
Indian Ocean islands subregion



Countries covered by the LAKI in the Indian Ocean islands subregion

| | |
|----------------|---|
| Comoros |  |
| Madagascar |  |
| The Maldives |  |
| Mauritius |  |
| The Seychelles |  |
| Sri Lanka |  |

V.

Indian Ocean islands subregion

Partnership with the International Water Management Institute (IWMI)

Context

The priority gaps for the Indian Ocean islands subregion were defined during the fourth LAKI priority-setting workshop convened from **20-22 October 2016 in Colombo, Sri Lanka**. The three-day workshop facilitated constructive discussions among a MSG of 11 core experts from the private and public sector, non-governmental organizations and research institutions.

Scoping paper

The scoping paper reviewed and summarized existing literature on adaptation for the subregion. Included were 31 knowledge gaps under the following thematic areas:

- > Water resources
- > Agriculture (crops, fisheries, and livestock production)
- > Coastal zones and marine ecosystems
- > Health
- > Energy
- > Infrastructure and human settlements

Priority-setting workshop

Step 1

Refining the pool of knowledge gaps

The MSG refined the gaps identified in the scoping paper by adding, deleting, merging and/or categorizing knowledge gaps into thematic groups, resulting in 38 adaptation knowledge gaps for the prioritization exercise.



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Step 2

Prioritizing the knowledge gaps

The MSG agreed on four criteria for the prioritization of the adaptation knowledge gaps (see annex I). These criteria were ranked individually by each MSG member and the results were aggregated to determine the different weight for each criterion.

Discussions revealed that the prioritization results were skewed toward large islands and did not adequately reflect the needs of some of the smaller ones. Thus, the prioritization was done for a cluster of large Indian Ocean islands (Madagascar, Sri Lanka) resulting in six priority gaps (see Table 5) and a cluster of small Indian Ocean islands (Comoros, the Maldives, Mauritius and the Seychelles) resulting in six priority gaps (see Table 5).

Figure 8 summarizes the distribution of priority gaps by thematic area for the large islands and small islands, respectively. For large islands, improving agricultural resilience to climate change was the main focus. For the small islands, which are less dependent on agriculture, protecting the integrity

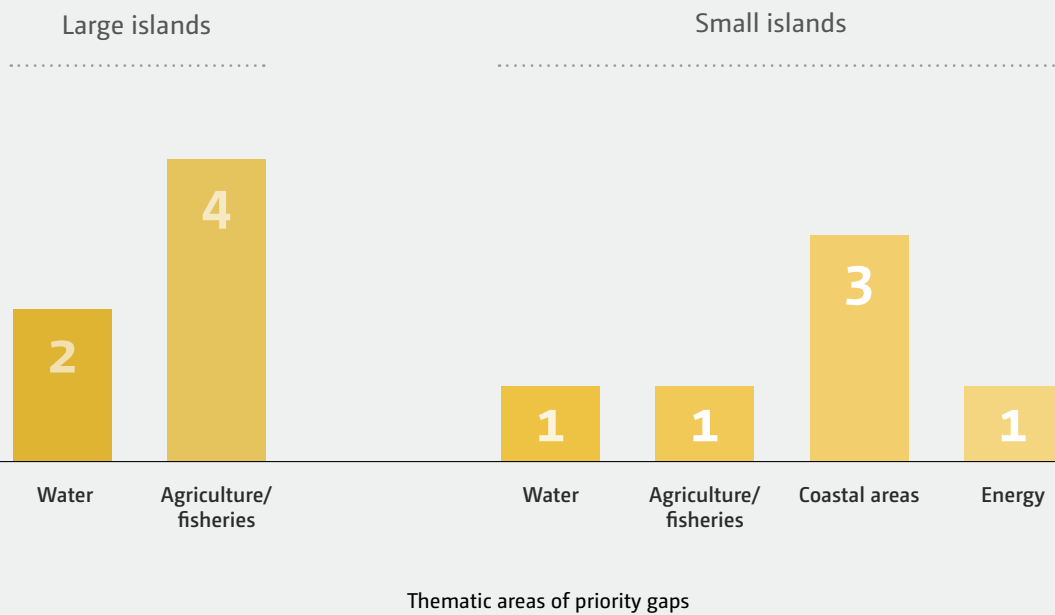
of coastal areas was the primary concern. Most of the priority gaps for both the large and small islands related to a mix of factors, especially a lack of data (cluster 1) and lack of access to existing data (cluster 2).

