
Twenty-second meeting of the Council
Abu Dhabi, 26-27 October 2021

Work Programme Self-Assessment 2020-2021

I. Introduction

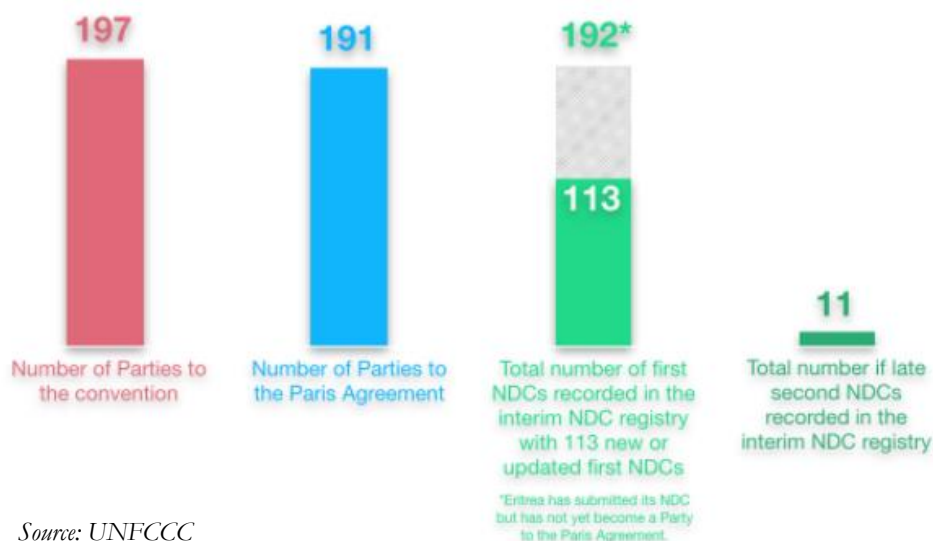
Pursuant the Medium-term Strategy (MTS) 2018-2022, the Agency is required to undertake a self-assessment of its biennial programmatic work. This request is given in the context of the need to better measure, document and assess the effectiveness and impact of IRENA's programmatic work to guide its implementation and future programming. Accordingly, this document provides the self-assessment of work conducted under its Work Programme and Budget for 2020-2021.

Thanks to its agile structure, IRENA was able to adapt to country needs as COVID-19 emerged at the onset of the biennium. The Agency responded swiftly to the changing situation and not only delivered the planned knowledge products but also produced COVID-related analyses to inform policy making. While the analytical work continued largely on schedule, the pandemic significantly uprooted the plans for country support. Despite the circumstances, the Agency still managed to support countries especially in their NDC revision process. At the time of writing this report, IRENA had completed 56% of outputs defined in the Work Programme, with 44% in advanced stages of progress. It is envisaged that the performance rate will be comparable to 2019, where the rate of implementation stood at 94%.

II. Impact on the ground

With the heightened global focus on the climate emergency, and as requested by Members, IRENA prioritised the work on **Nationally Determined Contributions** (NDCs). NDCs embody efforts by countries to reduce national emissions and adapt to the impacts of climate change. Created as part of the Paris Agreement, countries are asked to prepare, communicate and maintain successive NDCs that they intend to achieve, with new or updated NDCs to be submitted every five years (e.g. by 2020, 2025, 2030).

Figure 1: NDCs submitted to UNFCCC



Source: UNFCCC

Over the course of the biennium, IRENA engaged with 72 countries in 135 work packages as part of NDC revisions. Support has ranged from capacity building on policy, finance, statistics, and modelling; development of renewable readiness, site assessments, flexibility assessments, MRV programmes and roadmaps; planning support; and review of targets and NDCs.

Figure 2: Overview of NDC support provided



Disclaimer: Boundaries and names shown on this map do not imply any official endorsement of acceptance by IRENA.

Source: IRENA internal records

To date, IRENA has been referenced in 17 NDCs. Some are referenced below.

‘Antigua and Barbuda started the NDC update process in 2019 with a request for support from NDC Partnership’s Climate Action Enhancement Package (CAEP). Through CAEP and bilateral support, Antigua and Barbuda received technical assistance from Climate Analytics (CA), the International Renewable Energy Agency (IRENA), the Organization of Eastern Caribbean States (OECS) Commission, the Global Green Growth Institute (GGGI) and the United Nations Development Programme (UNDP).’

Antigua and Barbuda NDC

“The Government of Grenada is appreciative of the support provided by the IRENA....”
Grenada NDC

Mitigation costs

At the time the NDC Update Report was being drafted, a CBA and a costing study of the mitigation measures included in the NDC2 were under development. IRENA conducted a cost-effectiveness analysis that estimated the costs of the mitigation measures that fall under the power sector, while ICLEI is conducting a costing study and a CBA of the mitigation measures that fall under all other sectors covered by the NDC2. Once completed, these efforts will help to inform an estimate of the finance required to implement the NDC2 mitigation measures.

Second, an additional 13 mitigation measures have been included. The NDC1 identified 10 mitigation options. The NDC2 revises and strengthens those mitigation measures and includes additional ones identified through the metabolic analysis and IRENA’s work on the power sector. An additional eight mitigation measures were identified through the metabolic analysis, while IRENA defined eight for the power sector through the cost-effectiveness analysis of renewable energy mitigation options (five of which from the NDC1 were strengthened) and ICLEI added another two new options. All of these are included in the NDC2.

The Gambia NDC

‘Nigeria has, with support from UNDP, GIZ, IRENA, the Islamic Development Bank and other development partners, in a coalition of development partners contributing through the NDC Partnership, carried out a significant enhancement program as part of the NDC update’

Nigeria NDC

‘Ciudad, 20 de julio de 2021. En base a los reportes presentados “Net Zero by 2050” por la Agencia Internacional de Energía y el “World Energy Transitions Outlook: 1.5°C Pathway” de IRENA, se realizó una sesión estratégica entre los técnicos de la Secretaría Nacional de Energía para el análisis e intercambio que refuerce la Agenda de Transición Energética de Panamá.’

Panama NDC

‘The revised and strengthened NDC incorporates additional mitigation measures identified in an IRENA technical study that evaluated cost-effective mitigation options for the power sector, as well as sector coupling options for transport electrification. Measures were identified through the use of national plans and strategies, which involved two rounds of stakeholder consultation.’

Saint Kitts and Nevis NDC

‘The 8 supporting partners assisting Seychelles technically and financially to raise our ambitions by updating mitigation and adaptation targets and broadening the scope of our NDCs to cover a greater part of the economy, are: World Bank, EU, UNDP, IRENA, GIZ, TNC, Pew Charitable Trust and SeyCCAT’

‘We thank the NDC Partnership for their collaborations and we are appreciative of the support provided through its 9 supporting partners. The partners are: World Bank, European Union, UNDP, IRENA, GIZ, TNC, Pew Charitable Trust, SeyCCAT and Commonwealth.’

Seychelles NDC

‘Zimbabwe’s Revised NDC Report was developed under the auspices of the NDC Partnership’s Climate Action Enhancement Package (CAEP) with technical support from the World Bank, COMESA, FAO, ICLEI Africa, IRENA, UNDP, ILO, UNEP, SEI and World Bank. The team would like to thank the individuals from these organisations for their analysis and participation in interviews.’

Zimbabwe NDC

As part of the Agency’s NDC work, IRENA also provided **renewable energy resource assessment**¹ support to 11 countries. Specifically, such support was provided to Antigua and Barbuda, Burkina Faso, Colombia, Ecuador, Kyrgyzstan, Mali, Mauritius, Mozambique, Saint Lucia, Seychelles and Turkey.

‘In the troubled times of the global pandemic, IRENA continues to pursue its international goals and puts new meaning into them in the context of overcoming the COVID consequences.’

IRENA Member

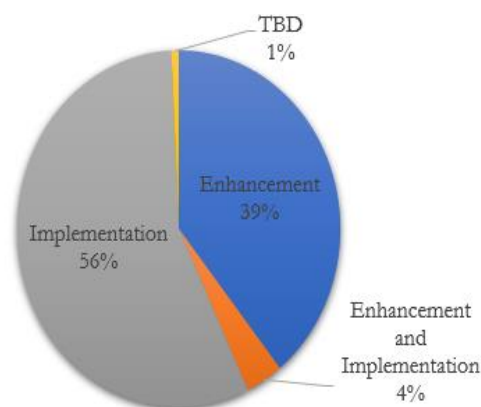
¹ Supported in part by NDC Partnership (NDCP), UNDP and EU TAF.

IN FOCUS: NDC PARTNERSHIP and UNDP

Through cooperation with the NDC Partnership (NDCP), UNDP and the European Union's Technical Assistance Facility (EU TAF), IRENA was able to support 72 countries in 135 work packages as part of NDC revisions. Support provided was 56% focused on NDC implementation, and 39% on enhancement.

As part of its role as custodian agency of the SDG7 and the lead intergovernmental agency on energy transition, IRENA also supported NDCs by co-hosting 46 dialogues and debates on the Nationally Determined Contributions (NDCs) and climate action. IRENA also continues to coordinate the energy track of the Marrakesh Partnership on the Global Climate Action.

Figure 1: IRENA support for NDCs



Source: IRENA internal records



IRENA NDC support has been an effective tool for countries in revising their NDCs. Of the 22 countries where NDC support is considered finalised, six countries have submitted new or revised NDCs, and an additional 16 are expected to be submitted in the coming period. 17 instances of written recognition were recorded either in formal submission or via other avenues.

Country support is made possible through IRENA's strong foundation of data and analytics. The **Global Atlas** for example closes the gap between countries that have access to the necessary data and expertise to evaluate the potential for renewable energy deployment in their countries and

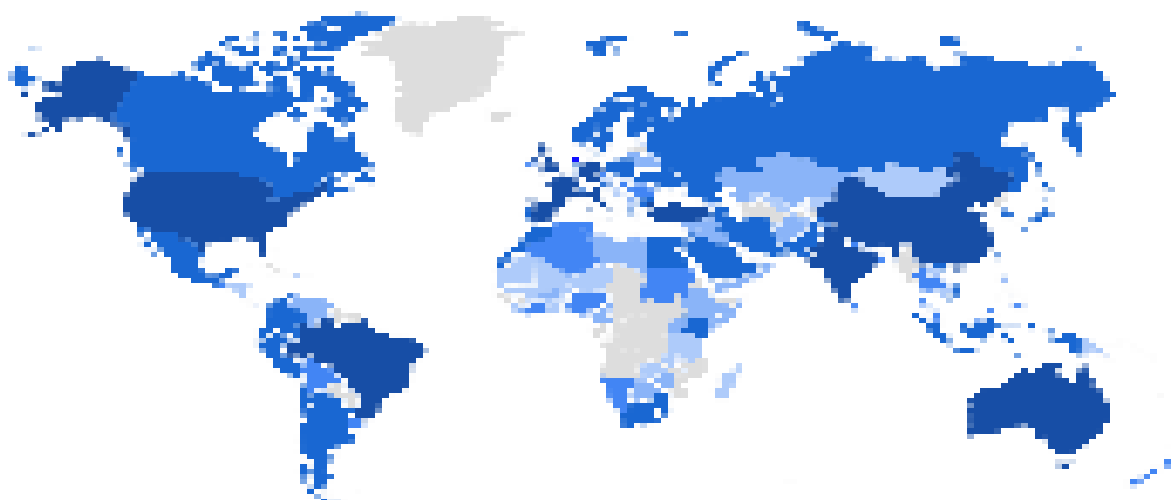
Number of users: ≈ 30 000

Number of page views: 130 000

Number of technical datasets download: 534 (since June 2021)

those that lack these elements. It is a web platform that allows its users to find maps of renewable energy

resources for locations across the world. The Atlas today comprises 67 countries and 60 research institutes and private companies who contribute to different aspects of the tool. Ten research institutes and private companies have joined since 2019.



Today, the Global Atlas contains 2000 renewable energy maps on this single and consistent platform covering solar, wind, bioenergy, geothermal and marine energy worldwide. In this biennium, IRENA has commenced using the Global Atlas for project facilitation at the country level.



