

IRENA Work Programme and Activities on Innovation and Cooperation

ALCUE NET- Latin American-Caribbean and European Union Workshop on Renewable Energies and Energy Efficiency
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International Renewable Energy Agency (IRENA)

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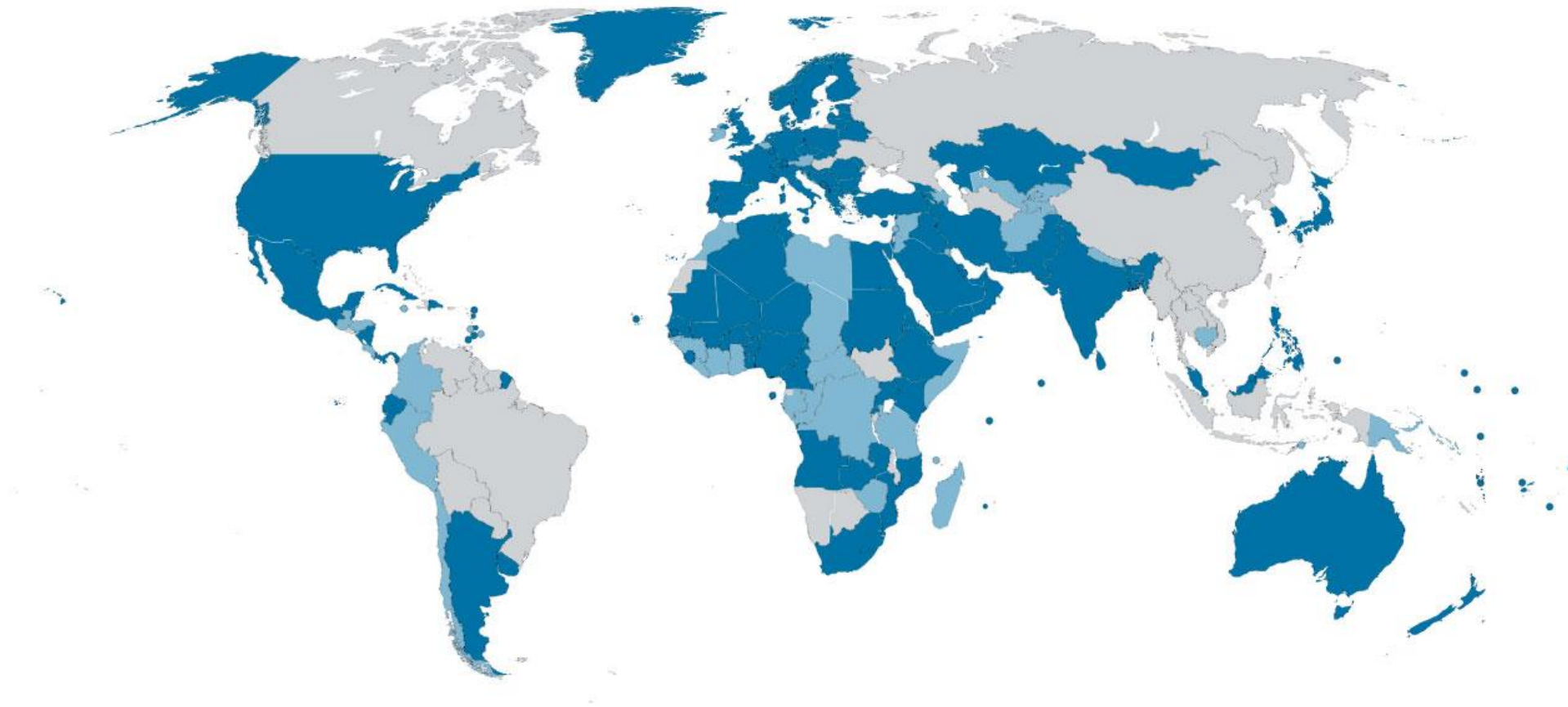
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The Agency

International Renewable Energy Agency

Established April 2011

- Mission: Accelerate deployment of renewable energy
- Scope: Hub, voice and source of objective information for renewable energy
- Members: 161 partner countries; 119 ratified members
- Mandate: Sustainable deployment of the six RE resources
(Biomass, Geothermal, Hydro, Ocean, Solar, Wind)
- Structure: 3 programmatic divisions CSP, IITC, KPFC
- Location: Headquarters in Abu Dhabi -United Arab Emirates
Innovation and Technology Centre (IITC), Bonn -Germany
- Director-General: Adnan Amin



