



INTEGRATING ADAPTATION MONITORING AND REPORTING INTO EXISTING INFORMATION SYSTEMS IN MOROCCO

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ACTION AREA: Adaptation

FOCUS AREA: Monitoring and Evaluating

COUNTRY: Morocco

SECTORS

INVOLVED: Cross-sectoral

TIMEFRAME: 01/2013-06/2016

CASE SUMMARY: The main objective of Morocco's comprehensive Monitoring and Evaluation (M&E) system for adaptation is to provide the country's various regions with an easily accessible instrument to control, analyze and visualize climate-related data and actions. More specifically, Morocco's M&E system pursues three objectives: i) monitor & evaluate the vulnerability of key sectors; ii) support the monitoring of adaptation actions and provide input for their improvement; iii) collect and systematize successful experiences.

Morocco's M&E system is a good practice case because it is science-based, it has been developed through a broad and participatory consultation process and it is financially viable. Overall, the M&E system is well aligned with decision-making structures.





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BACKGROUND: Climate change is a key issue in Morocco. Over the last decades Morocco has seen an average temperature increase of 1°C and a significant increase in the frequency and severity of extreme events, mainly droughts and floods (Royaume du Maroc, 2010). Given its high vulnerability to climate change, Morocco has shown a high level of commitment at the international and national level to take climate action. International efforts are exemplified through the organization of the international climate change negotiations 2016 in Marrakech (COP22) and review of its NDC in 2016 following the adoption of the Paris Agreement. National efforts include the National Plan to Fight Global Warming, the National Strategy on Climate Change and, more recently, the National Strategy for Sustainable Development, amongst other.

In 2010, in order to intensify activities to protect its climate and environment, Morocco adopted the National Charter for Environment and Sustainable Development. In this context, and in an effort to address the varying information needs of regional and local decision-makers, the Government of Morocco decided to de-centralize the management and collection of environmental data and set up a Regional Information System for the Environment and Sustainable Development (SIREDD in French) for each of its regions. Regional Observatories for the Environment and Sustainable Development (OREDDs in French) were mandated to collect relevant data and report on the environmental situation of the region (GIZ, 2017).

In order to develop a coherent adaptation planning process at the regional level, Morocco reviewed the SIREEDs and developed an adaptation M&E system in selected regions. The adaptation M&E component was initially developed in three pilot regions (Souss-Massa, Marrakech Safi and Beni Mellal Khénifra) and integrated into the SIREEDs. Purpose of the adaptation M&E system has been to track progress regarding climate change adaptation, build capacities and facilitate learning among regional partners. The idea has been to give a better understanding of climate change impacts on various sectors and to provide an accountability framework through which progress in the implementation of adaptation policies can be monitored and evaluated.

In 2015, the Office of the Secretariat of State for Sustainable Development reviewed all existing SIREEDs and decided to harmonize the various databases to the end of developing a National Information System. Once completed, this national information system will contain an adaptation M&E system, which will be based on the framework piloted in the three regions.

ACTIVITIES: The development process of the adaptation M&E system in the three selected regions can be divided into three successive phases: conceptualization, operationalization and re-adjustment.

- **CONCEPTUALIZATION:** During the conceptualization phase, government agencies established the key vulnerabilities in the three regions. They carried out a literature review, conducted vulnerability analyses, assessed existing M&E systems and identified needs and users of the adaptation M&E system.
- **OPERATIONALIZATION:** During the operationalization phase, the activities focused mainly on the development and selection of indicators. These indicators were based on climate change impact and vulnerability chains and developed through a participatory approach involving key stakeholders, namely experts from OREDD, representatives of regional environment directorates, and other technical services. About 30 indicators were developed for the various regions (e.g. 27 indicators have been developed in the region of Marrakech, 30 indicators in Souss-Massa).