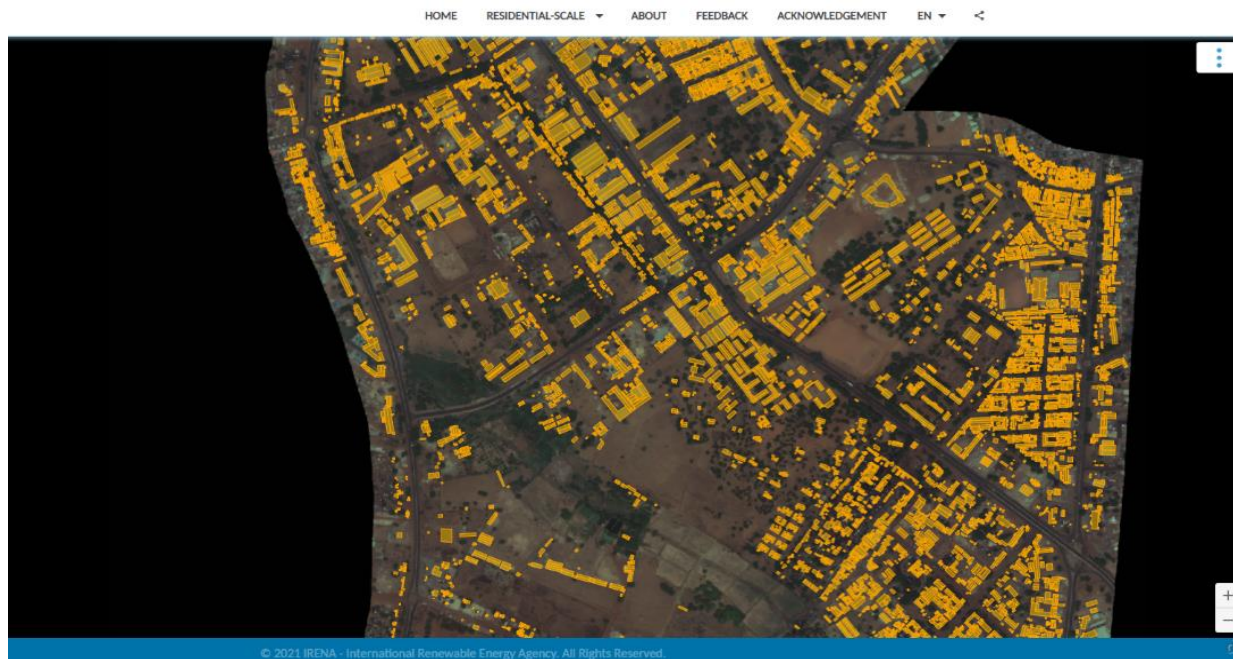
Ten years after its creation, the Global Atlas is unmatched in its datasets and resource coverage. It has become a practical tool used by countries and Members to realise projects and accelerate deployment on the ground.

IRENA conducted assessments of 104 sites (68 solar PV and 36 wind), reflecting prospective installed capacity of 5,531.6 MW for project development. This took place in ten countries in Africa and SIDS, namely Comoros, Eswatini, Mali, Morocco, Nauru, Nigeria, Sudan, Togo, Zambia and Zimbabwe. This work provided varied support in the project facilitation cycle. In Mali and Zimbabwe, for instance, the site assessment provided the basis for tariff and Power Purchase Agreement (PPA) negotiations.

"The site assessment provided by IRENA gave Nauru a fair understanding of the solar potential on the assessed site. As the assessment was done remotely based on simulation and satellite data, it helped in providing a high-level understanding of the feasibility studies conducted for the development of the Nauru Solar Expansion Plan and was also shared for the preparation of the GEF funded SMARTEN project proposal."

IRENA Member

As part of IRENA's work on cities, a demonstration of rooftop solar was completed in Kasese, Uganda with the [SolarCity simulator](#)² (called SolarCityEngine). This tool was also applied to coastlines area in [Antigua and Barbuda](#), [Chongli](#) in China, [Ulaanbaatar](#) in Mongolia, [Burgunji](#) in Nepal, three markets ([Jimeta](#), [Kaduna](#), [Sokoto](#)) in Nigeria, [Castries](#) in Saint Lucia, [Victoria](#) in Seychelles, and [Abu Dhabi](#) in the United Arab Emirates. More simulators are currently being developed for Port Louis in Mauritius, Sao Tome & Principe, and Sahinbey in Turkey.



² Supported in part by the governments of Denmark; Germany, as part of the German Government International Climate Initiative (IKI); and Walloon region of Belgium.

'[We] have realised how expensive it is to collect, analyse and report reliable and usable data for making investment decisions. [...] The Solar Simulator has given us an opportunity to be able to assess the techno-commercial viability of markets. What is also very useful is the fact that it covers a large portion of the city's roof tops for potential solar projects. We have commenced the use of the simulator in the three cities available (Sokoto, Jimeta and Kaduna) for potential investments and hope to build on the success of this to scale up to other cities.'

IRENA Member

The SolarCityEngine continues to be disseminated, including by partner institutions. For example, the Organisation of Eastern Caribbean States (OECS) informed the Agency that it will introduce a hyperlink to IRENA's SolarCityEngine website in the [Resources](#) section of the Eastern Caribbean Solar Challenge. The Alternative Energy Promotion Centre ([AEPC](#)) and Nepal requested integrating the SolarCity simulator hyperlink in the [AEPC](#) website. The World Bank expressed interest to partner with IRENA on the SolarCityEngine for global roll-out.

Renewable Readiness Assessments (RRA)³ are another tool that IRENA has used to support countries over the course of the biennium. RRAs are county-led, comprehensive processes for assessing the suitability of conditions for the development and deployment of renewable energy, also identifying the actions required to improve those conditions. In the current biennium, IRENA has completed seven RRAs.⁴

'IRENA RRA study had important impacts on the country's energy sector [...] The study contributed to the promotion of renewable energy in different sectors such as agriculture, industry and transport. This is reflected in the current NDC revision process.'

IRENA Member

'...the Renewables Readiness Assessment has been developed in cooperation with International Renewable Energy Agency with a view to complement the country's efforts in enabling the wider penetration of various renewable energy technologies.'

IRENA Member

'Bhutan RRA has been an important document to structure our activities in various dimensions. Some of the notable contributions can be observed in formulation of National Determined Contributions (NDCs)...'

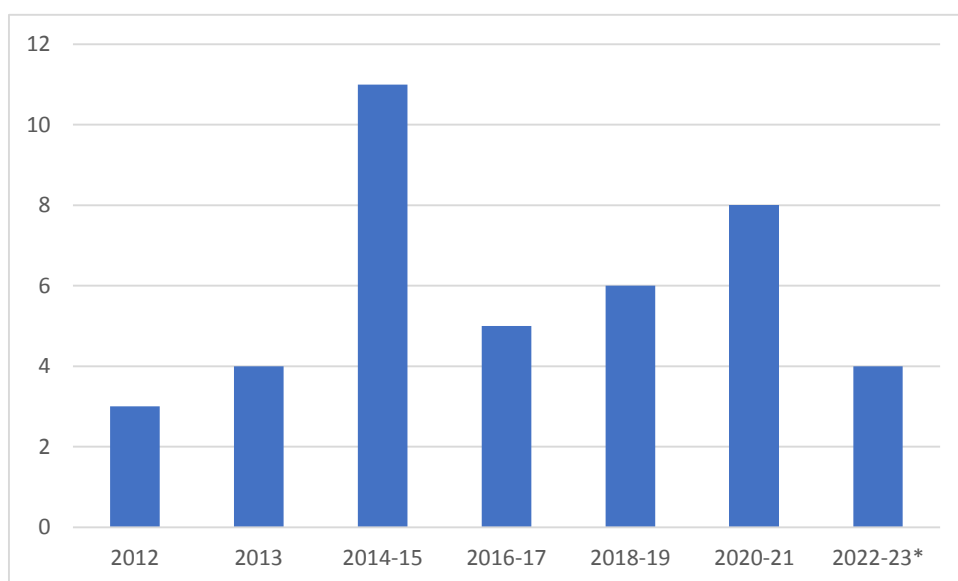
IRENA Member

As country needs become more complex, IRENA now provides combined RRA and outlook analysis. Renewable Energy Outlooks (REO) include RRA analysis and add the IRENA Remap methodology, which identifies untapped potential and quantifies factors such as costs, investment needs and the effect on externalities related to air pollution and the environment. Feedback received from countries has been positive, with many referencing IRENA support and analysis specifically helpful to NDC development. The below figure shows RRAs/REOs completed in the biennium and ongoing work envisaged to be completed in the next programmatic cycle.

³ Supported in part by the Walloon region of Belgium.

⁴ Albania (March 2021); Belarus (July 2021); Botswana (July 2021); El Salvador (Dec. 2020); Jordan (Feb. 2021); Paraguay which is to be launched (Oct/Nov. 2021); and Tunisia (June 2021)

Figure 2: RRAs/REO completed per biennium



*RRAs ongoing / Source: IRENA internal records



Renewable Readiness Assessments are a strong tool to assess a national energy system and its gaps. As a country-led process, it helps refine energy strategy, policy, and climate-related targets. RRA continues to be refined in line with the developments in the sector.













The Agency’s engagements at a global, regional and country level have increased as countries advance in their energy transitions. Here, engagement of Members in the programmatic activities is of central importance.

IRENA established **Collaborative Frameworks** in 2020 on several key topics as vehicles for dialogue, peer-to-peer collaboration and exchange of knowledge. Topics to date cover Just and Inclusive Transition, Geopolitics of Energy Transformation, Enhancing Dialogue on High Shares of Renewables in Energy Systems, Green Hydrogen, Hydropower, and Ocean Energy/Offshore Renewables. The Collaborative Framework on Oil and Gas Sectors and the Energy Transition is in development.

17 meetings

1 420 participants

Figure 3: List of Collaborative Frameworks and their respective Co-facilitators

Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems		
Collaborative Framework on the Geopolitics of Energy Transformation		
Collaborative Framework on Green Hydrogen		
Collaborative Framework on Hydropower		
Collaborative Framework on Ocean Energy/Offshore Renewables		
Collaborative Framework on Just and Inclusive Energy Transition		

IN FOCUS: COLLABORATIVE FRAMEWORK ON GEOPOLITICS

Co-facilitators: Germany and United Arab Emirates

3 meetings

239 participants

The Collaborative Framework on the Geopolitics of Energy Transformation (CF-GET) was established in 2020 in response to calls from the Membership following the release of the '[A New World – The Geopolitics of the Energy Transformation](#)' report by the Global Commission on the Geopolitics of Energy Transformation. Its purpose is to achieve a deeper understanding of the geopolitical consequences of the ongoing energy transitions and the large-scale shift to renewable energy.

Three meetings have been held to date with registered participants from more than 65 Members as well as from a range of international organisations, and academia.

Under the umbrella of the CF-GET, IRENA is developing a report on the Geopolitics of Hydrogen⁵, using this convening as a source of insights and information to enrich the analytical work. The report will be the first product developed under this Collaborative Framework and will be launched at the twelfth session of the Assembly in January 2022.

⁵ Supported in part by the governments of Germany and Norway.