- Members of the Agency
- Signatories/States in Accession

As of 1 August, 2013

2 Programmatic Divisions

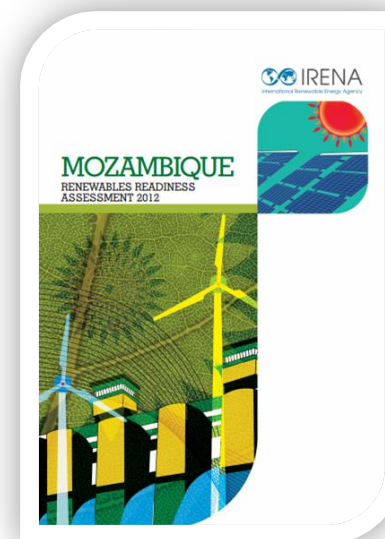
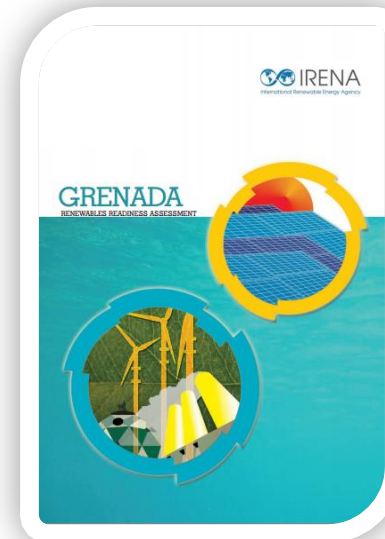
Knowledge Policy and Finance Centre (KPFC)

- IRENA's centre of excellence for renewables policy and finance issues;
- Data collection and analysis to advise Member Countries and disseminate information;
- Repository of IRENA's internal knowledge to inform and support the agency divisions.



Country Support and Partnership (CSP)

- Network hub for cooperation between countries, regions, organisations and institutions.
- Supports countries in the development and implementation of national and regional renewable energy strategies;
- Engages with countries and partners to translate analysis into concrete actions;
- Supports key capacity-building efforts;
- Assists countries with Renewables Readiness Assessments (RRAs).



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IRENA Innovation
and Technology
Centre

- 1. Energy planning:** REMAP/SE4ALL, power sector planning, grid stability, roadmaps and technology briefs
- 2. Costing and markets:** Costing Alliance and Project Navigator
- 3. Innovation:** Patents and standardization, quality infrastructure, technology adaptation, innovation policy advice, RD&D cooperation

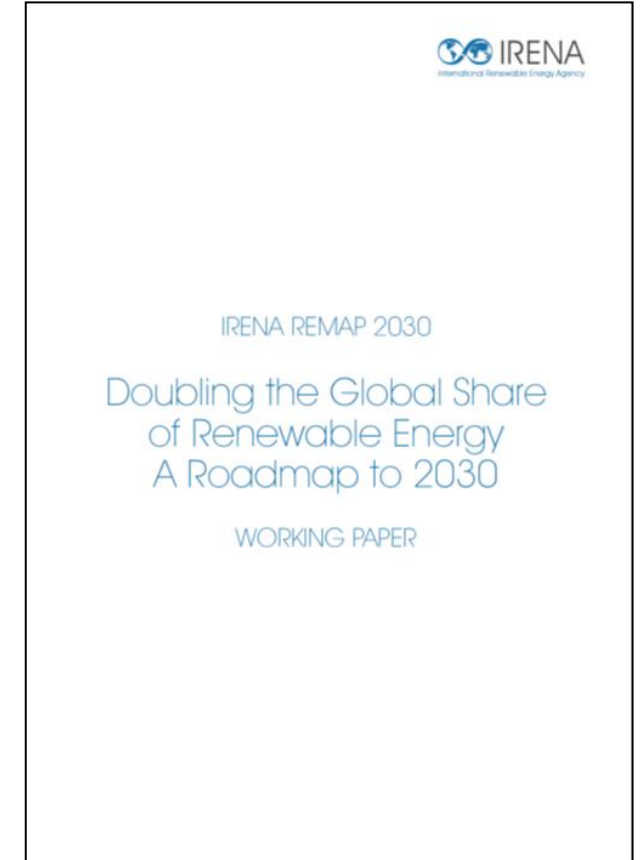


Global aspirational target of doubling the share of renewable energy by 2030

IRENA is the renewable energy hub for UN Secretary-General's Sustainable Energy for All (SE4ALL) initiative

