)**

19. Only one (1) SWM project was funded by the FAO focusing on agricultural biomass for the period 2013 to 2016. This project is on-going implementation in Argentina with the following details:

PROBIOMASA Project stands for the promotion of energy derived from biomass in Argentina (South America).The project was implemented since the year 2013 to end in 2016 with a total funding of USD 5.49 Million.



PROBIOMASA pursues to secure the establishment of provincial-level bioenergy strategies aligned with national policy regarding energy, agricultural and environmental dimensions. The project develops the necessary mechanisms at local, provincial and national level to ensure implementation, supervision and monitoring of the production, management and sustainable use of biomass. The program aims to boost production, management and sustainable use of biomass for energy purposes that will generate a total of 200 electric MW and 200 thermal MW by 2016. Also, it expects to generate other benefits such as annual savings by replacing imported fossil fuels, creation of new jobs, generation of new capabilities focused on renewable energy management, energy security improvement in isolated areas (30 communities in total) and reduction of local pollution of soil and water as well as fire reduction.

**Table 6. List of FAO Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING FAO PROJECT</b>					
South America	Argentina	Waste Agricultural Biomass	PROBIOMASA: Project for the promotion of energy derived from biomass in Argentina	2013-2016	5.49 M

## **E. Global Environment Facility (GEF)**

20. For this assessment period (2012-2016), GEF has funded most number of waste management projects totalling to one hundred (100). It is interesting to note however that the projects being hereto are covering the period 2008 to 2021. During the conduct of the assessment, 17% are completed, 27% are ongoing and 56% are in the pipeline.

21. The GEF funded projects covering six (6) regions, namely Africa, America, Asia, Europe, Middle East and Oceania. Below are the detailed summary of the various projects:

- a. In Africa, GEF has Forty-one (41 or 41%) projects, broken down below:
  - 7 (17%) completed projects: E-waste, hazardous waste, municipal waste, waste agricultural biomass and waste water.

- 9 (22%) on-going projects: hazardous waste municipal waste, waste agricultural biomass and waste water.
- 25 (61%) pipeline projects: hazardous waste, municipal waste, waste agricultural biomass and waste water.
- Majority (26 or 41%) of the projects in Africa has focus on hazardous waste stream.

b. In America, GEF has twenty-four (24 or 24%) projects:

- 4 (17%) completed projects: hazardous waste, municipal waste and waste water
- 8 (33%) on-going projects: hazardous waste, healthcare waste and organic waste.
- 12 (50%) pipeline projects: hazardous waste.
- Majority (17 or 71%) of the projects in America has focus on hazardous waste stream.

c. In Asia, GEF has twenty-two (22 or 22%) projects:

- 5 (23%) completed projects: hazardous waste, municipal waste and waste water
- 9(41%) on-going projects: hazardous waste, healthcare waste, and organic waste
- 8 (36%) pipeline projects: hazardous waste.
- Majority (17 or 77%) of the projects in Asia has focus on hazardous waste stream.

d. In Europe, GEF has eight (8 or 8%) projects:

- 1 (12%) completed projects: hazardous waste, municipal waste, and waste water
- 1(12%) on-going projects: hazardous waste, healthcare waste, and organic waste
- 6 (76%) pipeline projects: hazardous waste.

- 100% of the projects in Europe have focus on hazardous waste stream.
- e. In the Middle East, GEF has two (2 or 2%) pipeline projects. Both focused on hazardous waste.
- f. In Oceania, GEF has three (3 or 3%) pipeline projects. Both focused on hazardous waste.

## 22. On-Going (27) GEF Projects

- a. NAMA on Integrated Waste Management and Biogas - Uganda (Africa),

The project started implementation in 2015 until 2010. The total funding is USD 14.27 Million. It aims to improve waste management practices in Towns and Municipalities by introducing Integrated Wastewater Treatment Plants and Biogas Digesters. Projects outcomes include strengthened Institutions and capacity or improved waste management and regulation; integrated wastewater treatment and biogas plants demonstrated with investment; and scale up of the use of biogas technologies in other municipalities.

- b. Integrated Municipal Management Model of Household and Similar Waste with Low Greenhouse Gas Emissions - Algeria (Africa)

The project started implementation in 2014 until 2017 with total funding of USD 17.49 Million. It seeks to promote a model of municipal integrated management of household and use of waste for energy generation resulting to low GHG emissions. Target outcomes of the project include development of integrated management of water at source; value created from collected waste leading to ultimate minimizations of wastes; and promotion of the municipal model of integrated waste management at the regional and national levels

- c. Promoting Production and Utilization of Biomethane from Agro-Waste - South-Eastern Botswana (Africa)

This project started its implementation in 2014 until 2018 with total funding of USD 17.66 Million. It seeks to facilitate low-carbon investments and public-private partnerships in the production and utilisation of biogas from agro-waste in the districts of South-Eastern Botswana. Project target outcomes include reduction UPOPs, mercury and e-waste emissions through capacity building, introduction, and demonstration of BEP and BAT and strengthening

of the legislative and policy framework, demonstration and introduction of alternative instruments.

- d. Protect Human Health and the Environment from Unintentional Releases of POPs Originating from Incineration and Open Burning of Health Care- and Electronic-waste – Egypt (Africa)

This project started implementation in 2015 until 2020 with total funding of USD 21.02 Million. Protect targets to protect human health and the environment from unintentional releases of POPs originating from incineration and open burning of health care- and electronic waste. Project target outcomes include reduction UPOPs, mercury and e-waste emissions through capacity building, introduction, and demonstration of BEP and BAT and strengthening of the legislative and policy framework, demonstration and introduction of alternate.

- e. Ethiopian Urban NAMA: Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation (COMPOST) (Africa)

The project started implementation in 2015 until 2019 with total funding of USD 50.20 Million. The project seeks to promote greater use of Integrated Solid Waste Management (ISWM) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns aligned with national growth and transformation plan for the urban sector. The project expected outcomes are developed capacity and knowledge management on waste to energy; established pilot agro-industrial WTE plants; and scaled-up investment in WTE plants

- f. Sustainable Conversion of Waste to Clean Energy for Greenhouse Gas (GHG) Emissions Reduction – Kenya (Africa)

This project started implementation in 2015 until 2019 with total funding of USD 11.67 Million. It seeks to promote investments in waste-to-energy (WTE) technologies to increase electrification and to reduce GHG emissions. The project expected outcomes are developed capacity and knowledge management on waste to energy; established pilot agro-industrial WTE plants; and scaled-up investment in WTE plants

- g. Environmentally Sound Management of Municipal and Hazardous Solid Waste to Reduce Emission of Unintentional POPs - Senegal (Africa)

The project was implemented since 2013 until 2018 with total funding of USD 10.13 Million. The project aims to reduce POPs releases from hazardous and municipal wastes by strengthening technical and institutional

capacities of a group of private sectors which can sustain and BAT/BEP demonstrated in the project within the context of the implementation of the National Implementation Plan (NIP) under the Stockholm Convention. Project expected outcomes are reduced dioxin and furan emissions demonstrated at selected dump sites and in hazardous waste process; evident mitigation of socio-economic impacts of the project's intervention on the existing and informal business activities; established legislation framework and enhanced chemical safety awareness

- h. Promotion of BAT and BEP to Reduce uPOPs Releases from Waste Open Burning in the Participating African Countries of COMESA-SADC Sub regions(South Africa)

The project started implementation in 2014 until 2019 with total funding of USD 33.25 Million. It is implemented to continuously minimize unintentionally produced POPs (uPOPs) releases in the open burning sector by introducing best available techniques and best environmental practices (BAT/BEP) demonstrated at selected sites. Expected outcomes include established POPs baseline information on open burning practices and inventory of major dumpsites/landfills in participating countries; strengthened legislation and human resources capacity in implementing BAT/BEP; pilot demonstration of BAT/BEP in selected priority sites; disseminated information and awareness raised; and established monitoring and evaluation mechanism.

- i. Promotion of Waste-to-Energy Applications in Agro-Industries - Tanzania (Africa)

The project started implementation in 2012 until 2016 with total funding of USD 31.78 Million. To promote investments in waste-to-energy (WTE) technologies for energy (electricity + thermal energy) generation in agro-industries. Target outcomes include improved awareness, knowledge, and capacity on waste-to-energy technologies in the country; established financing facility and increased involvement of financing institutions in WTE projects; increased use of WTE technologies for industrial applications

- j. Reducing Argentina's Greenhouse Gas Emissions from the Energy Sector through the Utilization of Organic Waste for Energy Generation in Agriculture and Agro Industries(America)

This project started implementation in 2015 until 2019 with total funding of USD 33.16 Million. It targets to reduce GHG emissions from Argentina's energy sector by incorporating organic residues and waste into generation of heat and electricity in the agro-industrial sector. The project targets to reduce GHG emissions from Argentina's energy sector by incorporating organic residues and waste into generation of heat and electricity

in the agro-industrial sector. Project expected outcomes are strengthened policy and institutional framework, knowledge base and competencies; demonstration of low-GHG energy generation technologies based on agricultural and agro-industrial waste utilization; and monitoring and evaluation plan prepared and carried out.

k. Sustainable Business Models for Biogas Production from Organic Municipal Solid Waste - Argentina (America)

This project started its implementation in 2014 until 2018 with total funding of USD 15.52 Million. It aims to introduce biogas technologies for energy generation as part of the national programme for integrated municipal solid waste management

l. Belize Chemicals and Waste Management Programme (America)

This project started implementation in 2014 until 2017 with total funding of USD 7.54 Million. It seeks to strengthen national institutional, technical, and legal infrastructure and capacity for POPs phase out and sound chemicals management. Project expected outcomes include strengthened institutional capacities through enhanced policies and regulatory framework supporting sound management of chemical life cycle; managed and disposed of POPs waste; reduced dioxin release from informal waste dumps; and reduced UPOPs release from uncontrolled, open burning of agricultural and other wastes

m. Environmentally Sound Management of Polychlorinated Biphenyl (PCB) - Containing Equipment and Wastes and Upgrade of Technical Expertise – Bolivia (America)

This project started its implementation in 2014 until 2017 with total funding of USD 7.67 Million. The project seeks to strengthen national capacities for the environmentally sound management (ESM) of PCBs, reduction/elimination of PCB releases from serviced electrical equipment at workshops and interim storage locations, to avoid cross contamination of electrical equipment and to protect human health and the environment. Expected outcomes include strengthened regulatory and institutional capacities; raised awareness for the implementation; and environmentally sound management of PCB containing electrical equipment and waste

n. Environmental Sound Management of Mercury and Mercury Containing Products and their Wastes in Artisanal Small-scale Gold Mining and Healthcare - Honduras (America)

This project started its implementation in 2015 until 2019 with total funding of USD 5.33 Million. The project aims to protect human health and the environment from Mercury releases originating from the intentional use of mercury in artisanal small-scale gold mining (ASGM), as well as the unsound management and disposal of Mercury containing products from the healthcare sector. Project expected outcomes are strengthened institutional capacities to achieve the ESM of Mercury; strengthened policy and regulatory framework to reduce reliance on Mercury, and Mercury added-products and improve the environmental sound management of Mercury; reduced mercury releases from priority sectors (artisanal & small scale gold mining and healthcare); strengthened technical capacity and infrastructure for the interim storage of Mercury containing wastes.

