

## Independent Terminal Evaluation

African Least Developed Countries (LDCs)

**Capacity strengthening and technical assistance for the  
implementation of the Stockholm Convention (SC)  
National Implementation Plans (NIPs) in African Least  
Developed Countries (LDCs) of the ECOWAS sub-region**

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## List of acronyms and abbreviations

| <b>Abbreviation</b> | <b>Meaning</b>                                    |
|---------------------|---|
| AMCEN               | African Ministerial Conference on Environment     |
| ASP                 | African Stockpiles Programme                      |
| BAT                 | Best available techniques                         |
| BCRCC               | Basel Convention Regional Coordinating Centre     |
| BEP                 | Best environmental practices                      |
| CAR                 | Central African Republic                          |
| COMESA              | The Common Market for Eastern and Southern Africa |
| COP                 | Conference of Parties                             |
| ECOWAS              | Economic Community of Western African States      |
| ESM                 | Environmentally Sound Management                  |
| FAO                 | Food and Agriculture Organization                 |
| FSP                 | Full Size Project                                 |
| GEF                 | Global Environment Facility                       |
| GVD                 | Gestion et Valorisation des Déchêts               |
| IA                  | Implementing Agency                               |
| LDC                 | Least Developed Country                           |
| M&E                 | Monitoring and Evaluation                         |
| MIS                 | Management Information System                     |
| NCC                 | National Coordination Committee                   |
| NPPF                | National POPs Focal Point                         |
| NIP                 | National Implementation Plan                      |
| NPC                 | National Project Coordinator                      |
| NPT                 | National Project Team                             |
| PCB                 | Project Coordinating Body                         |
| PCBs                | Polychlorinated biphenyls                         |
| PCDD                | Polychlorinated dibenzo-p-dioxins                 |
| PCDF                | Polychlorinated dibenzo-furans                    |
| PM                  | Project Manager                                   |
| POPs                | Persistent Organic Pollutants                     |
| PPP                 | Public Private Partnership                        |

| <b>Abbreviation</b> | <b>Meaning</b>   |
|---------------------|--|
| PSC                 | Project Steering Committee   |
| RC                  | Regional Coordinator   |
| RENAPAP             | Regional Network on Safe Pesticide Production and Information for Asia and Pacific |
| SADC                | The Southern African Development Community   |
| SC                  | Stockholm Convention   |
| SCS                 | Stockholm Convention Secretariat   |
| SMART               | Specific, Measurable, Achievable, Relevant, Time-bound                             |
| STP                 | Sao Tome and Principe  |
| ToC                 | Theory of Change   |
| TOR                 | Terms of Reference   |
| UNDP                | United Nations Development Programme   |
| UNEP                | United Nations Environment Programme   |
| UNIDO               | United Nations Industrial Development Organization                                 |
| UP-POPs             | Unintentionally Produced POPs  |

## Glossary of evaluation-related terms

| Term                                  | Definition  |
|---------------------------------------|---|
| Baseline                              | The situation, prior to an intervention, against which progress can be assessed.  |
| Effect                                | Intended or unintended change directly or indirectly due to an intervention.  |
| Effectiveness                         | The extent to which the development intervention's objectives were achieved or are expected to be achieved.   |
| Efficiency                            | A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.   |
| Impact                                | Positive & negative, intended & non-intended, directly & indirectly, long term effects that represent fundamental durable change in the condition of institutions, people & their environment brought about by the Project.   |
| Indicator                             | Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.  |
| Intermediate States                   | The transitional conditions between the Project's outcomes & impacts which must be achieved in order to deliver the intended impacts.   |
| Lessons learned                       | Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.  |
| Logframe (logical framework approach) | Management tool drawing on results-based management principles used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcomes, impacts) and their causal relationships, indicators, and assumptions that may affect project success or failure. |
| Outcomes                              | The likely or achieved short- to medium-term behavioral or systemic effects to which the Project contributes, which help to achieve its impacts.  |
| Outputs                               | The products, capital goods, and services that an intervention must deliver to achieve its outcomes.  |
| Relevance                             | The extent to which an intervention's objectives are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donor's policies.  |
| Risks                                 | Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.   |
| Sustainability                        | The continuation of benefits from an intervention, after the development assistance has been completed.   |
| Target groups                         | Specific entities for whose benefit an intervention is undertaken.  |

# Executive Summary

## A. Introduction

The full-size project “*Capacity Strengthening and Technical Assistance for the Implementation of the Stockholm Convention (SC) National Implementation Plans (NIPs) in African Least Developed Countries (LDCs) of the ECOWAS Sub-region*” funded by the Global Environment Facility (GEF) was implemented from July 2011 to December 2018 by the United Nations Industrial Development Organization (UNIDO). The project covered 15 countries and was nationally executed by the Ministries responsible for Environment of the participating countries. The regional component was executed by a regional coordinator with support from the Economic Community of the Western African States (ECOWAS) Commission and the Africa Institute.

The overall objective of the project was to strengthen and/or build capacity required in LDCs of the ECOWAS sub-region to implement their National Implementation Plans (NIPs) in a sustainable, effective and comprehensive manner while building upon and contributing to strengthening the member country’s capacities for environmentally sound management of POPs chemicals. The evaluation covered the whole duration of the project.

## B. Evaluation findings and conclusions

The in-depth evaluation included a review of project documents and country visits to Guinea, Mali, Niger and Togo to interview project personnel, intended beneficiaries, project partners, and other stakeholders involved in the projects by using a participatory approach. Field visits to the pilot project sites were also undertaken during the country visits. Based on the information available and the findings of the discussions held, the evaluation made the following conclusions.

**Relevance:** The project is relevant to national priorities of the participating countries, and was designed to assist countries in implementing some elements of their National Implementation Plan (NIP) on Persistent Organic Pollutants (POPs). The project is also relevant to GEF strategic priorities in the POPs focal area.

**Efficiency:** The project duration was originally designed for 5 years, but due to challenges the actual duration was 7¼ years. The project was significantly delayed due to changes at the level of UNIDO, Ebola outbreak and lack of support from national authorities. By taking corrective actions, the current UNIDO project manager, adequately supported by the incoming regional coordinator, was able to put the project on the right track. However, despite these efforts, many national activities were not undertaken and most pilot demonstration projects were still on-going at the time of the evaluation.

**Effectiveness:** Due to delays in project implementation, the project has not been able to meet many of its stated objectives. Despite several meetings took place and the Declaration was drafted, the BAT/BEP Forum for the ECOWAS sub-region was not established as only two of the sixteen participating countries signed the Declaration. However, the project contributed to successfully build capacity in some of the participating countries on BAT/BEP in sectors such as textile, leather or recycling of plastics and lube oil through regional and national training workshops. Best available techniques (BAT) have been identified and transferred to the pilot demonstration sites. Most of the demonstration projects are on-going and for most of them it is too early to assess the impact of the project interventions. However, for the pilot demonstration on plastic recycling in Guinea, which is almost completed, impact is already visible - increased productivity and significant cost savings, less POPs released to the environment and livelihood of waste collectors significantly improved. On the other hand, while the preliminary results for the pilot projects on bio-pesticides and smoke fish

look promising, they are not yet completed. Finally, due to short time remaining, phytoremediation, the low cost technology for remediation of contaminated soil was not undertaken.

Sustainability: Some financial as well as socio-political risks have been identified for sustainability of project results. The countries have indicated that they would require financial assistance as well as technical support to sustain and replicate the project results. And there is documented evidence that the project did not get the required support from the decision makers.

UNIDO Backstopping: Several changes of project managers at UNIDO during the project implementation affected the implementation process. It was slow to start but with the take-over of current UNIDO project manager (PM), implementation gathered momentum and all demonstration projects were initiated. She took timely and critical actions, and provided technical back-stopping by hiring quality and competitive international and national experts to introduce BAT/BEP to pilot demonstration sites. Procurement of goods and services for the project were however delayed due to the administrative challenges of implementing this regional project involving so many countries and covering a wide range of environmental issues.

Cross cutting issues:

Although gender aspect was not a requirement for this project (GEF-4), involvement and participation of women in the projects was satisfactory.

Regarding M&E, the logical framework proposed in the project document is adequate to allow for proper monitoring and tracking of progress at output level rather than at outcome level as indicators were provided only for outputs level. There were some deficiencies in the implementation of the M&E plan. However, it was clear that the intervention logic proposed was used as basis for monitoring progress. All PSC meetings were held and reports submitted.

| Rating for the Project |  |           |
|------------------------|--|-----------|
|                        | Evaluation criteria                            | Rating    |
| <b>A</b>               | <b>Impact (progress toward impact)</b>         | <b>MU</b> |
| <b>B</b>               | <b>Project design</b>                          | <b>MS</b> |
| 1                      | • Overall design                               | S         |
| 2                      | • Logframe                                     | MS        |
| <b>C</b>               | <b>Project performance</b>                     | <b>MU</b> |
| 1                      | • Relevance                                    | HS        |
| 2                      | • Effectiveness                                | MU        |
| 3                      | • Efficiency                                   | MU        |
| 4                      | • Sustainability of benefits                   | MU        |
| <b>D</b>               | <b>Cross-cutting performance criteria</b>      |           |
| 1                      | • Gender mainstreaming                         | S         |
| 2                      | • M&E:<br>✓ M&E design<br>✓ M&E implementation | MS        |
| 3                      | • Results-based Management (RBM)               | MS        |
| <b>E</b>               | <b>Performance of partners</b>                 |           |
| 1                      | • UNIDO  | MS        |
| 2                      | • National counterparts and Executing partners | MU        |
| 3                      | • Donor  | S         |
| <b>F</b>               | <b>Overall assessment</b>                      | <b>MU</b> |

**C. Recommendations**

|  |   |
|--|---|
| <b>To UNIDO:</b>                       |   |
| 1                                      | As most of the pilot projects are not completed yet and the preliminary results of many of them look promising, it is recommended to grant an extension of 6 months to allow for completion of activities at the pilot sites. This will not only help sustain the initial results and benefits from the project but also enhance the rate of project’s performance and results achievement.   |
| 2                                      | Although not completed, some of the pilot demonstration projects are already producing tangible results, and impacts are visible at the project sites. The countries indicated that for sustenance or replication of projects results, they would require financial as well as technical support. UNIDO should consider assisting the countries in securing such support through follow-up initiatives or through other mechanisms. |
| 3                                      | Once completed, UNIDO should consider gathering, summarizing and disseminating information and lessons on the pilot demonstration projects to other participating countries and regions.  |
| <b>To UNIDO and ECOWAS commission:</b> |   |
| 4                                      | The BAT/BEP Forum has not been established yet. It is recommended that UNIDO and the ECOWAS Commission should co-operate to put in place a mechanism to implement the regional action plan on BAT/BEP that was developed in the context of the project to ensure replication and sustainability of project results.   |
| <b>To national governments:</b>        |   |
| 5                                      | Very few countries have adopted elements / recommendations / manuals developed in the context of the projects, and which have been incorporated in national strategy / plans or legislation. The countries are encouraged to consider adopting some of the project results in their national strategies, plans or policies.   |
| 6                                      | The national authorities should ensure that used oils coming from different sectors such as electrical, mining and oil industries, which are considered as hazardous wastes, are soundly managed. In particular, in Mali, where the pilot demonstration project on used oil was implemented, the authorities should consider promoting recycling of these used oils.  |
| 7                                      | At the pilot site for contaminated site in Sao Tome and Principe, the two identified contaminated sites will not be remediated due to very short time left. It is recommended that these sites are properly secured and safe guarded with adequate fencing and signage.   |

**D. Lessons learned**

Most participating countries of the project under evaluation complained about the very low budget available for national activities – the biggest part of the budget was allocated to pilot demonstration projects. Given the low funding involved, the project was not given due recognition and support by the decision makers in many countries. It was also difficult to recruit national consultants. Managing the project administratively was very challenging given the high number of countries involved, the high amount of administrative work required, and procurement of good and services were very much delayed. A regional approach for the implementation of projects involving many countries and covering many topics may not be the right approach. A country approach or restricting the number of countries as well as the number of topics (ideally restricted to one) might be a better one.

# 1. Introduction

## 1.1 Evaluation objectives and scope

This terminal evaluation had two main objectives. The first was to assess the project's performance based on the criteria of relevance, effectiveness, efficiency, sustainability and impact. On the other hand, the second was to develop a series of findings, lessons and recommendations to enhance the design of new and implementation of ongoing projects by UNIDO. The assessment included an analysis of the completion of project activities, delivery of outputs, occurrence of outcomes, and of risk management. The key question was whether the project has achieved or is likely to achieve the main objective "to reduce POPs emissions by strengthening and / or building capacity required in participating countries to implement their NIPs in a sustainable, effective and comprehensive manner while building upon and contributing to strengthening the country's capacities for sound management of POPs chemicals". This question was addressed by assessing the extent to which the project contributed to the conditions necessary to build the capacities of the participating countries for the sound management of POPs chemicals.

The purpose of this evaluation exercise was also to draw lessons and recommendations for UNIDO and the GEF that could help in improving the identification, design and implementation of future similar projects. This terminal evaluation report also includes examples of good practices for other projects. The evaluation covered the whole duration of the two projects, from December 2011 to March 2019.

## 1.2 Overview of the Project Context

To address the issue of the continuous degradation of the environment, the Least Developed Countries (LDCs) of the ECOWAS Sub-region adopted a list of measures to strengthen the environmental protection. During the last years, in particular, these countries focused on preventive approaches and on total control of the pollution. To achieve these goals, the ECOWAS Member States ratified the Stockholm Convention on Persistent Organic Pollutants (POPs), with the aim of protecting both human health and the environment against the negative effect of the POPs. According to the article 7 of the Convention, each party has to develop and try to apply a national plan for the implementation of its obligations.

The preliminary gap analyses conducted to assess the baseline situation of each State against the Convention's requirements showed a widespread need of strengthening the capacities and the technology transfer components. Furthermore, the analyses showed other shortages, namely: awareness raising and training; monitoring of POPs in core media and the others; technology transfer for cleaner production; policies and regulations; inventory for intentionally generated POPs releases (pesticides, PCBs) and wastes containing POPs; identification of contaminated sites; an initial inventory of unintentionally produced POPs (UP-POPs) and introduction of BAT/BEP to mitigate and eliminate the releases of UP-POPs by key emitting industries; measures for environmentally sound management of wastes to reduce UP-POPs emitting from current open burning practices; financial mechanisms to ensure implementation of each action plan; development and enhancement of capacity in support of Convention implementation; and establishment of a long-term mechanism to control POPs releases.

The project was implemented by UNIDO and the governments as part of their efforts to fulfil the requirements of the SC. The project is one of three similar projects in three African sub-regions making up the capacity strengthening and technical assistance for the implementation of the SC NIPs in African LDCs and Small Island Developing States (SIDS) Programme. Besides the ECOWAS,

the two other sub-regions were the Common Market for Eastern and Southern Africa (COMESA)<sup>1</sup> and Southern African Development Community (SADC)<sup>2</sup>. The Full-Size Projects (FSP) (UN Environment and UNIDO components together) were endorsed by the GEF CEO in March 2011. The projects for the three sub-regions were of a duration of 5 years. The component implemented by the UN Environment was related to institutional; legislation, regulation, implementation and enforcement capacities. The one implemented by UNIDO is the project under evaluation and is described in the next section.

### 1.3 Overview of the Project

According to the project document, the overall objective of the project was to reduce POPs emissions through strengthening and/or building capacity required in the LDCs of the ECOWAS Sub-region to implement their Stockholm Convention NIPs in a sustainable, effective and comprehensive manner while building upon and contributing to strengthening country's foundational capacities for sound management of chemicals and waste in general.

The immediate objective of the project was to create an enabling environment in the ECOWAS Sub-region by establishing/amending laws, regulations, policies and standards, strengthening institutions for the remediation of contaminated sites, introducing BAT/BEP to industrial processes, managing municipal solid wastes, health-care wastes, supporting the phasing out of agricultural use of POP pesticides through the promotion of best agricultural practices including the use of bio-botanical pesticides and promoting locally designed technologies development.

#### 1. The expected outcomes were

- Outcome 1: Introduction of BAT/BEP in industrial production processes and others mentioned in Annex C of Article 5 of the Convention;
- Outcome 2: Reduction of exposure to POPs at workplace and from waste;
- Outcome 3: Identification and assessment of contaminated Land/sites;
- Outcome 4: Establishment of project management structure and M&E mechanism.

#### Project Factsheet

|  |  |
|--|--|
| Project Title:                               | Capacity Strengthening and Technical Assistance for the Implementation of Stockholm Convention (SC) National Implementation Plans (NIPs) in African LCDs of the ECOWAS Sub-region              |
| UNIDO project No. and/or ID:                 | 104064   |
| GEF project ID: COMESA                       | 3969   |
| Region                                       | Africa (ECOWAS)  |
| Country(ies):                                | Benin, Burkina Faso, Central Africa Republic, Chad, Democratic Republic of Congo, Gambia, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Sao Tome and Principe, Senegal, Sierra Leone, Togo |
| GEF focal area(s) and operational programme: | GEF4; POPs: POPs-1   |

<sup>1</sup> Member countries of COMESA: Burundi, Comoros, DR Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, Zimbabwe.

<sup>2</sup> Member countries of SADC: Angola, Botswana, D. R. Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe.

## Project Factsheet

|   |  |
|---|--|
| GEF implementing agency(ies):   | UNIDO  |
| GEF executing partner(s):   | Ministries of Environment in participating countries |
| Project CEO endorsement / : Approval date:  | May 2011   |
| Project implementation start date: (First PAD issuance date) :                                    | December 2011  |
| Original expected implementation end date:  | December 2016  |
| Actual implementation end date:   | 31 March 2019  |
| GEF project (FSP) grant (excluding PPG, in USD):  | 4,000,000  |
| UNIDO co-financing (in kind, USD) :   | 1,200,000  |
| Total co-financing at CEO endorsement (in USD) :  | 4,793,452  |
| Total project cost (excluding PPG and agency support cost, in USD; at CEO endorsement) (in USD) : | 8,793,452  |
| Mid-term review date:   | July 2017  |
| Terminal evaluation date:   | January – August 2019                                |

### 1.4 Project Implementation Arrangements

As mentioned in the project document, the implementation arrangement for the Programme was the following:

**UNIDO** was the Implementing Agency (IA) of the Programme and the project under evaluation as well, and was implementing the issues of BAT and BEP, technology transfer and private sector investments and public-private partnerships (PPP) at national and sub-regional level; project implementation commenced in December 2011.

**UNEP** was implementing the following components of the Programme: policies, legislative and regulatory framework enforcement and global data collection, management and processing to enhance global monitoring of POPs releases, which are described in the UNEP project document.

**Programme Coordination Body (PCB):** comprising of representatives from UNEP, UNIDO, executing agencies, RECs, the Stockholm Convention Centres (SCCs), the Basel Convention Regional Centres (BCRCs). The PCB was to meet twice per year for the first two years, and had the role of overseeing the programme implementation.

**Sub-regional Project Steering Committees (SPSC):** comprising representatives from UNEP, UNIDO, executing agency staff, POPs/NFPs, the BCRC and relevant organizations relating to project execution. SPSC was to approve annual work plans, agree on terms of reference for external consultants and oversee project activities.

**Regional Coordinator (RC):** A regional coordinator is mentioned in Annex B of the project document. In consultation with UNIDO project manager and the project counterparts, he/she was

to assist the Regional/National Focal Points. He/she was expected to coordinate all activities of the project linking both vertically and horizontally given in the project organizational chart. His/her office would be responsible for maintaining all files of the project, oversee the work of the NPC, maintain linkage with the R/NFPs and through it, with the Sub-Regional Project Steering Committee. He/she was to assist international experts and organize regional workshops, training courses directly or through NFPs. He/she was to ensure that all activities were performed in a timely manner in accordance with the work plan and was to participate in SPSC meetings and submit reports as required. He/she was to take active part in the M&E of the project and to provide all assistance during mid-term and final evaluations. He/she was responsible to submit progress reports and make sure that all necessary reports were submitted in a timely manner.

The RC was foreseen to coordinate all activities of the project linking both vertically and horizontally given in the project organizational chart. He/she was to oversee the work of the NPC and make sure that all activities are performed in a timely manner in accordance with the workplan and support M&E activities of the project. Moreover, RC was to provide overall technical assistance on workshops, trainings, develop a workplan for management and reduction / elimination of POPs; provide assistance in drafting technical specifications of equipment procurement; provide technical advice on establishment of MIS for the project and provide corrective measures for accidental issues that may arise. A RC was recruited at the start of the project. Due to disagreement with the UNIDO PM, his contract was not renewed and he was replaced in 2017.

**National Project Coordinator (NPC):** A NPC is also mentioned in the Annex B of the project document. The NPC was tasked to prepare project's Annual Workplan and its indicators; monitor day-to-day project implementation progress; coordinate project implementation activities in participating countries including preparation of TORs for technical consultants/experts, subcontracts, support organization of workshops and preparation of project quarterly and annual progress reports. According to the first sub-regional progress report<sup>3</sup>, the National POPs Focal Points (NPFs) of the participating countries were the National Project Coordinators

**National Project Teams (NPT):** coordinated by the POPs NFPs, responsible for project execution at the national level. NPT was to include members of the NIP National Coordinating Committee and other relevant stakeholders. NPTs were scheduled to meet once every three months to plan upcoming project activities and evaluate completed activities.

Other experts on contaminated sites, paper and plastic recycling, recycling of lube oil, BAT/BEP, pesticides and wastes management have been recruited, as necessary, during the project. The following diagram is included in the project document, and illustrates the above-described implementation structure.