Step 3

Designing possible response actions

As a final step, the MSG suggested potential response actions and organizations well placed to implement them. For example, to address priority gap number one for the large islands, the MSG recommended capacity building workshops and developing context-specific reports capturing best practices for local officers/technicians specializing in land and water. For the chief gap facing small islands, the MSG recommended developing guidance for local and national policymakers on how to improve the climate resilience of coastlines based on available research on erosion. More recommendations are available in the workshop report.

Figure 8 **Number of priority gaps by thematic area for the Indian Ocean islands subregion**



Implementing actions to close knowledge gaps

The outcomes of the priority-setting workshop and the full workshop report were disseminated through the Adaptation knowledge portal¹³ and by the subregional coordination entity International Water Management Institute.¹⁴

Already, researchers at the University of Michigan, USA have responded with a capstone project titled *Improving climate resilience in the Seychelles: Evaluating the impacts of sea-level rise and storm*

surges on Seychelles' critical infrastructure. The project targets the first and third priority gaps identified for the small islands (see Table 5) and will run through early 2019.

The University of Michigan team is working with local actors in the Seychelles as well as international organizations to investigate and narrow these gaps through science-policy-practice collaboration.

13. see: www4.unfccc.int/sites/NWP/Pages/LAKI-Asia.aspx

14. see: www.iwmi.cgiar.org/2016/10/from-the-hindu-kush-to-the-indian-ocean

Table 5 | Priority knowledge gaps for the Indian Ocean islands subregion

Large islands

| No. | Thematic area | Gap description | Cluster | Knowledge user |
|----------|------------------------|---|--|--|
| 1 | Agriculture/ fisheries | Insufficient information on water-conserving irrigation practices and other water management techniques | Lack of data, lack of access [Mix] | Agricultural planners, extension officials, small-scale farmers (gender), water/irrigation management practitioners |
| 2 | Agriculture/ fisheries | Insufficient information on crop and agricultural diversification | Lack of data, lack of access [Mix] | Farmers, extension people, planners |
| 3 | Agriculture/ fisheries | Insufficient information on climate-smart crop varieties | Lack of data, lack of access, lack of actionable knowledge (e.g., in need of repackaging existing knowledge) [Mix] | Policymakers (local planners, government officials), farmers and agro-based industries, non-governmental organizations |
| 4 | Water | Insufficient information on climatic parameters at the sub-basin/ catchment/ subnational level | Lack of data, lack of access [Mix] | Policymakers (local planners, government officials) |
| 5 | Water | Insufficient information on water storage capacity and status (e.g. reservoirs, tanks) | Lack of data [1] | Policymakers (local planners, government officials), non-governmental organizations |
| 6 | Agriculture/ fisheries | Insufficient information on cropping calendars that precisely integrate the impacts of climate change | Lack of data, lack of access, lack of actionable knowledge (e.g., in need of repackaging existing knowledge) [Mix] | Policymakers (local planners, government officials), farmers and agro-based industries, non-governmental organizations |

For more information, see the full workshop report available via the Adaptation knowledge portal at <http://www4.unfccc.int/sites/nwp/Pages/Home.aspx>

Table 5 | Priority knowledge gaps for the Indian Ocean islands subregion

Small islands

| No. | Thematic area | Gap description | Cluster | Knowledge user |
|----------|------------------------|---|--|---|
| 1 | Coastal areas | Insufficient information on the impacts of storm surges and other extreme events on coastal areas, including erosion and impacts on infrastructure, and drinking water supply | Lack of data, lack of access [Mix] | Policymakers (local planners, government officials) from various ministries/ departments, tourism industry, non-governmental organizations, coastal communities |
| 2 | Agriculture/ fisheries | Insufficient knowledge on how climate change affects coastal/marine fish migration | Lack of data, lack of access [Mix] | Fisheries industries, fisheries sector officials |
| 3 | Coastal areas | Insufficient information on the impacts of sea level rise on coastal areas, including erosion and impacts on infrastructure, and drinking water supply | Lack of data, lack of access [Mix] | Policymakers (local planners, government officials) from various ministries/ departments, tourism industry, non-governmental organizations, coastal communities |
| 4 | Coastal areas | Insufficient information on the impacts of climate change on coral reefs, including coral bleaching | Lack of data, lack of access, lack of actionable knowledge (e.g., in need of repackaging existing knowledge) [Mix] | Policymakers (local planners, government officials), environmental non-governmental organizations, fishers, fisheries associations |
| 5 | Water | Insufficient information on climatic parameters at the sub-basin/ catchment/ subnational level | Lack of data, lack of access [Mix] | Policymakers (local planners, government officials) |
| 6 | Energy | Insufficient information on the impacts of climate change on energy demand | Lack of data [1] | Energy suppliers, policymakers/government, non-governmental organizations |

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