- o. Environmentally Sound Management of Products and Wastes Containing POPs and Risks Associated with their Final Disposal - Honduras (America)

This project started its implementation in 2015 until 2020 with total funding of USD 13.99 Million. The project is implemented to minimize impacts on health and the global environment through sound chemicals management and reduction of POPs releases through wastes management operations.

- p. Strengthening of National Initiatives and Enhancement of Regional Cooperation for the Environmentally Sound Management of POPs in Waste of Electronic or Electrical Equipment (WEEE) – Latin American Countries

This project started its implementation in 2014 until 2019 with total funding of USD 44.5 Million. The project seeks to strengthen national initiatives and enhance regional cooperation for the environmentally sound management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in Latin-American Countries.

- q. Sound Management of POPs Containing Waste - Mexico (America)

This project started its implementation in 2013 until 2018 with total funding of USD 28.82 Million. The project seeks to minimize impacts on health and the global environment through sound chemicals management and reduction of POPs releases and exposure to POPs from e-waste and pesticides management operations in Mexico. The project expected outcomes include strengthened national legal and regulatory framework to enhance enforcement and compliance capacity for Stockholm Convention (SC); developed and implemented e-waste management plans; demonstrated POPs related to e-

waste release minimization in formal recycling and informal recycling of e-waste settings; established provincial POPs pesticides Waste Management Plan; strengthened institutions at provincial level for obsolete pesticides management

r. Municipal Solid Waste Management - China (Asia)

This project started implementation in 2014 until 2019 with total funding of USD 60.00 Million. The proposed aims to reduce unintentional production of PCDD/F in pilot municipalities by applying best available techniques and best environmental practices (BAT/BEP) to municipal solid waste (MSW) management; and establish favorable conditions for replication of demonstrated BAT/BEP across China, with policy and regulatory framework support and increased award. Expected outcomes include reduced PCDD/F emissions through BAT/BEP application to MSW management; reduced waste for disposal; enhanced public accountability; increased public awareness of social benefits of at source separation and on risks associated with different PCDD/F emission levels; SC requirements incorporated into MSW management regulations; adjusted incentive system for MSW incineration adjusted; increased capacity of provincial and city level environmental officials and city waste managers to monitor and enforce SC requirements, among others

s. Reduction of POPs and PTS release by environmentally sound management throughout the life cycle of electrical and electronic equipment and associated wastes - China (Asia)

This project started implementation in 2012 until 201s with total funding of USD 58.87 Million. The project targets to reduce/elimination of POPs and PTS releases associated with E-Waste processing through implementation of a lifecycle WEEE management system based on extended producer responsibility, and application of BAT/BEP processing technology.

t. Organic Waste Streams for Industrial Renewable Energy Applications – India(Asia)

The project started its implementation in 2013 until 2018 with total funding of USD 21.63 Million. The proposed project will focus on using organic waste streams for industrial renewable energy (RE) applications in SMEs, in support of the energy policy priorities, with the overall aim to trigger technology innovation in SMEs and reduce dependency on fossil fuels. Target outcomes are enhanced use of organic waste streams for industrial RE applications; demonstrated technical and financial viability of projects; enhancement of capacity of key players in target industries; promotion of



knowledge and information sharing and dissemination of best practices; sustainable replication model for effective scaling up of different technologies.

- u. Introduction of an environmentally sound management and disposal system for PCBs wastes and PCB contaminated equipment - Indonesia (Asia)

This project started implementation in 2013 until 2018 with total funding of USD 21.63 Million. The project seeks to build capacity to introduce and implement PCB management system to reduce and/or eliminate releases from PCB waste stockpiles and PCB-containing equipment. It targets to dispose of at least 3,000 tonnes of PCBs, PCB-containing equipment and maximize opportunities for public-private partnership with supporting policies and regulations. The target outcomes are strengthened institutional capacities at central and provincial government; strengthened legislation, policy framework and enforcement of PCBs management; demonstrated management of PCBs through proper collection, packaging, registration, labeling, transportation and safe storage of targeted PCBs wastes; disposed at least 3,000 tonnes of high and other range concentration PCBs, PCB-containing equipment and wastes; increased public awareness on issues concerning PCB wastes impact on health and environment.

- v. Reducing Releases of PBDEs and UPOPs originating from unsound waste management and recycling practices and the manufacturing of plastics - Indonesia (Asia)

This project started implementation in 2013 until 2017 with total finding of USD 20.05 Million. The project's main objective is to reduce releases of PBDEs and UPOPs by improving overall life-cycle management of plastics and PBDEs-containing plastics through the introduction of alternatives to PBDEs in plastics manufacturing processes and the application of BAT/BEP in plastics recycling and disposal practices. Project target outcomes are strengthened national policy and regulatory framework to reduce UPOPs and PBDE releases from plastics manufacturing, recycling, and disposal; reduced or eliminated importation and use of PBDEs (C-pentaBDEs and C-octaBDEs) from being applied in plastics manufacturing.

- w. Elimination of POPs Wastes - Kazakhstan (Asia)

This project started implementation in 2011 until 2018 with total funding of USD 69.6 Million. The overall objective of the project is to reduce the environmental and health hazards associated with stockpiles of PCB-containing materials and waste and POP-containing pesticides, by eliminating

stockpiles, establishing a treatment facility and safeguarding sites consistent with the country's obligations under the Stockholm Convention. Target outcomes are decreased environmental risks and threat to population's health by safely disposing of PCB-containing materials, mainly capacitors, managing and disposing of stockpiles of POP-containing pesticides and enhancing public awareness and farmers' knowledge on POPs pesticide hazards and reduced reliance; opportunities given to neighboring Central Asian countries with the treatment and final disposal of PCBs and POP-containing pesticides; demonstration of clean-up of incidentally contaminated sites

- x. Protect human health and the environment from unintentional releases of POPs and mercury from the unsound disposal of healthcare waste - Kyrgyzstan Republic (Asia)

This project started its implementation in 2014 until 2017 with total funding of USD 7.20 Million. It seeks to implement BEP and BATs in the health-care sector to assist Kyrgyzstan in meeting its obligations under the Stockholm Convention to reduce UPOPs as well as Mercury releases while reducing the occurrence of the spread of infectious diseases due to inadequate HCWM. Project outcomes include enhanced HCWM National plan, implementation strategies, and national and city-wide policies; implemented BAT/BEP for HCWM systems and recycling in the capital area; implemented mercury waste management and mercury reduction active.

- y. Implementation of PCB Management Programs for Electric Cooperatives and Safe e-wastes Management in the Philippines (Asia)

This project started its implementation in 2015 until 2020 with total funding of USD 42.28 Million. The overall goal is to protect human health and the environment through sound management of PCBs and PBDEs in e-wastes. Targeted outcomes are strengthened legislation and institutional capacity in implementing PBDE action plans; reduction and eventual elimination of POPS-PBDEs releases from WEEE; sound management of PCB-contaminated equipment, PCB wastes and stockpiles from electric cooperatives; strengthened institutions, enhanced capacity and raised awareness on sustainable and effective WEEE and PCB wastes management; and monitoring and evaluation of progress of plan implementation

- z. Environmentally Sound Management and Disposal of PCBs Wastes and PCB Contaminated Equipment - Sri Lanka (Asia)

This project started implementation in 2013 until 2018 with total funding of USD 23.78 Million. The project will build capacity to introduce and implement a polychlorinated biphenyl (PCB) management system to reduce

and/or eliminate releases from PCB waste stockpiles and PCB-containing equipment in an environmentally sound manner. Target outcomes include strengthened institutional capacities and stakeholders' awareness on PCB issues; formulated and enforced policy and regulations relevant to PCBs; disposed 1000 tons of PCBs, PCB-containing equipment and wastes

aa. POPs Legacy Elimination and POPs Release Reduction Project  
- Republic of Turkey (Europe)

This project started implementation in 2014 until 2018 with total funding of USD 95.48 Million. The project focuses on addressing POPs legacies through eliminating POPs Pesticide and PCB stockpiles, cleaning up associated POPs and chemical pollutant contaminated sites; dealing with longer term PCB phase out by reducing U-POPs release in major industrial sectors and providing institutional, regulatory and technical capacity strengthening. The project targets to eliminate POPs pesticide stockpile consisting of 3,000 t of pure HCH with high POPs waste concentration and at least 350 t of PCB stockpiles; support assessment, cleanup and monitoring of priority POPs contaminated sites; demonstrate the sustainable treatment of up to 150 cross contaminated PCB transformer units by using de-halogenation technologies; provide technical assistance for setting up a national plan for treatment of PCB contaminated transformers; support the qualification of required hazardous waste infrastructure and technical capacity at national level for the ongoing management of POPs and other chemical hazardous wastes; support enhancing of institutional and regulatory capacity for environmentally sound chemicals management.

23. Pipeline (56) GEF Projects

a. Development of Minamata Convention on Mercury Initial Assessment - Angola, Malawi, and Zimbabwe (Africa)

The project started in 2014 until 2016 with total funding of USD 1.05 Million. The Ratification and early implementation of the Minamata Convention is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in participating countries.

- Participating countries make full use of enhanced existing structures and information available dealing with mercury management to guide ratification and early implementation of the Minamata Convention.
- Full understanding of comprehensive information on current infrastructure and regulation for mercury management enables participating countries to develop a sound roadmap for the ratification and early implementation of the Minamata Convention

- 3. Enhanced understanding on mercury sources and releases facilitated the development of national priority actions
- Improved understanding on national needs and gaps in mercury management and monitoring enabled a better identification of future activities
- Participating countries and key stakeholders made full use of the MIA and related assessments leading to the ratification and early implementation of the Minamata Convention on Mercury
- Enhanced communication, support and training facilitate the development of the Minamata Initial Assessment by participating countries and build the basis for future cooperation and regional approaches for mercury management

b. Minamata Convention Initial Assessment in Francophone Africa II - Benin, Burkina Faso, Niger and Togo (Africa)

The project timeline is 2015 to 2017 with total funding of USD 934,400.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions.

- National and regional capacity improved to ratify and prepare for implementation of the Minamata Convention
- Project achieves objective on time through effective monitoring and evaluation

c. Development of Minamata Initial Assessment - Botswana, Lesotho, Namibia and Swaziland (Africa)

The project timeline is 2015 to 2017 with total funding of USD 861,000.00.

Ratification and early implementation of the Minamata Convention is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in participating countries.

- Establishment of Coordination Mechanism and organization of process
- Assessment of the national infrastructure and capacity for the management of mercury, including national legislation
- Development of a mercury inventory using the UNEP mercury tool kit and strategies to identify and assess mercury contaminated sites

- Identification of challenges, needs, and opportunities to implement the Minamata Convention on Mercury
- Preparation and validation of National MIA reports and implementation of awareness raising activities and dissemination of results
- d. Development of Minamata Convention Mercury Initial Assessment in Africa for Burundi, Central African Republic, Congo Republic, Côte d'Ivoire and Gabon

The project timeline is 2015 to 2017 with total funding of USD 1.06 Million. Ratification and early implementation of the Minamata Convention is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in participating countries.