Methodology: Global gap analysis based on collective country/regional analysis

- What is RE outlook by 2030 in BAU scenario?
- What are the additional technology deployment options?
- What are the costs and benefits of the options





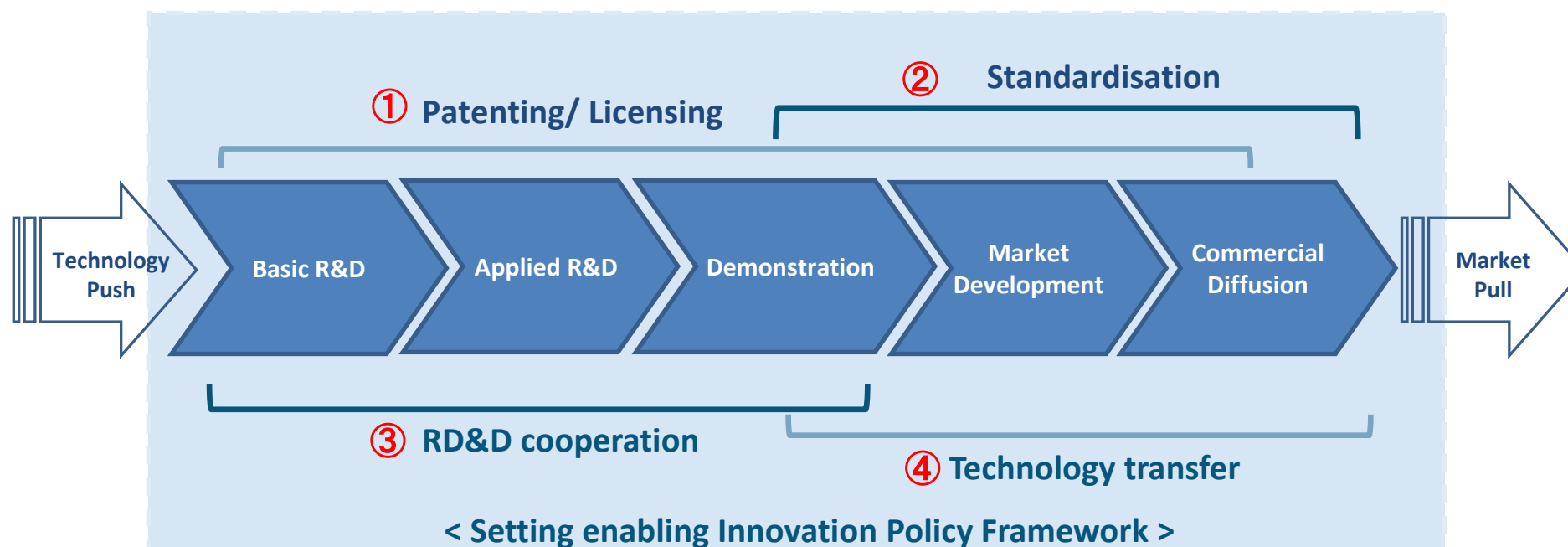
- 25 countries representing 75% of global energy demand by 2030
- Represents 58% of world population in 2012, 56% in 2030
- 60% of global GDP in 2012
- Results are aggregated to produce a global cost curve

Australia	Mexico
Brazil	Morocco
Canada	Nigeria
China	Russia
Denmark	Saudi Arabia
Ecuador	South Africa
France	South Korea
Germany	Tonga
India	Turkey
Indonesia	United Arab
Italy	Emirates
Japan	United Kingdom
Malasya	United States
	Ukraine