---

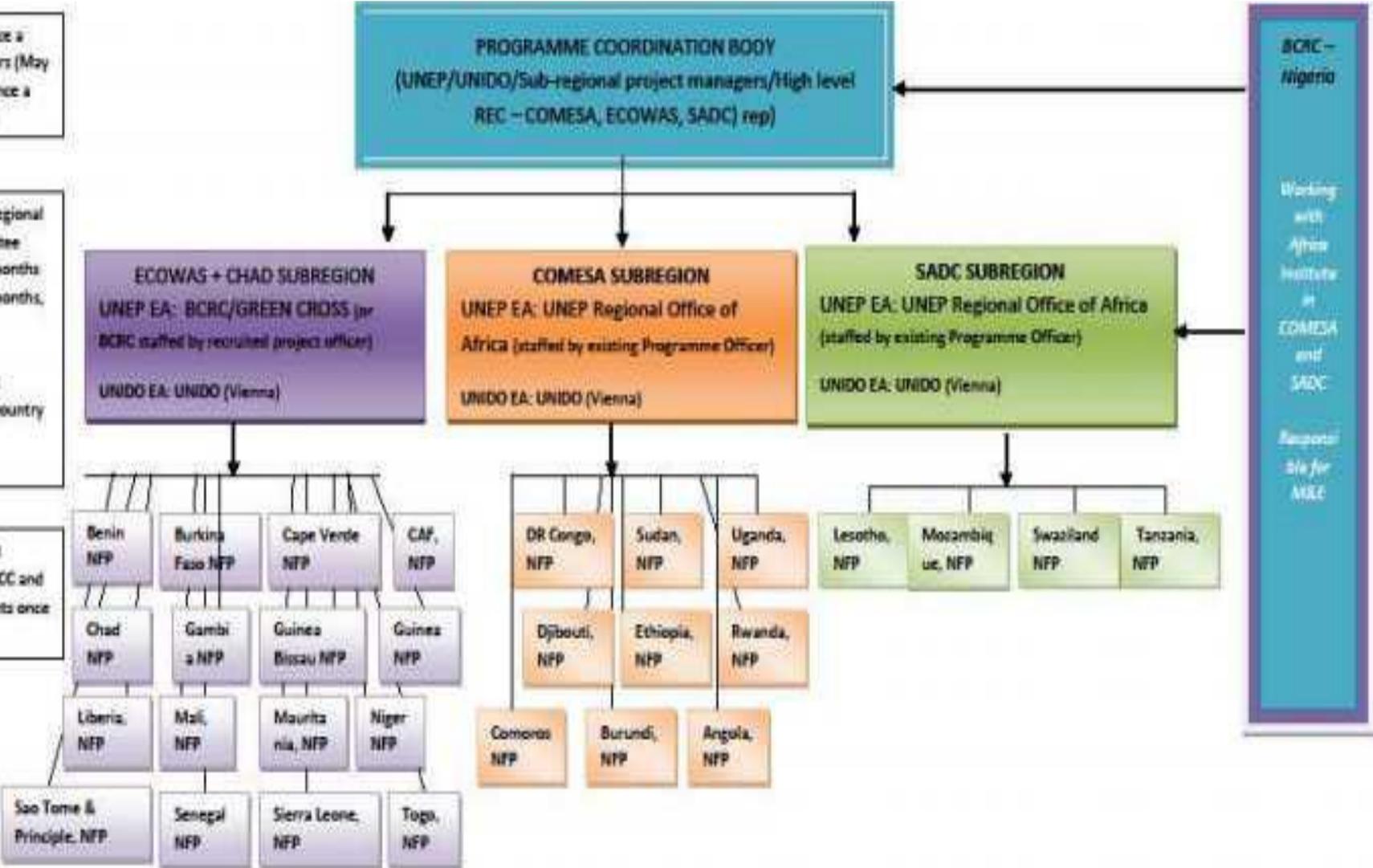
<sup>3</sup> Sub-regional progress report for the period June – December 2011

Diagram of the implementation structure:

Note: meets twice a year for two years (May and Nov), and once a year thereafter.

Note: each subregional steering committee meets every 6 months for the first 18 months, and annually thereafter.  
Composition: 1A: Project officer, country rep; topical organisations

POPs Focal Point (supported by NCC and other orgs). Meets once per month.



## 1.5 Theory of Change

Although no explicit theory of change (ToC) was proposed for the project, the project document (including the logical framework) contain enough information to enable the reconstruction of the ToC describing how the project was expected to contribute to put in place the necessary conditions in the participating countries for impact in the long term.

The ToC (Annex 4) developed by the evaluation team proposes that in order to bring about behavioral changes for effective impact in the LDCs of the ECOWAS sub-region, it is critical that a set of necessary preconditions are achieved. Indeed, for protecting the health of the population and the environment of the LDCs against the hazardous effects of POPs, it is necessary to achieve technological transformations and to build capacities for sound management of wastes and contaminated sites. Capacities to bring about change would be accomplished by adapting and demonstrating technologies (BAT) and approaches (BEP) to reduce the emissions of PCDD/Fs at industrial sites. Incentives for change would be also achieved by developing awareness on the risk of exposure to POPs and ways to manage these risks, and also to build capacity on the identification and remediation of contaminated sites.

The project has greatly assisted the LDCs to put in place these preconditions. However, for effective impact, these preconditions are not sufficient and it is necessary that a number of intermediate states, identified by the evaluation, need to occur. These are: sharing of information, incentive and support; and replication in other regions and countries. One of the key components of the projects was technology transfer at the pilot sites for paper, plastic and lube oil recycling, healthcare waste management, and alternative approaches to the use of pesticides in agriculture in order to reduce PCDD/F releases and risk of exposure to POPs pesticides. As this was done through a pilot approach, it is vital that the results and lessons of these pilot demonstration projects are summarized and shared to other regions and countries for adoption, replication and / or upscaling. To create an atmosphere conducive for this, it is important that appropriate mechanisms / systems for incentives and support are in place in the LDCs, which would contribute to convince private sectors, and other key stakeholders to embark in these replication and / or upscaling efforts.

Several important assumptions were made during project development. One main assumption was high ownership and countries commitment to fulfill their obligations towards the SC. This assumption proved to be correct for pilot demonstration projects only, the project got strong support from the national governments. For the national activities in some of the participating countries, this assumption did not materialize as the project did not get the required support (See Sections 3.3, 4.2 and 5.3).

The other key assumption was local companies willing to invest to implement BAP/BEP. This also proved to be correct as the companies selected for the pilot demonstration projects invested significantly to adopt and implement BAT/BEP. For example, the Global Technology and Industry of Mali (GTIM), a company involved in the recycling of lube oil, invested about USD50,000 to improve on safety at its premises and to get the ISO 14001 certification. Similarly, on recommendation of the project Sodiaplast, a plastic recycling company located in Conakry, Guinea, invested USD 100,000 for the mechanization on its three sorting centers.

## 1.6 Evaluation methodology

The terminal evaluation was conducted in accordance with the UNIDO Evaluation Policy<sup>4</sup>, the UNIDO Guidelines for the Technical Cooperation Programme and Project Cycle<sup>5</sup>, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations<sup>6</sup>, the GEF Monitoring and Evaluation Policy<sup>7</sup> and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies<sup>8</sup>.

A participatory approach that sought to inform and consult with all key stakeholders of the project was used. The evaluation team consisted of Nee Sun Choong Kwet Yive, international consultant, and Francesco Cuda, evaluation analyst, consultant in the UNIDO Independent Evaluation Division.

The evaluation was carried out from February to June 2019. The theory of change approach was used to identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieve them. In particular the extent to which the project contributed to conditions necessary to achieve the overall objective of the project was assessed using this approach.

A combination of methods was used to deliver evidence-based qualitative and quantitative information from various sources: desk studies, individual interviews, focus group meetings and direct observation. In close consultation with the UNIDO Independent Evaluation Division and the UNIDO PM, Guinea, Mali, Niger and Togo, four countries where pilot projects were undertaken, were selected for country missions. In preparing for interviews and visits to the four selected countries, the evaluation team reviewed the documentation of the project provided by the UNIDO Project Manager (PM) and the RC. This included the project documents, the independent midterm evaluation report, minutes of regional Project Steering Committee (PSC) and the Project Coordination Body (PCB) meetings, annual and progress reports, Project Implementation Review (PIR) reports, pilot project and training reports as well as technical reports of international and national experts. The full list of documents consulted and persons interviewed during the evaluation are given in the annexes<sup>9</sup>. The planning of the country visits and the persons to be selected for interviews were done in close consultation with the UNIDO Project Manager (PM), the RC, and the national counterparts.

The country visits took place between 17 February 2019 and 1 March 2019 as follows: Togo: 17 – 19 February 2019; Guinea: 20 – 23 February 2019; Niger: 24 – 26 February 2019 and Mali: 27 February – 1 March 2019. During these visits, the evaluation team, accompanied by the RC, interviewed the key partners / stakeholders of the project such as the national project coordinators (NPCs), the national POPs Focal Points, ministries, academia or national laboratories, and representatives of the institution / company hosting the pilot projects. The evaluation team made field visits to three of the four project sites. In Mali, due to security reasons<sup>10</sup>, the evaluation team

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<sup>4</sup> UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

<sup>5</sup> UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

<sup>6</sup> GEF. (2017). Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized projects (Evaluation Office, Evaluation Document, 11 April 2017)

<sup>7</sup> GEF. (2010) The GEF Monitoring and Evaluation Policy (Evaluation Office, November 2010)

<sup>8</sup> GEF. (2011). GEF Minimum Fiduciary Standards: Separation of Implementation and Execution Functions in GEF Partner Agencies (GEF/C.41/06/Rev.01, 3 November 2011, prepared by the Trustee)

<sup>9</sup> See Annexes 2 and 3.

<sup>10</sup> Mali is facing a number of terrorist attacks since a number of years. To go to the pilot site, the evaluation team had to be accompanied by an armed escort according to the UN regulations. As this was not available, the mission to Kita, where the pilot site is located, was not undertaken.

could not undertake a site visit to the pilot project site on lube oil recycling in Kita, a town located about 200 km west of Bamako. The evaluation team could however interview (in Bamako) the Director and the Deputy Director of GTIM, the company hosting the pilot project. In Togo, they paid a visit to the Ecole Supérieure d'Agronomie of the University of Lomé, which was hosting the pilot project of bio-pesticides. In Niger, the evaluation team made a visit to the pilot site (in Niamey) of the Non-Governmental Organization (NGO) Gestion et Valorisation des Déchets (GVD), which was hosting the pilot project on paper recycling. Finally, in Guinea, a visit was made to the Sodioplast plastic recycling company located in Conakry.

The use of the theory of change approach, face to face interviews and desk review of the project documentation allowed the evaluators to assess causality, explain why objectives were achieved or not, and to triangulate information.

### 1.7 Limitations of the Evaluation

Although a few national and regional training workshop reports were not available, in general no major limitations in terms of access to documented information was encountered. However, it was not possible to interview the previous RC of the project (a citizen of Togo) when the evaluation team was in Togo. Despite numerous attempts made, the former RC could not be reached for interview. Other limitation was that a field visit could not be made to the pilot project site in Mali due to security reasons. Otherwise the other field visits and interviews of key stakeholders and partners took place as scheduled (see Annex 3). At the end of the country missions, the evaluation team went to Vienna, Austria (4 – 5 March 2019), and presented the preliminary findings and conclusions to the UNIDO management staff including the Chief of PTC/ENV/SCD. The comments and feedback received during the presentation have been considered in this report.

### 1.8 Non-participation of some countries

At design the number of countries participating in this regional project was fourteen namely Benin, Burkina Faso, Central African Republic (CAR), Chad, Gambia, Guinea, Liberia, Mali, Mauritania, Sao Tome and Principe (STP), Senegal, Sierra Leone, and Togo. Guinea Bissau joined the project afterwards. The Democratic Republic of Congo (DRC), which was a participating country in the COMESA sub-region project, requested to join the ECOWAS project due to language reason<sup>11</sup>. DRC, CAR and Mauritania did participate in some meetings and workshops such as the Inception Workshop (not for DRC) that was held on 6 – 7 December 2011 in Lomé, Togo, the sub-regional workshop on BAT/BEP in dyeing and finishing of textile and leather and in waste oil refineries held on 6 – 20 July 2012, in Dakar, Senegal and some PSC meetings, but they did not undertake any activity at national level. For DRC and Mauritania, the reasons for this lack of interest are not known. In the case of CAR, it is due to the political instability that the country has known since the beginning of the implementation of the project. This instability has led to recurring changes at the level of the National Focal Point of the Stockholm Convention, which did not have enough time to become familiar with the project before being replaced.

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<sup>11</sup> English was the language used for the COMESA project and DRC is a French speaking country

## 2. Project's contribution to development results - effectiveness and impact

### 2.1 Project's achieved results and overall effectiveness

Overall effectiveness is rated as **Moderately Unsatisfactory**. This rating is based on: i) the extent to which the outputs have been delivered and the outcomes accomplished, and ii) the extent to which outcomes have contributed to the conditions likely to lead to the desired long-term changes. The Africa Institute was subcontracted to measure impact indicators on annual basis. It developed impact assessment tables that were supposed to be completed by participating countries. There is no evidence that the countries provided this information. The assessment of achievement of activities and delivery of outputs is mainly based on Project Implementation Review reports, workshop reports and other relevant reports.

The project included 53 activities that were designed to deliver 10 outputs and to contribute to 4 outcomes. 10 of the 53 activities were designed to be undertaken at national level in all the participating countries. They were related to awareness raising, training activities and conducting surveys for the informal, recycling and waste sectors. A step wise approach was adopted to implement these national activities. Initially, the countries were sub-contracted to implement four activities. The remaining activities were to be undertaken through another sub-contract. However, due to significant delays that the project faced resulting from problems in transfer of funds, changes at the level of UNIDO, Ebola outbreak in 2014, non-recruitment of dedicated NPCs, and difficulty of recruiting national consultants due to low amount of funds available, and which are discussed later in the report (Section 3.3 – Efficiency), none of participating countries were able to complete the 10 activities (Table 1).

Due to the delays and given the short time remaining, the approach was changed in 2017. Instead of regrouping them in one subcontract, the remaining six activities were sub-contracted individually upon request by those countries who were able to successfully execute the first four activities. As can be seen in Table 1, six countries (Burkina Faso, Gambia, Guinea, Niger, STP and Senegal) were able to complete the first four activities, and three of them (Burkina Faso, Gambia and STP) undertook additional activities. The other countries completed three or less activities, with CAR, DRC and Mauritania not undertaking any activity.

The others activities were related to regional workshops on BAT/BEP or to the pilot projects that were implemented in selected countries. A few of these activities were not undertaken as discussed later in this section and in Annex 5. The latter provides a tabulated summary of assessment and ratings for the activities and outputs of the project (excluding activities and outputs for project management). 38 of the 53 activities corresponding to 8 outputs referred to 3 components that contributed to substantive project outcomes: (i) 3 outputs pertained to introduction of BAT/BEP in industrial production processes mentioned in Annex C of Article 5 of the Stockholm Convention (ii) 3 outputs were for reduction of exposure to POPs at workplace and close proximity of POPs wastes and UP-POPs emitting sources and (iii) 2 outputs were designed for the identification and assessment of contaminated sites

The remaining 2 outputs were related to project management and monitoring and evaluation activities. The summary of ratings for the project is reported in Table 2. Note that the ratings of the activities mentioned in Table 2 for each output are those given in Annex 5. Furthermore, as explained in Annex 5, the rating for an output is based on the average rating of all the activities for that output.

Table 1: Number of activities undertaken by the countries

| Country                     | Be* | BF* | CAR | Chad | DRC | Gam* | Guinea | GB* | Lib* | Mali | Mau* | Niger | STP | Sen* | SL* | Togo |
|-----------------------------|-----|-----|-----|------|-----|------|--------|-----|------|------|------|-------|-----|------|-----|------|
| No of activities undertaken | 1   | 5   | 0   | 3    | 0   | 6    | 4      | 3   | 1    | 1    | 0    | 4     | 5   | 4    | 4   | 3    |

\*Be: Benin; BF: Burkina Faso; Gam: Gambia; GB: Guinea Bissau; Lib: Liberia; Mau: Mauritania; Sen: Senegal; SL: Sierra Leone

Table 2: Rating of outputs<sup>12</sup> for the projects

|           | Output     | No of activities | Rating* of activities         | Rating* of Output |
|-----------|------------|------------------|-------------------------------|-------------------|
| Outcome 1 | Output 1.1 | 4                | 1 S; 1 MS; 1MU; 1 U           | MU                |
|           | Output 1.2 | 4                | 4 MS                          | MS                |
|           | Output 1.3 | 4                | 2 N/A**; 2 MS                 | MS                |
| Outcome 2 | Output 2.1 | 5                | 2 MS; 3 MU                    | MU                |
|           | Output 2.2 | 4                | 1 MS; 3 U                     | U                 |
|           | Output2.3  | 7                | 2 S; 2 MU; 3 HU               | MU                |
| Outcome 3 | Output 3.1 | 5                | 1 MS; 4 HU                    | U                 |
|           | Output 3.2 | 5                | 1 S; 1 MS; 3 HU               | U                 |
| Total     | 8          | 38               | 4S+12MS+6MU+4U+10HU+2N/A = 38 | 2 MS; 3 MU; 3 U   |

\*HS: highly satisfactory; S: satisfactory; MS: moderately satisfactory; U: unsatisfactory; HU: highly unsatisfactory

\*\* Activity was not undertaken as sector not identified in sub-regions, so a rating of Not Applicable (N/A) was given

<sup>12</sup> See annex 5 for detailed rating of activities and outputs

**Outcome 1: Introduction of BAT/BEP in industrial production processes mentioned in Annex C of Article 5 of the Convention.** For this outcome, **Activity 1.3.1: Carry out pilot demonstration of BAT/ BEP in textile dyeing and finishing** and **Activity 1.3.2: Carry out pilot demonstration of BAT/ BEP in leather dyeing and finishing** was not carried out because none of the participating countries met the criteria of the Stockholm Convention (Use of chloranil for dyeing in textile sector and alkaline extraction for finishing in leather sector).

Overall, under this outcome, there is documented evidence that the project performed **Moderately Satisfactorily** in the delivery of **Outputs 1.2 and 1.3**, and **Moderately Unsatisfactorily** for **Output 1.1** (Table 2 and Annex 5). In particular, under the **Output 1.1**, although a Declaration on the creation of a BAT / BEP forum for the ECOWAS sub-region was drafted and adopted after consultations in Lomé, Togo in December 2011 and in Ouagadougou in March 2012, and the Regional Forum officially launched in September 2012 in Arusha as side event of the AMCEN Meeting, unfortunately only 2 (Burkina Faso and Togo) of the 16 countries signed this Declaration. Similarly, under this output, the BAT/BEP guidelines could not be adopted as reference documents for improving the performance of industries, including regional, local and traditional practices in the region.

Nevertheless, seven guidelines have been developed on the basis of experiences capitalized through the implementation of six pilot demonstration projects. Similarly, despite efforts, the project did not succeed to formalize a framework for partnerships in the region for the implementation of the regional BAT/BEP action plan.

Given the incomplete achievement of the activities in some countries, and also the non-completion of the pilot demonstration projects, **Output 1.2** is rated **Moderately Satisfactory**. Under this output, a combined regional training workshop was undertaken in Dakar, Senegal, 16 – 20 July 2012 to build capacity on BAT/BEP in the textile, leather and waste oil refinery sectors of the sub-region. According to information submitted by the countries, textile industry exists in only 8 of the 16 countries, and experts from only 6 of the 8 countries attended the workshop.

Similarly, leather industry exists in only 8 countries of the sub-region, and experts from only 6 countries attended the workshop. For the waste oil refinery sector, 15 experts from 12 of the 16 participating countries attended the workshop. At national level a series of national awareness campaigns on BAT / BEP targeting the informal sector was organized in 12 of the 16 countries. Given the inactivity of some countries, this output was rated **Moderately Satisfactory**.

**Output 1.3**, rated **Moderately Satisfactory**, was related to introduction of BAT/BEP to different industrial sectors as well as the informal sector of the sub-region through pilot demonstration projects. As mentioned earlier, the pilot projects for the textile and leather sectors were not undertaken as none of the countries satisfied the SC criteria. On the other hand, two pilot demonstration projects on BAP/BEP for lube oil recycling and for food smoke curing are on-going.

The one on lube oil is being implemented in Mali at the lube oil recycling company, Global Technology and Industry of Mali (GTIM) located in Kita about 200 km west of Bamako. Implementation began in May 2016, and the project contributed to the following satisfactory achievements:

- Fifty-six (56) people sensitized on the environmentally sound management of used oils;
- Upgrading the facility: PCB test kits for oil and soil analysis and portable flue gas analyzers, gases purchased by project and handed to GTIM for better environmental monitoring during the recycling of used oils. Filters for flue gases have also been purchased but have

not yet been installed. A system to direct the gases into the combustion chamber instead of flaring has also been provided to GTIM.

- On recommendation of the project, GTIM invested significantly to improve on the safety at its premises (e.g. construction of appropriate structures for safety and better safety signage posts in place at the facility)
- Guidelines on the recovery and disposal of used oils and on the purchase, sale, collection, storage, transportation and disposal of processed oils developed;
- A paper on the role of the public and private sectors in the collection of hazardous waste drafted;
- Data / information on the country's used oil recycling sector is available;

The pilot demonstration of BAT/BEP for fish smoke-curing is on-going in Benin. Gbgamey in the commune of Cotonou and Djéffa beach in the municipality of Seme-Podji have been initially selected as pilot sites. Generally, smoking of fish is done by women using traditional techniques since decades. With these techniques, the women are unfortunately directly exposed to toxic chemicals such as PAHs<sup>13</sup>, dioxins and furans contained in the smoke (Figure 1). The project planned to introduce the FAO Thiaroye (FTT-Thiaroye) oven at the two selected sites. This oven was designed and developed, in partnership with the FAO, by the Centre National de Formation des Techniciens des Pêches et de l'Aquaculture (CNFTPA), a training institute in Senegal.

Among the numerous advantages the FTT-Thiaroye oven compared to traditional ovens is that its indirect smoke generator system makes use of a vegetable sponge (readily available in local markets), which serves as a filter for PAHs, dioxins and furans generated during the combustion of biomass. With this oven, the women would no longer be exposed to these hazardous chemicals.

Unfortunately, in the framework of the implementation of the Program of Action of the Government of Benin 2016-2021, twenty-four (24) markets were retained to be modernized with the creation of a smoking center. The two selected sites were among the twenty four markets and the FTT-Thiaroye ovens could not be constructed for demonstration purposes.

