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IRENA
International Renewable Energy Agency

INFOCUS

Renewables Readiness Assessments

"We have found that, despite the often stark variations in the needs, goals, and resource endowments of different countries, the RRA process stimulates tangible actions that promote renewable energy uptake."

- IRENA Director-General Adnan Z. Amin

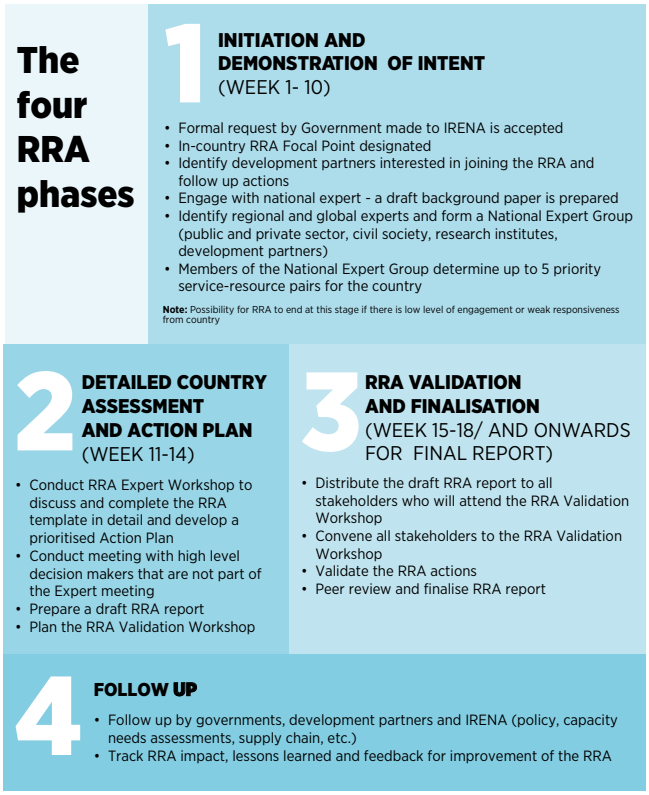
WHAT IS AN RRA?

In 2011, IRENA developed the Renewables Readiness Assessment (RRA) methodology to assess key conditions for renewable energy development and deployment in a given country and to identify short- to medium-term measures to further improve these conditions. The RRA is a country-initiated, country-led process. In this context, it facilitates consultations among national stakeholders towards the development of policy, technology and regulatory measures that are consistent with national priorities.

To date, IRENA has completed nineteen RRAs and is in the process of finalising another seven, with several more in the pipeline.

WHY CONDUCT AN RRA?

The deployment of renewable energy provides benefits for both industrialised and developing countries, including enhanced energy security, reduced fuel import dependency, improved energy access, poverty reduction, low-carbon development, and job creation. The RRA process assists a country in analysing its renewable energy sector, assessing its readiness for renewable energy deployment, and identifying concrete actions towards an increased deployment. RRA findings provide the basis for a country's informed interaction with development partners who are engaged from the beginning of the process and, during the post-RRA phase, help implement the recommendations arising from the RRA. The RRA recommendations also help inform IRENA's follow-up interventions in the country and the region at large.



THE DIFFERENT RRA PHASES

An RRA consists of four main phases. It is characterized by the involvement of various stakeholder groups during each of its phases. This multi-stakeholder approach ensures effective information gathering, the establishment of robust networks which include the most relevant actors, and broad ownership among government- and other stakeholders. Over time, the involvement of development partners and other stakeholders in the RRA process has increased.

1. Initiation and Demonstration of Intent

A National Expert Group is formed to steer the process and, for some countries, to follow-up on existing renewable energy plans. While the government has a prominent role, the National Expert Group typically also includes development partners, as well as members of the private sector and civil society. This group defines and prioritises key short- to medium-term actions.

2. Detailed Country Assessment and Action Plan

At this stage, a detailed background paper is introduced by IRENA which maps the country's unique energy context. This paper describes and analyses the current status of renewable energy deployment, the main challenges, and the main drivers to increase the share of renewable energy in the energy mix. The background paper provides the basis for experts and stakeholders to debate and decide upon key 'service-resource pairs', which link energy needs on the one hand with available renewable energy resources on the other.

