

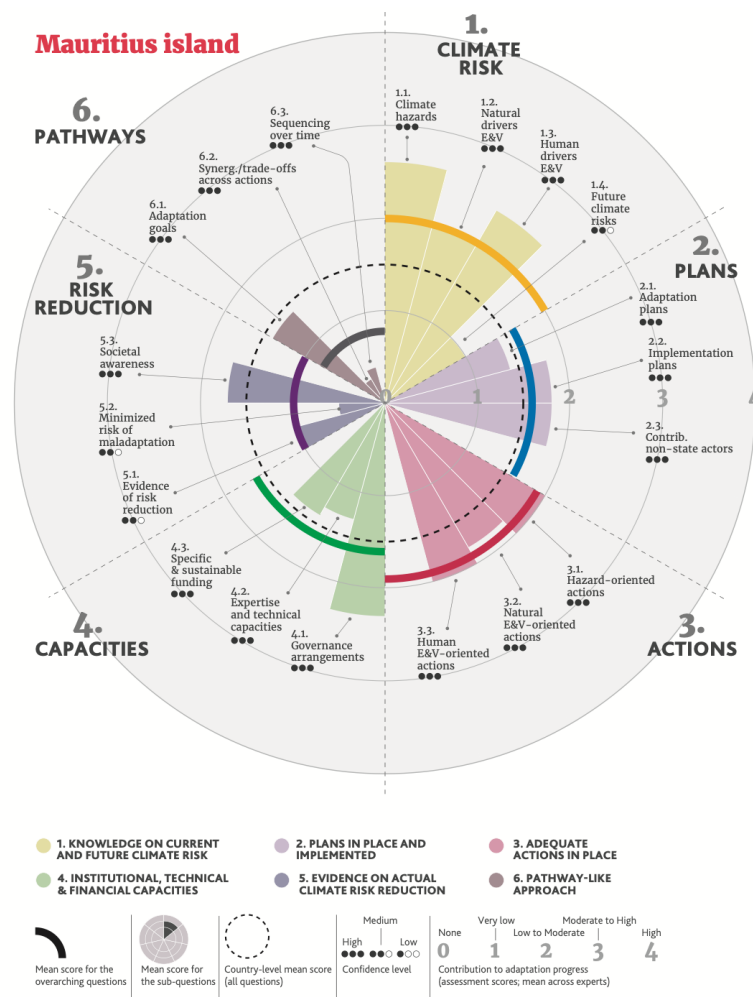
# ASSESSING COASTAL ADAPTATION TO CLIMATE CHANGE IN MAURITIUS ISLAND

The **Global Adaptation Progress tracker (GAP-Track)** project presented by IDDRI and AFD aims to explore innovative and complementary ways of assessing progress on adaptation to climate change. It uses an expert judgement approach (by a group of experts) applied to a question matrix, is based on a scoring system, and *Representative Adaptation Challenges* here defined as proxies of adaptation priorities at the global level (e.g. coastal adaptation, urban adaptation, etc.). The multiple dimensions of adaptation are framed by a question matrix—with 6 overarching questions and 19 sub-questions that aim to gather targeted information on specific issues on adaptation progress (see figure below). Such a framing and methodological protocol allows flexibility to mobilize different expertise and bring in a variety of sources of information and data, thereby overcoming challenges where data might not be available or are of different types (e.g. quantitative metrics, grey literature, research experience on the ground, traditional knowledge, policy documents).

A pilot study in 2021 applied to the coastal adaptation challenge and two national-level case studies (Mauritius in the South West Indian Ocean and Senegal in West Africa). This document summarizes the main results and takeaway messages for the Mauritius Island evaluation. The full evaluation and results (database, methodological and final reports) are freely available on the GAP-Track webpage<sup>1</sup>.

## Main results for Mauritius

The main results are captured in the Figure below and summarized in page 2.



<sup>1</sup> <https://www.iddri.org/en/project/assessing-global-progress-climate-adaptation-gap-track-2021>.

