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Reducing Pollution through Partnership

Workshop Report

Mozambique

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Participants were content to be named in this report.

Contents

1. Workshop summary

“Reducing Pollution Through Partnership” is a project to scope and help designing a comprehensive pollution program to enhance the capacity of low- and middle-income countries to manage chemicals and reduce air, chemical, and waste pollution. For this purpose, the Global Analysis Report produced by the Joint Nature Conservation Committee (JNCC) was presented to the Mozambican pollution experts to carry out a local sense check.

In order to present the results of the online (remote) surveys and interviews carried out as part of the local sense check on the JNCC Global analysis, JNCC and the Eduardo Mondlane University (UEM) promoted a 2 day workshop that was held in Maputo- Macaneta on 15 th and 16 th February 2022.

The workshop was well attended and brought together participants from the government, non-governmental and private organizations involved in pollution research and management in Mozambique. It began with the opening remarks and welcoming addresses given on behalf of UEM by Prof. Doctor Daud Jamal (Faculty of Sciences Director), and the project coordinator Prof. Dr. Salomão Bandeira; followed by a short table tour where the participants gave an informal presentation of themselves.

The first session was marked by the presentations of the main reports (the JNCC Report on Pollution in Mozambique and the results of the local sense check) both followed by a general discussion where the participants presented their opinions. Furthermore, work groups were created with the aim of sharing experiences and learning about pollution sources and management strategies in Mozambique. The second day session began with the summary presentations on the early proposed topics on the pollution sources and management strategies in Mozambique given by the groups, followed by the presentation of the Evidence Project Proposal.

The announcement of initiatives on pollution: *the workshop ended with the announcement of the planned development of the short term course on pollution to be coordinated by* Eduardo Mondlane University (UEM *)* and *the “Field activities'' initiative on pollution* (UEM, Eco+ and Geração C).

2. Workshop and country context

The workshop “Reducing Pollution through Partnership” takes place as a pioneering event in Mozambique, raising the issue of pollution and biodiversity in a very specific and quantitative way that has never been done before and bringing together several key actors in this component in Mozambique. The country still faces major challenges in terms of monitoring, managing and mitigating pollution; there are few initiatives, lack of knowledge and lack of resources.

3. Workshop format and presentations

3.1. General organization

The workshop was designed for a two day session held in the conference room at Lugar do Mar - Macaneta. Each session lasted from four to five hours, with a coffee break.

Each day consists of these following activities:

- Presentations (reports, initiatives and proposals);
- Work groups;
- Discussions;

The two-day session followed the agenda:

Day One

Duration: 1:30 PM - 5 PM

- Opening ceremony
- Presentation of the workshop agenda
- Presentation of the JNCC Global Initiative: Reducing Pollution through Partnership
- Presentation of the JNCC Global Report on Pollution and in Mozambique
- Presentation of the Local Sense Check Interviews report
- Group work

Day two

Duration: 9:30 AM - 1:00 PM

- Opening
- Day one session summary
- Presentation of the results of the working groups and discussion
- Presentation of the Evidence Project Draft

- Presentation of the basic structure of the module on pollution
- Presentation of the "*Field activities*" initiative on the pollution
- Final remarks and acknowledgments

3.2. Presentations used

Day 1	
Presentation name	**Presenters**
Global analysis methodologies and results	Sádia C. Nhandimo
Results of surveys (Local Sense Check)	Maria Perpetua Scarlet
Evidence report draft	Carolina Mutatisse
Day 2	**Facilitators**
Results of the working groups	
Group 1	Jonas Matsinhe
Group 2	Moisés Macaringue
Group 3	Manuela Amone
Group 4	Carolina Mutatisse
Group 5	Moniz Munguambe
Pollution module proposal	Noor Gulamussen

Presentations are available on request.

3.3. Collaboration methods used

At each presentation, a space was opened for the participants to comment. However, the main method used for engagement was the creation of working groups. Were created five working groups with an average of six participants per group. In these groups the participants were challenged to reflect on three topics related to pollution and then prepare a PowerPoint presentation to be presented and discussed in the following session**.**

Figure 1: Working groups at the workshop. Photo ©Joaquim Campira

4. Workshop statistics

4.1. Participant statistics

The workshop was well attended, bringing 34 participants in total, where 16 were women and 18 men, mainly from governmental institutions. Non-governmental and private organizations involved in pollution management were also represented.