IN FOCUS: COLLABORATIVE FRAMEWORK ON GREEN HYDROGEN

Co-facilitators: European Commission and Morocco

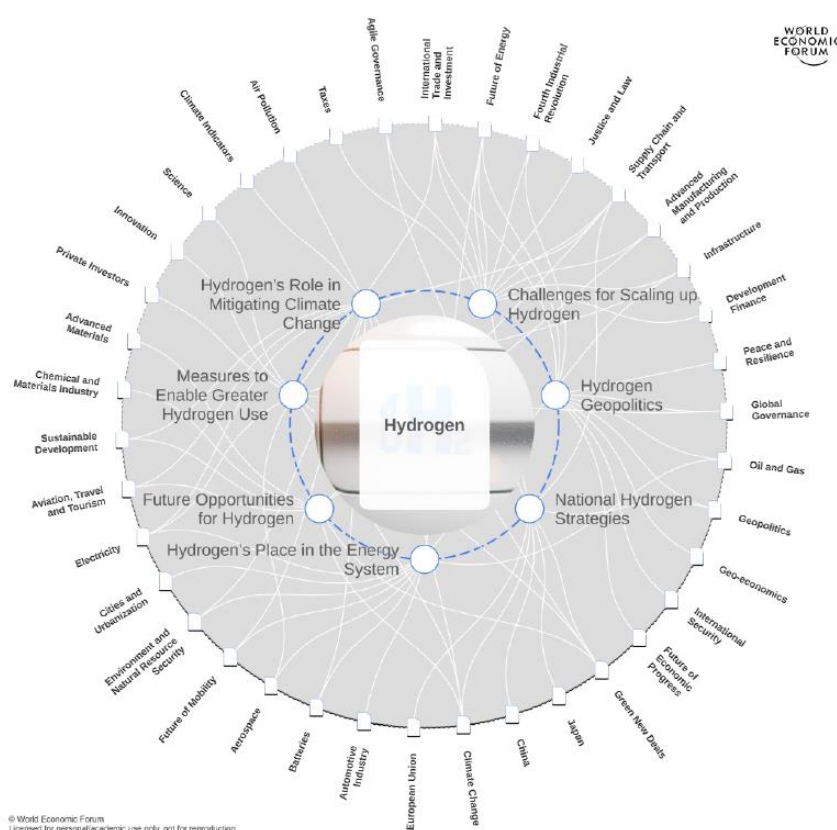
5 meetings

350 participants

In the course of the biennium, IRENA held four meetings and a deep dive workshop under the Collaborative Framework on Green Hydrogen. Highest attendance recorded in one meeting was 147 participants from 65 countries. Meetings have included Member-only sessions, and open sessions where private sector, IGOs and other stakeholders were invited. Topics discussed ranged from challenges policy makers face to scale up green hydrogen, certification and infrastructure, and enabling measures.

The Collaborative Framework on Green Hydrogen has facilitated the signing of an MoU with IPHE and the Hydrogen Council, as well as improved collaboration with the World Economic Forum. It also shed light on key enabling measures needed from public and private sector.

Collaboration with the World Economic Forum also facilitated the production of a “Hydrogen Transformation Map”. The map targets the non-expert audience and provides an overview of topics ranging from taxes and COVID to geo-economics and energy. The transformation map explores the key trends, interconnections and interdependencies between industry, regional and global issues. The tool⁶ is interactive, and includes an overview of the topic, summaries and links to the latest research and analysis on each of the trends as well as country briefings and data.



⁶ Available [here](#).

IN FOCUS: COLLABORATIVE FRAMEWORK ON OCEAN ENERGY / OFFSHORE RENEWABLES

Co-facilitators: Italy and Tonga

3 meetings

231 participants

In the course of the biennium, IRENA held three meetings under the Collaborative Framework on Ocean Energy/Offshore Renewables. Highest attendance recorded in one meeting was 88 participants from 38 Members. Meetings have facilitated discussion among Member countries, private sector and other IGOs. Topics discussed included input to IRENA's report to the G20 on Offshore Renewables, good practices for regional collaboration for offshore renewables and policy and technical aspects of offshore renewables.

Through engagement under the Collaborative Framework, GWEC, Denmark and IRENA submitted an Energy Compact as part of the High-Level Dialogue on Energy. The compact is based on WETO Offshore data to 2030, with regional granularity.



Collaborative Frameworks have become effective mechanisms for dialogue among Members and invited stakeholders, including the private sector, to address issues of key emerging importance. The format of the dialogues also allows targeted work plans to be developed in a collaborative and multi-partner approach.

Stakeholder engagement has proven to be an important element of the work under the Collaborative Framework. This includes active participation of several IRENA **Coalition for Action** members. Consisting of more than 120 energy players, including the private sector, industry associations, civil society, and research/academia, the Coalition for Action membership has increased by 29% since last biennium.

Working Groups on:



Business and Investors Group



Community Energy Group



Decarbonising End-Use Sectors Group



Towards 100% Renewable Energy Group



Agri-Renewables Group



Sustainable Energy Jobs Group

The Coalition for Action's activities have included production of a series of white papers and position papers culminating in launch events, Public-Private Dialogues, and technical webinars. The number of publications released has tripled since the last biennium from four to 15⁷, and events have doubled from seven to 15⁸. In response to the COVID pandemic, the Coalition for Action members also released four calls to action⁹. The Coalition for Action also contributed to the development of the Work Programme for 2022-2023 with 38 inputs submitted to the Secretariat (which can be found at Remember)

⁷ Includes upcoming publications scheduled for release in this biennium.

⁸ Includes upcoming events scheduled for this biennium.

⁹ Includes upcoming calls to action scheduled for this biennium.

Renewed Call to Action

Governments must act now to correct course for a green recovery and accelerate progress towards Paris Agreement



Coalition members urge governments to deliver on the following six actions:

1. Re-evaluate stimulus measures and correct course to ensure a green recovery in line with global climate objectives.
2. Raise policy ambitions and clarify long-term plans for renewable generation and consumption, both centralised and decentralised.
3. Ensure energy markets can deliver continuity and stimulate investment and growth in renewables.
4. Prioritise renewable energy as a key component of industrial policies.
5. Align labour and education policies with a just energy transition.
6. Intensify international co-operation and action on COVID-19 while recognising renewable energy as a key part of the solution.



The increase in work programme output under the Coalition for Action is evidence of the growing importance of the stakeholder voice in the energy field.

Several of IRENA’s initiatives that included broad partnerships yielded significant results. The **SIDS Lighthouses Initiative** (SIDS LHI)¹⁰, launched in 2014, is an inclusive multi-stakeholder platform that brings together public, private, inter-governmental and non-governmental actors. Participating SIDS and other partners share a vision of accelerating energy transformation to bolster climate resilience and sustainable development.

“IRENA has carved a niche in focusing international community on renewable energy needs of SIDS”

IRENA Member

Since inception, SIDS LHI grew in size and profile to include some 66 partners, double from the time of its establishment. In the 2020-2021 biennium, SIDS LHI marked its second milestone by reaching initiative goals three years ahead of schedule, for the second time. The table below summarises achievements.

Table 1: SIDS LHI targets and achievement data

Year	Target	To achieve by	Achieved in	Details	Status
2014	USD 500 million mobilised 100 megawatts (MW) of photovoltaics 20 MW of wind Significant quantities of small hydropower, geothermal and marine technology Participating SIDS develop renewable energy (RE) roadmaps by 2020.	2020	2017	USD 500 million mobilised 2.82 GW installed capacity for the 36 SIDS LHI partners. New installed capacity for all SIDS between 2014 and 2017 was 830 MW, consisting of 550 MW of solar 115 MW of wind	Achieved three years ahead of schedule with over five times solar and wind targets.

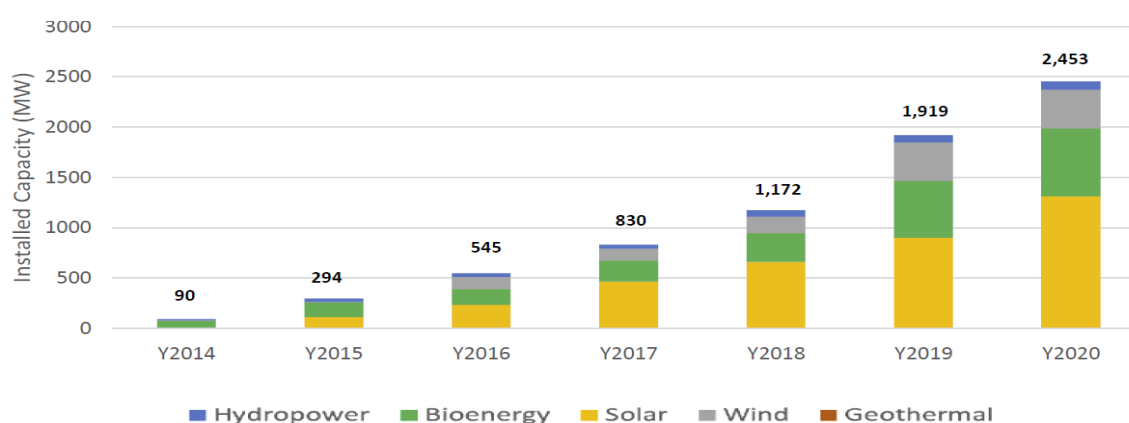
¹⁰Supported in part by the governments of Denmark; Germany, as part of the German Government International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative based on a decision adopted by the German Bundestag; and Norway

				27 MW of hydropower 138 MW of bioenergy.	
2017	5 GW installed renewable energy capacity in SIDS	2023	2020	5.94 GW total installed capacity in SIDS	Achieved three years ahead of schedule and near 1GW more than target.
2021	10 GW installed renewable energy capacity by 2030 Voluntary commitment of SIDS LHI energy compact submitted to the United Nations (UN) in September 2021 (UN HLDE)	2023			

Source: IRENA internal records

Year on year, SIDS have seen growth in renewable energy deployment most recently reaching 2,453 MW in 2020.

Figure 4: New cumulative renewable energy installations



Source: IRENA internal records



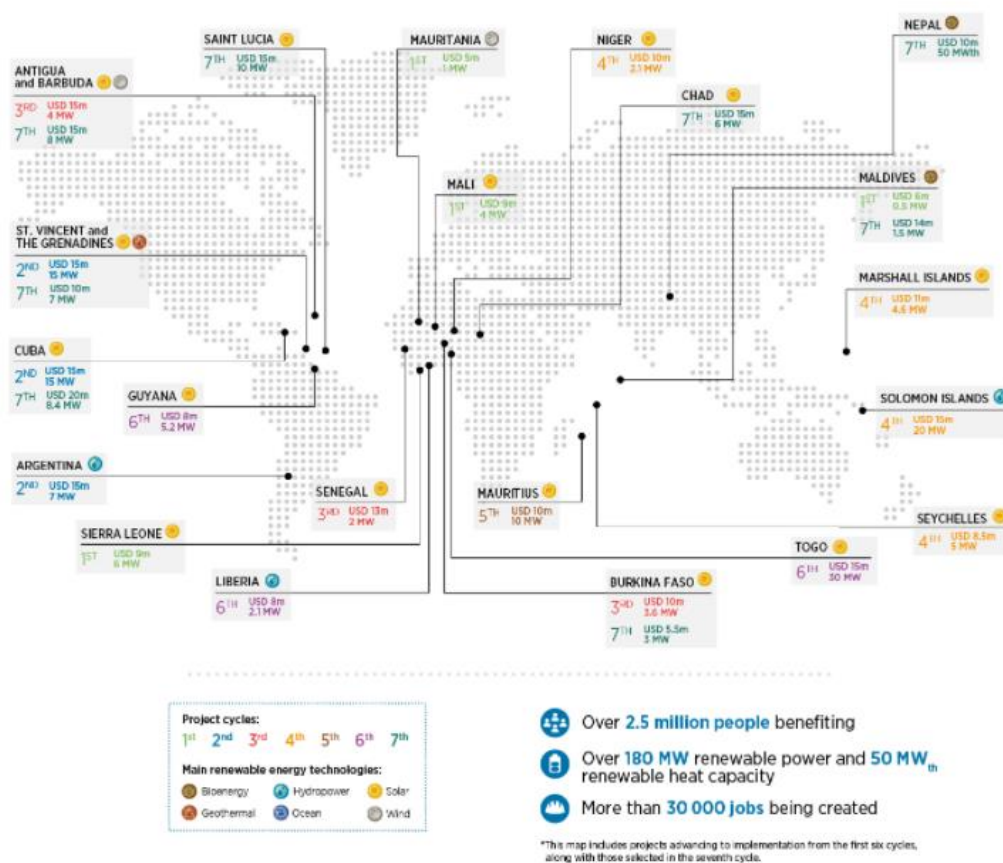
The SIDS LHI has become a key platform in advancing SIDS' energy transitions. SIDS LHI members have gained targeted support for enhancement and implementation of NDCs; capacity building of policymakers, utilities, private sector, financing institutions; policy, regulatory and advisory services to accelerate the uptake of renewables through the development of roadmaps, resource assessments, grid stability analysis, project planning, identification, execution and sustainability; and project development support to help attract financing.