- Establishment of Coordination Mechanism and organization of process
- Assessment of the national infrastructure and capacity for the management of mercury, including national legislation
- Development of a mercury inventory using the UNEP mercury toolkit and strategies to identify and assess mercury contaminated sites
- Identification of challenges, needs, and opportunities to implement the Minamata Convention on Mercury
- Preparation and validation of National MIA reports and implementation of awareness raising activities and dissemination of results
- Information exchange, capacity building, and knowledge generation
- e. Development of Minamata Initial Assessment – Cameroon (Africa)

The project timeline is from 2015-2017 with total funding of USD 200,000.00. Ratification and early implementation of the Minamata Convention is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in Cameroon.

- f. Integrated Sustainable Urban Development (SUDP) and Environmentally Sound Management of Municipal Solid Waste Project - Cameroon (Resubmission)

The project timeline is from 2016 to 2019 with total funding of USD 123.25 Million. The Project aims to strengthen integrated and environmentally sound urban planning and management in Cameroon by improving sustainable land use and waste management systems, resulting in reduced pollution, GHGs, and uPOPs emissions. The project components which are linked to expected outputs include sustainable and integrated urban planning and management; environmentally sound waste management technologies; and knowledge management and dissemination

g. Minamata Convention: Initial Assessment in Cabo Verde and Sao Tome and Principe (Africa)

The project timeline is 2016 to 2018 in total funding of USD 587,200.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions.

- National capacity improved to ratify and prepare for implementation of the Minamata Convention

- Project achieves objective on time through effective monitoring and evaluation

h. Enabling Activities to Review and Update the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) – Chad (Africa)

The project timeline is 2015 to 2016 with total funding of USD 194,000.00. To review and update the National Implementation Plan (NIP), which will be submitted to the government for approval and eventual transmission by the government to the Conference of Parties (COP) of the Stockholm Convention. Participating stakeholders will be able to manage the additional POPs with newly developed technical skills, expertise, and awareness. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions.

- National and regional capacity improved to ratify and prepare for implementation of the Minamata Convention

- Project achieves objective on time through effective monitoring and evaluation

i. Minamata Convention Initial Assessment – Chad (Africa)

The project timeline is 2015 to 2017 with total funding of USD 278,600.00. Pre-ratification activities under the Minamata Convention

completed to enable policy and strategic decision making and to prioritize areas for future interventions.

- National and regional capacity improved to ratify and prepare for implementation of the Minamata Convention
- Project achieves objective on time through effective monitoring and evaluation
- j. Development of Minamata Initial Assessment and National Action Plan for Artisanal and Small-Scale Gold Mining in Democratic Republic of Congo (DRC) (Africa)

The project timeline is 2016 to 2018 with total funding of USD 1.0 Million. Ratification and early implementation of the Minamata Convention is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in DRC. Expected outcomes include enhanced communication support and training to facilitate MIA development and national action plan; full use of enhanced existing structures and information available in dealing with mercury management; developed roadmap for rat

- k. Development of a Minamata Initial Assessment in Djibouti (Africa)

The project timeline is 2015 to 2017 with total funding of USD 200,000.00. Early implementation of the Minamata Convention is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in Djibouti.

- Establishment of a Coordination Mechanism and organization of process
- Assessment of the national infrastructure and capacity for the management of mercury, including national legislation
- Development of a mercury inventory using the UNEP mercury tool kit and strategies to identify and assess mercury contaminated sites
- Identification of challenges, needs, and opportunities to implement the Minamata Convention on Mercury
- Preparation and validation of National MIA reports and implementation of awareness raising activities and dissemination of results
- l. National Action Plan on Mercury in the Artisanal and Small-Scale Gold Mining sector – Gabon (Africa)

The project timeline is 2015 to 2017 with total funding of USD 661,000.00. National capacity and capability improved for prevention and

management of mercury use, through the preparation of a National Action Plan (NAP) for the artisanal and small-scale gold mining (ASGM) sector.

- Participatory stakeholders able to manage mercury in the ASGM sector (awareness, technical skills, expertise)
- NAP finalized for the endorsement from relevant stakeholders for iterative feedback
- Project achieves objective on time through effective monitoring and evaluation

m. Development of Minamata Convention Initial Assessment (MIA) for Ghana (Africa)

The project timeline is 2016 to 2018 with total funding of USD 200,000.00. The project will undertake a Minamata Convention Initial Assessment (MIA) to enable the Government of Ghana to determine the national requirements and needs for the ratification of the Convention and establish a national foundation to undertake future work towards the implementation of the Convention. Expected outcomes include an operational decision-making structure on mercury; assessed policy and regulatory framework, institutional capacity needs; raised awareness on environmental and health impacts of mercury; mainstreamed mercury intervention and priorities in relevant action plans; built national capacity for mercury inventories; prepared national mercury profile and MIA report

n. National Action Plan on Mercury in the Artisanal and Small-scale Gold Mining Sector – Ghana (Africa)

The project timeline is 2016 to 2018 with total funding of USD 555,250.00. The project seeks to improve national capacity and capability for Mercury management by preparation of a National Action Plan (NAP) for the artisanal and small-scale gold mining (ASGM) sector. Expected outputs of the project include the participatory stakeholders able to manage mercury in ASGM sector in terms of awareness, skills, and expertise; NAP finalized for an endorsement from stakeholders.

o. Minamata Convention Initial Assessment in Francophone Africa I for Guinea, Mali, and Senegal (Africa)

The project timeline is 2015 to 2017 with total funding of USD 775,800.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions.



- National and regional capacity improved to ratify and prepare for implementation of the Minamata Convention
  - Project achieves objective on time through effective monitoring and evaluation
- p. Development of National Action Plan for Artisanal and Small Scale Gold Mining – Madagascar (Africa)

The project timeline is 2016 to 2018 in total funding of USD 500,000.00. Development of National Action Plan to reduce the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, artisanal and small-scale gold mining and processing is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in Madagascar.

- q. Enabling activities to review and update the national implementation plan for the Stockholm Convention on persistent organic pollutants (POPs) – Mauritania (Africa)

The project timeline is 2015 to 2016 in total funding of USD 197,000.00. To review and update the National Implementation Plan, which will be submitted to the government for approval and eventual transmission by the government to the Conference of Parties of the Stockholm Convention. Participating stakeholders will be able to manage the additional POPs with newly developed technical skills, expertise, and awareness.

- Coordination mechanism in place with stakeholders aware of the risk of new POPs
  - Validation of inventories of new POPs (and updating of initial 12 POPs) by relevant stakeholders
  - Identification of national capacities for new POPs management and priority setting of new POPs risk reduction options
  - Government approval of updated NIP for the submission to the SC Secretariat
  - Periodic Monitoring
- r. Strengthen the National Decision Making Mechanism to Ratify the Minamata Convention and Strengthen National Capacities for the Implementation of its Futures Provisions – Morocco (Africa)

The project timeline is 2016 to 2018 in total funding of USD 200,000.00. Undertake a Mercury Initial Assessment (MIA) to enable

Morocco to assess Mercury releases, stocks, use and trade and determine institutional, policy, regulatory and capacity needs and measures to meet future obligations under the Convention, in order for the country to take an informed decision on ratifying the Minamata Convention.

- Enabling environment for decision making on the ratification of the Minamata convention established
- Initial assessment report and national mercury profile prepared
- Monitoring and evaluation
- s. National Action Plan on Mercury in the Mozambican Artisanal and Small-Scale Gold mining sector – Mozambique (Africa)

The project timeline is 2015 to 2017 with total funding of USD 584,000.00. National capacity and capability improved for the management of mercury, through the preparation of a National Action Plan (NAP) for the Artisanal and Small-scale Gold Mining (ASGM) sector.

- Participatory stakeholders able to manage mercury in the
- ASGM sector (awareness, technical skills, expertise)
- NAP finalized for the endorsement from relevant stakeholders
- Project achieves objective on time through effective
- monitoring and evaluation
- t. National Action Plan on Mercury in the Nigerian Artisanal and Small-Scale Gold Mining sector – Nigeria (Africa)

Project timeline is 2016 to 2018 with total funding of USD 873,000.00. The project seeks to improve the national capacity and capability on management of mercury, through the preparation of a National Action Plan (NAP) for the Artisanal and Small-scale Gold Mining (ASGM) sector. Main expected project outcomes include participatory stakeholders able to manage mercury in the ASGM sector; and NAP finalized for the endorsement from relevant stakeholders.

- u. Strengthen National Decision Making Towards Ratification of the Minamata Convention and Build Capacity Towards Implementation of Future Provisions – Seychelles (Africa)

The project timeline is 2014-2016 with total funding of USD 224,100.00. Undertake a Mercury Initial Assessment (MIA) to enable the Government of Seychelles to determine the national requirements and needs for the ratification of the Minamata Convention and establish a national

foundation to undertake future work towards the implementation of the Convention.

- To create an enabling environment for decision-making on the ratification of the Minamata Convention.

- National Mercury Profile and Mercury Initial Assessment Report developed.

v. Development of Minamata Initial Assessment and National Action Plan for Artisanal and SmallScale Gold Mining in Sierra Leone

Project timeline is 2016-2018 in total funding of USD 700,000.00. Early implementation of the Minamata Convention is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in Sierra Leone.

w. Promoting Organic Waste-to-Energy and other Low-carbon Technologies in Small and Medium-scale Enterprises (SMMEs): Accelerating Biogas Market Development in South Africa

The project timeline is 2016-2020 with total funding of USD 29.76 Million. The project seeks to promote market-based adoption of integrated biogas technology in SMMEs in South Africa. Target outcomes are strengthened the capacity of market players and enablers and established technology support systems; strengthened the market environment for biogas and developed regulatory framework for grid-connected small to medium scale waste-to-energy projects; demonstrated and scaled up technical feasibility and commercial viability of waste-to-energy and other low-carbon technologies.

x. Minamata Convention: Initial assessment in the Republic of Sudan (Africa)

The project timeline is 2015-2017 in total funding of USD 318,600.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions.

- National capacity improved to ratify and prepare for implementation of the Minamata Convention

- Project activities objective on time through effective monitoring and evaluation

y. Improve Mercury Management – Tunisia (Africa)

The project timeline is 2015-2017 with total funding of USD 2.95 Million. Contribute to the reduction of negative mercury impacts on human health and the environment in Tunisia.

- Improvements in national capacity to manage mercury-containing waste and comply with the Minamata Convention
  - SNCPA remediation plan improved by complementary information collected during the project
  - Project achieves objective on time through effective monitoring and evaluation
- z. Minamata Convention Initial Assessment (MIA) in the Republic of Colombia(America)

The project timeline is 2014 to 2016 with funding USD 208,000.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions.