4.1.1. Governmental institutions:

- Agency for Environmental Quality Control (AQUA);
- Eduardo Mondlane University (UEM);
- Faculty of Marine and Coastal Sciences (ECMC - Quelimane);
- Maputo Natural History Museum (MHNM);
- Ministry of Land and Environment (MTA);
- Ministry of Mineral and Foreign Resources (MIREME);
- Ministry of the Sea, Inland Waters and Fisheries (MIMAIP);
- Mozambican Chamber of Commerce (CCM).

4.1.2. Non-governmental and other organizations:

- Algarve University – Portugal (UniAlgarve);
- ECO+;
- Geração C;
- World Wildlife Fund (WWF);

4.2. Country reach

The workshop was attended mainly by participants from Maputo (33), representatives of the institutions at central level; and one participant from Manica Province, the central region of the country.

4.3. Collaboration session statistics

All 34 participants attended the group discussions. Main questions for discussion were:

- Reflection on the main sources of pollution in Mozambique;
- Definition of criteria for the selection of priorities in intervention proposals (priority areas and priority pollutants);
- Definition of engagement strategies for sustainability in the implementation of future pollution management programs.

4.4. Main points and discussion on global analysis methods and used data (IUCN Red List Pollution Threats)

The end of the presentation gave space to the general discussion of the results of the report in which the main interventions will be listed below:

- In Mozambique, mining is a serious problem; however, the scale is small. The methodology used ends up ignoring this variable because it uses large scales, and even because of the maps overlapping, making it difficult to create a hotspot in relation to pollution.
- Most maps in the International Union Conservation of Nature (IUCN) RedList of threatened species database are too generic and do not reflect the distribution of most species in the country. On the other hand, existing data on the type of pollution are also global and, in most cases, do not reflect the country's reality. It is not explained how data on pollution threats were obtained.
- Further regional studies are needed along the coastal zone, inland waters and close to large farms and mining companies.

- More specialized works by taxonomic groups are important and necessary, since there is a lot of information within the country for several areas, so some data needs confirmation and/or updating.
- A lot of information available on the IUCN Red List database is not confirmed and some data comes from unreliable sources.

4.5. Main points and discussion on analysis for specific country (Local Sense Check)

- Regarding the proportion of species threatened by pollution in Mozambique:
    - 29.4% The proportion represents totally our reality
    - 29.4% The proportion partially represents the reality
    - 23.5% The proportion does not reflect Mozambique's reality
    - 17.6% did not answer the question.

- Heat Maps analysis
    - 47% partially agree with the heat maps of species threatened by pollution in Mozambique
    - 11.8% completely agree with the information presented in the heat maps
    - 11.8% disagree with the results presented in the heat maps
    - 29.4% did not answer the question asked
    - The reasons for partially agreeing and not agreeing are mainly related to methodologies and are summarized in section 4.4.

- Main Pollutants

The experts reflected on the main pollutants in Mozambique and ranked them according to the following table:

Table 1: The main pollutants in Mozambique ranked by greatest impact on species in Mozambique by the JNCC IUCN pollution analysis and by Mozambican experts, for comparison.

JNCC categorization by pollution impacted species	Categorization of Mozambican experts
I. Agricultural and Forestry Effluents	I. Domestic and Urban Wastewater (26.06%);
II. Industrial and Military Effluents	II. Industrial and Military Effluents (24.78%);
III. Domestic and Urban Wastewate	III. Litter and Solid Waste (21.36%);
IV. Excessive Energy and Airborne Pollutants	IV. Agricultural and Forestry Effluents (16.66%);
V. Litter and Solid Waste	V. Excessive Energy and Airborne Pollutants (11.11%).

- Missing Aspects in the Global Analysis
    - Analysis of socioeconomic aspects of the country;
    - Geographical location of the country (sea currents marine litter equatorial currents / reception of runoff / sharing of watersheds – reception of pollutants produced upstream);
    - Conflicts and natural disasters/cyclical extreme events - climate change;
    - Social aspects do not occupy the place they deserve – migratory movements.

