Regional cooperation on renewable energy

Brainstorming workshop
Paris, France
11 January 2016

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Executive Secretary
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REN21 is a **multi stakeholder network dedicated** to the rapid uptake of **renewable energy worldwide.**

Science & Academia:
IIASA, ISES, SANEDI, TERI, Fundacion Bariloche, NREL

NGOs:
CURES, GFSE, Greenpeace, ICLEI, ISEP, JREF, RCREEE, WCRE, WFC, WRI, WWF

International Organisations:
ADB, EC, ECREEE, GEF, IEA, IRENA, UNDP, UNEP, UNIDO, World Bank

Industry Associations:
ACORE, ARE, CEC, CREIA, EREF, GWEC, IGA, IHA, IREF, WBA, WWEA

National Governments:
Brazil, Denmark, Germany, India, Norway, South Africa, Spain, UAE, United States of America

REN21 Renewable Energy Policy Network for the 21st Century

REN21: Support the rapid uptake of renewables worldwide

- Providing high quality information on renewables

- Developing networks, expanding outreach efforts
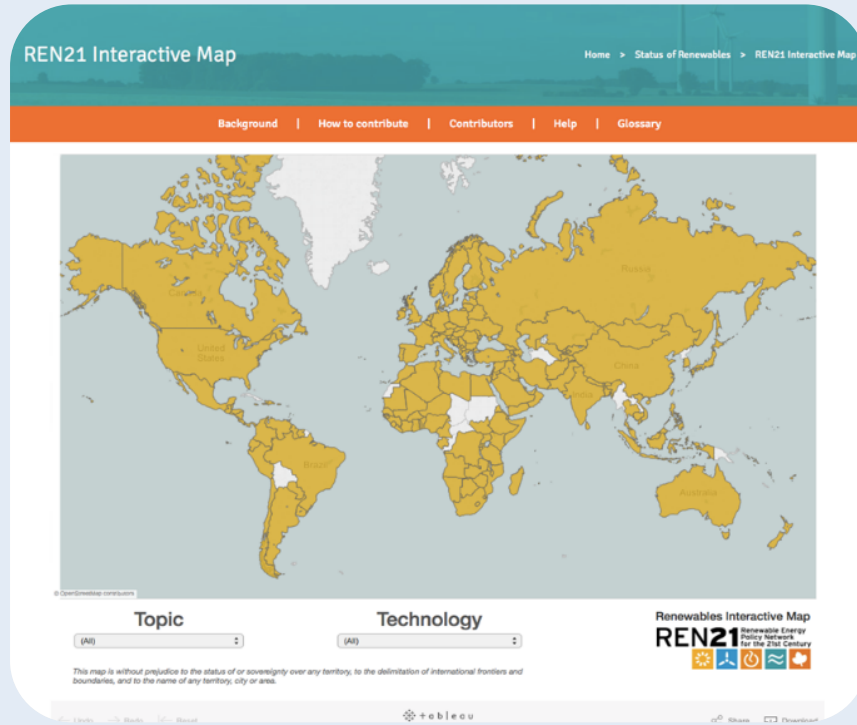
- Catalysing discussion and debate
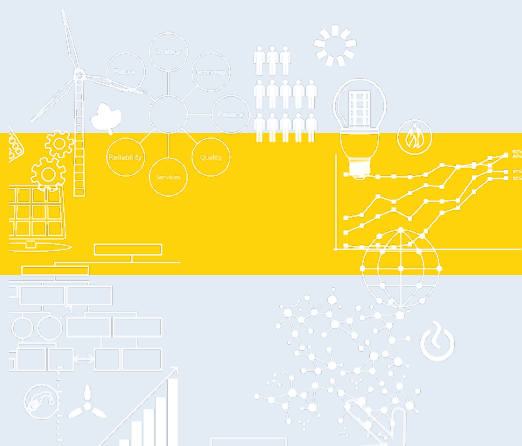
REN21 Renewables 2015 Global Status Report

- Launched 18 June 2015

- Network of over 500 contributors, researchers & reviewers worldwide

- The report features:
    - Global Overview
    - Market & Industry Trends
    - Investment Flows
    - Policy Landscape
    - Distributed Renewable Energy for Energy Access
    - Energy Efficiency
    - Feature: Using Renewables for Climate Change Adaptation

RENEWABLES 2015
GLOBAL STATUS REPORT

Annual Reporting on Renewables: Ten years of excellence

REN21 Renewable Energy Policy Network for the 21st Century

New REN21 Renewables Interactive Map

- New!