The **Global Geothermal Alliance (GGA)** is another example of an initiative that has shown impact in the biennium. The Alliance serves as a platform for dialogue, cooperation and coordinated action between the geothermal industry, policy makers and stakeholders worldwide to foster an enabling environment and attract more investments in geothermal energy. Launched at COP21 in 2015 in Paris with IRENA as its Secretariat, the Alliance added three new partners in the course of the biennium, bringing the total to 46 members and 42 partners.

IRENA recorded positive results from knowledge products and events produced under the Alliance. For example, the Africa Union Commission used the findings of the report ‘[Geothermal Development in Eastern Africa: Recommendations for power and direct use](#)’ as an input in the process of improving the efficacy of the Geothermal Risk Mitigation Facility for East Africa (ongoing). Based on experience and input from the GGA workshop ‘Enabling policies and regulatory frameworks for geothermal electricity and direct use in East Africa Rift’ ([Click here](#)) the ARGeo Project in East Africa is developing technical guidelines for geothermal direct use in Africa (ongoing). Interviews held with select countries in the development of this document encouraged even more dynamic work plan of the GGA, given the untapped potential of this resource.

During this biennium, IRENA completed its work on the **IRENA/Abu Dhabi Fund for Development (ADFD) Project Facility**. The Project Facility supported replicable, scalable and potentially transformative renewable energy projects in developing countries. The **IRENA/ADFD Project Facility** committed USD 350 million in concessional loans over seven annual funding cycles that have concluded in 2020. This work has resulted in the selection of [32 renewable energy projects](#), with over USD 100 million being allocated in the seventh cycle in 2020 to [eight renewable energy projects](#).

Figure 5: Selected projects advancing to implementation*



Source: IRENA internal records

In furthering bilateral and multilateral collaboration on technology development and deployment, the UAE has championed infrastructure and energy projects. These efforts have been pursued through formal channels including, but not limited to, the UAE-Pacific Partnership Facility for Pacific island countries, the UAE-Caribbean Renewable Energy Fund, and the joint project facility by IRENA and Abu Dhabi Fund for Development that supports renewable energy projects in developing countries’.

IRENA Member

Over the seven cycles, 602 project applications were received, representing USD 20.7 billion in project costs. This comprised applicants requesting USD 5.9 billion in concessional loans from ADFD, with an additional USD 14.8 billion coming in parallel from other co-funding sources. IRENA is currently engaged in discussions on a successor project facility.



The IRENA/ADFD Project Facility is an example of the impact of IRENA partnerships. By leveraging the respective value added, IRENA and the ADFD were able to generate 14.8 billion in funding from other sources and create an estimated 88,000 direct and indirect jobs.

Another initiative of note is the **Renewable Energy Entrepreneurship Support Facility**. In 2017, IRENA and the SADC Centre for Renewable Energy and Energy Efficiency launched the SADC Renewable Energy Entrepreneurship Support Facility following the successful pilot programme by IRENA and the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE). Facilities provide “mentorship” support and advisory assistance to small and medium-sized renewable energy entrepreneurs on technical issues (system sizing, installation guidelines, etc.), business management and operations, and project proposal refinement, as well as supporting entrepreneurs to successfully bring their innovative ideas to fruition.

In this biennium, focus was placed on continuing training for entrepreneurs and the development of a mentorship programme for Southern Africa-SADC. The mentorship for the first cohort of entrepreneurs is under implementation and IRENA has received initial progress reports from SMEs. One such report indicated that the SME attributes the increase of net profit by 20% and increased customer base to improved marketing strategies linked to IRENA training and mentorship programmes. IRENA will continue to collect this information and record impact as the programmes develop.

In line with the programmatic priorities for the biennium, IRENA has enhanced its focus on **partnerships**, to amplify its impact through these, especially to realise impact on the ground. This included a greater engagement with the private sector. To this end, IRENA released [*Guiding Principles for Engaging in Cooperation Activities with the Private Sector*](#) (“the guidelines”) to ensure this engagement is transparent and inclusive.

Over the biennium, IRENA concluded twenty-three partnerships, in addition to those already in place. Some highlights are provided below.

IN FOCUS: ROCKEFELLER FOUNDATION

In September 2020, IRENA signed a Memorandum of Understanding with the **Rockefeller Foundation**. Planned cooperation include:

- A green energy infrastructure plan to respond to the recovery efforts in the wake of the pandemic and achievement of SDG Goal on Energy and Climate.
- Convening Stakeholders, including development finance institutions, non-profits, philanthropies, and public sector organisations to leverage respective efforts
- Joint analytical and empirical activities
- Communication and outreach activities
- Efforts in support of the objective of scaling up renewable energy investments, including through the Climate Investment Platform

"In 2020, The Rockefeller Foundation was proud to join w/ @IRENA & many others in a Call to Action to bring reliable & sustainable #electricity, powered by #renewables.

We look forward to continuing this work together during #IRENA11A" - @rajshah, President of @RockefellerFdn



3:42 PM - Jan 20, 2021 - Twitter Web App



IRENA partnerships are effective mechanisms for the Agency to grow its recognition and impact. As more entities enter the renewable energy space, partnerships are increasingly important to avoid overlap of work, maintain clarity of mandate, and support multiplication of results. IRENA will continue to leverage its existing partnerships and build new ones with these goals in mind.

IN FOCUS: IRENA MODELLING AND PLANNING WORK

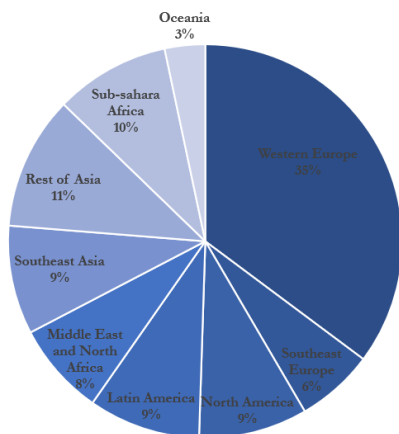
The **Long-Term Energy Scenarios (LTES) Campaign** is another example of an initiative that has recorded impact over the course of the biennium. Launched at the Ninth Clean Energy Ministerial (CEM) in May 2018 in Copenhagen, the campaign promotes the use and improvement of long-term model-based energy scenarios and their integration into decision-making processes to accelerate energy transitions in CEM countries. To ensure that non-CEM countries also benefit, IRENA created the LTES Network. This Network brings together government institutions responsible for the development of official government scenarios and technical institutions supporting these governments in the process of development and use of scenarios.

In the 2018-2019 biennium, the Initiative had 12 members and seven technical partners. In the current biennium, the initiative has had 14 new members and four technical partners join to date. Of the new joiners this biennium, 13 of the 14 members are non-CEM members, whereas last biennium, all members who joined were also CEM members.

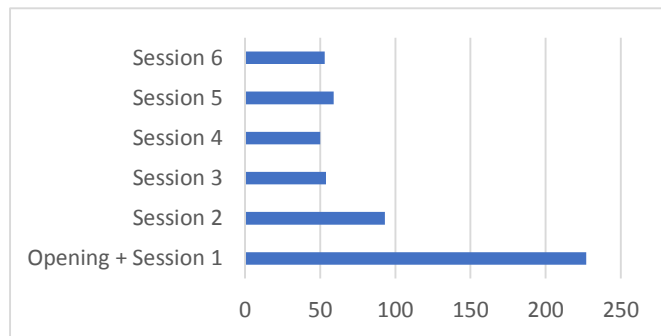
The International Forum on Long-term Scenarios for the Clean Energy Transition is the annual flagship event of IRENA's LTES Network and Clean Energy Ministerial LTES Initiative. It brings together scenario practitioners in government, academia, technical institutions and the private sector to discuss how to strengthen the development and improve energy scenarios to guide the clean energy transition. In 2021, IRENA hosted the 3rd Forum with a record 395 registrations.

26 Countries (50% CEM, 50% non-CEM) / 11 Partners

Figure 8: Registrations by country



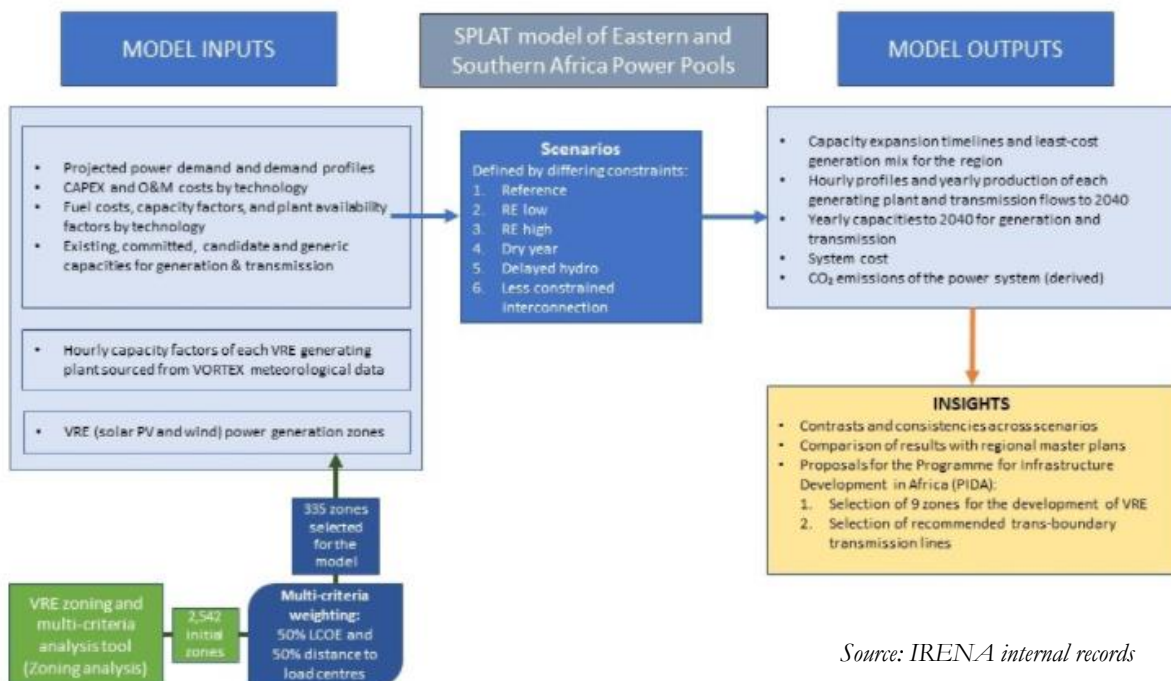
YouTube views by session



Source: IRENA internal records

Interestingly, YouTube viewing comes in higher at 536 views as of the writing of this report. While it is evident that training is more effective in-person, the value of on-line presence is recognised. Post-COVID events will consider how to best combine these positive elements.

Long-term planning work is supported through voluntary contribution from Denmark which underwent an independent review in early 2021. Recommendations received included increased focus on regional themes, and strengthened communication of activities, targeted to areas of high impact. IRENA is thankful for these types of reviews and is internalising input and will revise the programme accordingly.



Source: IRENA internal records

Je suis convaincu que cette formation permettra aux participants de relever les défis de l'Afrique Centrale en matière de planification'. I am convinced that this training will allow participants to meet the challenges of Central Africa in terms of planning'.