- National capacity improved to ratify and prepare for implementation of the Minamata Convention
- Project achieves objective on time through effective monitoring and evaluation

- aa. Reducing UPOPs and Mercury Releases from Healthcare Waste Management, e-Waste Treatment, Scrap Processing and Biomass Burning Colombia(America)

The project timeline is 2016-2021 with funding USD 27.8 Million. The projects aims to introduce BEP and BATs to reduce the release of unintentionally generated POPs and mercury from the treatment of healthcare waste (HCW), processing of Waste Electrical and Electronic Equipment (WEEE), iron and steel, and biomass burning in the sugarcane sector. Expected outcomes are updated release inventory of dioxins and furans; developed inventory for unintentional UPOPs; prevented/reduced emissions of UPOPs and Mercury generated in the treatment of HCW, UPOPs from the processing of WEE, metallurgical industry, and biomass burning; strengthened institutional, administrative, legal, technical and regulatory framework for reducing UPOPs

- bb. Review and Update of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) Colombia (America)

The project timeline is 2014-2016 with funding USD 250,000.00. To update the National Implementation Plan for Colombia in accordance with the new requirements of the Stockholm Convention. Results include:

- Agreement among stakeholders on the methodology, develop activities and responsibilities for updating the NIP.
- Inventory of new POPs established, inventory of initial POPs updated (e.g. Pesticides, POPs and PCBs, etc.), and review the inventory of dioxins and furans.
- Action plans for POPs updated and prepared that can lead to an effective reduction of POPs in the country.
- NIP is applied to guide national actions for addressing the new POPs and the initial 12 POPs and allows Colombia to comply with Article 7 and 15 of the Stockholm Convention.

cc. Review and update of the national implementation plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) in Cuba (America)

The project timeline is 2016-2018 with total funding USD 250,000.00. The project aims to review and update the National Implementation Plan (NIP) for Cuba in order to comply with Articles 7 and 15 under the Stockholm Convention. Expected Outcomes include enhanced national coordination; comprehensive planning and understanding of current POPs management and its impacts to human health as basis for planning; developed sound and cost effective actions to address POPs issues; developed rational and coherent strategies to reduce POPs risks in the country; developed and endorsed NIP as confirmation to commitment to implement Stockholm Convention

dd. Minamata Convention: Initial Assessment in Guatemala (America)

The project timeline is 2016-2018 with total funding USD 278,600.00. The project aims to complete pre-ratification activities under the Minamata Convention to enable policy and strategic decision making and to prioritize areas for future interventions. Expected outcome include improved national capacity to ratify and prepare for implementation of the Minamata Convention

ee. Development of Minamata Initial Assessment and National Action Plan for Artisanal and Small-Scale Gold Mining in Honduras (America)

The project timeline is 2016-2018 with total funding USD 700,000.00. Ratification and early implementation of the Minamata Convention is

facilitated by the use of scientific and technical knowledge and tools by national stakeholders in Honduras. Expected results include:

- Enhanced communication, support and training facilitate the development of the MIA and NAP and build the basis for future cooperation for the NAP implementation.
- Honduras makes full use of enhanced existing structures and information available dealing with mercury management to guide ratification and early implementation of the Minamata Convention.
- Full understanding of comprehensive information on current infrastructure and regulation for mercury management enables Honduras to develop a sound roadmap for the ratification and early implementation of the Minamata Convention.
- Enhanced understanding of mercury sources and releases facilitated the development of national priority actions.
- Improved understanding of national needs and gaps in mercury management and monitoring enabled a better identification of future activities.
- Honduras key stakeholders made full use of the MIA and related assessments and the NAP for the ASGM sector leading to the ratification and early implementation of the Minamata Convention on Mercury.

ff. Minamata Initial Assessment for Panama (America)

Project timeline is 2015 to 2016 with total funding USD 200,000.00. Undertake an Initial Mercury Assessment to identify the national mercury challenges and the extent to which legal, policy and regulatory framework will enable Panama to implement future obligations under the Minamata Convention. Expected outputs include:

- Enabling environment for decision-making on the ratification of Minamata established.
- National Mercury Profile and Mercury Initial Assessment Report development.

gg. Review and Update of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs)- Panama (America)

The project timeline is 2015 to 2017 with total funding USD 210,000.00. To update the National Implementation Plan for Panama in

accordance with the new requirements of the Stockholm Convention. Expected results include:

- Start up of NIP review and update process
- Assess the national infrastructure and capacity for the management of all POPs.
- Develop/Revise Action Plans for new POPs, update Action Plans for original POPs and update the NIP accordingly
- NIP

hh. Development of National Action Plans for Artisanal and Small-Scale Gold Mining in Paraguay (America)

The project timeline is 2016-2018 with total funding USD 500,000.00. Development of National Action Plans to reduce the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, artisanal and small-scale gold mining and processing are facilitated by the use of scientific and technical knowledge and tools by national stakeholders in Paraguay. Expected outputs include:

- Enhanced communication, support and training facilitate the development of the NAP and build the basis for future cooperation for the NAP implementation.
- Paraguay make full use of strengthened national coordination mechanism to guide the NAP development
- Full understanding of comprehensive information of the national ASGM sector enables Paraguay to develop NAP in compliance with the Minamata Convention.
- Paraguay has a NAP in compliance with Annex C of the Minamata Convention to guide its future action aiming at the reduction of mercury emissions and releases from this sector

ii. National Action Plan on Mercury in the Artisanal and Small-Scale Gold Mining Sector in Peru (America)

The project timeline is 2016-2018 with total funding USD 717,000.00. National capacity and capability improved for prevention and management of mercury use, through the preparation of a National Action Plan (NAP) for the artisanal and small-scale gold mining (ASGM) sector. Main expected project outcomes include participatory stakeholders able to manage mercury in the ASGM sector, and NAP drafted for the endorsement from relevant stakeholders

jj. Minamata Initial Assessment for Suriname (America)

The project timeline is 2016-2018 with total funding USD 200,000.00. The project undertake an Initial Mercury Assessment to identify the national mercury challenges and the extent to which legal, policy and regulatory framework will enable Suriname to implement future obligations under the Minamata Convention. Project outputs include:

- Enabling environment for decision-making on the ratification of Minamata established.
- National Mercury Profile and Mercury Initial Assessment Report development
- Monitoring and Evaluation

kk. Development of Minamata Initial Assessment in the Caribbean (Trinidad and Tobago, Jamaica, St Kitts and Nevis, St Lucia)- America

The project timeline is 2016-2018 with total funding 600,000.00. The project goal is to facilitate the Ratification and Early Implementation of the Minamata Convention through the use of scientific and technical knowledge and tools by national stakeholders in Trinidad and Tobago, Jamaica, St Kitts and Nevis and St Lucia.

ll. Strengthen national decision making towards ratification of the Minamata Convention and build capacity towards implementation of future provisions- Azerbaijan (Asia)

The project timeline is 2015-2017 with total funding USD 200,000.00. The project shall undertake a Mercury Initial Assessment (MIA) to enable the Government of Azerbaijan to determine the national requirements and needs for the ratification of the Minamata Convention and defining of national priorities for implementation of the Convention. Project outputs include:

- Enabling environment for decision-making on the ratification of Minamata established
- Development of National Mercury Profile and Mercury Initial Assessment Report
- Monitoring and Evaluation

mm. Strengthen national decision making towards ratification of the Minamata Convention and build capacity towards implementation of future provisions - Bangladesh, Guinea Bissau, Mauritania, Mozambique, and Samoa (Asia)



The project timeline is 2015-2017 with total funding USD 1.0 Million. Undertake a Mercury Initial Assessment to enable the Governments of Bangladesh, Guinea Bissau, Mauritania, Mozambique, and Samoa to determine the national requirements and needs for the ratification of the Minamata Convention and establish a national foundation to undertake future work towards the implementation of the Convention. Project Outputs include:

- Enabling environment for decision-making on the ratification of Minamata established.

- National Mercury Profile and Mercury Initial Assessment

- Report development

- nn. UPOPs Reduction through BAT/BEP and PPP-based Industry Chain Management in Secondary Copper Production Sector in China (Asia)

The project timeline is 2016-2021 with total funding USD 65.35 Million. Reduction and elimination of PCDD/Fs, HCB, and PCNs releases through the introduction of BAT/BEP in the secondary copper production sector in China. Project outputs include:

- Institutional strengthening and capacity building

- Demonstration of BAT/BEP technologies and PPP- based industry chain management

- National Replication Program

- Monitoring and Evaluation

- oo. Improve Mercury Management in India (Asia)

This project shall strengthen India's capacity to manage and monitor mercury use, import, export, stockpiles, emissions and releases throughout the country (with a particular focus on Annex A (Part I), Annex B and Annex D of the Minamata Convention) and enable India to take an informed decision on ratifying the Minamata Convention and to meet future obligations under the Convention.

- pp. Minamata Convention Initial Assessment in Malaysia (Asia)

The project timeline is 2015-2017 with total funding USD 500,000. Undertake a Mercury Initial Assessment to identify national mercury challenges and the extent to which the current legal, policy and regulatory framework will enable Malaysia to implement future obligations under the Minamata Convention.

qq. Minamata Initial Assessment in Nepal (Asia)

The project timeline is 2015-2017 with total funding USD 308,600.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions. Project Outputs include:

- National capacity improved to ratify and prepare for implementation of the Minamata Convention
- Project achieves objective on time through effective monitoring and evaluation

rr. Minamata Convention: Initial Assessment in Sri Lanka (Asia)

The project timeline is 2016-2018 with total funding USD 238,600.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions. Project outputs include:

- National capacity improved to ratify and prepare for implementation of the Minamata Convention.
- Project activities objective on time through effective monitoring and evaluation

ss. Enabling Activities to Review and Update the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants – Thailand (Asia)

The project timeline is 2016-2017 with total funding USD 450,000.00. To review and update the National Implementation Plan (NIP), and have it endorsed and submitted by the Government to the Stockholm Convention Conference of Parties (COP). Project outcomes include coordination mechanism in place with stakeholders aware of the risks of new POPs; validated inventories of new POPs; identified national capacities for new POPs management and priority setting for new risks; government-endorsed and submitted updated NIP to the SC CPOs; and periodic monitoring established.

tt. Minamata Initial Assessment for Albania (Europe)

The project timeline is 2015-2017 with total funding USD 200,000.00. Undertake an Initial Mercury Assessment to identify the national mercury challenges and the extent to which legal, policy and regulatory framework will enable Albania to implement future obligations under the Minamata Convention. The project output include:

- Enabling environment for decision-making on the ratification of Minamata established.

- National Mercury Profile and Mercury Initial Assessment Report development

- uu. Strengthen Bosnia and Herzegovina decision making towards becoming a Party to the Minamata Convention and build capacity towards implementation of future provisions (Europe)

The project timeline is 2015 to 2017 with total funding USD 200,000.00. Undertake a Mercury Initial Assessment to enable the Government of Bosnia and Herzegovina to determine the national requirements and needs for becoming a Party of the Minamata Convention and establish a national foundation to undertake future work towards the implementation of the Convention. Project outputs include:

- Enabling environment for decision-making on becoming the Party to the Minamata Convention established

- National Mercury Profile and Mercury Initial Assessment Report development

- Monitoring and evaluation

- vv. Development of a Minamata Initial Assessment in the Republic of Macedonia (Europe)

The project timeline is 2015-2017 with total funding USD 200,000.00. Ratification and early implementation of the Minamata Convention are facilitated by the use of scientific and technical knowledge and tools by national stakeholders in the Republic of Macedonia. Project outputs include:

- Establishment of a Coordination Mechanism and organization of process

- Assessment of the national infrastructure and capacity for the management of mercury, including national legislation

- Development of a mercury inventory using the UNEP mercury tool kit and strategies to identify and assess mercury-contaminated sites

- Identification of challenges, needs, and opportunities to implement the Minamata Convention on Mercury

- Preparation and validation of National MIA reports and implementation of awareness raising activities and dissemination of results

- ww. Minamata Initial Assessment for Montenegro (Europe)

The project timeline is 2015-2017 with total funding USD 220,000.00. Undertake a Mercury Initial Assessment (MIA) to enable the Government of Montenegro to determine the national requirements and needs for the ratification of the Minamata Convention and establish a national foundation to undertake future work towards the implementation of the Convention. Expected outputs include:

- Creation of an enabling environment for decision-making on the ratification of Minamata.