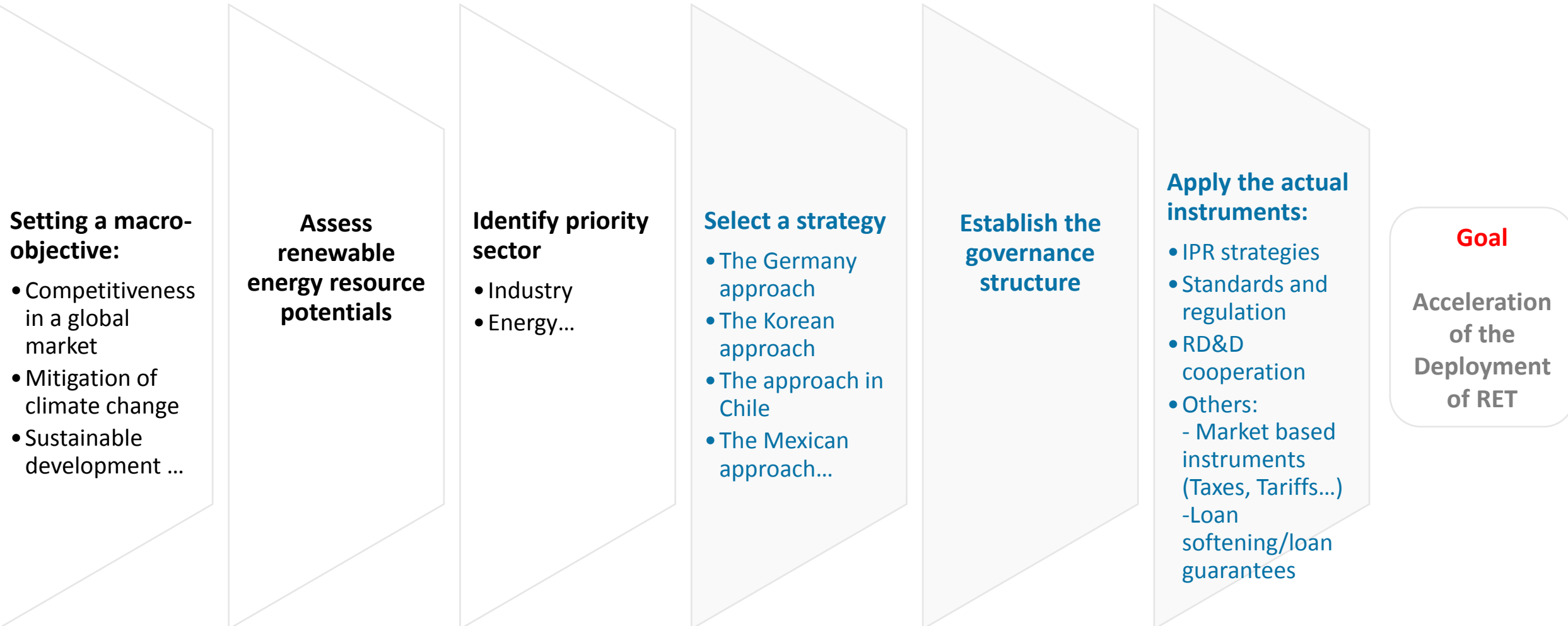
4 Innovation Activities

IRENA initiated an assessment of various instruments for RET innovation including:

- ① RD&D trend and status information from patents
- ② reduction of technology risk through streamlined standardisation and quality management
- ③ current status of global renewable energy technology RD&D cooperation
- ④ assessment of potential technology transfer



RETIP process overview



Use of standards not for products only but for the whole RET system

Use of standards to assure good quality products and good quality systems: including competence for designing, installing and maintaining the whole RET system.

Non-harmonized standards

Non-harmonized standards may create barriers for trading and transfer technologies → development and dissemination of regional harmonized technical guidelines for RET

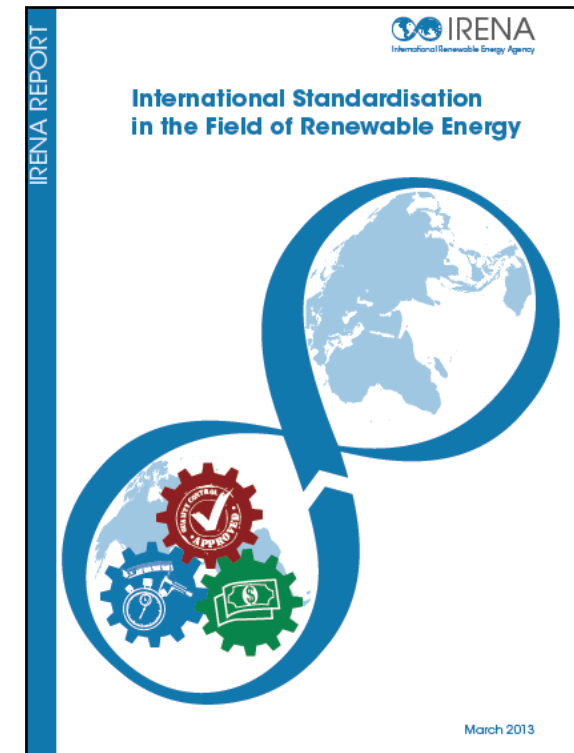
Quality infrastructure for small-scale RET