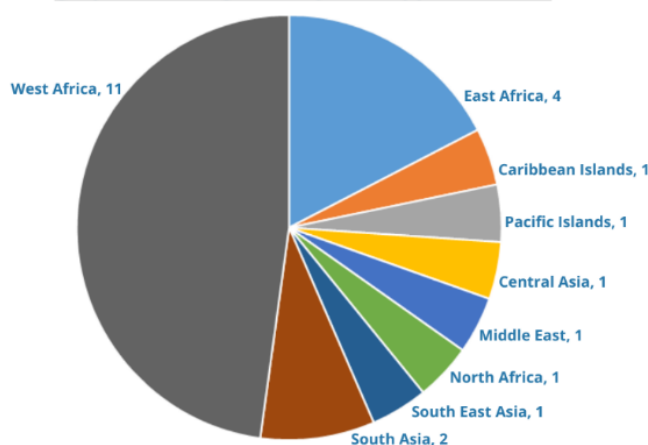
IRENA Member

In April 2021, IRENA and the International Atomic Energy Agency (IAEA) were selected as modelling partners for the development of the African Continental Power Systems Master Plan (CMP). The initiative is led by the African Union Development Agency (AUDA) with the technical and financial support of the European Union (EU) and is aimed at establishing a long-term continent-wide planning process. The two agencies' modelling tools will be the official planning models utilised in the development of the CMP. IRENA's System Planning Test (SPLAT) capacity expansion models are a key input to this work. Built using the MESSAGE software, the Agency has developed SPLAT models covering 47 African countries across the five African power pools.

Over the course of the biennium, IRENA evolved the Climate Investment Platform (an initiative launched at the UNSG's Climate Summit in 2019). The **Climate Investment Platform (CIP)**, a joint initiative of IRENA, UNDP, and SE4ALL in coordination with Green Climate Fund (GCF), is a platform to facilitate the financing matchmaking between registered financing institutions and registered renewable energy projects' proponents and has a mandate to mobilise capital towards developing countries to accelerate the scale of renewable energy technologies to meet NDC targets and SDG compliance. Over the biennium, 289 partners registered a total of 265 projects.

# Projects Supported for the development of the Project Information Documents (PIDS)	# Projects eligible for support and in active discussion for further assessment	# Projects introduced to financial partners	# Projects matched to financial partners
23	51	14	8

Geographic Coverage of Projects Supported, total: 23



MW Generated by Facilitated Projects

518.8 MW

Projected Total Investment Value

1006 million USD

Projected Total GHG Emissions Reduced

5 tCO2e million

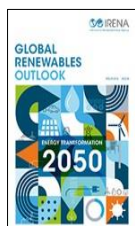
Source: IRENA internal records

III. Analytical and empirical centre of excellence

IRENA's ability to provide advice and support to countries and stakeholders is rooted in a strong analytical basis developed over the last decade. This knowledge basis gives the Agency the credibility and strength it has today.

"The World Energy Transition Outlook is both a reminder of the challenge ahead of us and a commitment we agree collectively on climate."

IRENA Member



IRENA's World Energy Transitions Outlook¹¹ provides the latest knowledge and data for the energy transition, offering high-level insights on technology choices, investment needs, policy framework and the socio-economic impacts of achieving a sustainable, resilient and inclusive energy future. IRENA published two flagship Energy Transitions Outlook reports over the biennium, translated to eight languages.



The *Global Renewables Outlook* and the *World Energy Transitions Outlook* together generated 3,283 articles. The *World Energy Transitions Outlook* alone was mentioned in 1,193 articles since its

publication in March 2021.

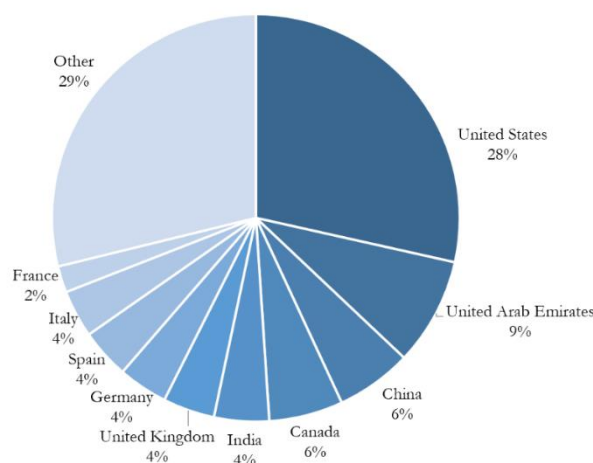
Media coverage of these two reports was in 26 languages across 95 countries from media outlets including the BBC, Bloomberg, CNN, The Economist, Financial Times, Le Monde and Handelsblatt.

On the IRENA website, both Outlooks attracted circa 241,000 visitors, when accounting for all related coverage.

The publication pages were most visited with traffic driven through communication products: press releases, social media posts and new digital articles featuring interactive infographics. The Global Renewables Outlook was downloaded by over 47,000 people over a period of more than a year, and the World Energy Transitions Outlook by almost 33,000 since publication in March 2021 showing increased interest in the first six months post launch.

+ 23% media coverage

Figure 7: WETO coverage by country



Source: IRENA internal records


During the 2018-2019 biennium, IRENA was mentioned in over 38,600 **news articles**. Within this biennium, the number increased to over 47,600 news articles, representing an increase in coverage of more than 23%.

Media increasingly see IRENA as a source of credible and trustworthy data and insight on

¹¹ Supported in part by the government of Germany.

renewables. For example, the Director-General gave over 50 interviews to media outlets and TV broadcasters since the beginning of 2020. This trend is also seen in IRENA data and statistics. For example, requests for IRENA costing data have grown by 59% since the last biennium¹². This represents only those requests for data that require more than one hour of work and requests for data not already available on IRENA's webpages.

Figure 8: Demand for IRENA cost data

 A review of the results showed an increase in detailed use of IRENA cost data notably by think-tanks and academic institutions, but also more broadly across stakeholders.



Source: IRENA internal records

IRENA's work has also received greater **media attention** in non-English speaking media. Coverage in this biennium was in 45 languages across 172 countries and came from renowned media outlets, such as ABC Australia, Al Arabiya, Agence France Press, BBC, Bloomberg, CCTV, CNBC, CNN, Deutsche Welle, The Economist, Economic Times, Euronews, Financial Times, Forbes, The Guardian, La Repubblica, Le Monde, El Pais, Reuters, Sky News Arabia, Spiegel Online, The Times of India, The Wall Street Journal and Xinhua.

¹² Data collected up to and including 8 August 2021.

Figure 9: Media coverage by language* and country



In the 2019 self-assessment, IRENA noted it had media coverage in over nine languages. Today, this has increased to 45 languages, demonstrating the increased reach of the Agency’s work.

Social media trends are also indicating broader recognition of the Agency and its work

- + 32%** (2020 vs 2019 visitor growth)
- + 46%** (2021 vs 2020 visitor growth)

	Twitter Total reach: 55,210,000 Followers: 104,100 (July 2021) since September 2019 + 48.69%
	Facebook Total reach: 9,379,949 Followers: 475,962 (July 2021) since September 2019 + 9%
	LinkedIn Total reach: 3,415,937 Followers: 108,966 (July 2021) since September 2019 +142%

Source: IRENA internal records

with an increase in followers across its three social media channels. Twitter and LinkedIn have been the focus of social communication efforts in the biennium.

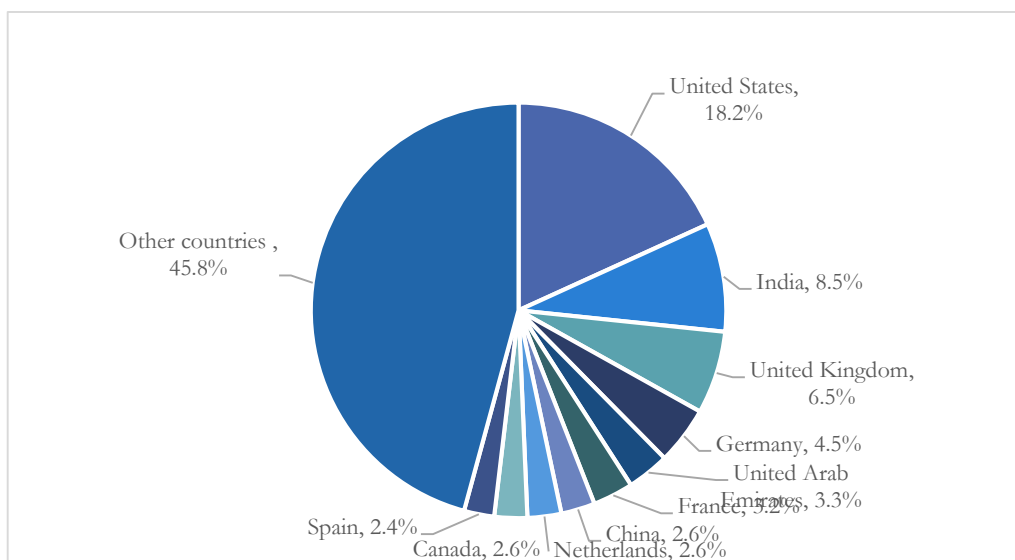
Results show that this has been profitable. The Agency also added a new live YouTube streaming to key events, including the IRENA Assembly, which has helped attract new viewers across the website and social media channels.

Website usage has also increased in the biennium. The irena.org website attracted almost 2.2 million visitors who browsed nine million pages in the biennium. The number of visitors has grown by 32% in 2020 as compared to 2019, and a further 46% in 2021 as compared to 2020. Browsed pages also grew by 48% in 2020 as compared to 2019, and by a further 50% in 2021 as compared to 2020.

Peaks of activity on the website were observed during IRENA’s Governing Body meetings, launches of key publications and communications campaigns. While the IRENA website attracts a global audience, over 50% of traffic comes from the countries listed in the chart below.

Source: IRENA internal records

Figure 10: Top website users by country



With its increasing brand recognition, IRENA’s website continues to attract views year on year. The Agency continues to expand on dissemination, including translation of selected products to reach wider audiences.

Over the biennium, IRENA also expanded its outreach through e-mail pushes reaching over 72,000 e-mail subscribers in the biennium and a growth by almost 45% from 2020 (up from 50,000 in 2020).

Total subscribers:
+ 72,194 (July 2021)
+ 60.4% (since December 2019)

Numbers indicate that most new subscribers sign up to receive press releases from IRENA (27,000 in total), although those who prefer this do not necessarily come from the

media industry. A high general interest in IRENA’s latest insights, data and organisational updates is also seen.



With over 1000 subscriptions, private sector representatives are the biggest group of subscribers with an engagement rate of 40% on average. Academia and research institutions are the most engaged target group with almost 60% click rate per direct mailing.

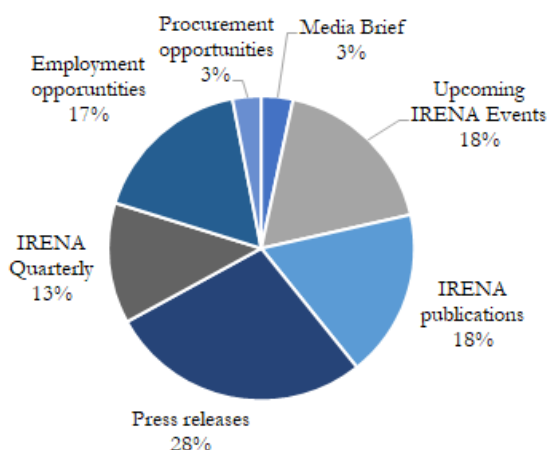
The accessibility of the Agency’s work was further improved with over 58% of website traffic coming from Google and other search engines, and 28% of direct traffic. IRENA’s website performs very well in renewable energy and energy transition related searches in Google, ranking in top results for energy sources and energy transition.

The remaining website traffic comes from social media, e-mail campaigns, other international organisations’ pages (e.g. UNFCCC, WEF etc.) and media referrals. Among these, Forbes referrals are generating the most traffic for irena.org among mainstream media. 10% of all visitors read press releases and articles, with content related to the flagship reports attracting the highest number of readers.

Global, regional and country level activities are supported by the Agency’s global analysis. Core analysis, published in its flagship publications, as well as technology briefs and market analysis provide the basis for its country and regional engagement.