- Proposed actions to make the global analysis useful for pollution mitigation programs in low- and middle-income countries
    - Publish and share the results of the reports with decision makers and potential implementers of pollution reduction projects;
    - Develop deeper work on pollution, particularly in relation to the way in which each pollutant affects a certain type of species;
    - Create partnerships with public and private institutions and organizations, civil society and communities in general;

4.6. Discussion on future project ideas

4.6.1. Creation of an Environmental Pollution Study Centre

This session was a discussion of the idea to create an Environmental Pollution Study Centre in Mozambique highlighting pollution management strategies, as well as the application of existing legislation related to pollution. This centre will create synergies between the different institutions, stakeholders and initiatives that participate in pollution research and management.

4.6.2. Presentation of the basic structure of the module on pollution

This session included the presentation of a structure module on pollution given by Prof. Doctor Noor Gulamussen (UEM). This is a short course (10-15 days), which promotes inclusive participation of students to technicians and will be divided into general aspects and wastewater treatment.

The following suggestions about the course were given by the participants in a short comment session:

- Add the duration of the course;
- Guess the engagement of experts in pollution from various sectors;
- Address content that deals with regulations in the area of pollution (incorporate environmental law);
- The course should address case studies and add environmental education terms to gain relevance (incorporate topics on good practices; how to do it, when to do it and what to do).

4.6.3. Launch of the "Field activities" initiative on the pollution

The initiative aims to implement activities with an impact on society. The initiative features three main actions:

- Roadshows (lectures, community theatre, exhibitions)
- Visual artistic expressions (paintings and others) displayed in public places
- Awareness activities

The announcement of the initiative was given by Professors Marlino Mubai and Salomão Bandeira. **Geração C** and **ECO +** represented by Regina Charrumar and David Xavier respectively, were presented as the main partners of the initiative. These partners develop work aimed at pollution management, focusing on the following activities:

- Solid waste collection on beaches and mangrove forests as well as mangrove restoration (Geração C);
- Environmental education (Geração C);
- Biodegradable solutions: biodegradable material supply (paper bags and cups made from sugarcane bagasse) (ECO+);
- Environmental consultancy in agriculture, aquaculture, and solid waste (ECO+).

5. Feedback

5.1. Usefulness of the workshop to participants

In general, the “Reducing Pollution through partnership” initiative was very well received by Mozambican Experts. In the workshop, the participants appreciated many aspects of the event highlighting the following points:

- The opportunity to collaborate on the evidence report
- The exchange of information from different areas of expertise in pollution

The initiatives and partnerships launched at the workshop such as “Field activities” and the short course on pollution.

The pollution report in Mozambique produced by the JNCC received praise from the participants. For the Mozambican experts, the existence of a report on pollution in Mozambique that presents numbers and images is a great starting point for the pollution management program for future elaboration and implementation. For the first time, these numbers provide a real indication of the state of pollution in Mozambique.

The partners contributed in a very effective way with information from work carried out on the subject of pollution in Mozambique in the different fields. The information

provided was useful for the elaboration of the evidence report and it was in the form of:

- Videos;
- Reports; and
- Databases.

5.2. Quality of information provided by JNCC/feedback on the Information Package provided from partners (and from workshop participants if any)

All the data provided by the JNCC in the form of videos, presentations and PDFs were crucial to better understand the project, its objectives, methodologies and results.

These are high quality data and have made it very easy to handle and translate with a view to disseminating the information among stakeholders.

5.3. Lessons learned – What worked well and what could have worked better

In a general way, the main objectives of bringing together Mozambican experts to present the JNCC report and survey results as well as promoting a debate on pollution was successfully achieved as it was possible to obtain contributions aimed at different areas.

We would have liked to have had participants from all regions of the country, however the period in which the interviews and workshop where being prepared (December-March) included the holiday season, and intense activities in many organizations, which did not allow for the participation of many stakeholders (we had cancellations and unavailability of people we considered important to participate).