Guidelines to establish national QI - Balance cost/benefits

In 2013:

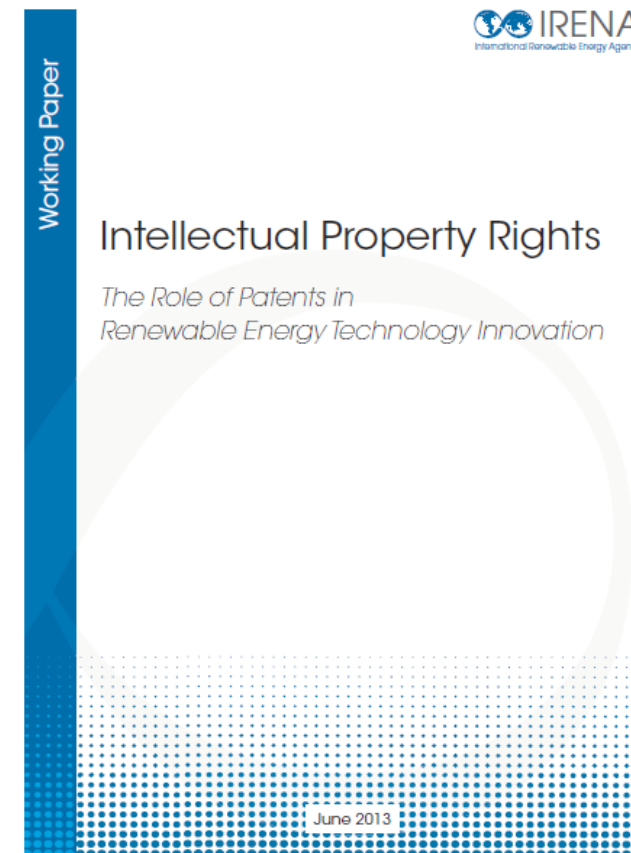
Solar water heaters

Small wind turbines



Patents for RET

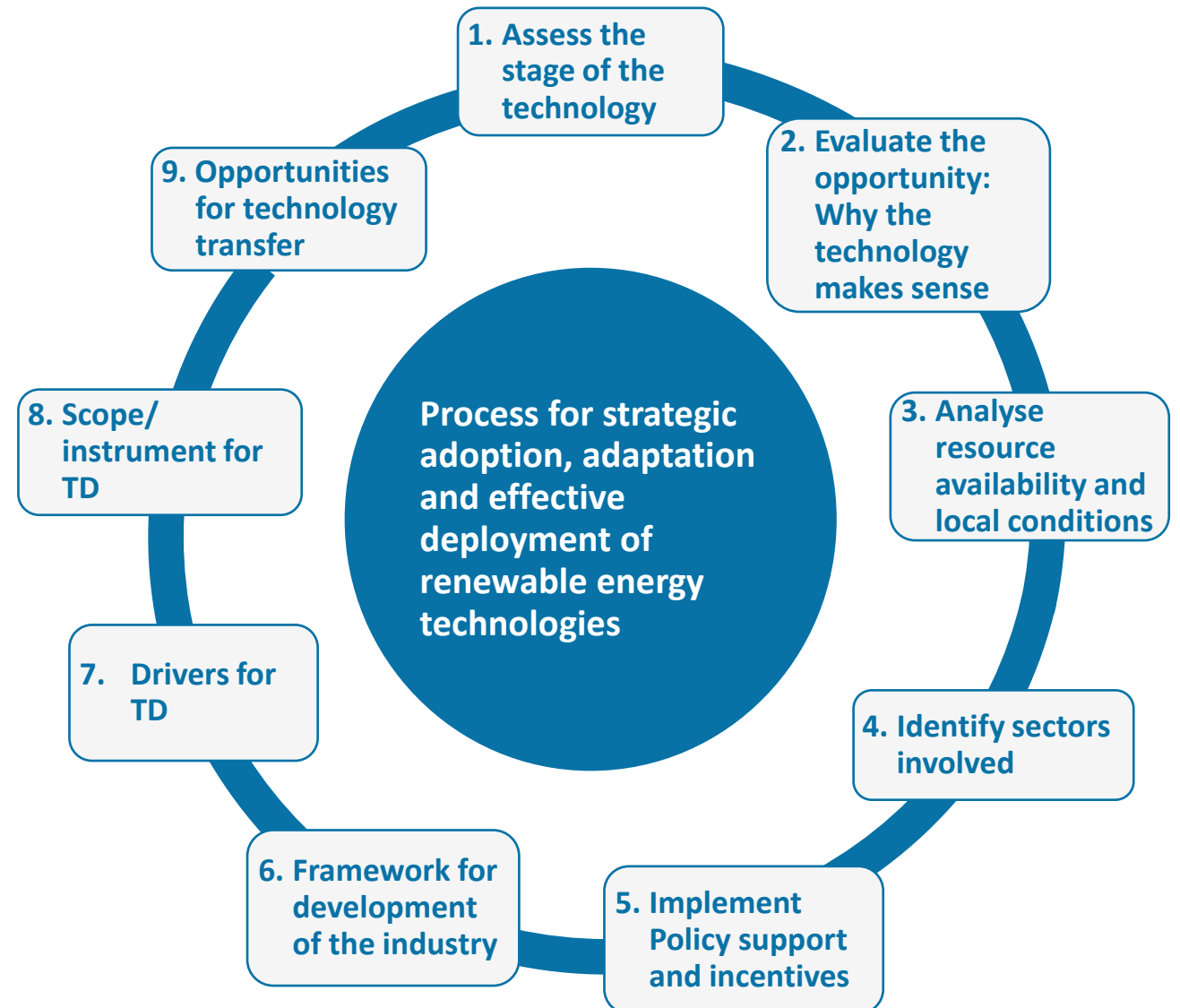
- The role of patents in RET innovation still needs to be better understood;
- Patents seen as an engine for innovation in R&D intensive sectors → further analysis is still required for RET sector;
- Patenting in most renewable energy areas has increased more than five-fold in the last two decades;
- Very few renewable energy patents have been filed outside OECD countries and China.