Following a mission by the international expert in June 2018, two new pilot sites were identified namely the Zogbo market in Municipality of Cotonou and Djéffa village in the Municipality of Sémè Podji. But, the FTT-Thiaroye ovens have not yet been constructed at these new sites. Nevertheless, in the context of the pilot project the following have been satisfactorily achieved: a national audit of the smoked fish and fish products sector in Benin; an analysis of the legal and institutional framework; the elaboration of a regulation based on the BAT / BEP of fish smoking according to the guidelines of Annex C of the Stockholm Convention; a training manual on FTT-Thiaroye technique and a technical sheet for the construction of an FTT-Thiaroye oven.

In addition to the development of these strategic documents, women of the two communities were trained on the best practices in fish smoking. Despite these achievements there is no documented evidence of the impact of the project on these communities.

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<sup>13</sup> PAHs: Polycyclic aromatic hydrocarbons formed as a result of incomplete combustion



**Figure 1:** Pictures taken from consultant's<sup>14</sup> report (a) Djeffa beach site (b) Gbegamey site

**Outcome 2: Reduction of exposure to POPs at workplace and close proximity of POPs wastes and UP-POPs emitting sources.** For this outcome<sup>15</sup>, delivery of outputs has been moderately unsatisfactory for **Outputs 2.1** and **2.3** and unsatisfactory for **Output 2.2** (Table 2).

Under **Output 2.1**, rated **Moderately Unsatisfactory**, representatives of only 7 of the 16 countries participated in a regional workshop on health care waste management that was organized in the context of the AUC project ACP/MEAs on 24 – 26 January, 2012 in Dakar, Senegal. The purpose of the workshop was to (i) raise awareness among the key stakeholders of the health sector on the need to soundly manage HCW; (ii) train participants on tools and technical guidelines for the sound management and disposal of HCW; (iii) train the participants on the implementation of pilot projects and national programs on the sound management of HCW. In the context of the project, a regional training workshop on municipal solid waste management was held in 2013 in Guinea Bissau. Experts involved in solid waste recycling from Ghana, Guinea Bissau, Senegal and Togo as well as municipal health workers and NFPs attended the workshop<sup>16</sup>.

Although these regional workshops on MSW and HCW management have been undertaken, there is no evidence that a regional programme for training on cleaner municipal solid waste and health-care waste management has been established (**Activity 2.1.3**). Under this output, only 8 of the 16 participating countries organized a national workshop on cleaner solid waste management (corresponding to **Activity 2.1.1**). Finally, only two (Niger and Sao Tome and Principe) of the sixteen countries adapted the training manuals on wastes to the national context (**Activity 2.1.4**). The key activity of this output was the pilot demonstration on sound management of HCW that was on-going (at the time of the evaluation exercise) at the Simao Mendes National Hospital in Guinea Bissau. The project has already purchased the necessary equipment for sound treatment of HCW and delivered to the hospital, and the building to host that equipment has also already been built. However, the equipment was not yet installed at the time of the evaluation<sup>17</sup>. 35 health care personnel of the hospital have already been trained on sound management of HCW.

<sup>14</sup> Evaluation du taux d'adoption, du confort et des impacts sur le chiffre d'affaires des femmes fumeuses de poisson utilisant la technologie FAO-Thiaroye. Naomie AFOUDA, August 2017

<sup>15</sup> See Annex 5 for detailed rating of outputs and activities

<sup>16</sup> Information taken from progress report of the RC

<sup>17</sup> Equipment was not yet installed at the time of the evaluation. The international consultant for this pilot project was to undertake a field mission to Guinea Bissau in March 2019, after the evaluation mission to the countries.

**Output 2.2** was related to the production and promotion of bio-botanical pesticides<sup>18</sup> in agriculture including market-gardening in urban areas of the countries of the sub-region. The inactivity of most of the participating countries for this output fully justifies its **Unsatisfactory** rating (Table 2). National workshops on integrated pest management in crop protection and post-harvest management with particular focus on the use of bio-pesticides and national inventories of existing bio-botanical pesticides formulations were undertaken in only one (Togo) of the sixteen participating countries.

The highlight for this output was supposed to be the pilot demonstration project on bio-pesticides that was undertaken in Togo, and hosted at the Laboratoire de Recherche sur les Agroressources et la Santé Environnementale (LARASE), University of Lomé, Togo. An expert of the Regional Network on Pesticides for Asia and the Pacific (RENPA<sup>19</sup>) provided technical assistance for this pilot project. At the time of the evaluation, the following have been achieved:

- Current status of known plant-based bio-pesticides in Togo;
- Priority crops and current national strategies for plant protection in Togo reviewed;
- Availability of neem (*Azadirachta indica*) and Indian verbena (*Cymbopogon schoenanthus*) analyzed;
- Two bio-pesticides formulated – one based on neem essential oil and Indian verbena essential oil, and a wettable powder based on neem seeds;
- Successful testing of these two formulated bio-pesticides at laboratory scale in mini greenhouses; real field testing not yet undertaken
- LARASE laboratory at the University of Lomé in Togo equipped with a gas chromatograph coupled with a mass spectrometer (GC / MS) (Figure 2 (c)) – purchased by the project - to strengthen its technical capacity to analyze bio-pesticides;
- LARASE laboratory at the University of Lomé in Togo equipped with a neem seed powder production unit including a neem seed dehuller (Figure 2 (a)), a neem seed huller and a neem seed crushing machine (Figure 2 (b)) – equipment set purchased by the project
- Five people trained on GC / MS equipment and on neem seed powder production unit
- Ninety-four people trained in the collection and processing of neem seeds.
- Forty-six vegetable and crop growers sensitized on the benefits of bio-pesticides;
- A PhD thesis entitled « *Développement d'un biopesticide à visée agronomique à base d'huile essentielle de verveine des Indes (Cymbopogon Schoenanthus (L.) Spreng)* » successfully completed.
- PhD student and plant protection specialist trained in bio-pesticide formulation;
- Two hectares of land belonging to the Agricultural Experiment Station of the University of Lomé at Tchitchao (450 km north of Lomé) planted with neem trees.

These achievements look very promising indeed as capacity has been built for the formulation of new bio-pesticides as well as their analysis, and also their testing on selected crops at pilot scale level in mini greenhouses. But field testing as well as production of these new formulations that would require significant investment (especially for the essential oils production) for scaling up have not been done yet. The evaluation questions this approach adopted for the demonstration project. Well established neem-based bio-pesticide formulations (easy to use and requiring minimal

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<sup>18</sup> Bio-botanical pesticide will be referred as bio-pesticide for simplification

<sup>19</sup> Experts of RENPA have successfully implemented numerous projects on bio-pesticides in the Asian and Pacific regions. For all the projects, a neem based bio-pesticide produced from neem seeds was used

investment for production<sup>20</sup>) have been successfully used and promoted by RENRAP for crop protection in different parts of the world (e.g. in Asia and Pacific) since decades. These same established formulations, which did not require any further research, have been successfully used in the bio-pesticide demonstration pilot projects of the COMESA and SADC sub-region projects (see Section 1.2, last paragraph)<sup>21</sup>, and thousands of small planters in these two sub-regions have already adopted these bio-pesticides.

The evaluation considers that had the project proposed and promoted these well-established neem-based bio-pesticides since the beginning, the outcome would have been completely different. The project would have most likely gained the buy-in of the small-scale planters and other growers, and thousands of them would have most probably already adopted these cheap and efficient neem-based formulations. In parallel, capacity could have been built to develop these new formulations (based essential oils). There is no evidence yet of any support for a PPP model for the creation of a national MSE to produce and promote use of bio-pesticide (**Activity 2.2.4**).



**Figure 2:** (a) Neem seed dehuller; (b) Neem seed crushing machine; (c) GC/MS

**Output 2.3** is rated **Moderately Unsatisfactory** given the short comings evidenced for this output. No country undertook any activity to identify the informal PCB waste collection system and carry out environmental audits to determine the need to improve the collection and channeling of PCB waste streams in an environmentally sound way (**Activity 2.3.1**). Eleven (Benin, Burkina Faso, Chad, Mali, Niger, Senegal, Togo, Congo DR, Mauritania, Guinea-Bissau, and Guinea) of the sixteen countries were already engaged in a regional UNEP/GEF project on PCB sound management<sup>22</sup> as mentioned in the project document, and which started in 2010 and closed in 2015. This could explain why these eleven countries did not undertake this activity. But there was no documented evidence of synergies between this activity and the UNEP/GEF project in the eleven countries. For this output, the investigation of the current informal paper and e-waste management and the management of other halogenated solid and liquid waste was not done by any country (**Activity 2.3.5**), and none provided support for activities to prevent irrational dumping and open burning of paper and other halogenated solid and liquid wastes (**Activity 2.3.6**). On the other hand, only 7 out of the 16 countries conducted surveys on existing concepts for plastic waste management (**Activity 2.3.2**).

<sup>20</sup> About USD12,000 and it corresponds to the neem seed pulper, a neem seed huller and a neem seed crushing machine that the project provided to the University of Lome

<sup>21</sup> Similar projects to the project under evaluation have been implemented in countries of the COMESA and SADC sub-regions

<sup>22</sup> Demonstration of a Regional Approach to Environmentally Sound Management of PCB Liquid Wastes and Transformers and Capacitors Containing PCBs – GEF ID 2770 – 4,889,300 USD

The key achievement for **Output 2.3** was the successful implementation of the pilot demonstration project on recycling of plastic wastes in Guinea. This demonstration project, which was nearly completed during the evaluation, was hosted by Sodiaplast, a company present in Senegal, Burkina Faso and Sierra Leone also, specialized in the recycling of plastic wastes. The project contributed to the following remarkable achievements:

- 536 plastic waste collectors (67 groups) sensitized and equipped with collection kits and personal protection equipment (PPE) such as gloves, masks and boots (Figure 3(c))
- 145 people (51 women and 94 men) sensitized on the environmental sound management (ESM) of the plastic wastes;
- Comprehensive audit of current plastic wastes management practices done, validated and shared;
- National communication strategy on the ESM of plastic wastes is available;
- A concept of private public partnership for ESM of plastic wastes developed and validated and shared;
- Guinean legal framework for the management of MSW reviewed and henceforth includes specific provisions for the ESM of the plastic wastes;
- National Action Plan for the elimination of plastic wastes in the environment developed, validated and shared;
- Sodiaplast equipped with BAT equipment – purchased by project for USD230,000 – (Figure 3(a)) and flue gas treatment device<sup>23</sup> that would result in increased efficiency (production increased from 8 to 12 tons daily) and decrease in the release of dioxins and furans. Sodiaplast invested about USD100,000 to mechanize its three sorting centers by purchasing sorting and compacting machines (Figure 3 (b))<sup>24</sup>.
- Plastic wastes are recycled into finished plastic products such as chairs and water containers (Figure 3 (d)) that are sold on the local markets. According to feedback gathered during the field mission<sup>25</sup>, those products are much more robust than similar imported products. Those having bought these recycled products are very satisfied and always look for these products.

Besides these achievements, the project contributed to create employment and improve the livelihood of the plastic waste collectors, who generally come from the very poor communities. The president of the association of plastic waste collectors (created in 2016), whom the evaluation met during the field mission<sup>26</sup>, was very thankful to the project, and stated that before the project they were 200, and currently they are 1216.

He also mentioned that the project helped to increase their income and decrease poverty in their community. They received proper training on how to protect their health by using personal protective equipment and each one of them received 2 pairs of boots, 2 pairs of gloves and 2 masks.

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<sup>23</sup> Flue gas treatment device not yet installed at the time of the evaluation.

<sup>24</sup> Interview data with the DG of Sodiaplast on 21 February 2019

<sup>25</sup> Mission to Guinea was undertaken on 20 – 23 February 2019.

<sup>26</sup> The evaluation team met the President of the Association of plastic waste collectors on 20 February 2019 in Conakry, Guinea



**Figure 327:** (a) Shredding & grinding equipment (b) Mechanization of sorting center (c) Worker wearing PPE (d) Plastic products

The pilot demonstration project on used paper / cardboard recycling under **Output 2.3** is on-going in Niger. The demonstration was hosted by the NGO Gestion et Valorisation des Déchets (GVD) in Niamey, Niger. GVD, which was created in 2005 in Niger, is involved in the recycling of wastes (e.g. plastics wastes) into finished products, which are sold on the local market. Currently, GVD is present in many countries of the sub-region including Cameroon, DRC, Ivory Coast, Mali and Togo where they have waste recycling units. Since the start of the demonstration project in 2017, the following satisfactory results have been achieved:

- The regulatory and institutional framework for the management of paper and cardboard waste in Niger reviewed;
- An operational strategy for paper and cardboard waste management drafted;
- Two options for recycling used paper / cardboard have been identified: (1) manufacture of paving stones and slabs using used paper/cardboard, plastic and sand, and (ii) manufacture of biofuels for household energy based on used paper and organic waste). The first option has been chosen by GVD for the recycling of paper/cardboard. This option of recycling paper/cardboard is not common. It is recommended to undertake close monitoring once the recycling unit is operational to confirm that paper/cardboard wastes are indeed being used as slabs are already being produced using plastic and sand only.
- One hundred and fifty-eight (158) people (138 women and 20 men) sensitized on the ESM of used paper / cardboard;
- One hundred and fifty (150) personalities and executives (6 ministers, ambassadors, decision-makers, ministry officials, etc.) and 380 teachers and pupils from two institutions were made aware of the ESM of used paper / cardboard;
- An analysis on the need for the ESM waste paper/cardboard in Niger has been carried out;
- The environmental audit and requirement for establishing a paper / cardboard recycling unit has been carried out;
- Equipment for a paper / cardboard recycling unit purchased by the project but not yet installed. GVD is constructing (co-finance) the building that will host the recycling unit (Figure 4 (d)).

GVD has two sites where it has recycling units, one is located in Niamey the Capital City and the other one, which is much bigger, is found in Zinder, the second largest City of Niger, which located

<sup>27</sup> Pictures taken by the evaluation team during field mission

about 800 km north of Niamey. The evaluation made a field visit to the Niamey site where the demonstration would be hosted. At this site, GVD already has a small operational unit (Figure 4 (a)) that recycles plastic wastes mixed with sand to produce paving slabs (Picture 2 (b)), latrine tops (Figure 2 (c)), and other products. The recycling unit for the demonstration project, which is not operational yet, would be located close (a few hundred meters away) to the existing unit. The project has already purchased the equipment consisting of a shredder, a grinder, an extruder, a laminator, a compacting device, and a moulding device. At the time of the evaluation, the building where this equipment would be installed was under construction (Figure 4 (d)). According to GVD, the completion of the works including the installation of the equipment would take 2 to 3 months. GVD have already contacted waste collectors to provide them with paper/cardboard wastes.



**Figure 4<sup>28</sup>:** (a) GVD recycling unit in Niamey (b) Paving slabs (c) Latrine top (d) Building under construction to host demonstration pilot project

During the country mission the evaluation team was able to meet the waste collectors of two of the five communities involved in the project. They were all women and they were from two small localities – “Quartier Sahara” and “Quartier Pays Bas” – situated in the suburb of Niamey. These two communities, which have been involved in the collection of plastic wastes in previous initiatives and also with GVD, were contacted by the project (GVD) to collect paper/cardboard wastes for the pilot demonstration. A two-day awareness and training workshop, organized with the support of the Ministry of Environment, was undertaken targeting these waste collectors. The later were very satisfied with the workshop as it sensitized them on the need to use PPE and to adopt best practices to protect their health. They were particularly very thankful to the project as it would allow them to generate some income (50 CFA Francs<sup>29</sup> per kg of used paper/cardboard) given that most of them were unemployed before the project. The national consultant<sup>30</sup> confirmed the good running of the workshop, which was done in local language. However, she mentioned that given the scope of the work, the fee was not sufficient.



<sup>28</sup> Ibid. footnote 30

<sup>29</sup> 1 USD ≈ 580 CFA Francs

<sup>30</sup> Interview with national consultant recruited by the project

**Figure 5:** (a) Collectors of Quartier Sahara (b) Collectors of Quartier Pay Bas (c) Small street in Quartier Sahara

**Outcome 3: Identification and assessment of contaminated sites.** For this outcome, the activities and outputs were designed to build capacity for the identification, assessment and remediation of contaminated sites. As can be seen in Table 1, delivery of the two outputs has been unsatisfactory. Under **Output 3.1**, four (**Activities 3.1.1, 3.1.2, 3.1.3 and 3.1.5**) of the five were not undertaken (see Table 2 and Annex 5). No reasons were provided why these were not undertaken. The pilot demonstration project to verify the effectiveness of the low-cost remediation technology and validate contaminated site identification methodology was the only activity (**Activity 3.1.4**) that was undertaken. This pilot demonstration project, which was supposed to start in 2012<sup>31</sup>, began in 2017 and was undertaken in Sao Tome and Principe. DEKONTA<sup>32</sup>, an international service and technology provider, was contracted to remediate two contaminated sites found in Mourro Carregado and Monte Café respectively. These contaminated sites were located near warehouses where large stocks of obsolete pesticides (including POPs) were stored. Samples collected inside and outside (soil) the warehouses were found to be significantly contaminated with DDT, aldrin, dieldrin and endosulfan<sup>33</sup>, which are all POPs pesticides.

In 2018, a total of 80 tons of obsolete pesticides and wastes were safely packed and exported to United Kingdom for sound disposal by high temperature incineration at a dedicated hazardous facility. However, phytoremediation, which was the low decontamination technology selected, of the two contaminated sites was not undertaken due to very short time remaining. Instead DEKONTA proposed two urgent options: either to excavate the contaminated soil and send to sanitary landfill, or to cover the contaminated soils with a resistant protective layer and secure the sites with fencing and adequate warning signs. As there was no suitable landfill site in Sao Tome and Principe, the second option was selected. The project has successfully contributed to the sound disposal of 80 tons of obsolete pesticides (mostly POPs) and associated wastes but it was not able to achieve the key objective of the pilot demonstration project, which was to demonstrate that remediation of contaminated soil by a low cost demonstration technology (phytoremediation) was possible, due to late start of the activity. Not-undertaking four of the five activities for this output and not achieving the key of objective fully justify the **Unsatisfactory** rating given to **Output 3.1**.

**Output 3.2** is also rated **Unsatisfactory**. While the capacities of 30 experts to manage POPs contaminated sites of the participating countries were strengthened during a regional training workshop in 2012 in Benin (**Activity 3.2.1**), the **Activities 3.2.2, 3.2.4 and 3.2.5** were not undertaken. **Activity 3.2.4** was partially completed as national workshops to create awareness among key stakeholders including policy makers on health risks that can result from exposure to POPs contaminated sites have been organized in only eight (Burkina Faso, Gambia, Guinea, Niger, Sao Tome and Principe, Senegal, Sierra Leone and Togo) of the sixteen participating countries.

## 2.2. Progress towards impact

Assessment of impact can be referred to the extent to which the project brought about changes in the human condition or in the environment. Changes, whether intended or unintended, can be

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<sup>31</sup> According to the timeline of activities provided in the project document, this pilot demonstration project should have started in the first of implementation, that's in 2012

<sup>32</sup> <http://dekonta.com/> - DEKONTA is an international environmental services and technologies provider. It is a Czech Republic company, established in 1992, and has successfully completed numerous projects in Europe, Asia and Africa

<sup>33</sup> Inside samples: DDT 419 ppm, Aldrin 272 ppm; dieldrin 4,750 ppm and endrin: 5610 ppm. Outside soil samples: DDT 43 ppm; Aldrin 8.8; dieldrin 161 ppm; endrin 141; endosulfan 10ppm.

positive or negative. For this project, the evaluation did not find any evidence of negative impacts on human health or on the environment. For impact, there is need for behavioral changes of the project beneficiaries in the participating countries. Behavioral may happen at three levels (i) Economically competitive - Advancing economic competitiveness (ii) Environmentally sound – Safeguarding environment and (iii) Socially inclusive – Creating shared prosperity, which are discussed in the following paragraphs.

### 2.2.1. Behavioral change

**Economically competitive** – This aspect of change would necessarily involve the private sector, individuals or groups of individuals that would derive an increased income as a result of the project intervention. These were directly involved in activities of the pilot demonstration projects under **Outcome 1** and **Outcome 2**. Under **Outcome 1**, which was on technology transfer and best practices in industry, BAT/BEP were introduced in Mali for recycling of lube oil and in Benin for smoking of fish. As the two pilot projects are still on-going, it is too early to assess the economic impact of the project interventions. However, as stated by the director general of GTIM, engaged in the recycling of lube oil, the project brought them some notoriety and they are more visible and better known to the authorities and to the generators of used oil. With this good visibility and notoriety, and anticipating the adoption by the government of the guidelines and decree on the sound management of used oil, developed in the context of the project, GTIM is expecting an increase in their business activities in the short – medium term.

The project has had a very positive impact at Sodiaplast, which was hosting the demonstration project on plastic recycling (**Outcome 2**). As discussed previously (section 2.1), the project provided them with new equipment (costing about USD230,000), which greatly contributed to increased efficiency and productivity. With this new equipment not only the productivity has increased by 50% (treatment plastic wastes increased from 8 to 12 tons daily), but Sodiaplast can also treat all type of plastic wastes. Before the project, Sodiaplast could treat only soft plastic wastes (e.g. plastic bags), but with the new equipment provided by the project it can also recycle hard plastic wastes such as plastic chairs or water containers. Sodiaplast has also made significant cost savings on the transportation of plastic wastes. As the recycling facility is located in Conakry, the plastic wastes from distant locations (that could be as much as 600 to 700 km) are transported by trucks. Before the project, a truck could transport about 5 to 6 tons of plastic wastes per trip. But with the purchase of the waste compactor (recommended by the project), a truck can now transport up to 10 tons of compacted plastic waste per trip. As for the pilot project on paper/cardboard recycling, it is too early to assess the impact of the project interventions on efficiency and productivity as the recycling unit is not yet operational.

**Environmentally sound** – For **Outcome 1**, behavioral changes are seen for the pilot project on recycling of used oil. Before the project, GTIM was recycling all types of used oil including those that could be potentially contaminated by PCBs .as they were not aware of the existence of these toxic chemicals. Thanks to the project, they are now well informed about PCBs and the health problems they may cause. They have also been provided with test kits to systematically screen the used oils for PCB prior to recycling. For the pilot project on smoking of fish in Benin, although the FTT-Thiaroye ovens, recommended by the project, for the smoking fish were constructed at the initial project sites, no information could be obtained on their adoption by the women (Section 2.1) and on any behavioral changes that could have happened. However, it is expected that with the use of this type of oven, the women would no longer be exposed to PAHs, dioxins and furans as these hazardous chemicals would be filtered off by the smoke generator system of the FTT-Thiaroye oven.