- Sourced from over **7000 data lines**

- Data are:
  o constantly updated
  o representsup-to-date information on renewable energy

www.ren21.net/map

Renewable Energy "Champions" - annual investment/capacity additions

ANNUAL INVESTMENT / NET CAPACITY ADDITIONS / PRODUCTION IN 2014

	1	2	3	4	5
Investment in renewable power and fuels (not including hydro > 50 MW)	China	United States	Japan	United Kingdom	Germany
Investment relative to annual GDP[1]	Burundi	Kenya	Honduras	Jordan	Uruguay
Geothermal power capacity	Kenya	Turkey	Indonesia	Philippines	Italy
Hydropower capacity	China	Brazil	Canada	Turkey	India
Solar PV capacity	China	Japan	United States	United Kingdom	Germany
CSP capacity	United States	India	—	—	—
Wind power capacity	China	Germany	United States	Brazil	India
Solar water heating capacity[2]	China	Turkey	Brazil	India	Germany
Biodiesel production	United States	Brazil	Germany	Indonesia	Argentina
Fuel ethanol production	United States	Brazil	China	Canada	Thailand

REN21 *Renewables 2015 Global Status Report*

REN21
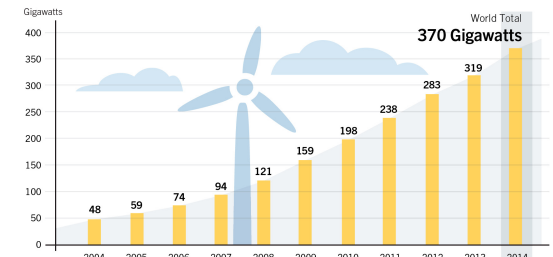Renewable Energy
Policy Network
for the 21st Century
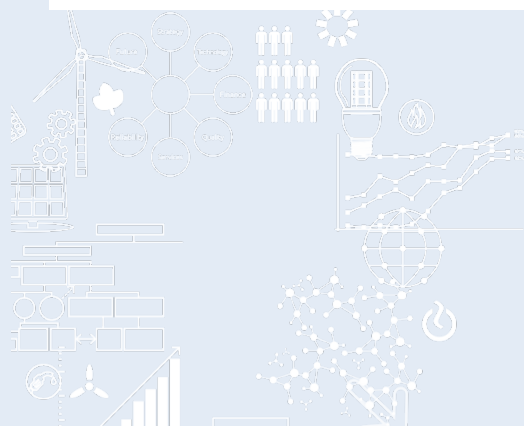
Increasing Penetration of Renewables

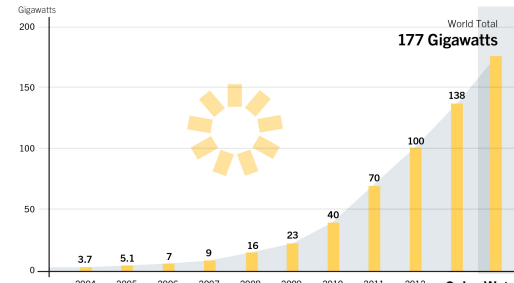Global installed capacity and production from all renewable technologies have increased substantially

Significant cost reductions for most technologies

Supporting policies spread throughout the world


Wind Power Global Capacity, 2004–2014

Gigawatts

World Total
370 Gigawatts

48 — 2004
59 — 2005
74 — 2006
94 — 2007
121 — 2008
159 — 2009
198 — 2010
238 — 2011
283 — 2012
319 — 2013

REN21 *Renewables 2015 Global Status Report*

Solar PV Global Capacity, 2004–2014

Gigawatts

World Total
177 Gigawatts

3.7 — 2004
5.1 — 2005
7 — 2006
9 — 2007
16 — 2008
23 — 2009
40 — 2010
70 — 2011
100 — 2012
138 — 2013