Potential and opportunities for south-south cooperation on enhanced deployment of RET in LAC and Africa

Objectives

- Promote south-south and triangular cooperation on shared learning for technology transfer opportunities, niches and potentials of key technologies;
- Promote localisation of the RE deployment chain and value addition;
- Promote enhanced private sector investments in environmentally sound technologies.



5 RD&D cooperation in LAC

Objectives of IRENA's activity



Public and private
RD&D initiatives
Key stakeholders
and players in LAC



Barriers to RD&D
due to gaps in
cooperation



Recommendations
to strengthen local,
regional, national
and international
cooperation



Key areas where
IRENA can
contribute best

Cooperation strategies to support RD&D in the innovation policy frameworks of LAC

Scope of research



Regionally-focused but worldwide-based

Multidisciplinary perspective

Current Status

RET Neutral

Cooperation strategies to support RD&D in the innovation policy frameworks of LAC

Compilation of initiatives...

INITIATIVES	KEY PLAYERS				
	NGO	Academia	Governmental Centre	IGO	Private Sector
IITER: R&D of RET	SP, CEDECAP	UNI, UPC, UPRG			
Ibero-American Program of Innovation			MINEC, SENACYT, CONACYT, ANII, CONCYTEC, FONTAR, ADI, CONICYT, CDTI, FINEP, Viceministerio de Ciencia y Tecnologia Bolivia		
REGSA		HUAS, UC, UCB, FUSSC			
EUCARINET				CARICOM, EC	
Technological Innovation Act			Brazilian Congress		Scientific and Technological Institutions and private companies in Brazil
Working Group on EERR: EU-LATAM-Caribbean			CONACYT, MINECO, MINCYT		
JIRI			CONICYT, VTT,	CELAC	
IDEAS	GVEP		SENER, Government of Korea, BMZ, DGIS, GIZ	IDB	
Regional Initiative of Technological Patents for Development				CAF	Independent researchers in LAC
Energy Innovation Center			U.S Department of Energy	ECPA, IDB	
Low Carbon Communities of the Americas: Dominica Wind Project			Government of Dominica, U.S. Department of Energy	ECPA	
Utilization of Coffee Biomass for Production of Biofuel and Generation of Electricity			USDA, Cenicafe	ECPA, OAS	

Cooperation strategies to support RD&D in the innovation policy frameworks of LAC

Research of initiatives...

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Energy Innovation Center			U.S Department of Energy
Low Carbon Communities of the Americas: Dominica Wind Project			Government of Dominica, U.S. Department of Energy
Utilization of Coffee Biomass for Production of Biofuel and Generation of Electricity			USDA, Cenicafe

More than
12 cases



Cooperation strategies to support RD&D in the innovation policy frameworks of LAC

Research of initiatives...