For **Outcome 2**, although many training and awareness raising workshops for workers of the solid and health care waste sectors have been undertaken and recommendations made, there is no evidence or indication yet of behavioral changes in the participating countries. Similarly, for the pilot project on bio-pesticides in Togo, although much has been done (see Section 2.1), no behavioral changes have been evidenced yet. However, potential for impact is high if bio-pesticides are used. In most regions of the world, farmers and other crop producers generally use chemical pesticides for crop protection to ensure high yield and better income. This is also the case in Africa, where it is common practice for small scale or individual planters to buy these chemicals pesticides in the informal sector at lower costs. The risk is that some of them could potentially be POPs pesticides. If instead, these plant growers adopt bio-pesticides for crop protection, they would no longer be exposed to these toxic chemical pesticides during application in the field. And it is well known that exposure to these chemicals including POPs pesticides through diet or occupational exposure has been associated with a wide range of adverse health effects. Moreover, the environment would no longer be polluted with these synthetic pesticides as it is well accepted that widespread application of chemical pesticides has been blamed as being the main source of bringing POPs pesticides into the atmosphere and subsequently into oceanic and freshwater ecosystems.

For the pilot demonstration project on the recycling of plastic wastes in Guinea, the project has contributed, to some extent, to decrease the amount of dioxins and furans released to the environment. In Guinea, no sanitary landfill exists for the sound management of solid waste. The solid wastes are either brought to dumpsites where open fires regularly occur, littered in the environment or burned. During the mission in Conakry, Guinea, the evaluation team witnessed the huge amount of wastes dumped in canals, street sides and rivers. In some cases, there were clearly signs of burning. As discussed in the previous section, the project has contributed to increase the productivity at Sodioplast by 50% –12 tons of plastics recycled daily instead of 8, implying that 4 tons of plastics waste are not dumped in the environment daily (corresponding to about 1040 tons yearly for 260 working days).

Considering that 10% of that annual amount would have been burned, and using the emission factors given the UNEP toolkit<sup>34</sup>, it is estimated that about 0.02 gTEQ<sup>35</sup> of dioxins and furans would have been emitted to the environment yearly had the project not been undertaken. Similarly, as reported in Section 2.2.1 (Economically competitive), the project contributed to increase the amount of plastic waste (through compacting) that can be transported by truck per trip, from 5 tons to 10 tons approximately. This suggests that less trips (50% less) are required to transport the same amount of plastic wastes to the recycling unit. The UNEP toolkit reports that engines running on diesel would emit 0.1µgTEQ per ton of diesel consumed. Therefore, the release of dioxins and furans during the transportation of plastic wastes has been reduced by about 50% as a result of the project interventions. To calculate the amount, it would require the amount of diesel consume annually, and this data was not available.

For **Outcome 3** that relates to identification and assessment of contaminated sites, no behavioral change has been observed given that the pilot study on remediation of contaminated site was not undertaken. The only notable change observed is that the project assisted Sao Tome and Principe to soundly dispose of 80 tons of obsolete pesticides (including POPs) and wastes that were exported to United Kingdom for high temperature incineration at a dedicated facility.

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<sup>34</sup> Standardized Toolkit for Identification and Quantification of Dioxin and Furan Releases. Edition 2.1, December 2005, UNEP Chemicals

<sup>35</sup> TEQ: Toxic equivalent is a unit that takes into consideration the contribution of the 17 toxic congeners of dioxins and furans

**Socially inclusive** – While in most pilot demonstration projects, either it is too early to see change as the project is not completed (bio-pesticides and lube oil recycling) or no information is available (fish smoking in Benin), on the other hand tangible signs of behavioral changes are evidenced at the pilot sites for plastic and paper/cardboard recycling in Guinea and Niger respectively. In both countries, the waste collectors are from the poor communities. As reported in Section 2.1, the project has greatly contributed to significantly improve their livelihood. In Niger, where the waste collectors are exclusively women (Figure 5 (a) and (b)), the additional income they could generate from the selling of the paper/cardboard wastes was very helpful. As stated by most of them during the field mission, the salaries of their husbands were barely sufficient to cater for basic needs. This additional income greatly improved their everyday life. They can have proper meals, buy new clothes more often for their children, and also provide for their school materials such as pens and notebooks. They also highly appreciated the awareness/training workshop, which informed them on the risks associated to the collection of wastes at dumpsites and trained them on the best practices and approaches to protect themselves.

In Guinea, the plastic waste collectors are exclusively men, and they were also very satisfied and thankful to the project. Besides contributing to create employment and improving their livelihood, the project assisted the waste collectors to regroup into an association that was officially established in 2016, and currently there are 1216 members. As stated by the president of the association, the creation of this association changed their status. Before the project, they were lowly considered by the population. With the creation of this association, which they are very proud of, not only they gained more respect, but their economic activity was recognized officially and is considered as contributing to clean the country. Finally, the association is a forum where they can voice out whatever concern they may have. The pilot project also very positively impacted an association of the youth and women<sup>36</sup> involved in the composting of organic wastes in Labé, the second biggest city in Guinea, 350 km in the north east of Conakry. According to its president, the project helped them in many ways. With the implementation of the project, they have also started to collect and sell plastic wastes to Sodiaplast, which allowed them to generate additional income. The project has also helped to decrease the high unemployment rate affecting the poor communities as more persons<sup>37</sup> are now engaged in the collection of plastic wastes, which in turn has greatly contributed to clean up the Labé marketplace.

### 2.2.2. Broader adoption

This section addresses the catalytic effect of the project that includes the extent to which the project's interventions have been adopted within a country or regionally, or beyond the domains and scales originally targeted. Given the numerous challenges and their nature related to BAT/BEP transfer in industry, identification and remediation of contaminated sites, and reduction of exposure at workplace, the achievement of the project objective to reduce POPs emissions through capacity building and strengthening in the participating countries is not likely to take place during the time span of the project. It requires that mechanisms to be put in place for continued process adoption to bring about behavioural change at broader scales after the projects end. The three mechanisms frequently used to promote the broader adoption of project interventions and innovations are: mainstreaming, replication and scaling-up.

**Mainstreaming** occurs when information, lessons or specific results generated by the project are incorporated into broader institutional mandates and operations such as laws, policies, regulations

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<sup>36</sup> Groupement des Associations des Jeunes et femmes pour le compostage à Labé

<sup>37</sup> These persons from poor communities are not members of the association

and programs. The evaluation found some evidence that mainstreaming is taking place in the participating countries. In Mali, for example, according to information available<sup>38</sup> the document “*Guidelines on the recovery and disposal of used oils and on the purchase, sale, collection, storage, transportation and disposal*”, developed in the context of the project would be adopted at national level. In Guinea, a decree regulating the management of plastic packaging and products generating plastic waste has been drafted and already validated by the key stakeholders, and it would be soon adopted by the government<sup>39</sup>. A copy of the decree was made available to the evaluation. Besides these few initiatives, the evaluation has not evidenced any national plans or strategies that would integrate the project results in the future. This would be crucial for mainstreaming of project results at a national level after the project ends. The evaluation therefore recommends that such efforts should be encouraged in order to sustain the projects results and lessons.

**Replication** occurs when the initiatives, technologies or innovations supported by the project are reproduced or adopted on a comparable scale. For this project, the evaluation has not seen any evidence of replication. The reason is most probably that at the time of the evaluation, except for the pilot demonstration project on plastic recycling that was almost completed, the others were still on-going. However, the results obtained so far (e.g. plastic recycling, bio-pesticide or lube oil recycling) look promising, and there is scope for replication either within the country or within the sub-region. To promote replication and ensure sustainability, the evaluation recommends that once the demonstration projects are completed, the experience gained and lessons learned from those that have been successful and produced tangible results, should be gathered, summarized and shared with the other participating countries.

**Scaling-up** takes place when the project supported interventions are implemented at a larger scale. These can be administrative, geopolitical, ecological or business scales. Initiatives that are scaled up are often expanded or adapted to accommodate new aspects or concerns relative to the new scales. For the project, the evaluation could not find any intervention supported by the project that was scaled up.

Although the project has produced some tangible results and positively impacted at some of the pilot sites, given that most of the pilot demonstration projects are still on-going and that many national activities have not been undertaken, overall rating on effectiveness is **Moderately Unsatisfactory**.

### 3. Project's quality and performance

#### 3.1. Design

A participatory approach was applied during the project identification process and this was crucial in selecting problem areas and national counterparts. The participating countries stressed a need for strengthened capacity, to implement the obligations under the Stockholm Convention, in a range of areas from building capacity through providing technical support; institutional, legislation, regulation, implementation and enforcement capacities; research, development and dissemination of technical capability for alternative technologies; capacities in POPs stockpiles and wastes identification, management and disposal; capacities in identifying and remediating contaminated sites; capacities in information exchange, public information, through to awareness raising and education. These thematic areas are either national priorities or are mentioned in their NIPs.

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<sup>38</sup> Interview with the Director of the Direction Nationale de l'Assainissement du Contrôle des Pollutions et des Nuisances, Ministry of Environment, Mali

<sup>39</sup> Interview data – Director of the Direction de l'Environnement, Ministry of Environment, Guinea

The project has clear thematically focused development objectives, namely, to reduce POPs emissions through strengthening and /or building capacity required in LDCs of the ECOWAS Sub-region to implement their NIPs in a sustainable, effective and comprehensive manner while building upon and contributing to strengthening the country's capacities for sound management of POPs chemicals, and verifiable indicators to determine its achievement. The project is formulated based on the logical framework approach. However, the design appears to be activity based as the verifiable SMART<sup>40</sup> indicators mentioned in the logical framework are for activities and outputs only and not for outcomes. The lack indicators for outcomes is considered a weakness as these would have allowed for better tracking of results. The assumptions provided for outputs in the logical framework are realistic.

The project was designed to address the identified problems, and besides the project management and M&E component, it included 3 outcomes on capacity building and demonstration projects covering different thematic areas – BAT/BEP, waste management, bio-botanical pesticides, and contaminated sites. As discussed in Section 2.1, the pilot demonstration of BAT/ BEP in textile and leather sectors was not carried out as the companies of these sectors in the sub-region did not satisfy the criteria of the Stockholm Convention. This clearly indicates that the problems were not properly identified during the preparatory phase. Project Design is rated **Moderately Satisfactory**.

### 3.2. Relevance

The project is highly relevant as it was designed to assist the participating countries, which are all parties to the Stockholm Convention, to fulfill their obligations towards the Convention. In particular, the project aimed to build and / or strengthen the capacity to address the problems identified during the preparatory phase. The thematic areas covered under the project were based on the countries' national priorities and are mentioned in their NIPs. The national stakeholders interviewed confirmed the high relevance of the project. They greatly appreciated the training workshops that covered various sectors such BAT/BEP, waste management and alternatives to chemical pesticides. The direct beneficiaries of the pilot projects also highly praised the project. Sodiaplast, for example, is very satisfied and very thankful to the project. It stated that the project interventions had a very positive impact: the project provided new BAT equipment that allowed increased efficiency and productivity as well as reducing release of dioxins and furans, the project provided technical guidance to improve their interim sorting centers, and there is better communication with the waste collectors.

The project outcomes are consistent with the operational program strategies of the GEF<sup>41</sup>. They are in particular much in line with GEF's goal in the POPs focal area, which is to protect human health and the environment by assisting countries to reduce and eliminate production, use and releases of POPs, and consequently contribute generally to capacity development for the sound management of chemicals. Under GEF-4, this goal was to be achieved by amongst others: strengthening capacities for NIP implementation, including assisting those countries that lag farthest behind to establish basic, foundational capacities for sound management of chemicals.

The lack of capacity and awareness of POPs issues in developing countries, and particularly in LDCs can lead to contamination of the environment by POPs, resulting in damage to health of human

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<sup>40</sup> SMART indicators: specific, measurable, achievable, relevant and time-bound indicators

<sup>41</sup> Focal Area Strategies and Strategic Programming for GEF-4, October 4, 2007. GEF Policy Paper, October 2007.

beings and risk to the poor is particularly high<sup>42</sup>. The project aimed at strengthening capacities to enable the countries to comply with their obligations set out in the SC, lay a sound foundation in the sub-regions to fulfill their commitments; and supports their chemical management regimes, which in turn would contribute to protect human health and environment from the threat of POPs. Finally, the projects are in line with the objectives of the Stockholm Convention on POPs and priorities at national level.

The project is also in line with UNIDO priorities and the renewed mandate on Inclusive and Sustainable Industrial Development (ISID). UNIDO's Mission Statement (IDB.39/13/Rev.1) includes safeguarding the environment – “UNIDO aspires to reduce poverty through sustainable industrial development. We want every country to have the opportunity to grow a flourishing productive sector, to increase their participation in international trade and to safeguard their environment”, and reiterates the flexible UNIDO approach for ISID – “Differentiate and adapt our approaches and methodologies according to the needs of countries at different stages of development”.

One of the pillars of the ISID is “Safeguarding the Environment - environmentally sustainable growth, via cleaner industrial technologies and production methods, including in the fields of waste management and recycling; the promotion, adaptation and transfer of environmentally sound technologies, under which UNIDO aims to assist countries in reaching compliance with the Stockholm Convention and aims at developing capacities in developing countries to protect their populations and their environmental resources from POPs-related pollution”.

Rating on relevance is **Highly Satisfactory**.

### 3.3. Efficiency

Efficiency assesses how economic and other resources and inputs such funds, expertise and time are used to produce results. Implementation of the project officially started in December 2011 and was planned for a duration of 5 years to end in December 2016. The project was granted five extensions to officially close in March 2019 for a total duration of seven years and three months. For GEF funded projects, the average actual implementation duration is 67 months against an average expected duration of 49 months at CEO endorsement – on average 18 months extension<sup>43</sup>. The extensions were required to address delays that the project faced. Delays were due to developments and changes that occurred within the project and also due to external factors. One such changes occurred at the level of the UNIDO project team. Over the course of the project, the UNIDO PM was changed twice<sup>44</sup> and both incoming PM found it challenging to take over given the regional scope of the project involving so many countries and covering such a wide range of activities. The current PM found it particularly challenging as the supporting staff also changed. Although she could interact regularly with the out-going PM<sup>45</sup>, the taking over took much longer than for a country project. The 2014 – 2016 Ebola outbreak in the Western African Region, and

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<sup>42</sup> Ibid. “Although most intentionally-produced POPs have been banned and are being phased out in OECD countries, the situation in developing countries, and particularly in Least Developed Countries, is one characterized in many instances by inadequate legislative and regulatory frameworks, coupled with the near absence of capacity for enforcement and lack of awareness of the hazards associated with POPs exposure. As a result, the limited local capacity can lead to regional and ultimately global contamination of the environment by POPs, with damage to the health and well-being of human populations, particularly the poor that are at greatest risk.”

<sup>43</sup> [http://www.thegef.org/sites/default/files/council-meeting-documents/EN\\_GEF.C.53.03\\_APMR%2BScorecard.pdf](http://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.53.03_APMR%2BScorecard.pdf)

<sup>44</sup> First UNIDO PM change occurred in 2013. Second UNIDO PM change happened in 2016. In 2016 the supporting staff changed as well as.

<sup>45</sup> The offices of outgoing and current PM in the same building at the UNIDO headquarters in Vienna

which particularly affected Guinea, Liberia and Sierra Leone, also affected the implementation process. The 4<sup>th</sup> PSC meeting that was scheduled in Gambia in October 2014, was postponed and held in Togo in June 2015. Although these reasons put forward explain the delays, they do not however justify the late implementation of some of the activities that should have started in the first two years according to the timeline of activities of the project document. As documented in Section 2.1 for **Output 3.1**, due a late start, the key objective of the pilot demonstration project on contaminated sites, which was to demonstrate feasibility of the phytoremediation, a low-cost technology, of POPs contaminated soil, could not be achieved.

Some countries were slow to start the national activities as they were facing delays in receiving funds. They complained about the stringent UNIDO rules for these transfers. However, UNIDO was just applying standard procedures for the proper management of funds<sup>46</sup>, and they proposed a second option of transferring funds through United Nations Development Programme (UNDP) offices in countries where UNIDO did not have a country office. Other countries, who followed the procedures, did not face such delays in receiving the funds. The fund transfer problem was therefore not due to stringent rules but rather the countries not able to meet the standard requirements for such transfers. The weak commitment of the NPF<sup>47</sup> and the loss of momentum as well as gradual loss of interest in the project due to delays encountered were also reasons for poor delivery at national level (Table 1). Moreover, some NPFs indicated that due to their heavy working load, they could not dedicate much time to the project, and it was also challenging to recruit national consultants given the low funding available (USD 5000 per activity).

The evaluation determines that delivery of outputs/activities did not commensurate with actual project expenditures. According to Table 1 only 43 out of 160 national activities have been completed by the countries implying that 117 activities were not undertaken, and yet the figures reported in Table 3 indicate a 98.9% for total expenditure.

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<sup>46</sup> UNIDO had requested an official letter to be issued by the counterpart with supporting documents from the bank to clear the legal identity of the bank account. In addition, UNIDO requested the counterpart to be able to provide details of the transaction on the use of the funds such as the bank account statement. Some counterpart institutions could not provide such documents and therefore, UNIDO opted to go via UNDP transfer.

<sup>47</sup> Instead of recruited and paid ones, the NPFs were nominated as NPCs

Table 3: Total expenditures for the project – GEF funds only

| Items of expenditure            | 2012           | 2013           | 2014           | 2015           | 2016             | 2017           | 2018           | 2019           | Total exp.       | %/total         |
|---------------------------------|----------------|----------------|----------------|----------------|------------------|----------------|----------------|----------------|------------------|-----------------|
| Contractual Services            | 0              | 12,097         | 331,508        | 54,781         | 608,141          | 195,457        | 259,656        | 23             | <b>1,461,663</b> | <i>36,9%</i>    |
| Equipment                       | 6,163          | 2,667          | 0              | 0              | 331,058          | 31,192         | 265,989        | 36,399         | <b>673,468</b>   | <i>17,1%</i>    |
| Int. Meetings                   | 271,701        | 135,886        | 13,699         | 28,498         | 2,376            | 35,612         | 67,571         | -857           | <b>554,486</b>   | <i>14%</i>      |
| Local travel                    | 44,454         | 28,945         | 16,345         | 6,176          | 9,217            | 47,162         | 13,191         | 18,657         | <b>184,147</b>   | <i>4,7%</i>     |
| Nat. Consult./Staff             | 1,816          | 0              | 0              | 9,099          | 24,511           | 20,564         | 0              | 2,183          | <b>58,173</b>    | <i>1,4%</i>     |
| Other Direct Costs              | 13,722         | 2,836          | 1,660          | 2,372          | 47               | 956            | 2,904          | 301            | <b>24,798</b>    | <i>0,7%</i>     |
| Premises                        | 0              | 0              | 0              | 0              | 0                | 0              | 192            | 0              | <b>192</b>       | <i>&gt;0,1%</i> |
| Staff & Int. Consultants        | 72,631         | 126,409        | 100,877        | 245,152        | 81,393           | 128,724        | 81,811         | 68,255         | <b>905,252</b>   | <i>22,8%</i>    |
| Staff travel                    | 0              | 19             | 0              | 0              | -19              | 0              | 0              | 0              | <b>0</b>         | <i>0%</i>       |
| Training/Study                  | 23,641         | 11,607         | 11,579         | 2,595          | 43,983           | -620           | 0              | 0              | <b>92,785</b>    | <i>2,3%</i>     |
| <b>Grand Total<sup>48</sup></b> | <b>434,128</b> | <b>320,466</b> | <b>475,668</b> | <b>348,673</b> | <b>1,100,707</b> | <b>459,047</b> | <b>691,314</b> | <b>124,961</b> | <b>3,954,964</b> | <b>100%</b>     |

Source: UNIDO Project Management database as of 13<sup>th</sup> of June 2019

<sup>48</sup> Total GEF fund is USD4,000,000

Co-financing ratio (Project co-financing: GEF financing) is considered by the GEF as an indicator of efficiency and effectiveness<sup>49</sup>. For GEF 5, the desirable co-financing ratio was 5:1. There was strong evidence of hosting institutions providing significant co-financing for the demonstration projects (See Section 2.1)<sup>50</sup>. However, as no information was available, it was unfortunately impossible to quantify the value of co-financing from countries or received from other donors. Had all the co-financing at CEO endorsement materialized, the ratio would have been 1.1:1<sup>51</sup>. There is documented evidence of synergy with other on-going regional project that contributed to cost effectiveness to some extent<sup>52</sup>.

Although there was evidence of synergy with other on-going initiative and mobilization of some co-funding, as delivery of national activities was incomplete and much delays encountered, the rating on efficiency is **Moderately Unsatisfactory**.

### 3.4. Sustainability

Sustainability is understood as the likelihood of continued benefits after the project ends. Sustainability is assessed in terms of the risks confronting the project, the higher the risks the lower the likelihood of sustenance of project benefits. The four dimensions or aspects of risks to sustainability as mentioned in the TOR namely sociopolitical, financial, environmental, and institutional frameworks and governance risks are discussed below.

**Sociopolitical risks** – All the participating countries have signed and ratified the Stockholm Convention, and all have established a NPFP, who was the NPC of the project. They have all transmitted their NIPs on POPs to the Secretariat of the Stockholm Convention Secretariat (SSC), and are engaged in reviewing and updating them through enabling activities<sup>53</sup>. Some are implementing other projects related to the sound management of POPs. For example, Burkina Faso, Chad, Gambia, Guinea-Bissau, Mali, Mauritania, Niger, and Senegal are implementing the GEF funded and FAO implemented regional project “*Disposal of Obsolete Pesticides including POPs and Strengthening Pesticide Management in the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) Member States*”<sup>54</sup>. These suggest the strong commitment of the participating countries to fulfill their obligations towards the Stockholm Convention. While it is not possible to foresee the priorities of future governments, there is no particular reason to expect that they will not remain bound to these obligations. However, according to documented evidence the project did not get strong support from the policy makers in some countries (see Section 4.2). For these reasons, sociopolitical sustainability is rated **Moderately Likely**.