There are several types of indicators used in the system: (1) indicators for assessing changes in vulnerability, by taking into account exposure, sensitivity, impact, and adaptive capacity; (2) indicators to track adaptation measures; (3) indicators to measure the impact of adaptation actions; (4) climate finance indicators; and (5) governance indicators.

The stakeholders developed a factsheet for each indicator, containing information on the indicator itself, modalities and responsibilities for data collection, baseline values, and interpretation. Finally, the indicators were integrated in the regional Information System for the Environment and Sustainable Development (GIZ & IISD, 2014).

• **RE-ADJUSTMENT:** The purpose of this third phase was to validate and refine the indicators. A number of participatory workshops and studies were conducted to review, update and complete the list of indicators, taking into account the climate change indicators from the National Strategy on Sustainable Development and the Sustainable Development Goals (SDGs). In addition, a number of workshops enabled the identification and validation of an approach to establish aggregated indicators, which could be used in the future for the elaboration of adaptation M&E indicators at the national level.

INSTITUTIONS

INVOLVED:

• **GOVERNMENT AGENCIES:** Office of the Secretariat of State to the Ministry for Energy, Mining and Sustainable Development responsible for Sustainable Development; Regional Observatory of the Environment and Sustainable Development (OREDD in French acronym) of Souss-Massa, Marrakech-Tensift-Al Haouz, and Beni Mellal Khenifra; Climate Change Committee; High Commission for Waters and Forests and the Fight against Desertification (HCEFLCD in French Acronym); Agency of the Hydraulic Basin, Agriculture, Waters and Forests and Tourism.

• **IMPLEMENTATION PARTNER:** Deutsche Gesellschaft für International Zusammenarbeit (GIZ) GmbH.

• **OTHER INSTITUTIONS:** National Observatory of the Environment of Morocco (ONEM in French acronym); Regional Directorate of Water and Forests (DREF in French acronym); National Agency for the Development of Oasis and Arganeraie Zones (ANDZOA in French acronym); Agricultural Development Agency (ADA in French acronym); Regional Networks for the Exchange of Environmental Information (RREIE in French acronym); Regional Councils; "Wilayas"; NGOs and Economic interest groups (GIE in French acronym); research institutions.

COOPERATION WITH: — Federal Ministry for Economic Cooperation and Development (BMZ), Germany.

FINANCE: — The project was financed by GIZ.

IMPACT OF ACTIVITIES: — • **INCREASED AWARENESS AND IMPROVED KNOWLEDGE BASIS:** The development of climate change impacts and causality chains and the data collection enhanced the regions' knowledge of the vulnerabilities of various sectors (e.g. agriculture, water resources, biodiversity) to the impacts of climate change. Moreover, taking stock of existing M&E systems provided Morocco with a better understanding of needs of the target regions, which helps to improve policy developments.

• **INTEGRATION OF ADAPTATION M&E SYSTEM INTO THE REGIONAL INFORMATION SYSTEM ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (SIREDD):** The M&E system was integrated into existing data infrastructure (GIZ & OREDD, 2014), thus allowing for swift and cost-effective implementation.



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WHY IS IT

GOOD PRACTICE:

- **STAKEHOLDER ENGAGEMENT:** The adaptation M&E system has been developed through an extensive consultation process. This process provided the M&E system with a sense of regional ownership. It involved discussions and meetings with a wide range of actors from various backgrounds, sectors and levels of decision-making to develop and select appropriate indicators and identify key sectors for integrating adaptation M&E. Morocco has successfully sought input from all relevant stakeholders, particularly for the selection of appropriate indicators. At the national level, the process was led by the State Secretary to the Ministry of Energy, Mining and Sustainable Development. At the regional level, the leading actors were the OREDDs, the Regional Directorates of Environment and the climate change committee. The climate change committee is constituted of representatives of the Wilaya, the regional council, and prefectures as well as of representatives from technical services, development agencies and research institutions. This process also received international technical and financial support from GIZ. The extensive stakeholder engagement allowed to understand the supposed causal links between the intervention actions and the expected strategic outcomes and helped to develop a common vision of adaptation at the regional level.
- **FINANCIAL VIABILITY:** The indicators have been selected and data have been compiled from various existing sectoral monitoring services. Existing data were then refined and adjusted. This pragmatic approach saved not only resources, but also prevented duplications. Morocco made best use of what was already there.
- **SCIENCE-BASED:** In order to measure adaptation, the M&E system uses an innovative approach with a focus on baseline studies, indicators and results chains. The selection of indicators is based on key requirements for achieving the objectives of the M&E system. Thus, a vulnerability chain was developed for each priority sector of activity in the region, before visualizing links between indicators (GIZ, 2017). This approach ensures a greater credibility of the outcomes.