INITIATIVES		KEY PLAYERS	
	NGO	 More than 18 countries	 More than 12 cases
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Low Carbon Communities of the Americas: Dominica Wind Project			
Utilization of Coffee Biomass for Production of Biofuel and Generation of Electricity			

Research of initiatives...

INITIATIVES	KEY PLAYERS		
More than 40 institutions		More than 18 countries	
More than 12 cases			

Methodology

- Integrates cooperation and innovation;
- Based on other developed methodologies;
- Applicable to different innovation instruments ;
- A tool to systematically identify barriers
 - Case-by-case basis
 - Evaluating indicators;
- Becoming aware by testing the methodology on different initiatives.



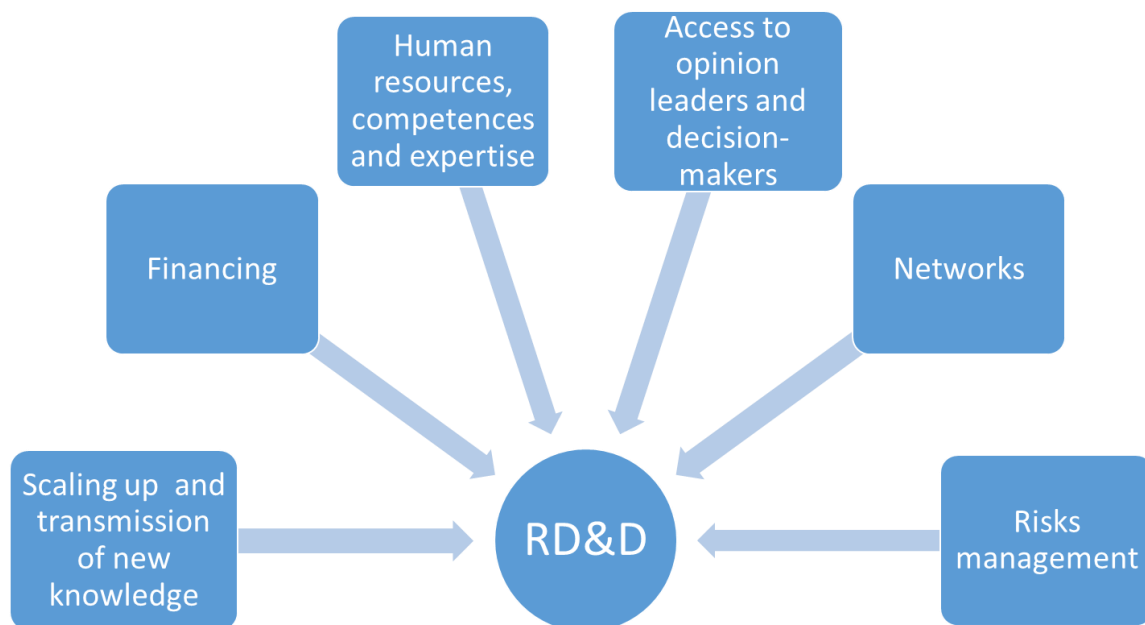
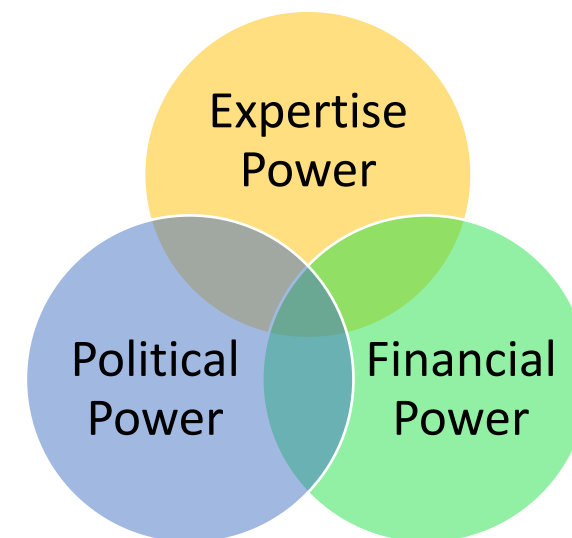
Step 1: Identification of the objective for innovation