REN21 *Renewables 2015 Global Status Report*

Solar Water Heating Collectors Global Capacity, 2004–2014

Gigawatts-thermal

World Total
406 Gigawatts-thermal

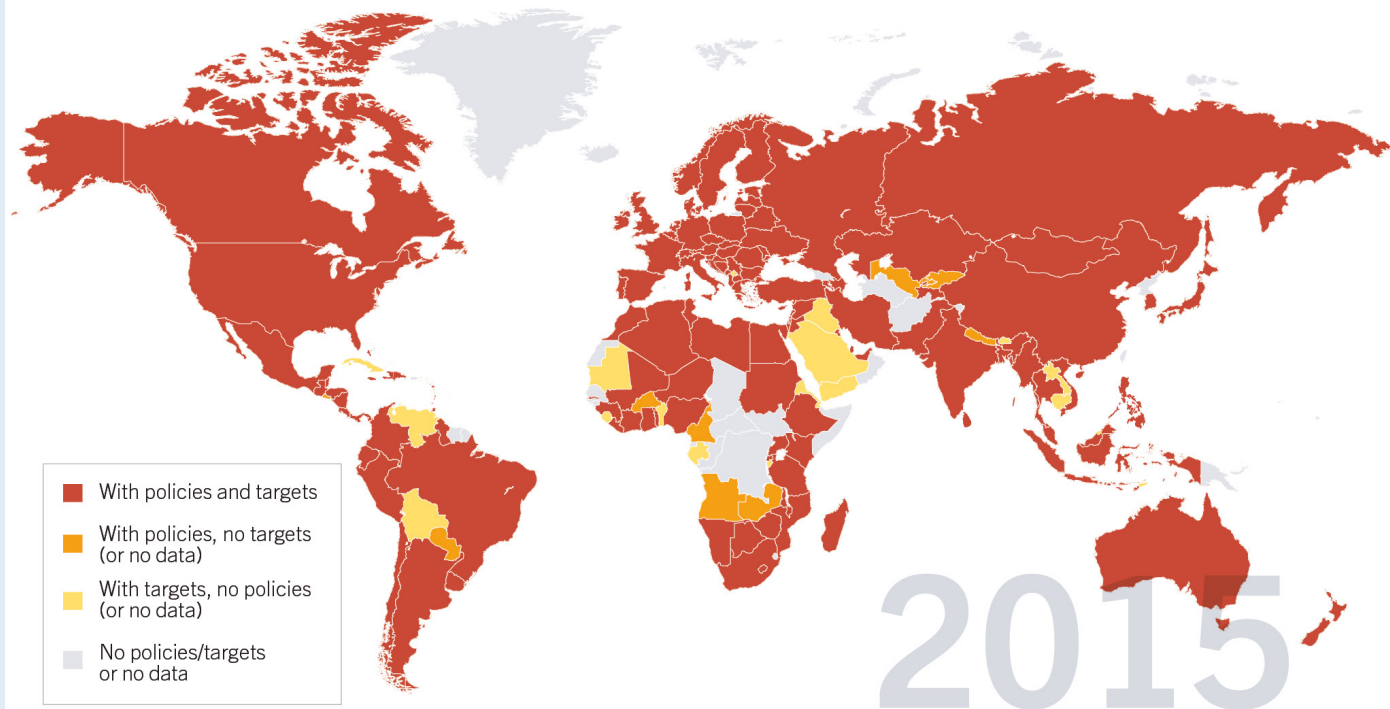- Glazed collectors
- Unglazed collectors
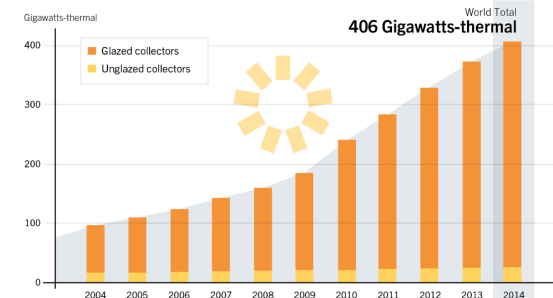
Data are for solar water collectors only (not including air collectors).