**Financial risks** – According to information available in the NIPs of the ECOWAS Member countries, the financial resources required to implement elements of their NIPs are huge compared to what can be made available by the respective countries<sup>55</sup>. During the interviews, the countries again reaffirmed that they would require financial resources to sustain and replicate the projects results

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<sup>49</sup> [http://www.thegef.org/sites/default/files/council-meeting-documents/EN\\_GEF.C.54.10.Rev\\_.01\\_Co-Financing\\_Policy.pdf](http://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.54.10.Rev_.01_Co-Financing_Policy.pdf)

<sup>50</sup> Sodiaplast invested USD 100,000 to mechanize its interim sorting centers and GTIM invested USD40,000 to upgrade its facility for safety and to obtain ISO certification.

<sup>51</sup> Total co-financing: GEF funds = USD 4,793,452: USD 4,000,000

<sup>52</sup> Representatives of 7 of the 16 participating countries were trained on health care waste management in a workshop that was organized in the context of the AUC project ACP/MEAs in 2012

<sup>53</sup> All the countries have secured GEF funds to review and update their NIPs:

<sup>54</sup> GEF ID: 4740 GEF grant: USD 7,450,000

<sup>55</sup> Information taken from the Project Document

and benefits. For example, they recognized that the pilot demonstration projects, more specifically those on plastic and paper recycling and on bio-pesticides looked promising and have already produced very positive impacts. They indicated that while financial sustainability at the pilot sites would be a challenge, replicating these efforts within the pilot countries and within ECOWAS sub-region would however require both financial and technical assistance. For these reasons, the rating on financial sustainability is **Moderately Unlikely**.

**Institutional framework and governance risks** – As discussed earlier, the past and current governments have shown strong commitments to fulfill their obligations towards the Stockholm Convention. While it is not possible to foresee the priorities of future governments, there is no particular reason why they will not remain bound to their obligations to conform to the Convention. Furthermore, as mentioned earlier (section 1.2), UN Environment is implementing the institutional and regulatory framework component. In particular the strengthening of the national regulatory framework of the countries would ensure compliance with the requirements of the Stockholm Convention. However, as discussed earlier (Section 2.1 and Annex 5), only two of the sixteen countries signed the Declaration for the establishment of the BAT/BEP Forum for the ECOWAS sub-region. The establishment of this forum is key for replication and scaling-up purposes. As it has not been established there are significant risks regarding institutional framework. Therefore, institutional framework sustainability is rated **Moderately Unlikely**.

**Environmental risks** – The project is considered ecologically sustainable as it was designed to build the capacities of the participating countries for the sound management of chemicals and wastes. This would enable the countries to implement their NIPs, which would contribute to reduce emissions of POPs to the environment. Furthermore, as no environmental risk that can influence or jeopardize the project outcomes and future flow of project benefits has been identified, environmental risk is considered low. Environmental sustainability is rated **Likely**.

Given the risks identified for financial and institutional framework, sustainability of the project is rated **Moderately Unlikely**.

### 3.5. Gender mainstreaming

Gender data have been compiled for some of the project activities although at the time of project formulation, inclusion of gender consideration was not a requirement under the GEF-4. For example, 51 women & 94 men and 138 women & 20 men were sensitized on the ESM of plastic and paper wastes respectively. Similarly, although the project did not focus on gender in any of their activities, it did not exclude members of any gender in their activities or in the project management teams. There is documented evidence of participation of both genders in the project activities including project management. For example, one of the three UNIDO PM was a woman. Similarly, while for the pilot demonstration project on plastic recycling the wastes collectors were exclusively men, for the demonstration on paper/cardboard recycling they constituted solely of women. Both genders have also participated in the regional training workshops on BAT/BEP. They came from different governmental agencies, public and private sectors, and academia.

The project has been beneficial to the population living near the pilot sites irrespective of their race, age or gender. By reducing the emission of POPs through the numerous initiatives at the pilot projects (see Section 2.2.1 – Environmentally Sound), the project has reduced risks that specifically affect women, young children and personnel at work place. POPs are highly toxic chemicals that pose risks to all human populations causing severe health problems such as reproductive and developmental problems, interference with hormones and can cause cancer. For example, research

has shown that POPs can cause birth defects, and premature birth or to low-weight babies<sup>56</sup>. Men can also be specifically affected such as reduced sperm count<sup>57</sup>.

## 4. Performance of Partners

### 4.1. UNIDO

Project management is rated as **Moderately Satisfactory**. As discussed in Section 3.3, the changes, which occurred at the UNIDO delayed project implementation. There is documented evidence that the project was slow to start, which contributed to decrease efficiency. Except for the regional training workshops that were timely held during the first two years, there is evidence that the procedures to implement most of the activities including all the pilot demonstration projects started only as from 2014. With the lengthy process of drafting ToRs, selecting service providers and establishing contracts, coupled with the Ebola outbreak and issues regarding the transfer of funds to countries, all the demonstration projects and most national activities actually started as from 2016. The evaluation found documented evidence that the national counterparts were not kept properly informed during that period, and this created some frustration and caused loss of interest in the project. However, the current UNIDO PM, who took over in 2016 succeeded to reactivate the implementation process and put the project on the right track again by 2017. With support of the current RC<sup>58</sup>, she managed to get all pilot demonstration projects as well as some national activities started. Despite these short comings, UNIDO assisted in the identification of international experts and the transfer of state-of-the-art technologies and best practices to the pilot sites. UNIDO also facilitated the organization of the regional workshops by identifying and recruiting the appropriate resource persons and experts. UNIDO showed flexibility and foresight to request for five project extensions and to absorb the additional costs incurred. The support provided by UNIDO was appreciated by the national counterparts, who however pointed out the lack of communication at some stage of the project.

### 4.2. National counterparts

National execution is rated as **Moderately Unsatisfactory**. The rating is based on the performance of the individual countries in the execution of national activities as well as pilot demonstration projects<sup>59</sup> (Annex 6). This rating, which is an average of all the ratings given to each individual country, may not reflect the real rating obtained by a given country. Actually, seven countries were rated **Moderately Satisfactory**, five obtained a **Moderately Unsatisfactory** rating, one obtained **Unsatisfactory** and the last three countries were rated **Highly Unsatisfactory** as they did not undertake any national activity (no demonstration project was implemented in these three countries)<sup>60</sup>.

In all the participating countries, the project was under the responsibility of the Ministry of Environment, and the National Coordination Committee<sup>61</sup> (NCC) was reinstated and led by the NPC,

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<sup>56</sup> Toichuev, et al. 2017b. "Organochlorine Pesticides in Placenta in Kyrgyzstan and the Effect on Pregnancy, Childbirth, and Newborn Health." *Environ Sci Pollut Res*. <https://doi.org/10.1007/s11356-017-0962-6>.

<sup>57</sup> Galimova EF, Amirova ZK, Galimov SN (2015) "Dioxins in the semen of men with infertility". *Environ Sci Pollut Res Int*. 22(19):14566-14569.

<sup>58</sup> The previous RC was replaced in 2017.

<sup>59</sup> Only seven countries have hosted demonstration projects and this has been taken into consideration for the overall rating for a given country. See annex 6 for detailed rating

<sup>60</sup> Annex 6 gives a detailed explanation of how the rating was given to each individual country.

<sup>61</sup> NCC was a committee established to oversee the execution of enabling activities to develop the NIP on POPs. For most countries, the NCC is also the committee responsible to oversee all projects related to POPs

who was the NFPF. There was no documented evidence however on the membership of the NCC and whether the NCC met to plan for the execution of national activities. As documented in PCB and PSC meeting reports, the lack of support and recognition of the project by decision makers at national level affected the delivery of national activities in many of the countries – less than 3 activities completed (Table 1). The weak commitment of the NPCs<sup>62</sup> also contributed to the poor delivery in these countries. On the other hand, thanks to the dedication and commitment of the NPCs<sup>63</sup>, the other countries succeeded to complete the four activities in the first sub-contract (Section 2.1), and managed to complete a few additional ones despite the limited funds available to recruit national consultants. It is worthy to note that the same project was implemented in the COMESA and SADC sub-regions, and the countries succeeded to complete the ten activities despite similar challenges such as delays in transfer of funds or high working load of the NPCs.

### 4.3. Donor

GEF was the main donor for the project. The funds were available and transfers were timely and adequate. Rating is **Satisfactory**.

## 5. Factors facilitating or limiting the achievement of results

### 5.1. Monitoring & evaluation

**M&E Design.** The project document included a detailed description of the project’s M&E activities. These included annual reports, tripartite annual review reports that were done through the Project Coordinating Body (PCB) meetings, Project Implementation Review (PIR) reports for the GEF, an independent midterm evaluation, a terminal report and an independent terminal evaluation. M&E activities included a regional inception workshop with representatives of all participating countries, annual tripartite meetings (between the national counterparts, project management, UNIDO and UNEP), annual regional Project Steering Committee (PSC) meetings (between national counterparts, UNIDO, project management, and ECOWAS Secretariat) and annual visits to selected project sites. The system was designed to provide information for monitoring progress, and to learn and to make adjustments for successful completion of activities. This M&E plan is adequate to track progress at activities and outputs level, but not at results level given that indicators for outcomes are lacking in the logical framework.

**M&E Implementation.** There is documented evidence of some deficiencies in the implementation of the M&E plan. Although the slow pace of project implementation was reported and recommendations made to address this issue, the PSC as well as the PCB did not point out the late start of some of the activities such as the pilot demonstration project on remediation of contaminated site, which should have started in the first year of implementation, but which effectively started in 2017. As a result, the key objective, which was to demonstrate the feasibility of remediation of contaminated soil by a low-cost technology, was not achieved due to short time remaining (see **Section 2.1 – Outcome 3**). The evaluation believes that had procedures<sup>64</sup> for implementation started much earlier, the pilot demonstration would have been completed and all objectives achieved. Despite these deficiencies, based on information available, it is clear that the project results framework was used as basis for project implementation, and the SMART verifiable indicators therein were used to track progress at output level rather than at results level. The project produced the annual as well as the PIR reports, which were used to keep track of project

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<sup>62</sup> Documented in PSC and PCB meeting reports

<sup>63</sup> Confirmed by the RC and UNIDO

<sup>64</sup>The drafting of Tors, selection of international consultant, tendering and selecting of service provider are quite time consuming administrative activities / procedures

outputs and targets. Similarly, tripartite PCB and regional PSC meetings were used to assess progress and adapt the projects to changing conditions or unforeseen circumstances. Due to the Ebola outbreak and delays in project implementation, the midterm evaluation, which was due in 2014, was carried out in April – July 2017. It made ten recommendations related mainly to the completion of project activities at the pilot sites. Most were adequately managed by the project management. However, one key recommendation related to the establishment of the BAT/BEP Forum for the ECOWAS sub-region still remains to be addressed. Despite efforts made, only two of the sixteen participating countries have signed the Declaration for the establishment of the Forum.

The project encountered several unforeseen situations that required adaptive management. For example, due to the stringent UNIDO rules as perceived by some countries, transfer of funds for national execution was very much delayed<sup>65</sup>. Instead of transferring funds directly to the counter parts, UNIDO proposed the option of going through UNDP offices in countries where UNIDO did not have an office. Similarly, due to Ebola outbreak, the 4<sup>th</sup> PSC meeting scheduled to be held in 2014 was postponed to 2015. The annual regional PSC meetings, as well as PCB meetings were undertaken. For cost effectiveness, the PCB meetings were planned back-to-back with the regional PSC meetings at the same venue. As mentioned previously Africa Institute was tasked to measure impact indicators on annual basis. However, although it developed impact assessment tables, there is no evidence that the participating countries provided information to fill those tables. Similarly, while it is documented in the PSC and PIR reports that countries have completed national activities, however the evaluation could not access most of the reports for these completed activities.

**Budgeting and Funding for M&E activities.** A total amount of USD 151,000 were budgeted for M&E activities for the project. In general, the funds allocated for the different M&E activities were adequate except for the terminal evaluation. Due to budget constraint, it was not possible to undertake field visits to all the pilot project sites.

Rating on M&E is **Satisfactory**.

## 5.2. Results-Based Management

The United Nations Development Group defines results-based management (RBM) as “*a management strategy by which all actors, contributing directly or indirectly to achieving a set of results, ensure that their processes, products and services contribute to the achievement of desired results (outputs, outcomes and higher-level goals or impact). The actors in turn use the information and evidence on actual results to inform decision-making on the design, resourcing and delivery of programmes and activities as well as for accountability and reporting.*”<sup>66</sup> The key elements of RMB are (i) Focusing the dialogue on results at all phases of the development process; (ii) Aligning programming, monitoring and evaluation with results; (iii) Keeping measurement and reporting simple; (iv) Managing for, not by results; and (v) Using results information for learning and decision making.

As mentioned previously, one major weakness of the project design was the lack of indicators for outcomes. The M&E plan was thus designed for monitoring progress at outputs level rather than at results level. The approach adopted for the implementation of the project is therefore not exactly a

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<sup>65</sup> The perceived stringent UNIDO rules are actually standard operating procedures adopted by all UN implementing agencies.

<sup>66</sup> United Nations Development Group, results-based management Handbook: Harmonizing RBM concept and approaches for improved development results at country level” edited draft October 2011, p 2

RBM approach. Nevertheless, as discussed previously (Section 5.1) monitoring and tracking progress at outputs levels were satisfactorily done through a participatory approach involving all key stakeholders during the annual PSC and PCB meetings. Reporting by countries and RC were adequate and kept simple. There is documented evidence that following information provided by the executing partners and the results obtained, adaptive measures were taken and recommendations made for implementation and achievement of objectives. Rating on Results-Based Management is **Moderately Satisfactory**.

### 5.3. Other factors

**Factors that had a positive effect on project results** – The projects were adequately designed proposing relevant, precise, and concise information to allow for the achievement of project objectives. In particular, the project documents provide a project coordination and management structure at regional as well as at national level, and also describes the role and responsibilities of key stakeholders and executing partners (see Section 1.4).

The project was slow to start and the project faced significant delays due to changes at the level of UNIDO and other reasons documented earlier (Section 3.3). The commitment and pro-activeness of the current UNIDO PM, who took over in 2016 and adequately assisted by the current RC, succeeded to put the project on the right track. They succeeded in getting all the pilot demonstration projects started; some of which have already produced tangible results and visible behavioral changes (Section 2.2.1). Recruitment of high-quality experts was also a key factor to achieve those results. In particular, the guidance and expertise they provided greatly are contributing<sup>67</sup> to the successful transfer of best available technologies and adoption of best environmental practices at the pilot sites.

The project under evaluation was also being implemented in the COMESA and SADC sub-regions in the context of a Programme to build capacity in the LDCs of Africa to implement their NIPs. As the COMESA and SADC projects were ahead in terms of implementation, there is documented evidence that the ECOWAS project benefitted from lessons and experience of the other two projects.

The support provided by the ECOWAS commission and Africa Institute in project execution as well as their active participation in the PSC meetings were also factors that facilitated project implementation. For example, ECOWAS drafted a regional strategy as well as a regional regulatory framework for the sound management of plastic wastes.

**Factors that hampered project results or sustainability** – The major factors that hampered the implementation process were the delays encountered by the project. In order to allow for completion of activities, five extensions were granted, and the project was planned to end in March 2019 – 2 ¼ years longer than anticipated. Given that most pilot projects are not yet completed, the evaluation is recommending an additional 6 months extension.

There was a major assumption<sup>68</sup> related to the willingness of the countries to establish the BAT/BEP Forum that would promote replication of demonstration pilot projects on BAT/BEP in the sub-region once the project is over. This assumption has not materialized as only two of the sixteen countries signed the Declaration to establish the Forum. Thus, the objective to introduce BAT/BEP in the sub-region is compromised unless the Forum is established or another mechanism put in place for promoting BAT/BEP and project results.

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<sup>67</sup> At the time of the evaluation, most of the pilot demonstration projects were on-going.

<sup>68</sup> Assumption mentioned in the project logical framework – Annex A of the project document

The weak commitment of some of the NPCs and the lack of support and recognition of the project by decision makers at national level particularly affected delivery at national level. According to information available, in many countries the project was given low priority given the low funding available for the national activities.

#### 5.4. Overarching assessment and rating table

The assessment of the project is summarized in the table below.

Table 4: Summary of Assessment and Ratings for the project

|          | <b>Evaluation criteria</b>   | <b>Evaluator's summary comments</b>  | <b>Rating</b> |
|----------|--|--|---------------|
| <b>A</b> | <b>Impact (progress toward impact)</b>                                       | Some visible signs of impact are seen at the plastic pilot site. However many activities have not been undertaken and most pilot demonstration projects are still on-going.  | <b>MU</b>     |
| <b>B</b> | <b>Project design</b>  |  | <b>MS</b>     |
| 1        | <ul style="list-style-type: none"> <li>Overall design</li> </ul>             | Participatory approach adopted to develop project. The components and interventions included in the project adequate and relevant to the achievement of project objectives.  | S             |
| 2        | <ul style="list-style-type: none"> <li>Logframe</li> </ul>                   | The logical framework approach was adopted. Although it contains baseline and target values as well as well-defined SMART indicators for outputs and activities, the logical framework lacked indicators for outcomes that would have allowed better tracking of results | MS            |
| <b>C</b> | <b>Project performance</b>   | <b>All stated objectives achieved</b>  | <b>MU</b>     |
| 1        | <ul style="list-style-type: none"> <li>Relevance</li> </ul>                  | The project is relevant to national priorities, and was designed to assist the participating countries to implement some elements of their NIP.  | HS            |
| 2        | <ul style="list-style-type: none"> <li>Effectiveness</li> </ul>              | Most stated objectives not achieved as many activities not undertaken and pilot projects not yet completed. The BAT/BEP forum for the ECOWAS sub-region not established.   | MU            |
| 3        | <ul style="list-style-type: none"> <li>Efficiency</li> </ul>                 | Due to delays, most pilot project not yet completed. All GEF funds disbursed and yet many activities not undertaken.   | MU            |
| 4        | <ul style="list-style-type: none"> <li>Sustainability of benefits</li> </ul> | While socio-political risk is moderate, some financial and institutional risks have been identified. In particular BAT/BEP Forum has not been established. Sustainability of project outcomes is moderately unlikely.  | MU            |
| <b>D</b> | <b>Cross-cutting performance criteria</b>                                    |  |               |
| 1        | <ul style="list-style-type: none"> <li>Gender mainstreaming</li> </ul>       | Although gender aspect was not a requirement for this project (GEF-4), involvement and participation of women in the project was satisfactory.   | S             |

|          | <b>Evaluation criteria</b>   | <b>Evaluator's summary comments</b>  | <b>Rating</b> |
|----------|--|--|---------------|
| 2        | <ul style="list-style-type: none"> <li>M&amp;E: <ul style="list-style-type: none"> <li>✓ M&amp;E design</li> <li>✓ M&amp;E implementation</li> </ul> </li> </ul> | The logical framework proposed is adequate to allow for monitoring and tracking of progress at outputs level and not at results levels. SMART indicators for outputs and not for outcomes. Some deficiencies were evidenced in the implementation of the M&E plan. All PSC meetings held and relevant reports (e.g. PIRs) submitted. | MS            |
| 3        | <ul style="list-style-type: none"> <li>Results-based Management (RBM)</li> </ul>   | The lack of indicators for outcomes, which would have allowed for better tracking of results, is a weakness of the design.   | MS            |
| <b>E</b> | <b>Performance of partners</b>   |  |               |
| 1        | <ul style="list-style-type: none"> <li>UNIDO</li> </ul>  | Changes at the level of UNIDO caused delays in project implementation. However, by taking timely and critical actions, and hiring quality international and national experts, the current PM succeeded putting the project on the right track.   | MS            |
| 2        | <ul style="list-style-type: none"> <li>National counterparts and Executing partners</li> </ul>   | Numerous national activities were not undertaken due to lack of support at national level and weak commitment of NPCs. ECOWAS Commission and Africa Institute contributed meaningfully in project execution  | MU            |
| 3        | <ul style="list-style-type: none"> <li>Donor</li> </ul>  | GEF funds available  | S             |
| <b>F</b> | <b>Overall assessment</b>  |  | MU            |

#### **RATING OF PROJECT OBJECTIVES AND RESULTS**

- Highly satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Highly unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Likely (L): There are no risks affecting this dimension of sustainability.
- Moderately likely (ML). There are moderate risks that affect this dimension of sustainability.
- Moderately unlikely (MU): There are significant risks that affect this dimension of sustainability.
- Unlikely (U): There are severe risks that affect this dimension of sustainability.

## 6. Conclusions, recommendations and lessons learned

### 6.1. Conclusions

Due to several challenges, causing significant delays that affected the implementation process, the project has not been successful to achieve all the stated objectives. Most of the pilot demonstration projects were still on-going at the time of the evaluation and more than half of the planned national activities were not undertaken. Nevertheless, the project has contributed to build some capacity to reduce POPs emissions and to soundly manage POPs chemicals and contaminated sites at the pilot demonstration sites. The theory of change proposed by the evaluation mentions that five necessary preconditions should be in place for behavioral change and impact in the participating countries (Section 1.5 and Annex 4). The project has contributed at the development of these five necessary preconditions to some extent, but was not successful to fully put all of them properly in place in all the participating countries:

- **Workers trained on BAT/BEP concept** – This precondition is in place many but not all of the participating countries. The project has successfully provided adequate training to 90 experts from the participating countries on BAT/BEP in textile, leather and lube oil sectors through regional workshops. However, not all the countries participated in these training workshops implying that BAT/BEP concept is not yet introduced/known in the non-participating countries. Similarly, national awareness raising workshops were undertaken in only 12 of the 16 participating countries. Overall, more than 500 people from these twelve countries participated to these workshops.
- **Successful BAT transfer at pilot demonstration sites** – This precondition is not fully reached. The project is contributing to introduce BAT/BEP in the countries hosting the demonstration pilot projects. However, due to delays most of the demonstration projects are still on-going and it is too early for their assessment. Nevertheless, at Sodiaplast, involved in plastic recycling and where implementation is nearly completed, BAT transfer has been successful, and tangible results (increased efficiency and cost savings) have been achieved as well as positive impacts (reduction of POPs emissions and improved livelihood of waste collectors) are already visible.
- **Awareness of workers of the waste sector raised** – This precondition is in place in only some of the participating countries. The project helped to train 30 people coming from small and medium enterprises specialized in waste recycling from Togo, Ghana, Senegal and Guinea on the concept of "*Cleaner management of municipal solid waste and health care waste with a focus on risk reduction*" through a regional workshop. National workshops on cleaner waste management were organized in only 8 of the 16 participating countries. A pilot project on health care waste management is on-going at the Simão Mendes National Hospital in Guinea Bissau (with a biomedical waste treatment center) where 35 hospital staff have been trained on the sound management of health care wastes.
- **Capacity built for the identification of contaminated sites** – Thanks to the regional workshop undertaken by the project, the capacities of at least 30 experts in each of the participating countries have been built to identify and manage contaminated sites. In particular, the training, based on the UNIDO toolkit, was to enable the experts collect scientific data from contaminated sites and assess potential risks to humans, wildlife and the environment. On the other hand, only 8 of the 16 participating countries carried out national workshops to create awareness among key stakeholders including policy makers on the health risks that can result from exposure to contaminated sites.
- **Low cost remediation technique successfully demonstrated** – This precondition has not been achieved although the project succeeded in assisting Sao Tome and Principe of soundly

disposing 80 tons of obsolete pesticides (including POPs pesticides) and associated wastes. It was because of the short time remaining that phytoremediation, which was the low remediation technique selected for pilot demonstration, was not undertaken at the pilot site. Instead, the consultant recommended to secure the selected contaminated site as an alternative option.