SUCCESS FACTORS:

- **POLITICAL BUY-IN:** Policy mandates and directives have been key to ensuring that resources are made available for the establishment of the M&E system. A high level of political commitment and a regular dialogue with all stakeholders have allowed for the effective management of these resources.
- **ALIGNMENT WITH NATIONAL FRAMEWORKS:** To optimize resources, create synergies and avoid possible duplications, Morocco integrated the adaptation M&E component into the existing Regional Information System on Environment and Sustainable Development (SIREDDs) of the three regions. Further plans are underway to mainstream the indicator framework and develop a national information system (GIZ & IISD, 2014). These activities demonstrate that an indicator-based adaptation M&E system can be fairly easily integrated into existing M&E systems and scaled up. The system seems to be useful to address similar objectives in varying situations.

**OVERCOMING BARRIERS /
CHALLENGES:****WHAT WERE THE MAIN BARRIERS /
CHALLENGES TO DELIVERY?****INFORMATION: FAILURE IN THE
QUALITY AND RELIABILITY OF DATA
AND INFORMATION**

A key challenge was to identify existing data, sources, formats, and access conditions. This is a time-consuming process, especially if the data are scattered across sectors and scales and lie under the responsibility of different departments and agencies.

**INFORMATION: RESOURCE AND
CAPACITY CONSTRAINTS**

Setting up M&E systems for adaptation requires significant financial, human and technical resources. M&E systems need to be regularly updated based on new data, information and needs to stay relevant. This also requires resources, which were challenging to secure.

**INSTITUTIONAL: LACK OF HAR-
MONIZATION IN COORDINATION
BETWEEN SECTORS, SCALES AND
PARTNERS**

The data, information and actors needed to undertake adaptation monitoring and evaluation were scattered across different sectors and levels of decision-making.

**HOW WERE THESE BARRIERS /
CHALLENGES OVERCOME?**

Existing data were reprocessed or refined for better usability in the context of the M&E system. Morocco engaged competent actors that have been involved in identifying and monitoring the quality of data and indicators. For the modalities of data collection and reference values, Morocco also turned to the German M&E system.

Morocco tested the M&E system of adaptation in some pilot regions before refining it. In other words: the M&E system was developed over time and in a gradual manner. Moreover, Morocco focused only on some indicators initially. Selecting priority indicators allowed saving resources and time (GIZ & IISD, 2014). Monitoring a large number of indicators would take more resources and would have delayed the operationalization of the system. Finally, continuous stakeholder participation and capacity building was effective.

An inter-sectoral institutional framework was put in place to facilitate the implementation of the M&E system. A lead partner was designated to coordinate all actors and activities. This inter-sectoral arrangement helped to build synergies between actors.

LESSONS LEARNED:

- **BUILD A PARTICIPATORY PROCESS BASED ON EXISTING STRUCTURES:** The Moroccan example demonstrates how to develop an adaptation M&E system in a participatory, pragmatic and cost-effective way.
- **SECURE REGIONAL OWNERSHIP THROUGH INDICATOR DEVELOPMENT:** Developing indicators and gathering data through existing monitoring services and inter-sectoral exchange platforms helped to create a sense of regional ownership and take into account various perspectives. Prioritizing indicators (GIZ & OREDD, 2014) by focusing on available information saved costs and facilitated the implementation as well as the integration into existing monitoring platforms.