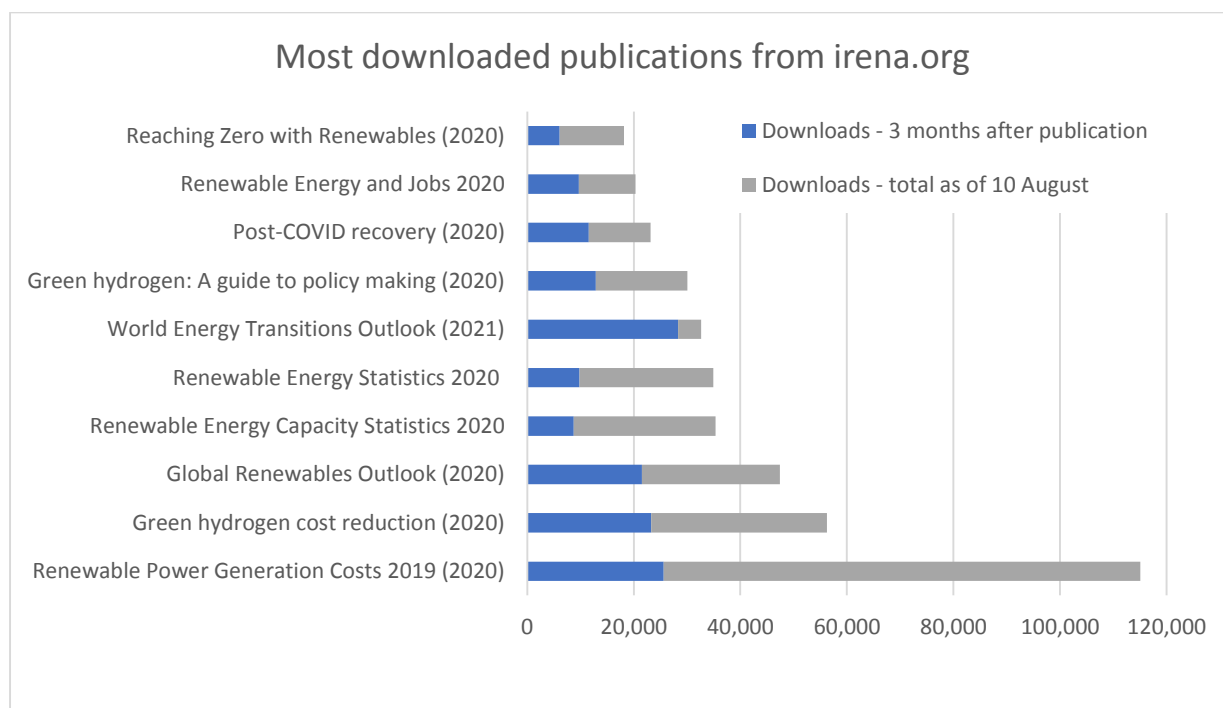
IRENA launched **106 publications** over the biennium in ten languages (six UN languages, plus German, Italian, Japanese and Portuguese). They cover a range of energy-related topics and contain information at the country, regional and global level. According to the IRENA website statistics, publications were downloaded over 3.3 million times from the IRENA website.

Figure 11: Subscriptions by e-mail type



Source: IRENA internal records

The downloaded publications shown in the chart below indicate the success of flagship titles and importance of up to date technical and policy analysis. IRENA facilitates access and discovery of its publications by producing Executive Summaries, e-books in mobile-friendly formats, infographics, interactive charts for web and social media as well as presentation slides with key figures and data.



Source: IRENA internal records ¹³ This figure shows publication download and does not account for statistical download of data through IRENA’s statistics pages.

¹³ The download data is obtained via Webtrends Analytics and includes additional data sources compared to the previous biennium report.



Flagship publications attract the most attention in the first three months. Annual flagship publications will, by their nature, show fewer overall downloads as they superseded with the release of the updated version, while biennium flagships will amass a larger total download per publication as it remains current for a longer period of time.



‘The essential role that IRENA plays in the dissemination of policy best practices and innovative finance models and in connecting IRENA members to reinforce our individual efforts will only increase in importance in the years to come.’

IRENA Member

IRENA published 12 other leading flagship reports on a range of topics spanning the technology, socio-economic and policy issues.

Flagship reports released in 2020 and 2021

Renewable Power Generation Costs (annual edition)

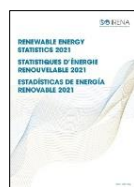


Edition 2021



Edition 2020

Renewable Capacity Statistics (annual edition)



Edition 2021



Edition 2020

Renewable Energy Statistics (annual edition)



Edition 2021



Edition 2020

Renewable Energy and Jobs – Annual Review	Edition 2021 Upcoming		Edition 2020
Tracking SDG7: The Energy Progress Report (annual edition)	Edition 2021		Edition 2020
Flagships produced in response to current affairs	Post-COVID Recovery: An agenda for resilience, development and equality (2020)		Reaching Zero with Renewables (2020)

Source: IRENA internal records.

“IRENA’s understanding of the technical policy and structural requirements for the accelerated development and deployment of renewable energy solutions has made it the leader of the energy transition.”

IRENA Member

IRENA also released 53 other publications, often translated in a range of languages, covering a broad range of technology, policy, socio-economic, finance and investment issues, as well as regional case studies and interdisciplinary topics such as cities and gender.

Reports released in 2020

1. Scenarios for the Energy Transition: Global experience and best practices
2. System Operation: Innovation Landscape Briefs (6 briefs)
3. Business Models: Innovation Landscape Briefs (5 briefs)
4. Renewable energy finance: Green bonds
5. Renewable energy finance: Institutional capital
6. Renewable energy finance: Sovereign guarantees
7. Power sector planning in Arab countries: Incorporating variable renewables
8. Towards 100% renewable energy: Utilities in transition

Reports released in 2021

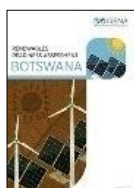
1. Tracking the Impacts of Innovation Offshore wind as a case study
2. United Nations Framework Classification for Geothermal Energy
3. Renewable Energy and Electricity Interconnections for a Sustainable Northeast Asia
4. Reaching Zero with Renewables: Biojet fuels
5. Green Hydrogen Supply: A Guide to Policy Making
6. Decarbonising end-use sectors: Practical insights on green hydrogen

9. Wind energy: A gender perspective
 10. Power system organisational structures for the renewable energy era
 11. Reduce: Non-bio renewables
 12. Recycle: Bioenergy
 13. Electricity Storage Valuation Framework
 14. Country papers: Scaling up renewables investment in high-potential markets
 15. Green hydrogen cost reduction
 16. Stimulating investment in community energy: Broadening the ownership of renewables
 17. Renewable energy and climate pledges: Five years after the Paris Agreement
 18. Quality infrastructure for smart mini-grids
 19. Fostering a blue economy: Offshore renewable energy
 20. Renewable Energy Policies in a Time of Transition: Heating and Cooling
 21. SIDS Lighthouses Initiative Progress and way forward
 22. Innovation Outlook: Ocean Energy Technologies
 23. Innovation outlook: Thermal energy storage
 24. Green hydrogen: A guide to policy making
 25. Geothermal development in Eastern Africa
 26. Global Landscape of Renewable Energy Finance 2020
 27. Mobilising institutional capital for renewable energy
 28. Rise of renewables in cities
 29. IRENA/ADFD Project Facility: Lessons from the selection process
 30. Renewable Energy Prospects for Central and South-Eastern Europe Energy Connectivity (CESEC)
 31. Stimulating Investment in Community Energy: Broadening the ownership of renewables
 32. Advancing renewables in developing countries
 33. Off-grid renewable energy statistics
7. Renewable Energy Policies for Cities: Buildings
 8. Renewable Energy Policies for Cities: Experiences in China, Uganda and Costa Rica
 9. Renewable Energy Policies for Cities: Transport
 10. Renewable Energy Policies for Cities: Power Sector
 11. Planning and prospects for renewable power: Eastern and Southern Africa
 12. The Renewable Energy Transition in Africa
 13. G20 Report on Offshore Renewables: An action agenda for deployment.
 14. Integrating low-temperature renewables in district energy systems: Guidelines for policy makers
 15. Companies in transition towards 100% renewable energy: Focus on heating and cooling
 16. Renewable energy benefits: Leveraging local capacity for solar water heaters
 17. Innovation Outlook: Renewable Methanol
 18. Trading into a bright energy future: The case for open, high-quality solar photovoltaic markets
 19. Upcoming: Urban Energy Transformation - Wuzhong
 20. Upcoming: Socioeconomics of the energy transition: The Case of Indonesia

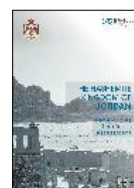
Source: IRENA internal records.

IRENA also undertook analytical work at the request of, and in collaboration with Members¹⁴. The 20 targeted analyses published over the biennium cover country-specific assessments and insights into specific technologies.

Renewables Readiness Assessment: Paraguay (upcoming)



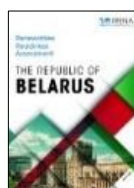
Renewables Readiness Assessment: Botswana



Renewables Readiness Assessment: The Hashemite Kingdom of Jordan



Renewables Readiness Assessment: Albania



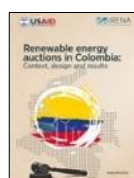
Renewables Readiness Assessment: Belarus



Renewables Readiness Assessment: Tunisia



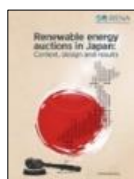
Utility-scale Solar and Wind Areas: Mauritania



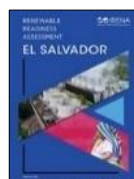
Renewable energy auctions in Colombia: Context, design and results



Antigua and Barbuda: Renewable Energy Roadmap



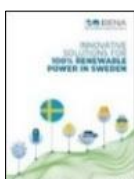
Renewable energy auctions in Japan: Context, design and results



Renewables Readiness Assessment: El Salvador



Renewable Energy Outlook: Lebanon



Innovative solutions for 100% renewable power in Sweden

Coalition for Action: Country papers: Scaling up Renewables Investment in High-potential markets

- Algeria
- Colombia

- Jordan
- India

- Mexico
- Tunisia
- Viet Nam

Source: IRENA internal records.

¹⁴ In addition to the 21 publications listed here, IRENA has produced five reports (“Utility scale solar and wind areas: Site assessment for Burkina Faso; Utility scale solar and wind areas: Site assessment for Ecuador; Grid Emission Factor Methodology Review in Ecuador; Energy Data Audit in Belize and Energy Data Gap Analysis in El Salvador”) that have been shared with the respective countries and are not publicly available.



“We need IRENA’s analytical capabilities to help us make sound decisions when it comes to renewable energy and the energy transition.”

IRENA Member

In an effort to extend the reach to the academic market, IRENA established a series of Staff Technical Papers offering insights into current energy-related topics. The Agency is currently preparing a dedicated webpage for academia, offering rapid access to these papers, flagships, infographics, presentation slides etc.

Staff Technical Papers		
Bracing for climate impact: Renewables as a climate change adaptation strategy	Energy subsidies: Evolution in the global energy transformation to 2050	Oil companies and the energy transition
Measuring the socio-economics of transition: Focus on jobs	Upcoming <ul style="list-style-type: none"> • 100% Renewable energy power systems to help policy makers better prepare for the challenges with 100% RE power system planning • Using digital technology to enhance renewable energy teaching and learning 	Upcoming <ul style="list-style-type: none"> • Renewable energy education and training policies • Community Engagement in Sub-Saharan Africa: Experiences of Large-scale Wind and Solar Projects (technical paper - authors)

Source: IRENA internal records

“The travel bans have been no impediment to IRENA’s prolific studies and events.”

IRENA Member

Despite the restrictions imposed by COVID-19, the number of virtual events is set to almost triple by the end of the year compared to the previous biennium. Out of a total of 347 events overall, the Agency organised 191 technical and capacity-building events (55%), 91 high-level events (26%) and 65 regional events (19%). This is due in large part to the Agency's shift to a virtual format due to the COVID-19 pandemic restrictions.

Attendance has risen at a faster pace to almost quintuple (close to 50,000 participants est.) that of last biennium.



Data shows that 21.8% of the participants come from academic and research institutes (one sixth of total) with increasing interest shown by private sector, accounting for 31.6% of registered attendees. High-level representatives from governments and policy-makers have represented 20%.