- Development of the National Mercury Profile and Mercury Initial Assessment Report

- Monitoring and evaluation

xx. Minamata Initial Assessment- Serbia (Europe)

The project timeline is 2016-2018 with total funding USD 297,220. The project seeks to conduct Mercury Initial Assessment (MIA) to enable the Government of the Republic of Serbia to determine the national requirements and needs for the ratification of the Minamata Convention and defining of national priorities for implementation of the Convention. Expected project outcomes are assessed policy, regulatory framework and institutional capacity needs in line with Minamata Convention implementation; raised awareness on environmental and health impacts of mercury; raised importance of mercury priority interventions at the national level through mainstreaming in relevant plans; built national capacity for mercury inventories; and prepared national mercury profile and MIA report

yy. Minamata Convention: Initial Assessment in Turkey (Europe)

The project timeline is 2016-2018 with total funding USD 529,000.00. Pre-ratification activities under the Minamata Convention completed to enable policy and strategic decision making and to prioritize areas for future interventions. Expected outputs include:

- National capacity improved to ratify and prepare for implementation of the Minamata Convention

- Project activities objective on time through effective monitoring and evaluation

zz. Reduction and Elimination of POPs and Other Chemical Releases through Implementation of Environmentally Sound Management of E-Waste, Healthcare Waste and Priority U-POPs Release Sources Associated with General Waste Management Activities – Jordan (Middle East)

The project timeline is 2016-2021 with total funding USD 29.39 Million. Reduction and Elimination of POPs and Other Chemical Releases through Implementation of Environmentally Sound Management of E-Waste, Healthcare Waste and Priority U-POPs Release Sources Associated with General Waste Management Activities. The project focuses on protection of human health and the environment through reduction and elimination of POPs, and other chemicals through implementation of environmentally sound management for e-waste, healthcare waste, and priority U-POPs release sour

aaa. Strengthen national decision making towards ratification of the Minamata Convention and build capacity towards implementation of future provisions- Jordan (Middle East)

The project timeline is 2015-2017 with total funding USD 200,000.00. Undertake a Mercury Initial Assessment (MIA) to enable the Government of Jordan to determine the national requirements and needs for the ratification of the Minamata Convention and defining of national priorities for implementation of the Convention. Project Outputs include:

- Enabling environment for decision-making on the ratification of Minamata established.

- National Mercury Profile and Mercury Initial Assessment Report development

- Monitoring and evaluation

bbb. Development of Minamata Convention Mercury Initial Assessment in Pacific - Cook Islands, Kiribati, Palau, Tonga and Vanuatu (Oceania)

The project timeline is 2016-2018 with total funding USD 520,000.00. Ratification and early implementation of the Minamata Convention are facilitated by the use of scientific and technical knowledge and tools by national stakeholders in participating countries. Project Outputs include:

- Participating countries make full use of enhanced existing structures and information available dealing with mercury management to guide ratification and early implementation of the Minamata Convention

- Full understanding of comprehensive information on current infrastructure and regulation for mercury management enables participating countries to develop a sound roadmap for the ratification and early implementation of the Minamata Convention

- Enhanced understanding on mercury sources and releases facilitated the development of national priority actions

- Improved understanding on national needs and gaps in mercury management and monitoring enabled a better identification of future activities

- Participating countries and key stakeholders made full use of the MIA and related assessments leading to the ratification and early implementation of the Minamata Convention on Mercury

ccc. Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Pacific Region- Fiji, Kiribati, Marshall Islands, Niue, Palau, Samoa, Solomon Islands (Oceania)

The project timeline is 2014 to 2018 with total funding USD 8.44 Million. The project aims to strengthen the capacity for implementation of the updated POPs Global Monitoring Plan (GMP) and to create the conditions for sustainable monitoring of POPs in the Pacific Islands Region. Expected outputs include:

- Relevant stakeholders for project implementation in the Pacific Islands region are committed to carry out the agreed responsibilities.

- Regional network and national capacity to carry out air and water sampling is enhanced in the Pacific Islands region, and high quality data is generated on the presence of initial and new POPs in the region

- Regional network and national capacity to carry out human milk sampling is enhanced in the Pacific Islands region, and high quality data is generated on the presence of initial and new POPs in the region.

- Accuracy of POPs assessment in the Pacific Islands region is consolidated by performance evaluation of national laboratories, as well as by analysis of additional matrices of major national interest.

- Contribution to regional report for the GMP is performed, and a roadmap for sustainable POPs monitoring for the Pacific Islands region in global context is developed.

ddd. Development of Minamata Initial Assessment in Papua New Guinea (Oceania)

The project timeline is 2015-2017 with total funding USD 300,000.00. Ratification and early implementation of the Minamata Convention are facilitated by the use of scientific and technical knowledge and tools by national stakeholders in Papua New Guinea. Expected outputs include:

- Establishment of Coordination Mechanism and organization of process

- Assessment of the national infrastructure and capacity for the management of mercury, including national legislation
- Development of a mercury inventory using the UNEP mercury toolkit and strategies to identify and assess mercury-contaminated sites
- Identification of challenges, needs, and opportunities to implement the Minamata Convention on Mercury
- Preparation and validation of National MIA reports and implementation of awareness raising activities and dissemination of results

**Table 7. List of GEF Funded Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING GEF PROJECTS (27)</b>					
Africa	Africa	WW	18. NAMA on Integrated Waste Management and Biogas in Uganda	2015-2020	14,27 M
Africa	Algeria	MSW	19. Integrated Municipal Management Model of Household and Similar Waste with Low Greenhouse Gas Emissions	2014-2017	17.49 M
Africa	Botswana	WAB	20. Promoting Production and Utilization of Biomethane from Agro-Waste in South-Eastern Botswana	2014-2018	17.66 M
Africa	Egypt	HW	21. Protect Human Health and the Environment from Unintentional Releases of POPs Originating from Incineration and Open Burning of Health Care- and Electronic-waste	2015-2020	21.02 M
Africa	Ethiopia	MSW	22. Ethiopian Urban NAMA: Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation (COMPOST)	2015-2019	50.20 M
Africa	Kenya	HCW	23. Sustainable Conversion of Waste to Clean Energy for Greenhouse Gas (GHG) Emissions Reduction	2015-2019	11.67 M
Africa	Senegal	HCW	24. Environmentally Sound	2013-2018	10.13 M

			Management of Municipal and Hazardous Solid Waste to Reduce Emission of Unintentional POPs		
Africa	South Africa	HW	25. Promotion of BAT and BEP to Reduce uPOPs Releases from Waste Open Burning in the Participating African Countries of COMESA-SADC Sub-regions	2014-2019	33.26 M
Africa	Tanzania	WAB	26. Promotion of Waste-to-Energy Applications in Agro-Industries	2012-2016	31.78 M
America	Argentina	OW	27. Reducing Argentina's Greenhouse Gas Emissions from the Energy Sector through the Utilization of Organic Waste for Energy Generation in Agriculture and Agro-Industries	2015-2019	33.16 M
America	Argentina	OW	28. Sustainable Business Models for Biogas Production from Organic Municipal Solid Waste	2014-2018	15.52 M
America	Belize	HCW	29. Belize Chemicals and Waste Management Programme	2014=2017	7.54 M
America	Bolivia	HW	30. Environmentally Sound Management of Polychlorinated Biphenyl (PCB) - Containing Equipment and Wastes and Upgrade of Technical Expertise in Bolivia	2014-2017	7.68 M
America	Honduras	HCW	31. Environmental Sound Management of Mercury and Mercury-Containing Products and their Wastes in Artisanal Small-scale Gold Mining and Healthcare	2015-2019	5.33 M
America	Honduras	HW	32. Environmentally Sound Management of Products and Wastes Containing POPs and Risks Associated with their Final Disposal	2015-2020	13.99 M
America	Latin America	HW	33. Strengthening of National Initiatives and Enhancement of Regional Cooperation for the Environmentally Sound Management of POPs in Waste of Electronic or Electrical Equipment	2014-2019	44.5 M



			(WEEE) in Latin-American Countries		
America	Mexico	HCW	34. Sound Management of POPs Containing Waste in Mexico	2013-2018	-
Asia	China	HW	35. Municipal Solid Waste Management	2014-2019	60 M
Asia		HW	36. Reduction of POPs and PTS release by environmentally sound management throughout the life cycle of electrical and electronic equipment and associated wastes in China	2012-2016	58.87 M
Asia	India	OW	37. Organic Waste Streams for Industrial Renewable Energy Applications in India	2013-2018	21.63 M
Asia	Indonesia	HW	38. Introduction of an environmentally sound management and disposal system for PCBs wastes and PCB contaminated equipment	2013-2018	30.15 M
Asia	Indonesia	HW	39. Reducing Releases of PBDEs and UPOPs originating from unsound waste management and recycling practices and the manufacturing of plastics in Indonesia	2013-2017	20.05 M
Asia	Kazakhstan	Hw	40. Elimination of POPs Wastes	2011-2018	69.6 M
Asia	Kyrgyz Republic	HCW	41. Protect human health and the environment from unintentional releases of POPs and mercury from the unsound disposal of healthcare waste in Kyrgyzstan	2014-2017	7.2 M
Asia	Philippines	HW	42. Implementation of PCB Management Programs for Electric Cooperatives and Safe e-wastes Management	2015-2020	42.28 M
Asia	Sri Lanka	HCW	43. Environmentally Sound Management and Disposal of PCBs Wastes and PCB-Contaminated Equipment in Sri Lanka	2013-2018	23.78 M
Europe	Turkey	HW	44. POPs Legacy Elimination and POPs Release Reduction Project	2014-2018	95.48 M