Objective of Innovation – Final goal to be accomplished

Step 2: Key players & stakeholders

Players – actively taking part in and having determined objectives

Stakeholders – All the individuals being positively or negatively influenced



Step 3: Identification of drivers

Drivers – Motivations of players to cooperate

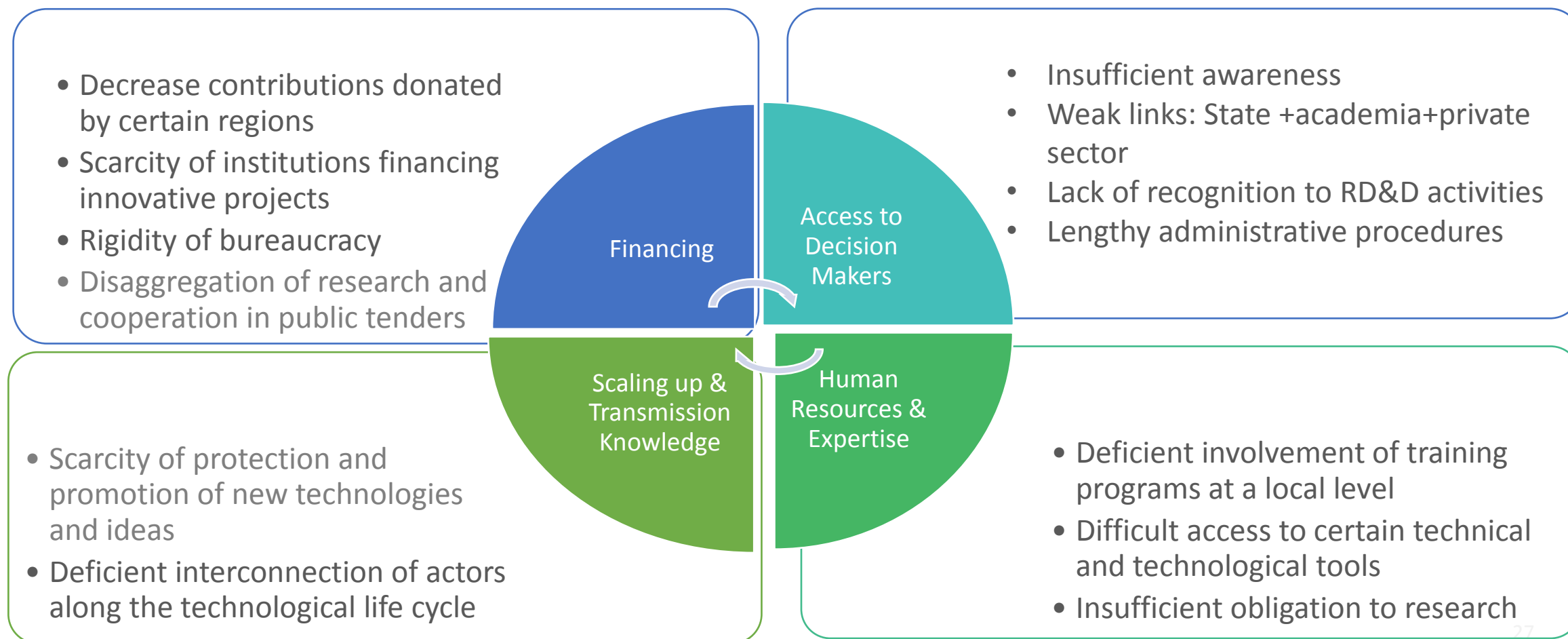
Step 4a: Identification and quantification of RD&D key factors

Key factors – Factors that constitute the basis for cooperation

Interviews and questionnaire

Step 6: Analysis of barriers

Barriers – The reasons why the key factors may not be stimulated for players



Step 7: Preliminary recommendations

- 
- Breaking the traditional scheme: strengthen cooperation with other advanced regions
 - Prioritizing RE projects: investing in economic growth
 - Spreading awareness: top-bottom approach
 - Motivating research: economic rewards and recognition awards
 - Importing knowledge to export technology
 - Bureaucracy and administration serving research; never vice versa
 - Call for proposals: the RDD&C concept

How could IRENA contribute to RD&D cooperation and innovation in LAC?

- Diffusing opportunities of research - demand for new technological solutions;
- Promoting on-going initiatives - compilation;
- Communicating key players/stakeholders - focal points working on same goals;
- Motivating governments - policies converging to a more influential RD&D of RET
- Informing researchers of arising funding opportunities - where and when to apply;
- Increasing the relevance of invisible players - bottom-up approach;
- Enabling assimilation of RET in communities - mediation;
- Sharing best practices and case studies;
- Spreading social and political awareness - top-down and the bottom-up approaches;
- Financing projects (!)



Muchas Gracias por su atencion
Thank you very much for your attention

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