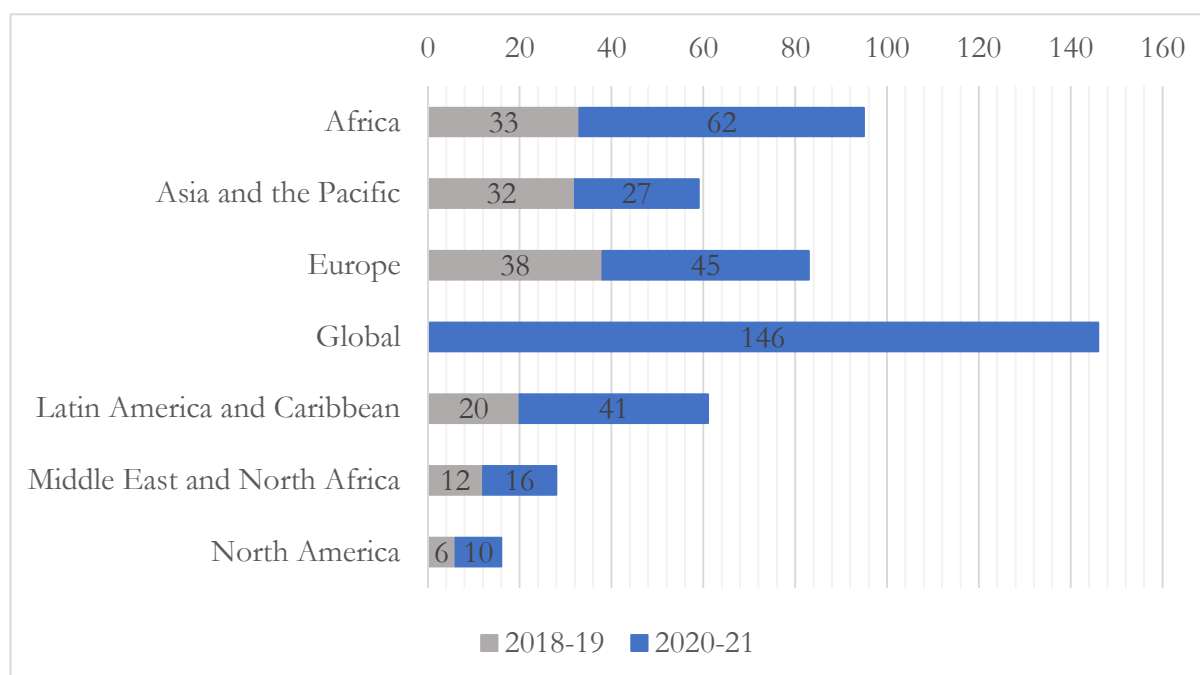
Satisfaction of the participants on the events organised by IRENA has been measured through voluntary surveys. More than half reported that the event they took part in was very helpful (71%) and almost the entirety of the audience stated that they gained new skills or knowledge that they will be able to use in the future (91.5%).



The shift in format pushed the Agency to challenge its technology limits but led to a positive change. IRENA can reach a much larger and more diverse audience through its virtual platforms. While there is recognition that physical meetings remain a required part of the work, virtual or hybrid format of events will continue to play a role in a post-COVID era.

IN FOCUS: INNOVATION WEEK – GREEN HYDROGEN

Figure 12: Geographical distribution of events by region, 2018-19 and 2020-21



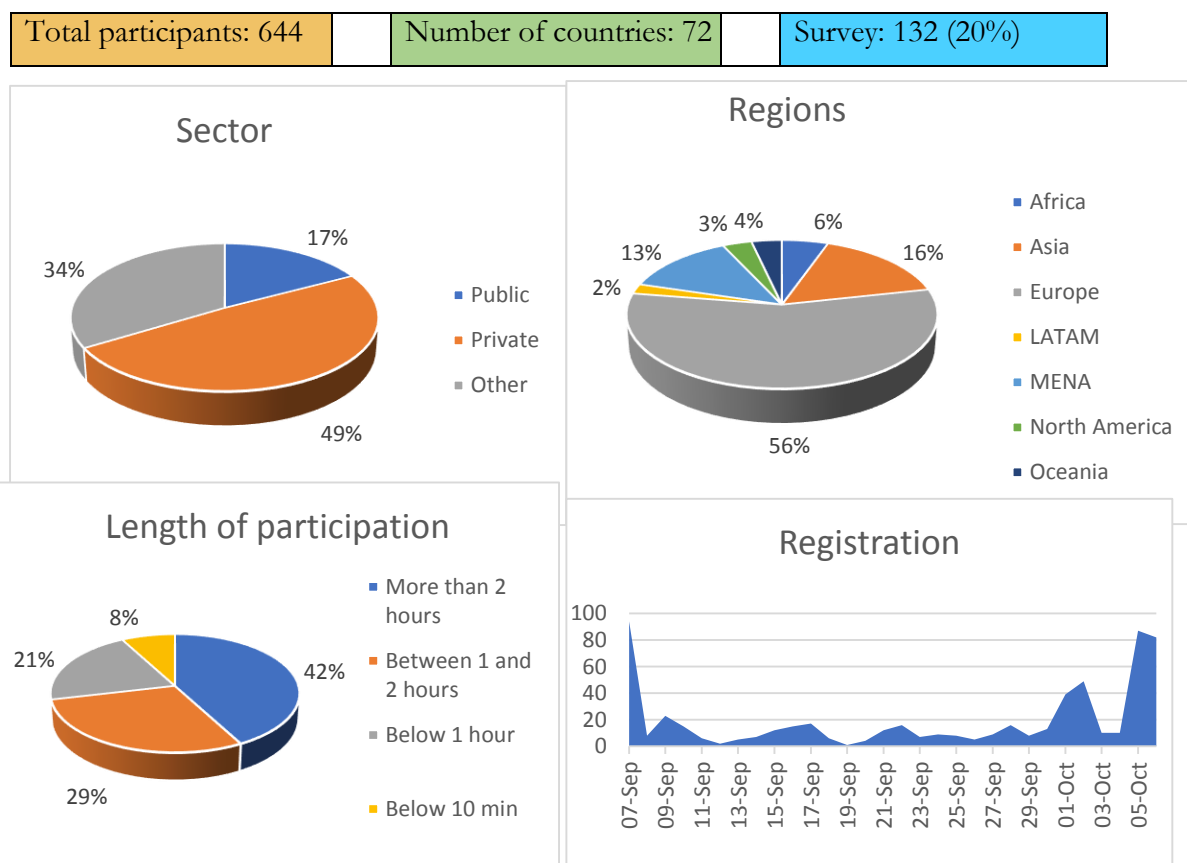
Source: IRENA internal records

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The 3rd IRENA Innovation Week took place online during 5-8 October 2020 under the theme “Renewable solutions for transport and industry”, with specific technical sessions organised in partnership with other international organisations (Electric Power Research Institute, Hydrogen Council, Global Bioenergy Partnership, Mission Possible Platform, International Transport Forum, Initiative and SDG Youth Constituency). This third edition broadened the discussion into the energy demand side and was informed by IRENA’s [Reaching Zero with Renewables](#) report.

Over 100 expert speakers participated, including Energy Commissioners from the European Commission and the African Union, Energy and Climate Ministers from four continents, panellists and facilitators from over 35 different countries, and an audience of over 1700 from circa 1250 organisations and almost 140 countries. The level and breadth of participation indicate the expanding recognition of the critical importance of decarbonising industry and transport and its significant implications for global economies.

Deepening its monitoring and evaluation of activities, the Agency routinely sends surveys after its events. The below is an example of the results recorded post-event. Data below relate to a session on Green Hydrogen: electrolysis, ammonia and other e-fuels that took place during IRENA’s 2020 Innovation Week.



Source: IRENA internal records

Innovation work was cited more than **140 times** (2020-2021), including the work related to the flagship report and briefs, Innovation Landscape for a renewable-powered future, the work on Innovation Outlooks and INSPIRE platform.

 IN FOCUS: *IRENA INSIGHTS* WEBINARS

Webinars in 2020

- **20** webinars in 2020
- **12942** Registered
- **7164** Attended
- **45%** Attendance rate

Registration by the type organisation:

Private sector represented 42% of all registration, followed by other (academia, NGO, international organisations, etc.) while public sector had a rather lower registration and attendance

Source: IRENA internal records

Webinars in 2021

- **11** webinars in 2021 (to date)
- **6042** Registered
- **2837** Attended
- **47%** Attendance rate

Registration by the type organisation:

37% are private sector companies, followed by government organisation, academia, NGO, etc.



Records show that attendees register most upon initial receipt of event invitation, or in the days immediately prior to the scheduled event. IRENA will continue to tailor its messaging to potential attendees with these findings in mind to maximise attendance.

IV. International Cooperation

The Agency continues to be a principal platform for international cooperation for energy transition, bolstered by its global reach and strong country engagement. IRENA relies on its **Governing Body meetings** to seek guidance from its Membership on policy, programmatic and governance-related matters and showcase Agency activities and progress. The table below provides information on the registration figures for the Council and Assembly comparing data from the 2018-2019 and 2020-2021 biennium.¹⁵

Important dialogues are held during the stakeholder week prior to the opening of each Assembly. Notable events include the annual IRENA Youth Forum, the Legislators Forum for Parliamentarians, SIDS Lighthouses Initiative, the Public-Private Dialogue as well as targeted fora to advance specific areas of work such as the Geopolitics of the Energy Transformation and High-Level Dialogue on Women in Renewable Energy.

To facilitate in-depth discussions on institutional matters of particular importance, Members also endorsed proposals to create specific Working Teams, including the Medium-term Strategy Working Team to guide the development of the Medium-term Strategy 2023-2027 and the open-ended group to discuss matters relating to the Staff Tenure Policy.

“We need to build the green recovery and IRENA’s global mandate impacting the recovery, development, and climate priorities can be very, very instrumental.” IRENA Member

¹⁵ Participation figures may differ from registration numbers.

Governing Body Meetings – IRENA Assembly and Council					
Meeting/Session	Registered Participants	Registered Delegations	Registered Members	Registered Signatories and States in Accession	Registered Other States
8 th Assembly (2018)	1,300	139 plus EU	127	8	5
9 th Assembly (2019)	1,570	156 plus EU	147	8	2
10 th Assembly (2020)	1,750	140 plus EU	135	4	2
11 th Assembly (2021)	2,200	143 plus EU	138	4	1
15 th Council (2018)	296	91 plus EU	85	4	3
16 th Council (2018)	300	94 plus EU	86	7	2
17 th Council (2019)	269	100 plus EU	96	4	1
18 th Council (2019)	395	125 plus EU	114	11	1
19 th Council (2020)	361	94 plus EU	90	4	1
20 th Council (2020)	316	94 plus EU	90	4	1
21 st Council (2021)	340	103 plus EU	98	5	0

Source: IRENA internal records



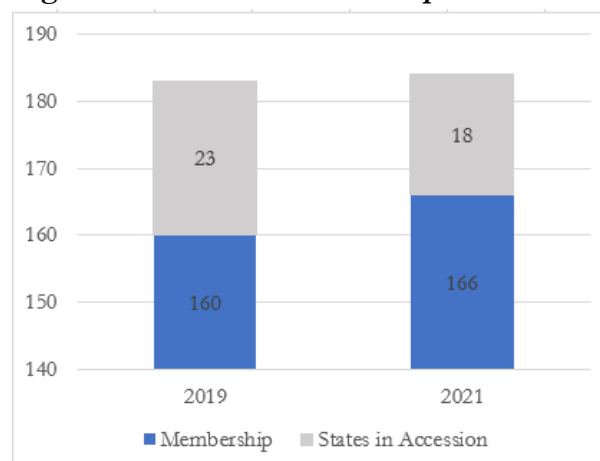
The virtual mode of conducting meetings and sessions of the Governing Bodies over this biennium has shown a growing trend in the number of registered participants and registered delegations, especially for the Assembly sessions, due in part to an increase of the Membership.

Over the biennium, IRENA welcomed six new **Members** to date, compared to seven in the last biennium. The Agency continues to make use of its unique global reach and Governing Body meetings to influence and inform the discourse on energy transitions worldwide.



At 166 Members¹⁶, the Agency is near universal in membership.

Figure 13: IRENA Membership



¹⁶ As of 21 September 2021, 165 countries and the European Union.