<b>PIPELINE GEF PROJECTS (56)</b>					
Africa	Angola, Malawi, Zimbabwe	HW	45. Development of Minamata Convention on Mercury Initial Assessment in Africa	2014-2016	1.05 M
	Benin, Burkina Faso, Niger, and Togo	HW	46. Minamata Convention Initial Assessment in Francophone Africa II	2015-2017	934,400.00
	Botswana	HW	47. Development of Minamata Initial Assessment in Botswana, Lesotho, Namibia and Swaziland	2015-2017	861,000.00
	Burundi, Central African Republic, Congo Republic, Côte d'Ivoire and Gabon	HW	48. Development of Minamata Convention Mercury Initial Assessment in Africa	2015-2017	1.06 M
	Cameroon	HW	49. Development of Minamata Initial Assessment in Cameroon	2015-2017	200,000.00
	Cameron	MSW	50. Integrated Sustainable Urban Development (SUDP) and Environmentally Sound Management of Municipal Solid Waste Project in Cameroon (Resubmission)	2016-2019	123.26 M
	Cape Verde and Sao Tome and Principe	HW	51. Minamata Convention: Initial Assessment in Cabo Verde and Sao Tome and Principe	2016-2018	587,200
	Chad	HW	52. Enabling Activities to Review and Update the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs)	2015-2016	194,000.00
	Chad	HW	53. Minamata Convention Initial Assessment in Chad	2015-2017	278.600.00
	DRC	HW	54. Development of Minamata Initial Assessment and National Action Plan for Artisanal and Small-	2016-2018	1.0 M

			Scale Gold Mining in Democratic Republic of Congo (DRC)		
	Djibouti	HW	55. Development of a Minamata Initial Assessment in Djibouti	2015-2017	200,000.00
	Gabon	HW	56. National Action Plan on Mercury in the Artisanal and Small-Scale Gold Mining sector in Gabon	2015-2017	661,000.00
	Ghana	HW	57. Development of Minamata Convention Initial Assessment (MIA) for Ghana	2016-2018	200,000.00
	Ghana	HW	58. National Action Plan on Mercury in the Artisanal and Small-scale Gold Mining Sector in Ghana	2016-2018	555,250.00
	Guinea, Mali and Senegal	HW	59. Minamata Convention Initial Assessment in Francophone Africa I	2015-2017	775,800.00
	Madagascar	HW	60. Development of National Action Plan for Artisanal and Small Scale Gold Mining in Madagascar	2016-2018	500,000.00
	Mauritania	HW	61. Enabling activities to review and update the national implementation plan for the Stockholm Convention on persistent organic pollutants (POPs)	2015-2016	197,000.00
	Morocco	HW	62. Strengthen the National Decision Making Mechanism to Ratify the Minamata Convention and Strengthen National Capacities for the Implementation of its Futures Provisions	2016-2018	200,000.00
	Mozambique	HW	63. National Action Plan on Mercury in the Mozambican Artisanal and Small-Scale Gold Mining sector	2015-2017	584,000.00
	Nigeria	HW	64. National Action Plan on Mercury in the Nigerian Artisanal and Small-Scale Gold Mining sector	2016-2018	873,000.00
	Seychelles	HW	65. Strengthen National Decision Making Towards Ratification of the	2014-2016	224,100.00

			Minamata Convention and Build Capacity Towards Implementation of Future Provisions.		
	Sierra Leone	HW	66. Development of Minamata Initial Assessment and National Action Plan for Artisanal and Small-Scale Gold Mining in Sierra Leone	2016-2018	700,000.00
	South Africa	OW	67. Promoting Organic Waste-to-Energy and other Low-carbon Technologies in Small and Medium-scale Enterprises (SMMEs): Accelerating Biogas Market Development	2016-2020	29.76 M
	Sudan	HW	68. Minamata Convention: Initial assessment in the Republic of Sudan	2015-2017	318,600.00
	Tunisia	HW	69. Improve Mercury Management in Tunisia	2015-2017	2.95 M
America	Colombia	HW	70. Minamata Convention Initial Assessment (MIA) in the Republic of Colombia	2014-2016	208,000.00
	Colombia	HW	71. Reducing UPOPs and Mercury Releases from Healthcare Waste Management, e-Waste Treatment, Scrap Processing and Biomass Burning	2016-2021	27.8 M
	Colombia	HW	72. Review and Update of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs)	2014-2016	250,000.00
	Cuba	HW	73. Review and update of the national implementation plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) in Cuba	2016-2018	250,000.00
	Guatemala	HW	74. Minamata Convention: Initial Assessment in Guatemala	2016-2018	278,600.00
	Honduras	HW	75. Development of Minamata Initial Assessment and National Action Plan for Artisanal and Small-	2016-2018	700,000.00

			Scale Gold Mining in Honduras		
	Panama	HW	76. Minamata Initial Assessment for Panama	2015-2016	200,000.00
	Panama	HW	77. Review and Update of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs)	2015-2017	210,000.00
	Paraguay	HW	78. Development of National Action Plans for Artisanal and Small-Scale Gold Mining in Paraguay	2016-2018	500,000.00
	Peru	HW	79. National Action Plan on Mercury in the Artisanal and Small-Scale Gold Mining Sector in Peru	2016-2018	717,000.00
	Suriname	HW	80. National Action Plan on Mercury in the Artisanal and Small-Scale Gold Mining Sector in Peru	2016-2018	717,000.00
	Caribbean	HW	81. Development of Minamata Initial Assessment in the Caribbean (Trinidad and Tobago, Jamaica, St Kitts and Nevis, St Lucia)	2016-2018	600,000.00
Asia	Azerbaijan	HW	82. Strengthen national decision making towards ratification of the Minamata Convention and build capacity towards implementation of future provisions	2015-2017	200,000.00
	Bangladesh, Guinea-Bissau, Mauritania, Mozambique, and Samoa	HW	83. Strengthen national decision making towards ratification of the Minamata Convention and build capacity towards implementation of future provisions	2017-2017	1.0 M
	China	HW	84. UPOPs Reduction through BAT/BEP and PPP-based Industry Chain Management in Secondary Copper Production Sector in China	2016-2021	65.35 M
	India	HW	85. Improve Mercury Management in India	2015-	1.0 M
	Malaysia	HW	86. Minamata Convention Initial Assessment in Malaysia	2015-2017	500,000.00

	Nepal	HW	87. Minamata Initial Assessment in Nepal	2015-2017	308,600.00
	Sri Lanka	HW	88. Minamata Convention: Initial Assessment in Sri Lanka	2016-2018	238,600.00
	Thailand	HW	89. Enabling Activities to Review and Update the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants	2016-2017	450,000.00
Europe	Albania	HW	90. Minamata Initial Assessment for Albania	2015-2017	200,000.00
	Bosnia and Herzegovina	HW	91. Strengthen Bosnia and Herzegovina decision making towards becoming a Party to the Minamata Convention and build capacity towards implementation of future provisions.	2015-2017	200,000.00
	Macedonia	HW	92. Development of a Minamata Initial Assessment in the Republic of Macedonia	2015-2017	200,000.00
	Montenegro	HW	93. Minamata Initial Assessment for Montenegro	2015-2017	200,000.00
	Serbia	HW	94. Minamata Initial Assessment	2016-2018	297,220.00
	Turkey	HW	95. Minamata Convention: Initial Assessment in Turkey	2015-2017	200,000.00
Middle East	Jordan	HW	96. Reduction and Elimination of POPs and Other Chemical Releases through Implementation of Environmentally Sound Management of E-Waste, Healthcare Waste and Priority U-POPs Release Sources Associated with General Waste Management Activities	2016-2021	29.39 M
Middle East	Jordan	HW	97. Strengthen national decision making towards ratification of the Minamata Convention and build capacity towards implementation of future provisions	2015-2017	200,000.00
Oceania	Cook Islands, Kiribati,	HW	98. Development of Minamata Convention Mercury Initial	2016-2018	520,000.00

	Palau, Tonga and Vanuatu		Assessment in Pacific		
	Fiji, Kiribati, Marshall Islands, Niue, Palau, Samoa, Solomon Islands, Tuvalu, Vanuatu	HW	99. Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Pacific Region	2014-2018	8.44 M
	HW Papua New Guinea	HW	100. Development of Minamata Initial Assessment in Papua New Guinea	2015-2017	300,000.00

## **F. German Society for International Cooperation, Ltd. (GIZ)**

24. Fifteen (15) SWM projects were funded by GIZ covering the period 2010 to 2019. The status of which are as follows:

- Completed – 10 or 67%
- On-Going - 5 or 33%

25. The funded projects came from four (4) regions, namely Africa, America, Asia and the Middle East. The waste streams responded to by the projects was summarized below.

a. In Africa, GIZ has five (5 or 33%) projects, broken down below:

- 3 (60%) completed projects: Hazardous waste, municipal waste, and waste water.
- 2 (40%) on-going projects: Municipal solid waste.
- The majority (3 or 60%) of the project focused on Municipal Solid Waste stream.

b. In America, GIZ has four (4 or 27%) projects, broken down below:

- 3 (75%) completed projects: Hazardous waste and municipal solid waste and waste water.

- 1 (25%) on-going projects: Municipal solid waste.
- The majority (3 or 75%) of the project focused on Municipal Solid Waste stream.
- c. In Asia, GIZ has four (4 or 27%) projects, broken down below:
  - 3 (75%) completed projects: Municipal solid waste and waste water.
  - 1 (25%) on-going projects: Waste water.
  - The majority (3 or 75%) of the project focused on Waste Water stream.
- d. In the Middle East, GIZ has two (2 or 13%) projects, broken down below:
  - 1 (50%) completed projects: Municipal solid waste.
  - 1 (50%) on-going projects: Waste water.

#### 26. On-Going (5) GIZ Projects:

##### a. Solid waste management and circular economy, Algeria (Africa)

The project timeline is 2014-2017. The project supports an integrated waste management system that also creates jobs. It aims to improve on the collection and transport of domestic waste and raising awareness on waste management. It also aims to improve on efficient disposal and sorting of waste, increased recycling, and knowledge sharing in the waste sector. Target outcomes of the project include improved municipal collection and transportation of domestic waste; and raised awareness on waste management, particularly, efficient disposal and sorting at waste management facilities; increased recycling of waste; improved training and exchange of experiences in the waste sector and project piloted

##### b. National Solid Waste Management Programme (NSWMP), Egypt (Africa)

The project timeline is 2012-2016. The programme is being implemented jointly with the KfW Development Bank and in cooperation with the European Commission. It is working to establish the structures required at the national level and – in addition to the contributions provided within the



framework of financial cooperation – supporting the construction of waste infrastructure in selected areas in four governorates. Based on adapted technical solutions and sustainable financing, model waste management approaches are being implemented in the governorates; local expertise and skills will be developed. At the national level, the programme is helping develop the necessary institutional, strategic and legal frameworks.