1. *Is there scientific knowledge on current and future **climate risks** at the appropriate scale available?* Climate hazards are far better understood and considered than the natural and anthropogenic drivers of exposure and vulnerability. Projections on future risks are at an early stage.
2. *Are there national to local **plans** in place and are they implemented?* There is no indication of locally led adaptation plans, especially in their design and implementation, despite that a national-level plan is in place that highlights the importance of local actors. Non-state actors are involved in consultation phases for adaptation related activities, but these latter usually remain focused on project-level needs and lack a longer-term perspective. At the same time, there are emerging examples of private companies engaging with public actors or the government in coastal adaptation-related activities.
3. *Are adequate **actions** taking place at a relevant scale to reduce climate risks?* Understanding the portfolio of actions implemented on the ground that contribute to risk reduction (hazard, exposure and vulnerability) is seriously constrained by a lack of systematized collection of information on the location/extent of adaptation-related actions carried out. In such a context, the GAP-Track expert group converge around a rather low contribution to adaptation progress. It recognizes that coastal risk-oriented actions are taking place in Mauritius over several decades, especially under the impetus of private actors (e.g. coastal retreat and sediment recharge by tourism companies) and international funding support (e.g. UNDP, JICA). Many actions are still under deployment on the ground, especially at the local scale, but until now the national-level decision-making process does not seem to have capitalized enough on such an experience. For example, there is no regular stocktake carried out (e.g. by national authorities) to track actions. The expert group also estimates that there are actually many sites where actions are not adequate, e.g. hard protection structures are in poor condition or not effective in reducing risk.
4. *Are there sufficient institutional, technical and financial **capacities**?* The capacities for addressing the coastal adaptation challenge in Mauritius are not at the appropriate scale. This is linked to several gaps in the governance arrangements to coordinate coastal adaptation policy and implementation, as well as due to limited technical capacities and expertise. In addition, funding mechanisms are still dominated by project-oriented funding that are limited in scope and duration.
5. *Are there evidence of actual **risk reduction**?* The GAP-Track expert group unanimously acknowledges that there is a critical lack of evidence on whether the adaptation-related actions carried out on the ground actually reduce risk levels, now and possibly in the future. This is partly due to a lack of reporting mechanisms on the characteristics of these actions (scope, objectives, results, etc.), and to knowledge gaps on how to measure current and future climate-related risks.
6. *Is a **pathway-like approach** considered?* Important forward-looking dimensions of adaptation (setting goals, sequencing action and accounting for trade-offs and synergies) critically lacks information, either because such information has never been formally collected, or simply because this forward-looking dimension is poorly addressed. This latter hypothesis is based on the experts' own knowledge of the Mauritius context, and led the expert group to assign this dimension a very low score (the lowest among all overarching questions).

## Policy messages/recommendations

- Improve the **assessment of current and future climate risks**, including the development of local-level prospective scenarios (hazards + exposure/vulnerability), to ensure evidence-based policy and action. This could be done by **reinforcing the governance framework**, such as organizing and carrying out **trainings to reinforce expertise and technical capacity**, as well as **involve non-government stakeholders** such as local scientists, firms and academic institutions.
- Create a mandate that gives responsibility to **local level actors to develop adaptation plans** including accessibility to resources and trainings.
- Develop a **centralized information database to collect and track the actions implemented on the ground** and dealing with coastal risk reduction and adaptation; including an assessment of the role of each action vis-à-vis risk reduction (positive or negative, extent, etc.). Ensure open data accessibility to support information sharing and communication with the community and private sector on adaptation activities in the country.
- Review existing adaptation policies and plans by adding time-horizons and goals from medium to long term vision, which includes looking at synergies and tradeoffs of adaptation options and their sequencing over time and according to risk scenarios and uncertainties (**adaptation pathways**).

### Authors and contact

A.K. Magnan (IDDRI, France), A. Anisimov (IDDRI, France), V.K.E. Duvat (La Rochelle University, France), P.N.K. Deenapanray (Ecological Living In Action Ltd, Mauritius), V. Kauppaymuthoo (Delphinium Ltd, Mauritius), S. Persand (Coastal Land and Marine Solutions Ltd, Mauritius) — Correspondance: [alexandre.magnan@iddri.org](mailto:alexandre.magnan@iddri.org)