3. RRA Validation and Finalisation

The RRA Validation Workshop gathers a wide range of stakeholders to discuss and seek agreement on a list of tangible actions to address cross-cutting issues, such as necessary policy and regulatory reforms. The feedback and information gathered during the workshop, and from additional consultations with key stakeholders, is consolidated into an action plan.

4. Follow Up

IRENA actively supports governments and development partners in shaping their future activities on the basis of RRA recommendations and the action plan.

The knowledge and insights gained from IRENA's engagement at the national level have provided an important contribution to defining the Agency's regional activities. The RRA methodology is evolving constantly as IRENA continues to refine and adapt it to each country's needs.

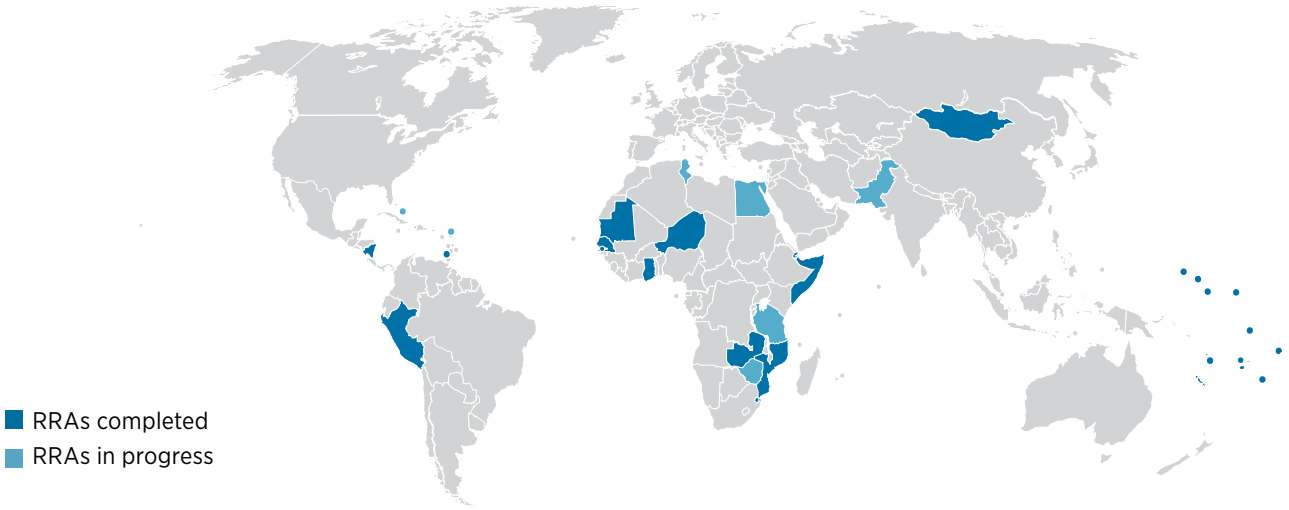
For additional information, please see Renewables Readiness Assessment: Design to Action.

WHAT IS IRENA'S ROLE?

IRENA facilitates the RRA process. Together with the national government, the Agency identifies development partners and acts as interlocutor between the government and these partners. In some cases, IRENA also assists in addressing some of the RRA recommendations.

"Conducting the assessment in partnership with IRENA strengthens the business case for renewable energy in each country or region, helping to attract investment and address complex, cross-cutting social and economic questions."

- IRENA Director-General Adnan Z. Amin



RRA COUNTRIES

RRAs have been completed in:

» Djibouti, Fiji, The Gambia, Ghana, Grenada, Kiribati, Marshall Islands, Mauritania, Mongolia, Mozambique, Nicaragua, Niger, Oman, Peru, the Philippines, Senegal, Swaziland, Vanuatu and Zambia

The RRA process is ongoing in:

Antigua and Barbuda, Bahamas, Egypt, Pakistan, Tunisia, United Republic of Tanzania and Zimbabwe