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HOW TO REPLICATE

- THIS PRACTICE:** —————
- **START BY TAKING STOCK OF EXISTING INFORMATION AND PRACTICES:** The documentation and the capitalization of Morocco's example contribute to a wider dissemination of the approach, which facilitates replicability.
 - **ALIGN M&E WITH EXISTING SYSTEMS:** The development of an innovative approach based on alignment with existing systems helps to ensure greater operational practicability (GIZ & IISD, 2016).
 - **SET UP A DATA SHARING AGREEMENT ON CLIMATE CHANGE BETWEEN VARIOUS SECTORS AND AGENCIES:** This will facilitate the breakdown of barriers between sectors and build effective synergies.
 - **SET UP A COORDINATION AND GOVERNANCE FRAMEWORK AT A HIGH LEVEL OF DECISION-MAKING:** This allows to build a common vision of targeted objectives in terms of adaptation, but also to achieve a consensus on stakeholder engagement and accountability.
 - **ESTABLISH A CLIMATE INFORMATION GOVERNANCE PLATFORM:** Such a measure will contribute to the wider dissemination of practices developed within the M&E program.
 - **ORGANIZE EXCHANGE VISITS:** Visits could be a good means for replication in other countries.

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FURTHER KEY RESOURCES:

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- GIZ (2017). Morocco: Adaptation monitoring and evaluation as part of the Regional Information Systems. Factsheet. Available at: <https://www.adaptationcommunity.net/wp-content/uploads/2017/11/05-giz2017-en-factsheet-morocco.pdf>
 - GIZ & IISD (2014). Monitoring and Evaluating Adaptation at Aggregated Levels: A Comparative Analysis of Ten Systems. Available at: https://gc21.giz.de/ibt/var/app/wp342deP/1443/wp-content/uploads/filebase/me/me-guides-manuals-reports/GIZ_2014-Comparative_analysis_of_national_adaptation_M&E.pdf

- GIZ & OREDD (2014). Guide relatif au montage d'un système de suivi et évaluation de la vulnérabilité et de l'adaptation au changement climatique (SSE ACC). Région du Souss Massa Drâa (SMD). Dépliant. (Establishment of a monitoring and evaluation system for vulnerability and adaptation to climate change in the region of Souss Massa Drâa). Available at: <https://www.4c.ma/fr/mediatheque/docutheque/guide-relatif-au-montage-du-syst%C3%A8me-de-suivi-%C3%A9valuation-de-la-vuln%C3%A9rabilit%C3%A9-et-de-l'adaptation-au-changement-climatique>

- WEBSITES:** —————
- Office of the Secretariat of State to the Ministry for Energy, Mining and Sustainable Development responsible for Sustainable Development: <http://www.environnement.gov.ma/fr>
 - Morocco Climate Change Competence Center: <http://www.4c.ma/fr>

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CASE STUDY

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- REFERENCES:** —————
- GIZ & IISD (2016). Développer des systèmes nationaux de suivi et évaluation de l'adaptation: guide méthodologique. (Developing national adaptation monitoring and evaluation systems: A guidebook.) Available at: http://www.adaptationcommunity.net/?wpfb_dl=361
 - Royaume du Maroc (2010). Seconde Communication Nationale à la Convention Cadre des Nations-Unies sur les Changements Climatiques. (Kingdom of Morocco. Second National Communication to the United Nations Framework Convention on Climate Change). Available at: <https://www.4c.ma/fr/mediatheque/docutheque/seconde-communication-nationale-la-convention-cadre-des-nations-unies-sur-les>



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<https://www.transparency-partnership.net/good-practice-database>
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