The project was slow to start and faced many challenges resulting in significant delays during implementation. By taking corrective actions and making necessary adjustments following recommendations made by the midterm evaluation, PSC and PCB, project management, adequately supported the ECOWAS commission and Africa Institute, was able to get the project on the right track. However, despite these efforts not all the stated objectives have been achieved.

Given that some financial, institutional as well as political risks have been identified, chances of continuous sustained impact of the project are moderately unlikely.

## 6.2 Recommendations

For continued relevance, sustainability of the project results and impact, the following recommendations are addressed to the various key stakeholders of the project.

|  |   |
|--|---|
| <b>To UNIDO:</b>                       |   |
| 1                                      | As most of the pilot projects are not completed yet and the preliminary results of many of them look promising, it is recommended to grant an extension of 6 months to allow for completion of activities at the pilot sites. This will not only help sustain the initial results and benefits from the project but also enhance the rate of project's performance and results achievement.   |
| 2                                      | Although not completed, some of the pilot demonstration projects are already producing tangible results, and impacts are visible at the project sites. The countries indicated that for sustenance or replication of projects results, they would require financial as well as technical support. UNIDO should consider assisting the countries in securing such support through follow up initiatives or through other mechanisms. |
| 3                                      | Once completed, UNIDO should consider gathering, summarizing and disseminating information and lessons on the pilot demonstration projects to other participating countries and regions.  |
| <b>To UNIDO and ECOWAS commission:</b> |   |
| 4                                      | The BAT/BEP Forum has not been established yet. It is recommended that UNIDO and the ECOWAS Commission should co-operate to put in place a mechanism to implement the regional action plan on BAT/BEP that was developed in the context of the project to ensure replication and sustainability of project results.   |
| <b>To national governments:</b>        |   |
| 5                                      | Very few countries have adopted elements / recommendations / manuals developed in the context of the projects, and which have been incorporated in national strategy / plans or legislation. The countries are encouraged to consider adopting some of the project results in their national strategies, plans or policies.   |

- 6 The national authorities should ensure that used oils coming from different sectors such as electrical, mining and oil industries, which are considered as hazardous wastes, are soundly managed. In particular, in Mali, where the pilot demonstration project on used oil was implemented, the authorities should consider promoting recycling of these used oils.
- 7 At the pilot site for contaminated site in Sao Tome and Principe, the two identified contaminated sites will not be remediated due to very short time left. It is recommended that these sites are properly secured and safe guarded with adequate fencing and signage

### 6.3 Lessons learned

1. The following lesson stemmed out of the project evaluation:

One major lesson emerged from this project:

Most participating countries of the project under evaluation complained about the very low budget available for national activities – the biggest part of the budget was allocated to pilot demonstration projects. Given the low funding involved, the project was not given due recognition and support by the decision makers in many countries. It was also difficult to recruit national consultants. Managing the project administratively was very challenging given the high amount of administrative work required, and procurement of good and services were very much delayed. A regional approach for the implementation of projects involving many countries and covering many topics may not be the right approach. A country approach or restricting the number of countries as well as the number of topics (ideally restricted to one) might be a better one.

## ANNEXES:

### Annex 1: TOR of the evaluation



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

## TERMS OF REFERENCE

### Independent terminal evaluation of project

*Capacity Strengthening and Technical Assistance for the Implementation of the Stockholm Convention (SC) National Implementation Plans (NIPs) in African Least Developed Countries (LDCs) of the ECOWAS Sub-region*

**UNIDO ID: 104064**

**GEF Project ID: 3969**

**January 2019**

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## I. PROJECT BACKGROUND AND CONTEXT

### 1. Project factsheet<sup>69</sup>

|   |   |
|---|---|
| Project title   | Capacity Strengthening and Technical Assistance for the Implementation of the Stockholm Convention (SC) National Implementation Plans (NIPs) in African Least Developed Countries (LDCs) of the ECOWAS Sub-region |
| UNIDO ID  | 104064  |
| GEF Project ID  | 3969  |
| Region  | Africa (ECOWAS)   |
| Country(ies)  | Benin, Burkina Faso, Central Africa Republic, Chad, Gambia, Guinea, Liberia, Mali, Mauritania, Sao Tome and Principe, Senegal, Sierra Leone, Togo   |
| Project donor   | GEF   |
| Project implementation start date                         | December 2011   |
| Expected duration   | 60 months   |
| Expected implementation end date                          | 31 March 2019   |
| GEF Focal Areas and Operational Project                   | FEM 4   |
| Implementing agency                                       | UNIDO   |
| Government coordinating agency                            | Ministries of Environment   |
| Donor funding   | USD 4,000,000   |
| Project GEF CEO endorsement / approval date               | May 2011  |
| UNIDO input (in kind, USD)                                | 1,200,000   |
| Co-financing at CEO Endorsement, as applicable            | USD 4,793,452   |
| Total project cost (USD), excluding support costs and PPG | USD 8,793,452   |
| Mid-term review date                                      | July 2017   |
| Planned terminal evaluation date                          | January – March 2019  |

(Source: Project document)

<sup>69</sup> Data to be validated by the Evaluation Team

## 2. Project context

To address the issue of the continuous degradation of the environment, the Least Developed Countries (LDCs) of the Sub-region ECOWAS (Economic Community of West African States) adopted a list of measures to strengthen the environmental protection. During the last years, in particular, these countries focused on preventive approaches and on total control of the pollution. To achieve these goals, the ECOWAS Member States ratified the Stockholm Convention on Persistent Organic Pollutants (POPs), with the aim of protecting both human health and the environment against the negative effect of the POPs. According to the article 7 of the Convention, each party has to develop and try to apply a national plan for the implementation of its obligations.

The preliminary gap analyses conducted to assess the baseline situation of each State against the Convention's requirements showed a widespread need of strengthening the capacities and the technology transfer components. Furthermore, the analyses showed other shortages, namely: awareness raising and training; monitoring of POPs in core media and the others; technology transfer for cleaner production; policies and regulations; inventory for intentionally generated POPs releases (pesticides, PCBs) and wastes containing POPs; identification of contaminated sites; an initial inventory of unintentionally produced POPs (UP-POPs) and introduction of BAT/BEP to mitigate and eliminate the releases of UP-POPs by key emitting industries; measures for environmentally sound management of wastes to reduce UP-POPs emitting from current open burning practices; financial mechanisms to ensure implementation of each action plan; development and enhancement of capacity in support of Convention implementation; and establishment a long-term mechanism to control POPs releases.

The project "Capacity Strengthening and Technical Assistance for the implementation of Stockholm Convention National Implementation Plans (NIPs) in African Least Developed Countries (LDCs) of the ECOWAS Sub-region", officially launched at the beginning of December 2011 and implemented by UNIDO, seeks an answer to these issues. The implementation of this project is expected to support the ECOWAS countries to comply with the obligations of the Convention, thanks to the financial support of the GEF and other donors.

## 3. Project objective and expected outcomes

The overall objective of the proposed project is to reduce POPs emissions through strengthening and/or building capacity required in the LDCs of the ECOWAS sub-region to implement their Stockholm Convention NIPs in a sustainable, effective and comprehensive manner while building upon and contributing to strengthening country's foundational capacities for sound management of chemicals and waste in general. The immediate objective of the project is to create an enabling environment in the ECOWAS Sub-region by establishing/amending laws, regulations, policies and standards, strengthening institutions for the remediation of contaminated sites, introducing BAT/BEP to industrial processes, managing municipal solid wastes, health-care wastes, supporting the phasing out of agricultural use of POP pesticides through the promotion of best agricultural practices including the use of bio-botanical pesticides and promoting locally designed technologies development.

Expected Outcomes and Outputs:

**Outcome 1: Introduction of BAT/BEP in industrial production processes and others mentioned in Annex C of Article 5 of the Convention;**

Output 1.1: Regional ECOWAS BAT/BEP Forum established;

Output 1.2: Human resources for BAT/BEP developed, technical knowledge shared in SMEs;

Output 1.3: BAT/BEP in textile and leather dyeing and finishing, in waste oil refinery and food smoke curing source categories initiated.

**Outcome 2: Reduction of exposure to POPs at workplace and from waste;**

Output 2.1: The concept of “Cleaner Solid Municipal and Health Care Waste Management System” introduced to the national plans of waste management (prevention and mitigation of UP POPs release from open burning and landfill fires);

Output 2.2: Bio botanical pesticides produced and promoted in agriculture including market gardening in urban areas for most affected staple food crops;

Output 2.3: Strategy developed to audit, formalize and scale up to MSEs informal management practices of PCBs solid and liquid waste, plastic waste, used paper and e-waste.

**Outcome 3: Identification and assessment of contaminated Land/sites;**

Output 3.1: Site identification strategies, protocols and guidelines formulated and applied in the sub region based on the UNIDO Toolkit

Output 3.2: Capacity to manage the contaminated sites strengthened.

**Outcome 4: Establishment of project management structure and M&E mechanism.**

Output 4.1: Project management structure established;

Output 4.2: M&E framework designed and implemented according to GEF M&E procedures.

#### **4. Project implementation arrangements**

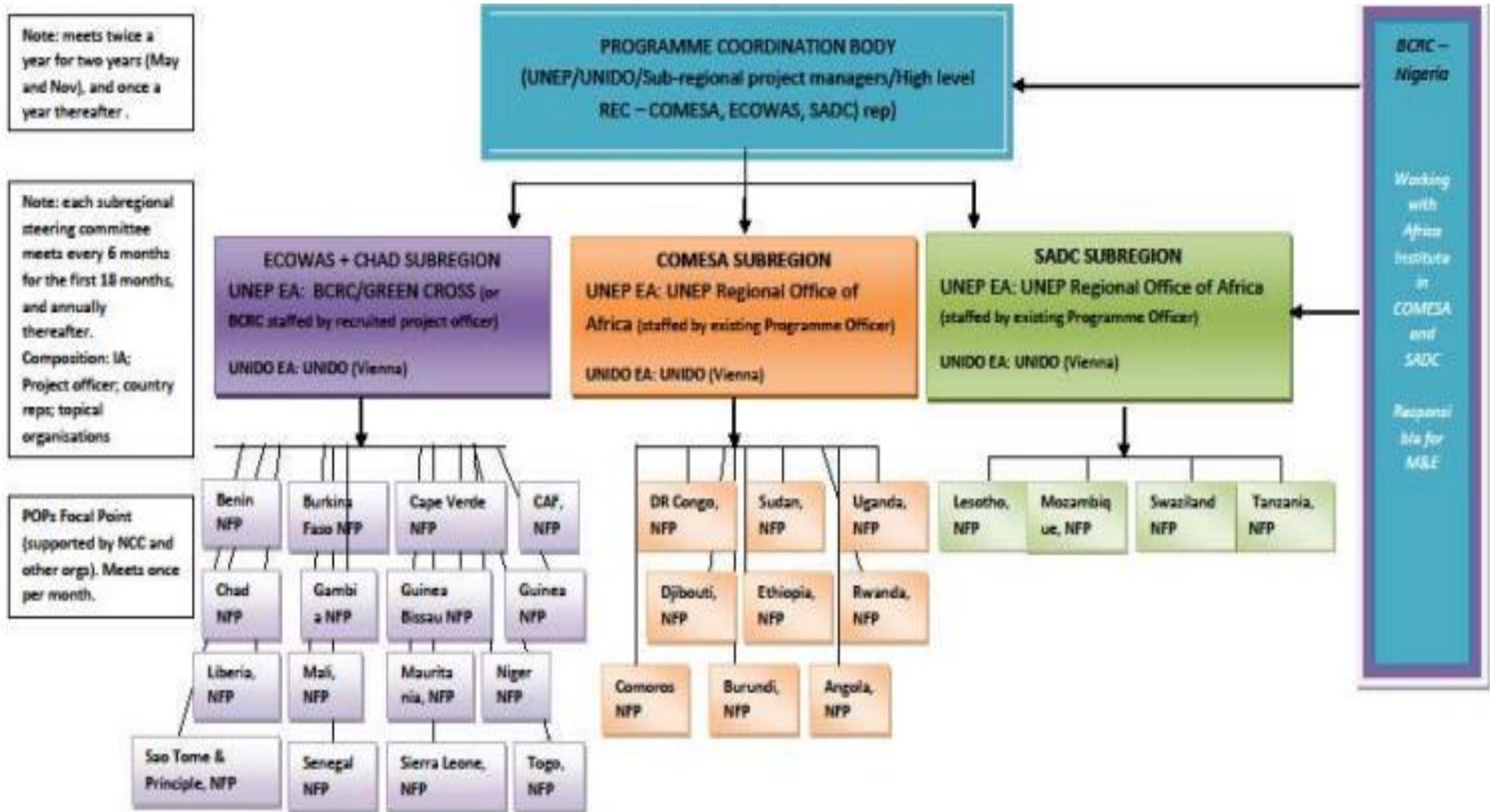
- **Programme Coordination Body (PCB):** comprising of representatives from UNEP, UNIDO, executing agencies, RECs, the Stockholm Convention Centres (SCCs), the Basel Convention Regional Centres (BCRCs). The PCB meets twice per year for the first two years, and has the role of overseeing the programme implementation.

- **Sub-regional Project Steering Committee (SPSC)** oversees the project execution. SPSC includes representatives from UNEP, UNIDO, executing agency staff, POPs/NFPs, the BCRC and relevant organizations relating to project execution. SPSC approves annual work plans, agrees on terms of reference for external consultants and oversees project activities. Furthermore, it also provides guidance to the executing agency and meets once every six months for the first 18 months, and annually thereafter. Among its main responsibilities: ensuring that the project's outputs meet the programme objectives; monitoring and reviewing of the project; ensuring that scope aligns with the agreed portfolio requirements; fostering positive communication outside of the focal points regarding the project's progress and outcomes; advocating for programme objectives and approaches and for exchanges of good practices between countries; reporting on project progress.

- **National project teams**, coordinated by the POPs/NFPs are responsible for executing activities at the national level. National project teams also include members of the NIP NCC and other relevant stakeholders. The National project teams meet once every three months to plan upcoming project activities and evaluate recently completed or ongoing activities. A project focal point (a UNIDO part-time professional and support staff) is established within UNIDO to assist in the project execution.

- **UNIDO and UNEP Regional Office of Africa** act as the Sub-regional executing agencies overseeing the development, implementation and management of the project.

The project management structure as designed is shown in the following chart:



## 5. Main findings of the Mid-Term Review (MTR)

In accordance with the policies and procedures of both UNIDO and the GEF relative to the follow-up and to the evaluation, a mid-term independent evaluation was conducted in July 2017. The key findings are:

- the regulative framework for POPs management was strengthened by the adoption of the declaration on the creation of the BAT/BEP forum for Western and Central Africa adopted on September 12th 2012 in Arusha, Tanzania.
- successful development of the directives on the BAT/BEP for the ecologically-rational management of the biomedical waste on the basis of the lessons learnt by the pilot project GEF/UNDP together with the one on lubricating oils management;
- Establishment of a research and training laboratory, through the implementation of the experimental demonstrations in various countries of the sub-region. As for the experts and national executives, around thirty were trained on the BAT/BEP in the textile, leather and oil refinery industries in 2012 in Dakar. Furthermore, additional thirty experts were trained on waste management with an emphasis on the reduction of the risks and on the concept of cleaner management of the solid municipal and biomedical wastes. Finally, around thirty experts coming from different institutions were trained at the regional level to allow them to collect the scientific data of the contaminated sites and to estimate the potential risks on human beings, fauna, flora and the environment in its whole;
- beginning of a dynamic coordination process among the ECOWAS Member States of the ECOWAS since 2011, with periodic meetings among executive members of the organ of coordination of the program including the sub-region of ECOWAS, COMESA and SADC.

## 6. Budget information

Table 1. Financing plan summary - Outcome breakdown<sup>70</sup>

| <b>Project outcomes</b>  | <b>Co-Financing (USD)</b> | <b>Donor (GEF/other) (USD)</b> | <b>Total (USD)</b> |
|--|---------------------------|--------------------------------|--------------------|
| 1- Introduction of BAT/BEP in industrial production processes and others mentioned in Annex C of Article 5 of the Convention | 1,556,500                 | 1,760,000                      | <b>3,316,500</b>   |
| 2- Reduction of exposure to POPs at workplace and close proximity of POPs wastes and UP-POPs emitting sources                | 1,080,500                 | 1,200,000                      | <b>2,280,500</b>   |
| 3- Identification and assessment of contaminated land/sites  | 1,797,952                 | 800,000                        | <b>2,597,952</b>   |

<sup>70</sup> Source: Project document.

| <b>Project outcomes</b>  | <b>Co-Financing (USD)</b> | <b>Donor (GEF/other) (USD)</b> | <b>Total (USD)</b> |
|--|---------------------------|--------------------------------|--------------------|
| 4- Establishment of project management structure and project M&E mechanism | 358,500                   | 240,000                        | <b>598,500</b>     |
| <b>Total (USD)</b>   | <b>4,793,452</b>          | <b>4,000,000</b>               | <b>8,793,452</b>   |

Source: Project document / Progress report

Table 2. Co-Financing source breakdown

| <b>Name of Co-financier (source)</b> | <b>In-kind</b>   | <b>Cash</b>    | <b>Total Amount (USD)</b> |
|--------------------------------------|------------------|----------------|---------------------------|
| PMA/CEDEAO                           | 1,150,000        | 600,000        | 1,750,000                 |
| Commission CEDEAO                    | 150,000          | 375,000        | 525,000                   |
| Commission Union Africaine           |                  | 20,000         | 20,000                    |
| Stockholm Convention Secretariat     | 150,000          |                | 150,000                   |
| ASGIPC (SAICM)                       | 1,148,452        |                | 1,148,452                 |
| UNIDO                                | 1,200,000        |                | 1,200,000                 |
| <b>Total Co-financing (USD)</b>      | <b>3,798,452</b> | <b>995,000</b> | <b>4,793,452</b>          |

Source : Project document

Table 3. UNIDO budget execution (Grant n. 500123 - 500271 - 200000297)

| <b>Items of expenditure</b> | <b>2012</b>    | <b>2013</b>    | <b>2014</b>    | <b>2015</b>    | <b>2016</b>      | <b>2017</b>    | <b>2018</b>    | <b>Total expend.</b> | <i>% over total</i> |
|-----------------------------|----------------|----------------|----------------|----------------|------------------|----------------|----------------|----------------------|---------------------|
| Equipment                   | 6,163          | 2,667          |                |                | 331,058          | 31,192         | 257,854        | <b>628,934</b>       | 16,6%               |
| Contractual Services        |                | 12,097         | 331,508        | 54,781         | 608,141          | 195,457        | 162,633        | <b>1,364,617</b>     | 36,2%               |
| International Meetings      | 271,701        | 135,886        | 13,699         | 28,498         | 2,376            | 35,612         | 60,288         | <b>548,060</b>       | 14,5%               |
| Local travel                | 44,454         | 28,945         | 16,345         | 6,176          | 9,217            | 47,162         | 10,121         | <b>162,420</b>       | 4,3%                |
| Staff travel                | 11,243         | 10,542         | 7,502          | 10,740         | 27               |                |                | <b>40,054</b>        | 1%                  |
| Nat. Consult./Staff         | 1,816          |                |                | 9,099          | 24,511           | 20,564         |                | <b>55,990</b>        | 1,5%                |
| Other Direct Costs          | 14,564         | 2,806          | -1,264         | 2,372          | 187              | 956            | 2,834          | <b>22,455</b>        | 0,6%                |
| Staff & Intern Consultants  | 72,631         | 126,409        | 100,877        | 245,152        | 81,393           | 128,724        | 103,960        | <b>859,146</b>       | 22,8%               |
| Train/Fellowship/Study      | 23,641         | 11,607         | 11,579         | 2,595          | 43,983           | -620           |                | <b>92,785</b>        | 2,5%                |
| Premises                    |                |                |                |                |                  |                | 129            | <b>129</b>           | >0,01%              |
| <b>Grand Total</b>          | <b>448,225</b> | <b>332,972</b> | <b>482,260</b> | <b>361,428</b> | <b>1,102,909</b> | <b>461,064</b> | <b>599,837</b> | <b>3,774,590</b>     | 100%                |

Source: UNIDO Project Management database as of 11<sup>th</sup> October 2018

## II. Scope and purpose of the evaluation

The purpose of the evaluation is to independently assess the project to help UNIDO improve performance and results of ongoing and future programmes and projects. The terminal evaluation (TE) will cover the whole duration of the project from its starting date in to the estimated completion date in 31/3/2019.

The evaluation has two specific objectives:

- (i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact; and
- (ii) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

## III. Evaluation approach and methodology

The TE will be conducted in accordance with the UNIDO Evaluation Policy<sup>71</sup>, Evaluation Manual and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle<sup>72</sup>. In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied.

The evaluation will be carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the evaluation. The evaluation team leader will liaise with the UNIDO Independent Evaluation Division (ODG/EIO/IED) on the conduct of the evaluation and methodological issues.