REN21 *Renewables 2015 Global Status Report*
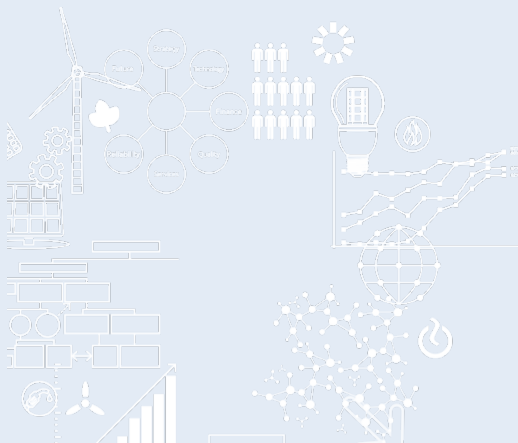
Renewable Energy Policy Landscape

Countries with Renewable Energy Policies and Targets, Early 2015

Legend:
- With policies and targets
- With policies, no targets (or no data)
- With targets, no policies (or no data)
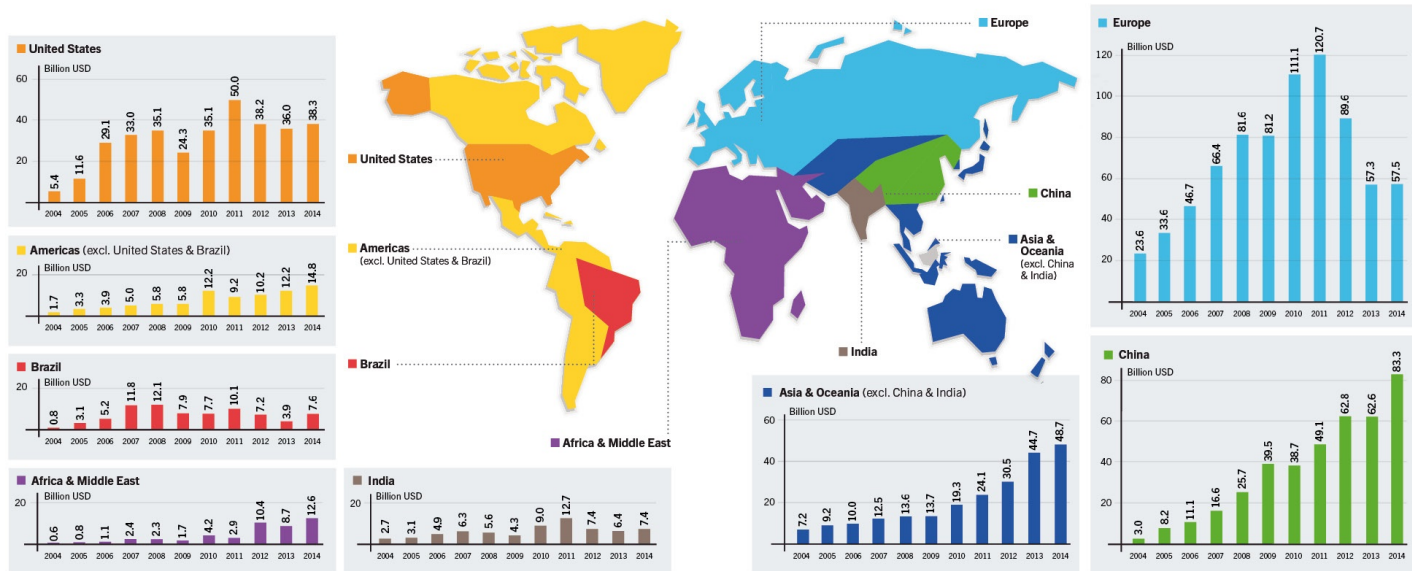- No policies/targets or no data

Countries are considered to have policies when at least one national or state/provincial-level policy is in place.

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Global New Investment in Renewable Power and Fuels, by Region, 2004–2014

Data include government and corporate R&D.