RRAs ARE ENABLING CHANGE - EXAMPLES

As the government is actively involved during the RRA process, recommendations resulting from the process are reflective of its priorities. Due to strong government ownership, many of the recommendations are implemented soon after the completion of an RRA. The ultimate purpose of the assessment thus goes beyond the issuance of an RRA report: its aim is to initiate a process towards the enhanced deployment of renewable energy that is focused, informed and realistic. Some examples include:

» The RRA in Zambia, released in January 2014, outlined that the country's heavy reliance on hydro power poses risks for sustaining future electricity demand due to intermittent droughts and expected water flow decline, caused by climatic factors. In order to manage these risks, the RRA recommended for Zambia to incorporate renewable energy sources other than hydro in its power generation plans. Subsequently, Zambia undertook a mapping of its renewable energy resources, and developed feed-in-tariffs and an integrated resource planning which incorporates a mix of renewables.

» The RRA for Peru recommended the use of auctions as a mechanism to speed up renewable energy deployment in the country, defining clear long-term policy goals for auctions. Peru pioneered the use of auctions for renewable energy in Latin America and is achieving competitive prices. The first two auctions yielded valuable lessons, such as the factors to consider in auction design, including lot size, local content requirements, opportunities to create hybrid systems, and the value of technology-neutral selection criteria. The RRA process also highlighted the need to prepare for renewable energy integration in transmission-grid expansion plans, particularly so that variable sources like solar and wind power can help to meet future electricity demand. Furthermore, off-grid renewables were identified to be crucial in addressing the remaining energy access challenges in Peru's rural areas. In line with the RRA recommendations, development banks and agencies are supporting the deployment of off-grid systems in rural areas of Peru.

» The RRA reports for three Pacific island countries highlighted that, among others, the development of renewables in Small Island Developing States (SIDS) would benefit from the establishment of dedicated institutional processes and structures. Fiji's RRA called for closer coordination among ministries and donors through a national energy committee, particularly to accelerate energy access through off-grid renewable energy technologies. The RRA for the Marshall Islands recommended, among others, the formation of a national energy agency and a renewable energy coordination committee to support the integration of solar PV systems into the grid. The Vanuatu RRA

recommended to review relevant legislation and policies that define the responsibilities and tasks of the Department of Energy and the Utilities Regulatory Authority in order to carry out actions towards achieving the renewable energy targets and also to design an institutional approach for sustaining solar home system off-grid electrification of households and public buildings. Following the devastating cyclone Pam, RRA recommendations have been integrated in the Vanuatu post-storm recovery plan as the government seeks to develop climate-resilient energy systems.

» The RRA report for Swaziland, released in March 2015, recommended to conduct a resource assessment and to improve the enabling conditions for bagasse-based power and solar power generation. Pursuant to the RRA action plan, Swaziland developed an 'Independent Power Producer Framework' and a grid code with support from the USAID Southern African Trade Hub. A standardised power purchase agreement (PPA) for various renewable energy technologies has led to the signing of four PPAs. Furthermore, IRENA is currently engaging with Swaziland in addressing specific gaps in the area of long-term strategic energy planning in support of the development of an energy master plan.

» In the Philippines, the RRA process supported a consensus on the development and implementation of the 'National Renewable Energy Program' which is currently under review by the 'National Renewable Energy Board'. Since the release of the assessment, two RRA recommendations were considered under the Philippines' 2015 annual work programme. As a follow up, IRENA is conducting a study on mini-grids, taking into account the country's rural electrification program and the aim to develop a climate-resilient energy system.

"The RRA has been a useful tool for Swaziland as we embark on a domestic renewable energy programme. The RRA has assisted the Ministry in identifying renewable energy technologies that are ready for development and have potential for investment. The assessment also assisted in providing guidance and prioritization on those technologies that require further investigation."

- Swaziland Minister of Natural Resources and Energy, Jabulile Mashwama

The Secretary of State of the Ministry of Energy, H.E. Delgertsogt Davaadorj, with Ministry officials and IRENA staff at the launch of the Mongolian RRA

H.E. Jabulile Mashwama, Minister of Natural Resources and Energy of the Kingdom of Swaziland with the RRA report

HOW TO GET INVOLVED:

Members interested in conducting an RRA or interested in supporting RRAs and post-RRA follow-up activities are invited to contact **Mr. Gurbuz Gonul** at **GGonul@irena.org**