The evaluation will use a theory of change approach and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning.

The theory of change will identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieve them. The learning from this analysis will be useful to feed into the design of the future projects so that the management team can effectively manage them based on results.

### 1. Data collection methods:

The following are the main instruments for data collection:

- (a) **Desk and literature review** of documents related to the project, including but not limited to:
  - The original project document, monitoring reports (such as progress and financial reports, mid-term review report, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
  - Notes from the meetings of committees involved in the project.
- (b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:

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<sup>71</sup> UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

<sup>72</sup> UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

- UNIDO Management and staff involved in the project; and
  - Representatives of donors, counterparts and stakeholders.
- (c) **Field visit** to project sites. The location will be decided at the inception phase together with the project management unit.

## 2. Evaluation key questions and criteria:

The key evaluation questions are the following:

- (a) What are the key drivers and barriers to achieve the long-term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long-term objectives?
- (b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
- (c) What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent the achieved results will sustain after the completion of the project?
- (d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation will assess the likelihood of sustainability of the project results after the project completion. The assessment will identify key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and explain how these risks may affect the continuation of results after the project ends. Table 4 below provides the key evaluation criteria to be assessed by the evaluation. The details questions to assess each evaluation criterion are in annex 2.

Table 4. Project evaluation criteria

| #        | Evaluation criteria                            | Mandatory rating |
|----------|--|------------------|
| <b>A</b> | <b>Impact</b>                                  | <b>Yes</b>       |
| <b>B</b> | <b>Project design</b>                          | <b>Yes</b>       |
| 1        | • Overall design                               | Yes              |
| 2        | • Logframe                                     | Yes              |
| <b>C</b> | <b>Project performance</b>                     | <b>Yes</b>       |
| 1        | • Relevance                                    | Yes              |
| 2        | • Effectiveness                                | Yes              |
| 3        | • Efficiency                                   | Yes              |
| 4        | • Sustainability of benefits                   | Yes              |
| <b>D</b> | <b>Cross-cutting performance criteria</b>      |                  |
| 1        | • Gender mainstreaming                         | Yes              |
| 2        | • M&E:<br>✓ M&E design<br>✓ M&E implementation | Yes              |
| 3        | • Results-based Management (RBM)               | Yes              |
| <b>E</b> | <b>Performance of partners</b>                 |                  |
| 1        | • UNIDO  | Yes              |
| 2        | • National counterparts                        | Yes              |
| 3        | • Donor  | Yes              |
| <b>F</b> | <b>Overall assessment</b>                      | <b>Yes</b>       |

### Performance of partners

The assessment of performance of partners will **include** the quality of implementation and execution of the GEF Agencies and project executing entities (EAs) in discharging their expected roles and responsibilities. The assessment will take into account the following:

- Quality of Implementation, e.g. the extent to which the agency delivered effectively, with focus on elements that were controllable from the given GEF Agency’s perspective and how well risks were identified and managed.
- Quality of Execution, e.g. the appropriate use of funds, procurement and contracting of goods and services.

**Other Assessments required by the GEF for GEF-funded projects:**

The terminal evaluation will assess the following topics, for which **ratings are not required**:

- a. **Need for follow-up:** e.g. in instances financial mismanagement, unintended negative impacts or risks.
- b. **Materialization of co-financing:** e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results.
- c. **Environmental and Social Safeguards<sup>73</sup>:** appropriate environmental and social safeguards were addressed in the project’s design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.

**3. Rating system**

In line with the practice adopted by many development agencies, the UNIDO Independent Evaluation Division uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory) as per Table 6.

Table 5. Project rating criteria

| Score |                           | Definition   | Category       |
|-------|---------------------------|--|----------------|
| 6     | Highly satisfactory       | Level of achievement clearly exceeds expectations and there is no shortcoming.   | SATISFACTORY   |
| 5     | Satisfactory              | Level of achievement meets expectations (indicatively, over 80-95 per cent) and there is no or minor shortcoming.                  |                |
| 4     | Moderately satisfactory   | Level of achievement more or less meets expectations (indicatively, 60 to 80 per cent) and there are some shortcomings.            |                |
| 3     | Moderately unsatisfactory | Level of achievement is somewhat lower than expected (indicatively, less than 60 per cent) and there are significant shortcomings. | UNSATISFACTORY |
| 2     | Unsatisfactory            | Level of achievement is substantially lower than expected and there are major shortcomings.  |                |
| 1     | Highly unsatisfactory     | Level of achievement is negligible and there are severe shortcomings.  |                |

<sup>73</sup> Refer to GEF/C.41/10/Rev.1 available at: [http://www.thegef.org/sites/default/files/council-meetingdocuments/C.41.10.Rev\\_1.Policy\\_on\\_Environmental\\_and\\_Social\\_Safeguards.Final%20of%20Nov%2018.pdf](http://www.thegef.org/sites/default/files/council-meetingdocuments/C.41.10.Rev_1.Policy_on_Environmental_and_Social_Safeguards.Final%20of%20Nov%2018.pdf)

#### IV. Evaluation process

The evaluation will be conducted from January to March 2019. The evaluation will be implemented in five phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

- i. Inception phase: The evaluation team will prepare the inception report providing details on the methodology for the evaluation and include an evaluation matrix with specific issues for the evaluation; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term review.
- ii. Desk review and data analysis;
- iii. Interviews, survey and literature review;
- iv. Country visits;
- v. Data analysis and report writing.

#### V. Time schedule and deliverables

The evaluation is scheduled to take place from January to March 2019. The evaluation field mission is tentatively planned between 17 February and 1 March 2019. The tentative timelines are provided in Table 3 below.

After the evaluation field mission, the evaluation team leader will visit UNIDO HQ for debriefing and presentation of the preliminary findings of the terminal evaluation. The draft TE report will be submitted 4 to 6 weeks after the end of the mission. The draft TE report is to be shared with the UNIDO PM, UNIDO Independent Evaluation Division, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for receipt of comments. The ET leader is expected to revise the draft TE report based on the comments received, edit the language and form and submit the final version of the TE report in accordance with UNIDO ODG/EIO/EID standards.

Table 6. Tentative timelines

| Timelines   | Tasks   |
|---|---|
| January 2019  | Desk review and writing of inception report   |
| Before 11 January 2019  | Briefing with UNIDO project manager and the project team based in Vienna through Skype  |
| 18 Feb – 1 Mar 2019   | Field visit to selected countries (tentatively Niger, Guinea, Togo and Mali, to be confirmed at Inception Phase)                        |
| Week 11 March 2019 (to be confirmed with the project manager & evaluation team) | Debriefing in Vienna<br>Preparation of first draft evaluation report  |
| March 2019  | Internal peer review of the report by UNIDO's Independent Evaluation Division and other stakeholder comments to draft evaluation report |
| March 2019  | Final evaluation report   |

#### Vi. Evaluation team composition

The evaluation team will be composed of one international senior evaluation consultant acting as the team leader and one junior evaluation consultant. The evaluation team members will possess relevant strong experience and skills on evaluation management and expertise and experience in environmental management. Both consultants will be contracted by UNIDO.

The tasks of each team member are specified in the job descriptions annexed to these terms of reference. The ET is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.

The UNIDO Project Manager and the project team will support the evaluation team throughout the evaluation process, including arranging meetings with stakeholders during the field visits. The UNIDO GEF Coordinator and GEF OFP(s) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation missions.

An evaluation manager from UNIDO Independent Evaluation Division will provide technical backstopping to the evaluation team and ensure the quality of the evaluation. The UNIDO Project Manager and national project teams will act as resourced persons and provide support to the evaluation team and the evaluation manager.

## **VII. Reporting**

### **Inception report**

This Terms of Reference (ToR) provides some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the Team Leader will prepare, in collaboration with the team, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type of and how the evidence will be collected (methodology). It will be discussed with and approved by the responsible UNIDO Evaluation Manager.

The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework (“evaluation matrix”); tools for collecting data prior to field work; division of work between the team members; mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable<sup>74</sup>.

### **Evaluation report format and review procedures**

The draft report will be delivered to UNIDO’s Independent Evaluation Division (the suggested report outline is in Annex 4) and circulated to UNIDO staff and national stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to UNIDO’s Independent Evaluation Division for collation and onward transmission to the project evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

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<sup>74</sup> The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO ODG/EVQ/IEV.

The ET will present its preliminary findings to the local stakeholders at the end of the field visit and take into account their feed-back in preparing the evaluation report. A presentation of preliminary findings will take place at UNIDO HQ after the field mission.

The TE report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly what was evaluated, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given in annex 4.

### **VIII. Quality assurance**

All UNIDO evaluations are subject to quality assessments by UNIDO Independent Evaluation Division. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO Independent Evaluation Division, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report by UNIDO's Independent Evaluation Division).

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 5. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO Independent Evaluation Division should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.

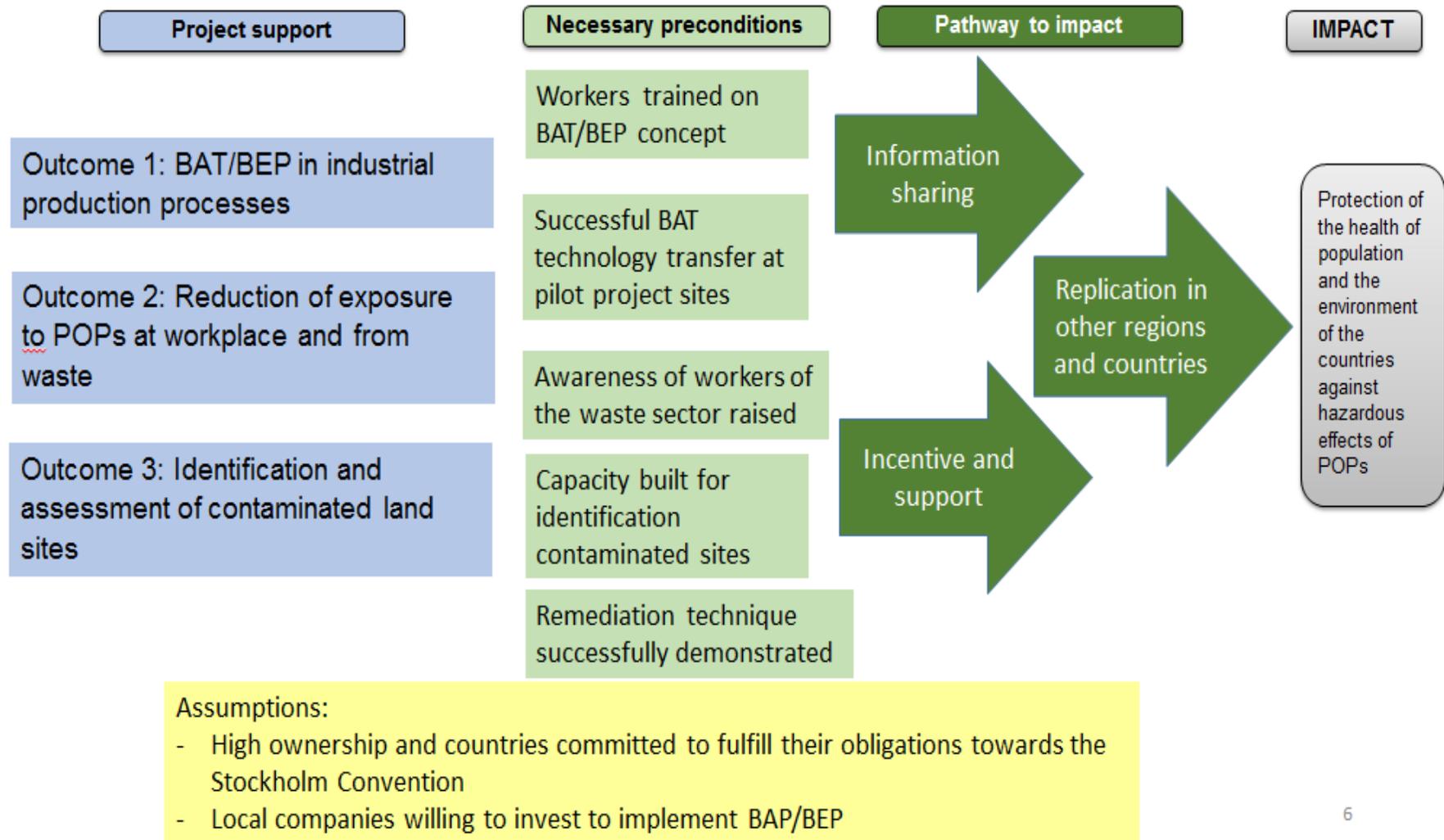
## Annex 2: List of documents consulted

|  |
|--|
| Project Mid Term Review (2018)   |
| 3 <sup>rd</sup> , 5 <sup>th</sup> , 6 <sup>th</sup> Project Steering Committee documents   |
| Final report on paper recycling pilot project ( Niger, 2018)   |
| Technical and diagnostic reports on paper recycling pilot project ( Guinea, 2018)  |
| Technical and diagnostic reports on pilot project ( Niger, 2018)   |
| Report on fish smoking pilot project in Benin  |
| Final report on Health care management in Guinea Bissau  |
| Final report on used oil recycle pilot project ( Mali, 2018)   |
| Technical Report (2018)  |
| Project implementation report (draft – 2018)   |
| Different documents related to the Bio-botanical pesticides pilot projects in Togo   |
| Progress reports   |
| Status implementation report (2017)  |
| Final declaration and report from the Ministerial Meeting for the adoption of strategic documents and the integrated management plan for chemical products and hazardous waste as well as high level events on POPs management projects (Abidjan, 2017)              |
| ECOWAS Experts’ Meeting for the preparation of the Ministerial meeting for the adoption of strategic documents and the integrated management plan of chemicals and hazardous wastes as well as the high level events on the draft management of POPs (Abidjan, 2017) |
| Medical Waste Management Guidance and Strategy (2016)  |
| Commitment and endorsement letters and notes   |
| NIP update workshop report (2012,2013)   |
| UNIDO Director General’s Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1) 2015   |
| UNIDO Director-General’s Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006) 2006  |
| GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized projects (Evaluation Office, Evaluation Document, 11 April 2017) 2017  |
| GEF, The GEF Monitoring and Evaluation Policy (Evaluation Office, November 2010)   |

### Annex 3: List of persons interviewed

| Name                                 | Institution  | Role                                    |
|--------------------------------------|--|---|
| <b>Project Management Unit</b>       |  |   |
| M. Fatin ALI MOHAMED                 | UNIDO  | Project Manager                         |
| M.me Isabella QUADRI                 | UNIDO  | Project Assistant                       |
| M. Bontiébite BADJARE                | UNIDO  | Regional Project Coordinator            |
| <b>Togo (16-18 February)</b>         |  |   |
| M. Thiyu Kohoga ESSOBIYOU            | Direction de l'Environnement                                     | Director General                        |
| M. N'Ladon NADJO                     | Direction de l'Environnement                                     | National project coordinator            |
| M. P. Essolakina BAFEI               | Direction de l'Environnement                                     | Project assistant                       |
| M. Matiyou TCHALA                    | Direction de l'Environnement                                     | Technical assistant                     |
| M. Blaise Minto DJATOITE             | Ministère de l'Agriculture                                       | Division Chief – POPs Focal Point       |
| Dr. Amen Yawo NENONENE               | Université de Lomé   | Deputy Director                         |
| Dr. TCHAGNILE                        | Université de Lomé   | Professor                               |
| M. Lankodjoa KOLANI                  | Université de Lomé   | Research assistant                      |
| <b>Guinea (19-22 February)</b>       |  |   |
| M. Ansoumane BÉRETÉ                  | UNIDO  | UNIDO Representative                    |
| M. Abou CISSÉ                        | Direction de l'Environnement                                     | Director General                        |
| Dr. Sekou Moussa KEITA               | UGANC Université de Conakry                                      | Director General                        |
| Dr. Alpha Issaga Pallè DIALLO        | UGANC Université de Conakry                                      | National consultant                     |
| M. TOURÉ                             | Union des collecteurs des déchets de plastique                   | President                               |
| M. Moussa DIA                        | SODIAPLAST   | Director General                        |
| M. Senyba TOURÉ                      | UNIDO  | International Consultant                |
| <b>Niger (23-25 February)</b>        |  |   |
| M. Moussa Dogo ALI                   | GVD  | Managing Director                       |
| Mr. Sahabi Abouba ISSOUFOU           | La Nigérienne de Recyclage des Déchets Plastiques et Organiques  | Director General                        |
| M. Sani MAHAZOU                      | Direction de l'Environnement                                     | Director General and Focal Point for SC |
| M. Boulama OUSMANE                   | Ministère de la Santé Publique                                   | Director                                |
| M.me Amadou MARIAMA                  | Ministère de la Santé Publique                                   | Division Chief                          |
| M. Harou OUSMANE                     | Ministère de la Santé Publique                                   | Directeur sortant                       |
| Comandant M. Moustapha CHETIMA       | Division industriel-énergétique, Bureau d'Impact environnemental | Chief, member of CdP                    |
| M.me Bazi Hadidjatou ISSOFOU         | Ministère de l'Environnement                                     | National project coordinator            |
| M.me Ibrahima Adama ABDOULAYA        | Ministère de l'Environnement                                     | National consultant                     |
| M. Sani SOUPIYANOU                   | Ministère de l'Environnement                                     | National consultant                     |
| <b>Mali ( 26 February- 01 March)</b> |  |   |
| M.me Haby SOW TRAORE                 | UNIDO  | UNIDO Representative                    |
| M. Amadou CAMARA                     | Ministère de l'Environnement, DNACPN                             | Director                                |
| M. Balla SISSOKO                     | Ministère de l'Environnement, DNACPN                             | Division Chief, Focal Point for SC      |
| M. Famori Karim KEITA                | GTIM   | Director General                        |
| M. Sallah DAOU                       | GTIM   | Deputy Director                         |

**Annex 4: Theory of Change**



## Annex 5: Rating for activities and outputs

Rating of activities and output: HS: Highly satisfactory; S: Satisfactory; MS: Moderately Satisfactory; MU: Moderately Unsatisfactory; U: Unsatisfactory; HU: Highly Unsatisfactory

- The rating of an activity is based on whether that activity has been completed or not (**Completed** or **Incomplete**) or achievement exceeds what was expected at design (**Exceeded**). A rating of HS is given in case if achievement exceeds expectation at design, which is the case for Activity 3.2.1.
- In the case of outputs, the rating is based on average rating obtained by all the activities of that output. Note that a score has been attributed to each rating as follows: HS = 6; S = 5; MS = 4; MU = 3; U = 2; HU = 1. If the average score for an output is not a whole number, then this figure is rounded off to the nearest whole number, and the rating corresponding to that number is the rating for the output.

| Activities   | Objectively verifiable indicators                  | Progress at project end and comments   | Status   | *Rating |
|--|--|--|--|---------|
| <b>Outcome 1:</b> Introduction of BAT/BEP in industrial production processes mentioned in Annex C of Article 5 of the Convention |  |  |  |         |
| <b>Output/Activities</b>   |  |  | <b>Exceeded</b><br><b>Completed</b><br><b>Incomplete</b> |         |
| <b>Output 1.1 :</b> Sub-regional ECOWAS BAT/BEP Forum established  | Existence of the ECOWAS sub-regional BAT/BEP Forum | BAT/BEP Forum not established, only two of the sixteen participating countries signed the Declaration for the establishment of the BAT/BEP Forum   | <b>Incomplete</b>  |         |
| <b>Activity 1.1.1:</b> Convene a workshop to prepare a Declaration for establishment of the subregional ECOWAS BAT/BEP Forum     | ➤ Verify the physical presence of the declaration  | Workshop held from 8 to 9 December 2011 in Lomé; draft ToRs prepared; regional priority source categories identified. Draft Declaration prepared. First Forum Chair and Vice-Chair designated<br><br>Workshop on BAT/BEP held in Ouagadougou, 26 – 29 March 2012. Final ToRs for the adopted; Regional Action Plan for | <b>Completed</b>   | S       |

| Activities   | Objectively verifiable indicators  | Progress at project end and comments   | Status   | *Rating                             |
|--|--|--|--|-------------------------------------|
| <p><b>Activity 1.1.2:</b> Launch the Regional Forum for development and formulation of a regional action plan on BAT/BEP</p> <p><b>Activity 1.1.3:</b> Assist in enhancing industry performance in the region in conformity with the BAT/BEP guidelines and provisional guidance document including regional, local and traditional practices and socio-economic considerations</p> <p><b>Activity 1.1.4:</b> Develop partnerships in the region for successful implementation of the regional action plan</p> | <ul style="list-style-type: none"> <li>➤ Launching and existence of Regional Forum</li> <br/> <li>➤ At least two industries in conformity with BAT/BEP in the region</li> <br/> <li>➤ Memorandum of Understanding to develop partnership for the implementation of regional action plan</li> </ul> | <p>BAT/BEP elaborated. To date, only 2 countries (Burkina Faso and Togo) signed the Declaration for establishment of the BAT/BEP Forum for the ECOWAS sub-region</p> <p>The BAT / BEP guidelines could not be validated as reference documents for improving the performance of industries, including regional, local and traditional practices in the region. Nevertheless, seven guidelines have been developed on the basis of experiences capitalized through the implementation of six pilot demonstrations.</p> <p>Despite efforts, the project did not succeed to formalize a partnership framework in the region for the implementation of the regional BAT/BEP action plan.</p> | <p><b>Incomplete</b></p><br><p><b>Incomplete</b></p><br><p><b>Incomplete</b></p> | <p>MU</p><br><p>MS</p><br><p>MU</p> |
| <p><b>Output 1.2:</b> Human Resources for BAT/BEP developed, technical knowledge shared in SMEs and informal sector</p>  | <p>Number of experts trained on BAT/BEP in textile, leather and oil refinery sectors</p>   | <p><b>A total of 27 experts in the three sectors trained</b></p>   |  |                                     |