IN FOCUS: GLOBAL HIGH-LEVEL FORUM ON ENERGY TRANSITION

The Assembly established the **Global High-Level Forum on Energy Transition** (GHLF) as a vision-building forum for IRENA Members to discuss their collective aspiration on the energy transition with key stakeholders. The inaugural meeting of the GHLF was held in a virtual format on 30 June 2021 and served as a platform for the launch of the full report of IRENA's World Energy Transitions Outlook and is a testament to the commitment of the Membership to multilateralism, active engagement in the activities of the Agency, and acceleration of the political momentum towards a rapid global energy transition.



Leaders speaking at @IRENA's HL Forum today highlighted the critical role of international cooperation for accelerating #energytransition.

World #EnergyTransitions Outlook provides actionable steps to create a new wave of momentum towards a 1.5° future: bit.ly/IRENA-WETO2021



V. Work Programme Implementation

In the course of the biennium, IRENA improved its evaluation processes and monitoring structures. The following provides an overview of these, with results of analysis highlighted.

'The evaluation survey suggests it is delivering well against all of its strategic objectives and that performance is on an upward trajectory since the last evaluation undertaken in 2015'

IOD Parc, external evaluator Executive Summary

IRENA **external evaluation**, conducted in 2020, covered progress made since 2018 against the Framework laid down in the MTS 2018-2022. It included a review of the Agency's positioning in the global energy transition. It also considered the reach, effectiveness, and impact of the Agency's activities implemented since 2018 (Work Programme and Budgets 2018-2019, and 2020-2021).

The external evaluation included, among other things, the interview of 25 IRENA Members and partner organisations, a survey, and a desktop review of IRENA documentation and internally produced monitoring data (including web and media analytics). The external evaluator's conclusions were as follows:

Figure 14: External evaluation survey response rate

Survey Group	Population	Responses	Response rate
Members	161	50	31%
External Stakeholders	221	39	18%
Staff	249	76	31%

External Evaluation Conclusions

The direction outlined in the 2018-2022 Medium-term Strategy is valid and should continue to guide work planning for the remainder of the period

Expedite and prioritise the development of a shared, organisation-wide result framework and monitoring strategy

Strengthen IRENA's analytical capability and service offering to lead the energy transitions with an added focus on just transitions

Define an engagement strategy that aims high (Ministerial-level) and wide (beyond energy)

There are different views as to what IRENA's role should be at the country-level and whether it should be more directly involved in supporting operational project-level activity. It will be important for IRENA to work through these for the next Medium-term Strategy

IRENA worked with the evaluation team post-evaluation to improve its monitoring and evaluation frameworks. The team noted that the Agency, as a knowledge broker, works to influence rather than deliver policy and practice. Inputs are thus several steps removed from tangible outcomes (e.g. policy adoption, infrastructure and development). Moreover, given the highly context-specific nature, knowledge-brokering and influencing are not well served by 'traditional' monitoring approaches such as quantitative indicators. To address these challenges and measure progress, IRENA was recommended to:

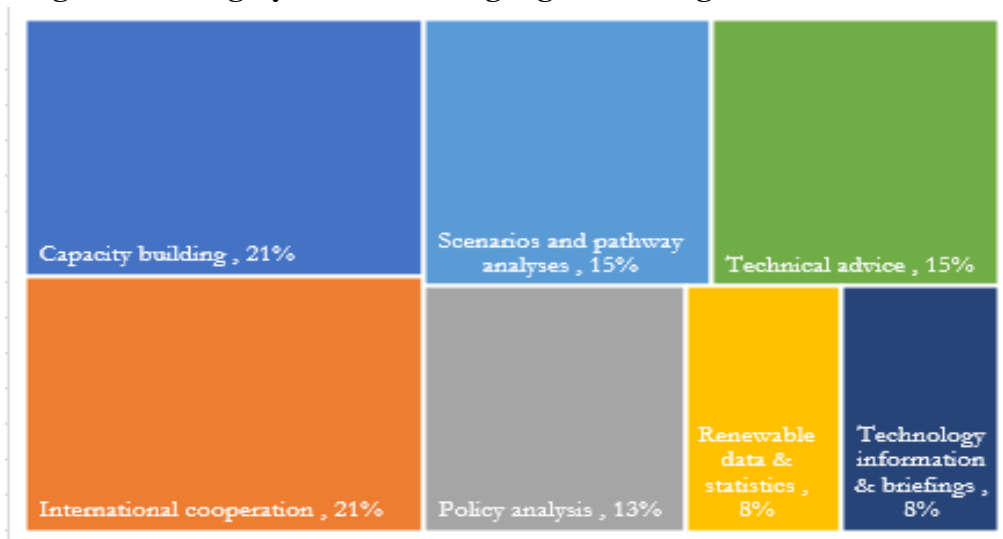
- Move beyond activity/output-level monitoring
- Identify processes for measuring IRENA's influence and contribution to outcomes (i.e. based on an acceptance that IRENA doesn't directly deliver outcomes)
- Build a shared, Agency-wide strategy capable of demonstrating whether and how IRENA's various workstreams fit together and contribute to results

Members and partners see a clear role and strategic opportunity for IRENA to address knowledge gaps on precisely how countries can build the necessary political and societal momentum for a renewables-based energy transition, and around the practical, tangible steps that will be required.'

IOD Parc, external evaluator Executive Summary

Seeking further input into this self-assessment process, IRENA undertook **a series of interviews** in July and August of 2021 with select Members it had engaged with over the biennium. These interviews were a targeted addition to feedback gathered at the Governing Body meetings, which is consistently collected and analysed. The Agency interviewed 12 countries, where a total of 39 activities occurred. Geographically, interviews were conducted with two countries from Africa, three from Asia and the Pacific, two from Europe, three from Latin America and the Caribbean, and one each from the Middle East and North Africa and North America. Activities noted during interviews ranged from multilateral events (Collaborative Frameworks, IRENA Governing Body meetings and associated side events, technical seminars), capacity building activities (resource and site assessments, planning support), Policy analysis (energy policies, NDCs), renewable energy and data training (MRV programme, statistics). When categorised by type, capacity building and international cooperation came out as leading with scenario and pathway analysis a close second.

Figure 15: Category of activities highlighted during interviews



Source: IRENA internal records

The Agency's role to facilitate dialogue both at a national level and international level, connecting stakeholders across all spectrums of the energy sectors remains impactful. Also, the data shows that despite the restrictions of the COVID pandemic, IRENA's ability to continue to build capacity at a local, national and regional level remains of value.

Specific references of impact include that IRENA support gave direction and supported development of new policy and national strategies; were used as input into legislative documents and energy policies/plans; enabled multi-stakeholder interaction and incentivised quicker and more ambitious government action. Both process and results were listed by those interviewed as beneficial. While end results (whether this be analysis, roadmap, trained participants) were recognised, the process itself was also noted as empowering to stakeholders as this built internal capacity and ensured sustainability of engagement.



All interviewed countries noted IRENA's impact. The most referenced impact related to a strengthening of institutional capacity and skillset in renewable energy at the country and regional level.

Interviews also sought to understand how the Agency may improve its engagement with countries. Highlighted among those interviewed was:



- There is a need to further strengthen communications, including improvements needed in the communication of Agency activities and how these can support Members, and the need to translate more of the Agency's work to support broader dissemination.
- Agency workshops, when of technical nature, should account for non-technical attendees to support broader knowledge transfer.
- Increase and improve process for joint work with individual Members (e.g. research, analyses, projects)
- Step-up mitigating actions against climate change to become a leading organisation in this area

Figure 16: Type of impact recorded of IRENA activities



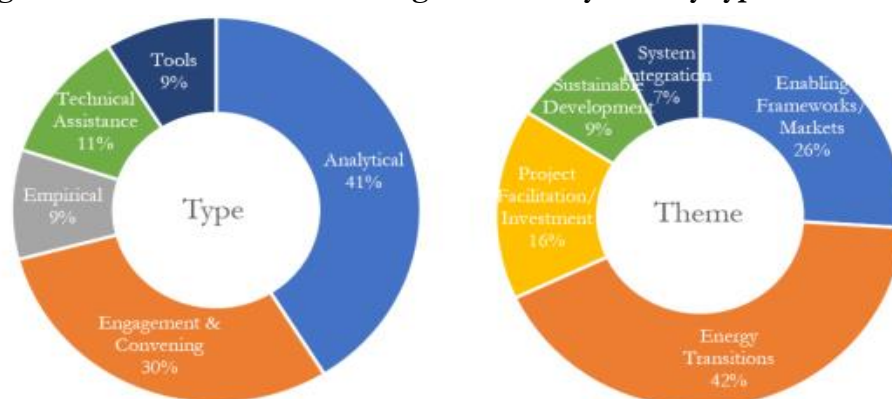
Source: IRENA internal records

IRENA is at the forefront in the drive for change, enabling policies and disseminating best practices and optimum practical tools for informed decision-making”

IRENA Member

In the course of the biennium and building on the first self-assessment conducted in 2019, the Agency also deepened its efforts to collect and synthesise qualitative and quantitative sources of information for evaluation over the biennium. Taking note of gaps highlighted in the last self-assessment, the Agency implemented **a tracking of its Work Programme outputs**. This tracking allowed a more detailed overview of where Agency activities fall. The tracking also served as a measure of progress over the course of the biennium. At the time of writing this report, IRENA had completed 56% of outputs defined in the Work Programme, with 44% in progress.

Figure 17: IRENA outward-facing activities by activity type and theme



Source: IRENA internal records

To facilitate tracking of progress and internal accountability, the Agency in 2020 introduced a Senior Manager’s Annual Directive, which is issued by the Director-General as a directive to all Directors to aid their performance review. The Directive also highlights projects that have cross divisional engagement.



Director-General's Directives improved on IRENA delivery by clarifying roles of divisions in delivery of the Work Programme, highlighting priorities in the course of the biennium and improving cross-divisional work on Agency-wide projects.

VI. Conclusion

The biennium introduced more challenges than usual. As IRENA initiated the biennium's work plans it was struck along with the rest of the world by the COVID-19 pandemic and the various implications it entailed. The Agency balanced its own shifting needs and ways of working, while it sought to provide its Membership with the tools and knowledge needed to conceptualise and implement pandemic response plans and policies aligned with the goals and targets of the climate and SDGs. It is due to the Members' unwavering support to IRENA, the Agency's agility in implementation of work plan, and the hard work of staff that it so fluidly made this shift. To date, IRENA has 100% implementation rate of outputs either completed or in progress, with 56% fully completed. While the conditions for implementation were not optimal, IRENA's long standing partnerships with its Member countries and partners as well as strong internal working relations allowed the Agency to deliver on its Work Programme.

The Agency placed renewed focus this biennium on establishing and growing partnerships. Data shows the value of these – both in increasing reach and curating a broader impact of work. IRENA will continue to form and build on its partnerships in the coming period. In the 2019 self-assessment, the Agency noted that it worked towards aligning the global energy transition process with the development and climate agendas. The above analysis demonstrates the impact of this alignment. Whether received through Governing Body meetings, programme evaluations or interviews, Member input into the Agency's implementation of work are what allows it to continue to deliver high-quality and relevant products and create long-lasting impact.

It is important to note as well that the Agency's ability to deliver impactful programmes of work benefits from the extra-budgetary resources of its Members. In the 2020-2021 biennium, IRENA received a recorded USD 24,639,735¹⁷ compared to USD 20,235,225 in the 2018-2019 biennium. An additional 3,645,967 has also to date been secured for the 2022-2023 biennium, with several additional pledges already made.

As part of the Agency's efforts to diversify resources, it created a database of Agency activities where additional financial support would be beneficial to deliver on the Work Programme. For activities to be approved into the database, they must be aligned with the strategic goals of the Agency and connected to the Agency's biennial Work Programme.

As with the first self-assessment, the results of this analysis will be used to further refine and develop the Agency's monitoring and evaluation processes. It has also helped the Agency in assessing activities and focus areas for the development of the next Work Programme.

¹⁷ Note that this reflects funds received in this biennium, or to come by end of 2021. Some contracts were concluded in the course of the previous year.