Target outcomes of the project are established national dialogue on the development of the strategic and political framework; developed national waste policy; developed internet platform for annual forum promoting networking between all actors in the waste sector; piloted models for collecting and recycling of waste; examined alternative financing models for waste management such as Extended Producer Responsibility (EPR)

c. Advisory project: concepts for sustainable waste management (South America)

The project timeline is 2014-2016. The advisory project draws on the results of completed and ongoing programmes. It compares experience gained through German and international development cooperation and takes into consideration the environmental, social and economic aspects of waste management. GIZ promotes cooperation with the national and international private sector with regard to training, knowledge transfer, networking and strategy development. The project serves as a source of know-how, mediation, and advisory services. Publications are:

- Reducing the input of plastic litter into the ocean around Grenada
- Reducing the input of plastic litter into the ocean around Cozumel
- Marine Litter. Causes, impacts and potential Solutions
- Economic instruments in solid waste management. Applying economic instruments for sustainable solid waste management in low- and middle-income countries
- Environment – Kenya. Waste Tyre Management
- Factsheet Sustainable Waste Management
- Solid Waste Management and Basic Sanitation in Benin
- Economic instruments in the waste management sector - Study by Green Budget Europe (FÖS) commissioned by GIZ Mexico; analysis of economic instruments in the waste management sector using case studies from industrialised and Latin-American countries

- Economic instruments in solid waste management – Case Study Maputo, Mozambique
  - Economic instruments for solid waste management – Case Study Bayawan, Philippines
  - Economic Instruments in Solid Waste Management. Case Study Bulgaria
  - Operator Models. Respecting Diversity: Concepts for Sustainable Waste Management - Réka Soós, Andrew Whiteman, David C. Wilson, Cosmin Briciu, Ekkehard Schwehn (ERM Germany, RWA UK, Green Partners-Romania, Wasteaware UK)
  - Operator Models. Respecting Diversity: Guidance Paper for Solid Waste Management Practitioners - Réka Soós, Andrew Whiteman, David C. Wilson, Cosmin Briciu, Ekkehard Schwehn (ERM Germany, RWA UK, Green Partners-Romania, Wasteaware UK)
- d. Producing energy from wastewater and organic waste, India (Asia)

The project timeline is 2009-2016. The city of Nashik in the state of Maharashtra is reducing its greenhouse gas emissions by using wastewater and organic waste for conversion to energy. By adopting this approach, it is improving its urban wastewater and waste management systems and demonstrating a technical solution in conurbations that can be replicated and financed and contributes to the climate change goals pursued by the Indian Government.

The Project aims to reduce greenhouse gas emissions in Nashik City, Maharashtra by using wastewater and organic waste for conversion to energy. Through adoption of this approach, the city will improve its urban wastewater and waste management systems and

As a result of the intensive involvement of the elected representatives of the city of Nashik and the city administration, all participants were able to improve their technical and business skills. International experts communicated the necessary expertise regarding technological options and management, for instance by providing information about applying the feed-in law for electricity and using a combination of wastewater and organic waste. Other towns and cities have enquired about the sustainable operating and financing model of the plant in Nashik and are showing interest in adopting it. Energy production from wastewater and organic waste is a new concept for Indian urban areas and has consequently aroused considerable interest in constructing more plants of this type.

Outcomes of the project include improved technical and business skills of elected representatives of the and city administration; developed and applied feed-in law for electricity using a combination of wastewater and organic waste; energy production fro

- e. Decentralised wastewater management as a measure for climate change adaptation in Jordan (Middle East)

The project timeline is 2014-2015. The project is providing support to the partner organisations in relation to decentralised wastewater management, and promoting efficient use of the available water resources. The project is based in northern Jordan – the region in which most of the refugees from Syria are living. The project is also helping to develop the capacities of specialists and managers at Jordanian universities. It plans to organise summer schools on applied wastewater technology in cooperation with German and Jordanian universities, as well as study trips to Germany.

Target outcomes of the project are created municipal wastewater system on project planning, issuing tenders, awarding contracts, monitoring construction, and maintaining the wastewater system; conducted feasibility study on the formation of a development partnership with the private sector, and advising treatment plant operators on financing, technology transfer and the construction of decentralised sewage treatment plants; and developed capacities of specialists and managers at Jordanian universities

**Table 8. List of GIZ Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING GIZ PROJECTS (5)</b>					
Africa	Algeria	MSW	11. Solid waste management and circular economy	2014-2017	
Africa	Egypt	MSW	12. National Solid Waste Management Programme (NSWMP)	2912-2016	
America	South America	MSW	13. Advisory project: concepts for sustainable waste management (Publication)	2014-2016	
Asia	India	WW	14. Producing energy from wastewater and organic waste	2009-2016	
Middle East	Jordan	WW	15. Producing energy from	2014-2019	

			wastewater and organic waste		
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## G. Inter-American Development Bank (IADB)

27. Eight (8) SWM projects were funded by IADB covering the period 2009 to 2016. The status of which are as follows:

- Completed – 7 or 88%
  - On-Going - 1 or 12%
- a. The majority (7 or 88%) of IADB projects was implemented in America while only 1 (12%) project is of global/regional coverage.
  - b. The majority (5 or 63%) of the project was focused on Healthcare waste stream while only 3 (or 37%) on Municipal Solid Waste stream.

28. On-going (1) IADB Project

- a. Water and Sanitation Program for Metropolitan Areas – Argentina (America)

The project timeline is from 2015-2016 with funding of 250,000.00. The project include water and sanitation works such as rehabilitation, upgrading, and expansion of water and sewer coverage; and institutional strengthening aimed at improving operating, business, and financial management by service providers. The project target outcomes include improved water and sanitation works and strengthened institutional and financial management by service providers (including preparing micro metering and macro metering, operating efficiency, and energy efficiency plans, review of rate and subsidy structures and levels, administrative reorganization, collection improvement, reduction of unaccounted-for water, and investment planning for operators).

**Table 9. List of IADB Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING IADB PROJECTS (1)</b>					
America	Argentina	HCW	<b>8. Water and Sanitation</b>	2015-	250,000.00

			<b>Program for Metropolitan Areas</b>	2016	
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## **H. International Finance Corporation (IFC)**

29. Three (3) MSW and agricultural projects were funded by ADB being implemented during the period 2011 to 2037 in selected countries from Africa and Asia. The status of which are as follows:

- One (1) completed project was focused on municipal solid waste.
- Two (2) on-going projects was focused on municipal solid waste and waste agricultural biomass.

30. On-going (2) IFC Projects

a. Shalivahana- India (Asia)

Shalivahana Green Energy Limited plans to undertake medium-sized projects in biomass, hydro, and wind energy sectors. The Investment project is aimed to support the company project pipeline of 200MW which includes 2 23MW biomass projects that will be handled by a fully owned subsidiary, Rake Power Limited. The projects targets construction of 3 new biomass power plants which will bring additional capacity of about 45MW in 2011 with approximately 200MW of which 2 biomass projects of 23MW each on pipeline

b. Renew Gen - Sri Lanka (Asia)

Project timeline is from 2012 to 2037. The project aims to build own and operate a 10MW waste to energy project using up to 580MT/day of municipal solid waste using highly proven grate based mass incineration technology suitable for unsorted MSW is used. The electricity generated will be sold to the grid. The project aims to use significant portion of the waste to help minimize negative impact of dumping and burning of waste, at the same time able to generate jobs and other economic benefits and reduced greenhouse gas (GHG) emissions

The project is a 25 year concession to build own and operate a 10MW waste to energy project in the Western Province of Sri Lanka. The project will process up to 580MT/day of municipal solid waste (MSW) and will generate up to 10MW of electricity which will be sold to the grid. The concession will be undertaken by Renewgen Environment Protection Kotte Pvt Ltd (“Renewgen Kotte” or “Company”), a company incorporated in Sri Lanka. The Ceylon Electricity Board will off-take the power generated from the plant. The project will use a highly proven (deployed in over 400 plants worldwide) grate

based mass incineration technology that is suitable for unsorted MSW in conjunction with advanced emission purification systems.

“The largest private sector investment in a waste to energy in Sri Lanka to date awarded via an international bidding process

- The project will handle a significant portion of the waste (up to 580MT per day) of the Western Province of Sri Lanka and help minimize negative impact of dumping and burning of waste
- The plant will provide up to 10MW of renewable energy to the grid
- The plant will generate employment for about 50 workers with a significant part of the workforce drawn from the local community.
- The project will result in reduced greenhouse gas (GHG) emissions
- The project will deliver economic benefits to the WMA which will channel these resources into enhancing its capacity"

**Table 10. List of IFC Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING IFC PROJECTS (2)</b>					
Asia	India	WAB	2. Shalivahana	2011-	-
	Sri Lanka	MSW	Renew Gen	2012-2037	

## I. UN-Habitat

31. Two (2) waste management projects were funded by UN-Habitat; of which one (1) was completed focused on *municipal solid waste (MSW) and the other one is on-going project focused on Healthcare waste*, covering the period 2009 to 2010.

32. On-going (1) UN-Habitat Project

- a. Water and sanitation in the world cities: Local Action for Global Goals, 2010.

This report estimates the number of the population not having adequate water supplies and urban areas that lack sanitation and reports many case studies in Asia, Africa, and Latin America. Outcome: Water and sanitation in the world cities: Local Action for Global Goals. The book is based on new

information, collected from 20 reference cities around the world. The cities demonstrate a range of urban solid waste and recycling systems across six continents and illustrate how solid waste management works in practice in tropical and temperate zones, in small and large cities, in rich and poor countries, and at a variety of scales. This report estimates the number of the population not having adequate water supplies and urban areas that lack sanitation and reports many case studies in Asia, Africa, and Latin America. -- Water and sanitation in the world cities: Local Action for Global Goals

Publication

**Table 11. List of UN-Habitat Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING UN-Habitat PROJECTS (1)</b>					
Global coverage	Asia, Africa and Latin America and the Caribbean	HCW	2. Water and sanitation in the world cities: Local Action for Global Goals	2010	-

## **J. United Nations Development Programme (UNDP)**

33. Six (6) waste management projects were funded by the UNDP being implemented since 2008 until 2017 from five (5) Regions, namely, Asia, Middle East, Oceania, America and Europe. Waste The status of which are as follows:

- Three (3) completed projects focused on hazardous waste, E-waste, and municipal solid waste.
- Three (3) on-going projects focused on municipal solid waste, E-waste and waste agricultural biomass.
- One (1) pipeline

34. UNDP (3) On-going Projects

- a. Integrated PCB Management in Costa Rica (America)

The project timeline is from 2013-2017. The Objective of the project is to minimize risks of exposure from PCBs to people and the Environment in Costa Rica. The project is working to decrease the barriers for achieving sound PCB management. Project's major outcome is strengthened national mechanisms and skills for dialogue, negotiation, and consensus, leading to the specific reduction of POPs and ODS with social, economic and environmental co-benefits through strengthened institutional capacity for the ESM of, including storage and disposal of PCBs; raised awareness and communication

b. Moldova Energy and Biomass Project - Moldova (Europe)

The project timeline is from 2011-2017 with total funding of 14.56 Million EUR. The project aims to contribute to a more secure, competitive and sustainable energy production in the Republic of Moldova through targeted support to the most viable and readily available local source of renewable energy, namely biomass from agricultural wastes. Expected outcomes are improved heating comfort levels in rural public buildings by using readily available biomass; stimulated national markets for efficient household heating, industrial cogeneration, briquetting; raised national capacity in the biomass sector, ensuring sustainability and further replication; and increased awareness and acceptance of renewable energy

c. Integrated Solid Waste Management of Baalbek Caza- Lebanon (Middle East)

The project timeline is from 2011-2015 with total funding USD 2.48 Million. The project aimed to develop capacities of the Ministry of Environment and Baalbek Municipality for the solid waste management. Sanitary landfill was also constructed and the existing dump site in Baalbek was restored as pilot activities. The project aimed to develop capacities of the Ministry of Environment and Baalbek Municipality for the solid waste management. Sanitary landfill was also constructed and the existing dump site in Baalbek was restored as pilot activities

**Table 12. List of UNDP Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING UNDP PROJECTS (3)</b>					
America	Costa Rica	E-Waste	4. Integrated PCB Management in Costa Rica	2013-2017	-



Europe	Moldova	MSW	5. Moldova Energy and Biomass Project	2011-2017	EUR14.56M
Middle East	Lebanon	MSW	6. Integrated Solid Waste Management of Baalbek Caza	2011-2015	2.48

## **K. United Nations Environment Program-International Environment Technology (UNEP-IETC)**

35. Sixteen (16) Waste management projects were funded by UNEP in various countries and being implemented for the period 2012 to 2017. The status of which are as follows:

- Eight (8) completed projects focused on hazardous waste, industrial waste, E-waste, healthcare waste, municipal solid waste.
- Eight (8) on-going projects focused on E-waste and municipal solid waste.