| Activities   | Objectively verifiable indicators  | Progress at project end and comments  | Status            | *Rating |
|--|--|---|-------------------|---------|
| <b>Activity 1.2.1:</b> Carry out training workshops in BAT/ BEP in textile dyeing and finishing      | ➤ Number of experts in the textile sector trained in BAT/BEP                     | Regional training workshop in BAT/BEP in textile sector undertaken in Dakar, Senegal, 16 – 20 July 2012. According to information submitted by the countries, textile industry exists in only 8 of the 16 countries. Textile experts from 6 of the 8 countries attended the workshop. | <b>Incomplete</b> | MS      |
| <b>Activity 1.2.2:</b> Carry out training workshops in BAT/ BEP in leather dyeing and finishing      | ➤ At least two experts in the leather sector trained in BAT/BEP                  | Regional training workshop in BAT/BEP in leather sector undertaken in Dakar, Senegal, 16 – 20 July 2012. According to information submitted by the countries, leather industry exists in only 8 of the 16 countries. Leather experts from 6 of the 8 countries attended the workshop. | <b>Incomplete</b> | MS      |
| <b>Activity 1.2.3:</b> Carry out training workshops in BAT/ BEP in waste oil refinery.               | ➤ Number of experts in the oil refinery sector trained in BAT / BEP              | Regional training workshop in BAT/BEP in waste oil refinery undertaken in Dakar, Senegal, 16 – 20 July 2012. 15 Experts from 12 of the 16 countries attended the workshop.  | <b>Incomplete</b> | MS      |
| <b>Activity 1.2.4:</b> Undertake targeted awareness raising campaigns in BAT/BEP for informal sector | ➤ Number of participants from the informal sector in awareness raising campaigns | A series of national awareness campaigns on BAT / BEP targeting the informal sector was organized in 12 of the 16 countries (Benin, Burkina Faso, Chad, Gambia, Guinea, Guinea Bissau, Liberia, Mali, Niger, Sao Tome and Principe, Senegal, Sierra Leone).                           | <b>Incomplete</b> | MS      |

| Activities  | Objectively verifiable indicators   | Progress at project end and comments  | Status   | *Rating                         |
|---|---|---|--|---------------------------------|
| <b>Output 1.3:</b> BAT/BEP in textile and leather dyeing and finishing and waste oil refinery source categories initiated   | BAT/BEP in textile, leather, waste oil refinery and food smoke-curing sectors introduced  | BAT/BEP pilot demonstration on waste oil recycling and food smoke-curing sectors  |  |                                 |
| <p><b>Activity 1.3.1:</b> Carry out pilot demonstration of BAT/ BEP in textile dyeing and finishing</p> <p><b>Activity 1.3.2:</b> Carry out pilot demonstration of BAT/ BEP in leather dyeing and finishing</p> <p><b>Activity 1.3.3:</b> Carry out pilot demonstration of BAT/ BEP in waste oil refinery</p> | <ul style="list-style-type: none"> <li>➤ Number of pilot demonstration in the sectors</li> <li>➤ Number of actors/operators trained on BAT/BEP</li> </ul> | <p>Pilot demonstration of BAT / BEP in dyeing and finishing in textile sector could not be carried out because none of the participating countries met the criteria of the Stockholm Convention (Use of chloranil for dyeing)</p> <p>Pilot demonstrations of BAT / BEP in dyeing and finishing in leather sector could not be carried out because none of the participating countries met the criteria of the Stockholm Convention (alkaline extraction for finishing).</p> <p>On-going pilot demonstration of BAT/BEP in waste oil refinery (recycling) in Mali at GTIM, a used oil recycling company. All equipment purchased by project and delivered to GTIM. Facility operational but the pollution control device, which the project has already purchased and delivered to GTIM, to reduce POPs emissions not yet installed at the recycling facility.</p> <p>Pilot demonstration of BAT/BEP for fish smoke-curing on-going in Benin. The FAO Thiaroye processing technique (FTT-Thiaroye) to smoke fish has been set up at two sites: Djéffa and Zogbo sites since 2017. However, those sites will be recovered by the authorities for extension of the port. New locations to host the FFT-Thiaroye processing equipment are</p> | <p>N/A</p> <p>N/A</p> <p><b>Incomplete</b></p> | <p>N/A</p> <p>N/A</p> <p>MS</p> |

| Activities  | Objectively verifiable indicators  | Progress at project end and comments  | Status                              | *Rating             |
|---|--|---|-------------------------------------|---------------------|
| <b>Activity 1.3.4:</b> Carry out pilot demonstration of BAT/BEP for food smoke-curing ( informal sector source category)  |  | being identified. Lesson learned: to ensure the long-term ownership / availability of a site before execution of activities.  | Incomplete                          | MS                  |
| <b>Outcome 2: Reduction of exposure to POPs at workplace and close proximity of POPs wastes and UP-POPs emitting sources</b>  |  |   |                                     |                     |
| <b>Output 2.1:</b> Concept of cleaner municipal solid waste and healthcare waste management system introduced in national waste management systems to mitigate UP-POPs releases   | Number of city municipalities implementing the concept of cleaner MSW and HCW management system  |   |                                     |                     |
| <p><b>Activity 2.1.1.</b> Organize national workshops on “Cleaner Waste Management” with the aim to promote business and job opportunities in the field of waste management.</p> <p><b>Activity 2.1.2</b> Organize a sub-regional training workshop for trainers of waste management personnel with focus on risk reduction and the concept of “Cleaner Municipal solid and Healthcare Waste Management”.</p> | <ul style="list-style-type: none"> <li>➤ Number of awareness raising workshops on MSW t organized for national and local decision makers.</li> <li>➤ Awareness raising and training workshops on waste management held in city municipalities</li> <li>➤ Number of experts trained on cleaner waste management</li> <li>➤ Regional centers with operational waste management programmes</li> </ul> | <p>Only 8 of the 16 participating countries organized a national workshop on cleaner waste management</p> <p>A regional training workshop bringing together representatives from SMEs involved in solid waste recycling, from Ghana, Guinea Bissau, Senegal and Togo, municipal health workers and National focal points was organized in 2013 in Guinea Bissau.</p> <p>Regional workshop on health care waste management organized in the context of the AUC project ACP/MEAs on 24 – 26 January, 2012 in Dakar, Senegal. However, only7 of the 16 countries were invited to the workshop</p> <p>Although regional workshops on MSW and HCW management have been undertaken, there is no evidence that this regional programme for training on cleaner municipal solid waste and</p> | <p>Incomplete</p> <p>Incomplete</p> | <p>MU</p> <p>MS</p> |

| Activities  | Objectively verifiable indicators  | Progress at project end and comments   | Status  | *Rating                       |
|---|--|--|---|-------------------------------|
| <p><b>Activity 2.1.3</b> Support the establishment of a regional programme for training on cleaner municipal solid and health-care waste management through the BCRCs, Cleaner production centers, and/ or the Stockholm Convention Technical centers as appropriate.</p> <p><b>Activity 2.1.4</b> Update and adapt the manuals for training purposes in general on sound HCW management developed under the GEF/UNDP demonstration project</p> <p><b>Activity 2.1.5</b> Carry out pilot demonstration of cleaner HCW management based on the lessons learnt from the GEF/UNDP Demonstration Project and support replication activities in the sub-region</p> | <ul style="list-style-type: none"> <li>➤ Number of revised training manuals produced</li> <li>➤ Number of pilot demonstration of cleaner HCW management</li> </ul> | <p>health-care waste management has been established through the mentioned centers</p> <p>Only two (Niger and Sao Tome and Principe) of the sixteen countries adapted the training manuals on wastes to the national context.</p> <p>Pilot demonstration on sound management of HCW on-going at the Simao Mendes National Hospital in Guinea Bissau. Equipment purchased by project and delivered to the hospital but not yet operational. 35 health care personnel trained on sound management of HCW. The international consultant made his first visit to the pilot site in 4 - March 2019** - after the evaluation field mission</p> | <p>Incomplete</p> <p>Incomplete</p> <p>Incomplete</p> | <p>MU</p> <p>MU</p> <p>MS</p> |
| <p><b>Output 2.2:</b> Bio-botanical pesticides produced and promoted in agriculture including market-gardening in urban areas</p>   | <p>Number of micro- or small enterprises producing bio-botanical pesticides</p>  |  |   |                               |
| <p><b>Activity 2.2.1:</b> Organize (in cooperation with FAO / RENPAP / MoA) national training workshops for market gardeners on integrated pest management in crop protection and</p>   | <ul style="list-style-type: none"> <li>➤ Number of awareness workshops held for smallholder farmers on integrated pest management and use</li> </ul>               | <p>Awareness raising workshop for market gardeners undertaken in Togo only</p>   | <p>Incomplete</p>                                     | <p>U</p>                      |

| Activities   | Objectively verifiable indicators  | Progress at project end and comments  | Status  | *Rating                     |
|--|--|---|---|-----------------------------|
| <p>post-harvest management with particular focus on the use of bio-botanical pesticides</p> <p><b>Activity 2.2.2:</b> Review existing data and conduct national inventory of existing bio botanical pesticides formulations</p> <p><b>Activity 2.2.3:</b> Facilitate field testing of bio-botanical pesticides in cooperation with research institutions, RENPAP, FAO and farmers associations</p> <p><b>Activity 2.2.4:</b> Support PPP model for the creation of a national MSE to produce and promote the use of bio-botanical pesticides</p> | <p>of bio-botanical pesticides</p> <ul style="list-style-type: none"> <li>➤ Inventory reports on bio-botanical pesticides</li> <li>➤ Number of producers using and/or willing to use individually or in cooperatives the new natural bio-pesticide formulations</li> <li>➤ Research activities on field application of bio-botanical pesticides for pest management</li> <li>➤ Number of MSEs producing and/or providing bio-botanical pesticides</li> </ul> | <p>Inventory done in Togo only</p> <p>On-going pilot project on bio-pesticide in Togo – Equipment to produce neem extract (the bio-pesticide) from neem seeds purchase and commissioned at the pilot site, University of Lomé. Bio-pesticide formulated tested on pilot scale not yet in the field</p> <p>No evidence of support PPP model for the creation of a national MSE to produce and promote use of bio-pesticide</p> | <p>Incomplete</p> <p>Incomplete</p> <p>Incomplete</p> | <p>U</p> <p>MS</p> <p>U</p> |
| <p><b>Output 2.3:</b> Strategy developed to audit, formalized and scale-up to macro and small enterprises informal management practices of PCBs, solid and liquid waste, plastic wastes, used paper and e-waste</p>  | <p>Number of micro- or small enterprises using BAT/BEP for waste recycling</p>   |   |   |                             |
| <p><b>Activity 2.3.1:</b> Identify the informal collection system of PCB and used oil</p>  | <ul style="list-style-type: none"> <li>➤ Inventory on collection of PCBs</li> </ul>  | <p>None of the countries undertook any activity to identify the informal PCB waste collection system and carry out</p>  | <p>Incomplete</p>                                     | <p>HU</p>                   |

| Activities   | Objectively verifiable indicators   | Progress at project end and comments   | Status                             | *Rating            |
|--|---|--|------------------------------------|--------------------|
| <p>and perform environmental audits to determine the need for enhancing collection and channelling of the PCBs streams on an ESM manner in line with GEF/UNEP pilot project in the sub-region</p> <p><b>Activity 2.3.2:</b> Conduct a survey on existing concepts for plastic waste management including the reuse of waste plastic bags as a raw material for various articles (bags, ropes, civil engineering materials).</p> <p><b>Activity 2.3.3:</b> Develop a concept for plastic waste management including the reuse of waste plastic bags as raw material for various articles (bags, ropes, civil engineering materials etc.).</p> | <p>wastes in the sub-region</p> <ul style="list-style-type: none"> <li>➤ Inventory on existing plastic waste management options</li> <li>➤ Development of a sub-regional plastic waste management concept</li> <li>➤ Number of national/sub-regional micro or small enterprise recycling plastic bags in an ESM concept</li> <li>➤ Number of national/sub-regional micro or small enterprises recycling paper and e-waste in an ESM manner</li> <li>➤ Number of initiatives supported</li> <li>➤ Number of enterprises on recycling paper and e-wastes at national level</li> </ul> | <p>environmental audits to determine the need to improve the collection and channeling of PCB waste streams in an environmentally sound way in relation to the project GEF / UNDP pilot in the sub-region</p> <p>7 out of the 16 countries conducted surveys on existing concepts for plastic waste management</p> <p>Pilot project on recycling of plastic waste successfully completed at Sodioplast company limited in Guinea with the following achievements:</p> <ul style="list-style-type: none"> <li>- 536 plastic waste collectors (67 groups) sensitized and equipped with collection kits</li> <li>- 145 people (51 women and 94 men) sensitized on the ESM of the plastic wastes;</li> <li>- Comprehensive audit of current plastic wastes management practices done, validated and shared;</li> <li>- National ESD Communication Strategy is available;</li> <li>- A concept of private public partnership for ESM of plastic wastes developed and validated and shared;</li> <li>- Guinean legal framework for the management of DSM reviewed and henceforth includes specific provisions for the ESM of the plastic wastes;</li> <li>- National Action plan for the elimination of plastic wastes in the environment developed, validated and shared</li> </ul> | <p>Incomplete</p> <p>Completed</p> | <p>MU</p> <p>S</p> |

| Activities  | Objectively verifiable indicators | Progress at project end and comments   | Status   | *Rating                                |
|---|-----------------------------------|--|--|--|
| <p><b>Activity 2.3.4:</b> Support the creation of a Micro- or Small Enterprise for an environmentally sound recycling of plastic bags from an existing structure.</p> <p><b>Activity 2.3.5:</b> Investigate the current informal paper and e-waste management and the management of other halogenated solid and liquid wastes</p> <p><b>Activity 2.3.6:</b> Provide support for activities to prevent irrational dumping and open burning of paper and other halogenated solid and liquid wastes</p> <p><b>Activity 2.3.7:</b> Support PPP model for creation of a national Micro- or Small Enterprise for an environmentally sound recycling of paper and e-wastes in the sub-region</p> |                                   | <p>- Sodiplast equipped with BAT resulting in increased efficiency (production increased from 8 to 12 tons daily).</p> <p>Partnership with Sodiplast for the environmental sound management of plastic wastes</p> <p>Activity not undertaken</p> <p>Activity not undertaken</p> <p>On-going pilot project on waste paper recycling in Niger. Partnership with the NGO GVD established for waste paper recycling, however it was unclear how the recycling would be done.</p> <p>No activity for e-wastes management undertaken</p> | <p>Completed</p> <p>Incomplete</p> <p>Incomplete</p> <p>Incomplete</p> | <p>S</p> <p>HU</p> <p>HU</p> <p>MU</p> |
| <p><b>Outcome 3:</b> Identification and assessment of contaminated sites</p>  |                                   |  |  |  |

| Activities   | Objectively verifiable indicators   | Progress at project end and comments   | Status   | *Rating                       |
|--|---|--|--|-------------------------------|
| <p><b>Output 3.1:</b> Sites identification strategies, protocols and guidelines formulated and applied in the sub-region based on UNIDO toolkit</p>  | <ul style="list-style-type: none"> <li>➤ Number of identified and assessed contaminated sites in the sub-region</li> <li>➤ Percentage of population that are aware of the danger of contaminated sites to human health and environment</li> </ul>   |  |  | <b>S</b>                      |
| <p><b>Activity 3.1.1:</b> Prepare manuals, procedures, protocols and guidelines for local use for the identification of POPs contaminated sites and for conducting risk assessment of these sites</p> <p><b>Activity 3.1.2:</b> Develop methodology for selection of economically feasible and environmentally sound POPs contaminated site remediation technologies</p> <p><b>Activity 3.1.3</b> Conduct study to identify environmentally sound remediation technologies or benign ways of cleaning up of the contaminated sites</p> | <ul style="list-style-type: none"> <li>➤ Physical presence of the strategy document including procedures, protocols and guidelines</li> <li>➤ Validated document that stipulate the step by step approach to select benign technology for the clean-up of contaminated sites</li> <li>➤ Validated review report on cost benefit analysis and effectiveness of various remediation technologies</li> </ul> | <p>Activity not undertaken</p> <p>Activity not undertaken</p> <p>Activity not undertaken</p> | <p style="background-color: red; color: black;">Incomplete</p> <p style="background-color: red; color: black;">Incomplete</p> <p style="background-color: red; color: black;">Incomplete</p> | <p>HU</p> <p>HU</p> <p>HU</p> |

| Activities   | Objectively verifiable indicators   | Progress at project end and comments  | Status                              | *Rating             |
|--|---|---|-------------------------------------|---------------------|
| <p><b>Activity 3.1.4:</b> Undertake pilot demonstration project to verify the effectiveness of the low-cost remediation technology and validate contaminated site identification methodology</p> <p><b>Activity 3.1.5:</b> Prepare contaminated site remediation plans of the identified hot spots in the sub-region</p>   | <ul style="list-style-type: none"> <li>➤ Number of pilot demonstration project to validate effectiveness of low cost remediation technology and methodology</li> <li>➤ Number of contaminated sites remediation plan in the sub-region</li> </ul> | <p>Pilot demonstration undertaken in Sao Tome and Principe. 80 tons of obsolete pesticides and wastes exported for sound disposal. Due to very short time remaining, phytoremediation (low cost) of contaminated sites not undertaken Instead as recommended by international consultant, cover contaminated soils with resistant protective layer and secure site with fencing and adequate warning signs</p> <p>Activity not undertaken</p>                   | <p>Incomplete</p> <p>Incomplete</p> | <p>MS</p> <p>HU</p> |
| <p><b>Output 3.2:</b> Capacity to manage the contaminated sites strengthened</p>   | <p>Number of experts trained on use of the Toolkit on contaminated sites developed by UNIDO</p>   |   |                                     | <p>S</p>            |
| <p><b>Activity 3.2.1:</b> Launch training workshop using UNIDO Toolkit and the FAO manuals and guidelines to experts from the relevant institutions to enable them collect scientific data from contaminated sites and assess potential risks to humans, wildlife and the environment</p> <p><b>Activity 3.2.2:</b> Create database and website within the ECOWAS sub-regions, linked to UNIDO website, to</p> | <ul style="list-style-type: none"> <li>➤ Number of stakeholders who regularly use the website and database from each country</li> <li>➤ Operational database and website</li> <li>➤ Number of initiated awareness raising programme</li> </ul>    | <p>The capacities of 30 experts to manage POPs contaminated sites of the participating countries were strengthened during a regional training workshop in 2012 in Benin. Based on the UNIDO toolkit, they were trained to collect scientific data from contaminated sites.</p> <p>The database and website linked to the UNIDO website for sharing and disseminating data / information collected on contaminated sites and hotspots have not been created.</p> | <p>Completed</p> <p>Incomplete</p>  | <p>S</p> <p>HU</p>  |

| Activities  | Objectively verifiable indicators   | Progress at project end and comments  | Status  | *Rating                       |
|---|---|---|---|-------------------------------|
| <p>share and disseminate data/information collected from contaminated sites and hot spots</p> <p><b>Activity 3.2.3:</b> Raise awareness among the major stakeholders, including decision makers on the health risk that may result from exposure to POPs contaminated sites</p> <p><b>Activity 3.2.4:</b> Assess aspects of involvement of technology providers for the development of public-private partnerships in managing contaminated sites</p> <p><b>Activity 3.2.5:</b> Develop mechanism to mobilize funds from within the ECOWAS member states for the remediation of contaminated sites to ensure project sustainability</p> | <ul style="list-style-type: none"> <li>➤ List of economic and financial incentives put in place by the governments for private investors</li> <li>➤ Memorandums of Understanding between the government or any public body and the private sector</li> <li>➤ Ministerial declaration of the ECOWAS LDC member States within the AMCEN meetings</li> <li>➤ Head of States decision at ECOWAS summit</li> </ul> | <p>National workshops have been organized in only eight participating countries (Burkina Faso, Gambia, Guinea, Niger, Sao Tome and Principe, Senegal, Sierra Leone and Togo) to create awareness among key stakeholders including policy makers to health risks that can result from exposure to POPs contaminated sites.</p> <p>Activity not undertaken</p> <p>Activity not undertaken</p> | <p>Incomplete</p> <p>Incomplete</p> <p>Incomplete</p> | <p>MS</p> <p>HU</p> <p>HU</p> |

Unsatisfactory; HU: Highly Unsatisfactory. \*\* This mission was done after the evaluation mission in the countries, which took place in 19 February – 1 March 2019

## Annex 6: Rating of countries

| Country#                                      | Be | BF    | CAR | Chad | DRC | Gam | Guinea | GB | Lib | Mali | Mau | Niger | STP | Sen | SL  | Togo |
|---|----|-------|-----|------|-----|-----|--------|----|-----|------|-----|-------|-----|-----|-----|------|
| No of activities undertaken                   | 1  | 5     | 0   | 3    | 0   | 6   | 4      | 3  | 1   | 1    | 0   | 4     | 5   | 4   | 4   | 3    |
| Rating of country* for delivery of activities | U  | MS    | HU  | MU   | HU  | MS  | MU     | MU | U   | U    | HU  | MU    | MS  | MU  | MU  | MU   |
| Rating for Pilot projects                     | MS | N/A** | N/A | N/A  | N/A | N/A | S      | MS | N/A | S    | N/A | MS    | MS  | N/A | N/A | MS   |
| Overall rating                                | MU | MS    | HU  | MU   | HU  | MS  | MS     | MS | U   | MU   | HU  | MS    | MS  | MU  | MU  | MS   |
| Marks***                                      | 2  | 3     | 0   | 2    | 0   | 3   | 3      | 3  | 1   | 2    | 0   | 3     | 3   | 2   | 2   | 3    |

# Be: Benin; BF: Burkina Faso; Gam: Gambia; GB: Guinea Bissau; Lib: Liberia; Mau: Mauritania; Sen: Senegal; SL: Sierra Leone; \* 0 = HU; 1-2 = U; 3-4 = MU; 5-6 = MS; 7-8 = S; 9-10 = HS. \*\*N/A: not applicable; \*\*\*HU = 0; U = 1; MU = 2; MS = 3; S = 4; HS = 5

### Note:

- Each country had to execute 10 activities
- The rating for delivery of activities is based on the number of activities completed by a country
- Only seven countries hosted a demonstration project, they were rated for its execution. The overall rating for these countries is the average rating for delivery of activities and pilot project.
- For countries that did not undertake a pilot project, the overall rating corresponds to the rating for delivery of activities.

Total marks obtained by all countries for overall rating = 32

Total number of countries = 16

Average marks per country =  $32 / 16 = 2$

2 corresponds to **Moderately Unsatisfactory**