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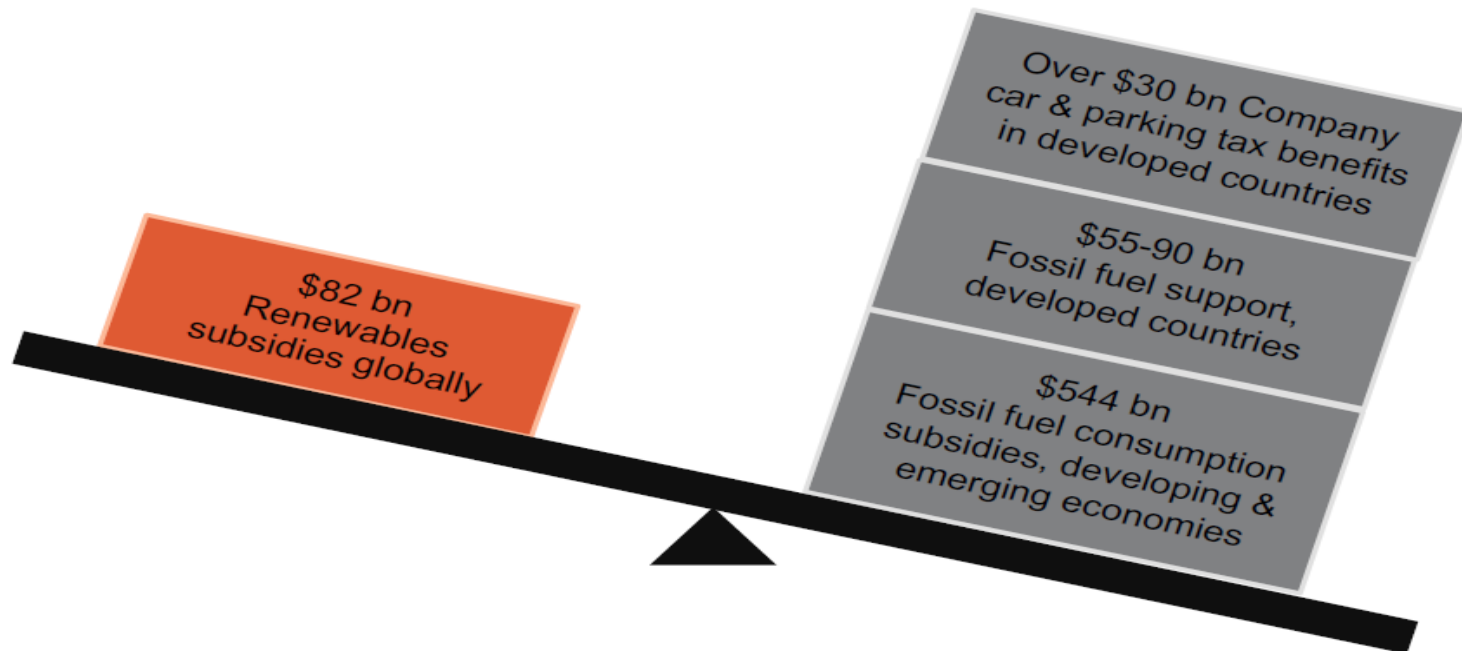Source: Frankfurt School–UNEP and BNEF

Developed Countries: Annual investment in 2014: **USD 138.9 billion** (increase of 3 % compared to 2013)

Developing Countries: annual investment in 2014: **USD 131.3 billion** (increase of 36% compared to 2013)

Why do we have to support renewables?

ELIMINATING ENVIRONMENTALLY HARMFUL SUBSIDIES - ENERGY

$82 bn Renewables subsidies globally

Over $30 bn Company car & parking tax benefits in developed countries

$55-90 bn Fossil fuel support, developed countries

$544 bn Fossil fuel consumption subsidies, developing & emerging economies

Sources: OECD (2013), Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels; IEA (2013), World Energy Outlook; IEA (2013), OECD (2014, forthcoming)

WORLD RESOURCES INSTITUTE

Evolution

- Increase in regional initiatives

- Development of regional initiative and policies requires joint baseline

- In response -> development of regional reports:
  - **ECOWAS:** launched November 2014
  - **SADC :** to be launched at SAIREC, October 2015
  - **UNECE:** launched at COP21, December 2015
  - **EAC:** to be launched in spring 2016

REN21 flagship products

Global Status Report: yearly publication since 2005

Regional Status Reports

www.map.ren21.net

Global Futures Report

REN21 Renewables Academy

International Renewable Energy Conferences

www.ren21.net/gsr

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