36. On-going (8) UNEP Projects

a. National and City Level Waste Management Strategies (Asia)

The project timeline is from 2014-2016. The project is aimed to support National Governments and Local authorities in the development of integrated waste management strategies, action plans, and demonstration projects. Pilot demonstration projects to be carried out to test the implementability of the action plans. -- \*National and city level Integrated Waste Management Strategies. The program also aims to spearhead the holistic waste management concept to train the next generation of experts through the creation of educational modules and training courses. Expected output is a Course package (33 credit - 24 credit taught courses, and 9 credit research work) for one year professional master's degree and/or short term training.

b. Academic Curriculum on (Holistic) Waste Management, Asia

The program aims to spearhead the holistic waste management concept to train the next generation of experts through the creation of educational modules and training courses. Expected output is a Course package (33 credit - 24 credit taught courses, and 9 credit research work) for one-year professional masters degree and/or short term training

- c. Regional Waste Management Outlooks (RWMO), Asia, 2016-2017

A comprehensive outlook on the overall waste management in Asia, along with a value addition of introducing the holistic waste (solid, liquid, gaseous wastes & emissions). The AWMO will bring the uniqueness and peculiarities of the Asian waste management, and also identifies the capacity building needs and futuristic direction on waste management in the region. It is also expected to provide a guidance to other regional/and national waste outlook. Expected outputs are RWMO publications.

- d. Waste Management studies in ASEAN region (Asia), 2015 to 2016.

UNEP is working closely with the ASEAN to help ASEAN Secretariat to raise awareness and consensus among its member states on undertaking waste as a national priority and leading to a harmonized policy framework in ASEAN based on work in three countries. Expected outputs are three (3) Regional Studies

- e. Global Partnership on Waste Management (GPWM), 2010-present.

The GPWM is an open-ended partnership for international agencies, governments, local/municipal authorities, businesses, academia, and NGOs, for; supporting the development of work plans to facilitate the implementation of Waste Management at a national and local level to overcome environmental, social, and economic issues inflicted by waste and its impact. Expected output is Scientific Assessments on International Waste Management Programmes; and Needs Assessment on Waste Management in developing countries

- f. Development of Scientific Assessments on International Waste Management Programmes, 2016

Mapping of international waste management projects - to analyse gap between demand/needs from developing countries and supply from international organizations – and effectiveness of delivery of international projects. Expected output is an Assessment of Current and On-going Activities on Waste.

- g. Compilation of techniques and Guidelines for E-Waste management

Guidelines of the technologies will be developed based on the available techniques and technologies for E -waste management including collection, storage, and primary and secondary dismantling for resource recovery and

proper disposal of E-waste. Expected output is Guidelines for E-waste Management

h. Development of Techniques Guidance and Compendiums on Waste Tires, 2015-2016

A compendium of commercially-available or near commercially available technologies and associated techniques for recovery of materials and energy from used tires has been drafted, which will be peer-reviewed at an expert workshop. Expected output is a Compendium on Wastetire.

**Table 13. List of UNEP Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING UNEP PROJECTS</b>					
Asia	Kyrgyzstan, Tajikistan; Mongolia; Nepal; Bhutan; India; Cambodia; Malaysia; Myanmar	MSW	9. National and City Level Waste Management Strategies	2014-2015	-
Global / Regional	Asia, Africa, America, Caribbean	MSW	10. Academic Curriculum on (Holistic) Waste Management	2014-2016	-
Global / Regional	Asia, Africa, America, Caribbean	MSW	11. Regional Waste Management Outlooks (RWMO)	2016-2017	-
Global / Regional	Asian Member States	E-waste	12. Waste Management studies in ASEAN region	2015-2016	-
Global / Regional	Global	MSW	13. Global Partnership on Waste Management <GPWM>	2010-present	-
Global / Regional	Global	MSW	14. Development of Scientific Assessments on International Waste Management Programmes	2016-	-
Global /	Global	E-waste	15. Compilation of	2016-	-

Regional			techniques and Guidelines for E-Waste management		
Global / Regional	Global	MSW	16. A compendium of commercially-available or near commercially available technologies and associated techniques for recovery of materials and energy from used tires.	2015-2016	-

## L. World Bank

37. Seven (7) On-going Waste Management projects were funded by the World Bankis being implemented for the period 2009 to 2019from four (4) Regions, namely, Africa, Asia, Europe, European Union.

- a. The majority (5 or 71%) of the projects was focused on municipal solid waste stream while the remaining projects were focused on hazardous waste and waste plastics.

38. On-going (7) World Bank Projects

- a. Liberia - Emergency Monrovia Urban Sanitation (EMUS) Project 3AF, Liberia (Africa)

The project timeline is from 2009 to 2016 with total funding of USD 4.64 Million. The 3AF will support ongoing EMUS activities including a more systemic recycling of plastics. The 3AF supports (i) deepening recycling start-up as a pilot; (ii) initiate preliminary environmental and social studies for a potential landfill Cheese manburg; and (iii) continue with support to MCC to carry on with contractor engagement to collect and transport waste from the transfer stations to the landfill. A number of people in urban areas provided with access to theregular solid waste collection; Volume of waste collected and disposed of; Special SW account for revenue from SW established, among others. Project outcomes include improved waste collection services; enhanced capacities for management of wastes and implementation and supervision; raised public awareness on management of wastes

- b. Managing Healthcare Waste and PCBs, Middle East and North Africa

The project timeline is from 2012-2017 with total funding of USD 16.8 Million. The Project covers promoting best techniques and practices for

managing healthcare waste and polychlorinated biphenyls (PCBs) to reduce releases of dioxins, furans, and PCBs, strengthening the recipient's legal and institutional framework and establishing a sound and sustainable management programs for improving management and final disposal of healthcare waste (HCW) and PCBs.

Project outcomes include strengthened Institutional Framework and Capacity for HCW and PCBs' Management at the national, regional and local levels; improved HCW and PCBs' Management and Disposal. HCW personnel trained at national, regional and local levels; among others"

- c. Solid waste management OBA Pilot in West Bank, Hebron and Bethlehem

The project timeline is from 2013-2018. The objective of the project is to improve access to quality and financially sustainable SWM services in Hebron and Bethlehem (H and B) governorates. The project has two components. The first component is led by the World Bank (WB) and leverages donor support. The second component is private sector participation. Target outcomes are improved access to primary collection service especially the poor households; improved collection up to 9% and with fees efficiently collected, and percentage of cost recovery compared with baseline data. Access to improved primary collection services; Improved Financial Sustainability

- d. Output-Based Aid for Municipal Solid Waste Management, Nepal (Asia)

The project timeline is from 2012-2017 with total funding of USD 4.488 Million. The development objective of the Output-Based Aid for Municipal Solid Waste Management Project for Nepal is improve access to high quality and financially sustainable solid waste management services in participating municipalities in Nepal. Expected outcome: (i) improved the quality of services; (ii) improved financial sustainability.

- e. "Ningbo Municipal Solid Minimization and Recycling Project, China (Asia)

The project timeline is from 2013-2019 with total funding of USD 160 Million. The development objective of the Ningbo Municipal Solid Waste Minimization and Recycling Project for China is to assist selected districts in Ningbo Municipality to increase the volume and proportion of municipal solid waste recycled with processes for waste separation at source and recycling. The project has four components. Key indicators: (i) proportion of waste separated; (ii) total amount of separated kitchen waste collected; and (iii) total amount of recycling materials separated at the sorting centers.

- f. Second Solid Waste Management Project on Environmental Framework and Management Plan, Bosnia-Herzegovina (Europe)

The project timeline is 2012 with total funding of USD 27.5 Million. The project's objectives are to: improve solid waste services cost effectively in participating priority areas; increase administrative and technical capacity for solid waste management at the local and entity level; improve the cost recovery mechanism for the sector to encourage private sector involvement; and correct environmental problems and reduce health hazards caused by inadequate waste collection and disposal systems. By improved collection, transfer, and disposal of solid waste, and the reduction of illegal dumping in environmentally sensitive areas, the project is expected to have positive benefits to human health and to reduce adverse environmental impacts of waste disposal. Expected outcomes include rehabilitated existing disposal sites, wild dump closures, collection infrastructure, support equipment, and to a limited extent convert existing small dumpsites to transfer stations; institutional strengthening and capacity building activities for entity level institutions involved in solid waste management including preparation of feasibility studies, financial, environmental and social assessments of landfill sites and provide support for bidding procedures for the investments and services

- g. Integrated Nutrient Pollution Control Project - Additional Financing, Romania (European Union)

The project timeline is from 2015-2017 with total funding of USD 53.95 Million. The overall development project aims to support Romanian government towards meeting EU Nitrate Directive requirements at the National Scale. The project aimed to support the Government of Romania to meet the EU Nitrates Directive requirements by (a) reducing nutrient discharges to water bodies, (b) promoting behavioral change at the commune level, and (c) strengthening institutional and regulatory capacity. Expected project outcomes include establishment of Local Commune Invest Fund to provide support for effective investments and management practices to reduce nutrient pollution from agricultural, livestock and human sources; strengthened institutional and capacity and coordination; and raised awareness on the issue

**Table 14. List of World Bank Waste Management Projects**

Country Region	Country	Waste Stream	Project	Date (Start/End)	Total Budget (USD)
<b>ON-GOING WORLD BANK PROJECTS (7)</b>					
Africa	Africa	WP	1. Liberia -	2009-2016	4.64 M

			Emergency Monrovia Urban Sanitation (EMUS) Project 3AF		
	Tunisia	HW	2. Managing Healthcare Waste and PCBs (Demonstrating and promoting best techniques and practices for managing healthcare waste and polychlorinated biphenyls -PCBs Project)	2012-2017	16.8 M
	West Bank	MSW	3. Solid waste management OBA Pilot in West Bank	2013-2018	8 M
Asia	Nepal	MSW	4. Output-Based Aid for Municipal Solid Waste Management	2012-2017	4.49 M
	China	MSW	5. Ningbo Municipal Solid Immunization and Recycling Project	2013-2019	160 M
Europe	Bosnia- Herzegovina	MSW	6. Second Solid Waste Management Project on Environmental Framework and Management Plan	2012	27.5 M
European Union	Romania	MSW	7. Integrated Nutrient Pollution Control Project - Additional Financing	2015-2017	53.95 M