REPIC

Renewable Energy
Energy - & Resource Efficiency
Promotion in
International
Cooperation

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

**Swiss State Secretariat for Economic Affairs SECO**

**Swiss Agency for Development and Cooperation SDC**

**Swiss Federal Office for the Environment FOEN**

**Swiss Federal Office of Energy SFOE**


# REPIC: Promoting Renewable Energy and Resource Efficiency in Developing and Transition Countries

**Stefan Nowak, REPIC - Platform**

22 May 2023, e-workshop IEA Bioenergy & UNIDO

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# Energy crisis: UN Global Crisis Response Group urges support to most vulnerable and transition to renewables

03 August 2022

**Latest recommendations from the UN Global Crisis Response Group call for windfall tax to fund fair policies and sustainable energy solutions.**

© Shutterstock/Ruwan Walpola | People queuing for gas in Sri Lanka

## Related

### Stories

10 Nov 2022

The Netherlands commits $1.9 million support to the UN Global Crisis Response Group on Food, Energy and Finance

20 Oct 2022

Political will, greater action needed to tackle cascading crises, leaders say

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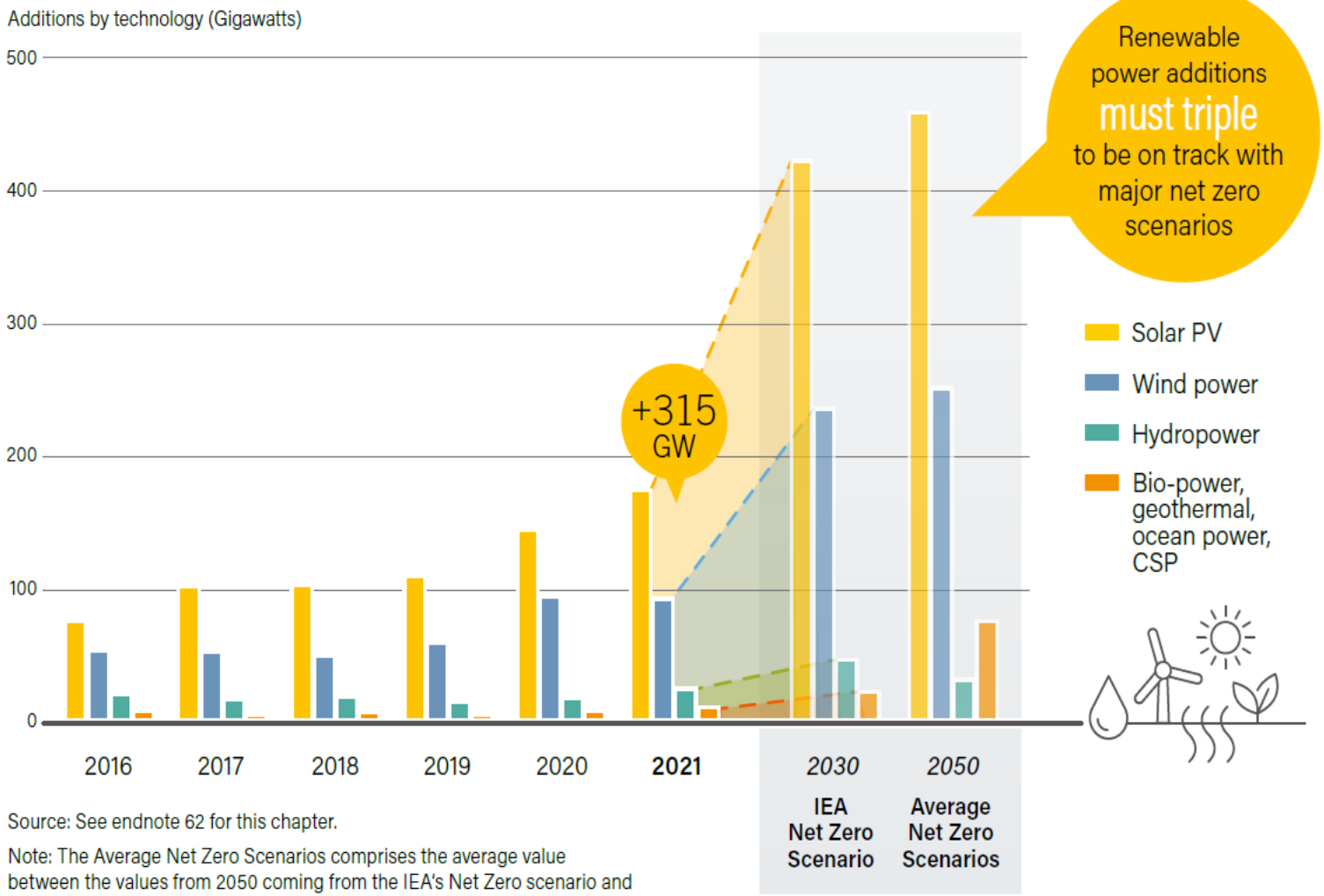
### Topic


Macroeconomics

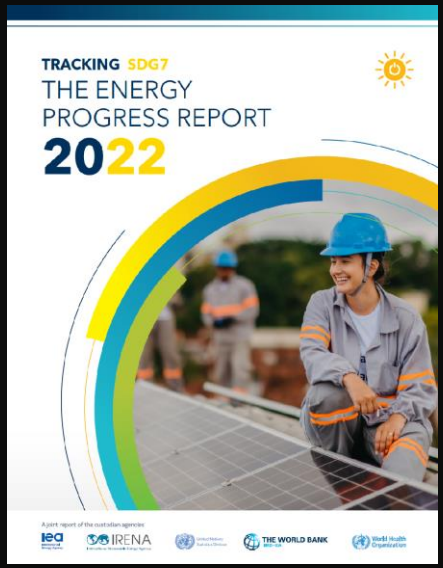
FIGURE 6.
Annual Additions of Renewable Power Capacity, by Technology and Total, 2016-2021, and to Achieve Net Zero Scenarios for 2030 and 2050




Source: See endnote 62 for this chapter.

Note: The Average Net Zero Scenarios comprises the average value between the values from 2050 coming from the IEA's Net Zero scenario and the World Energy Transitions Outlook scenario from IRENA.


| INDICATOR | 2010 | LATEST YEAR |
|---|---|---|
| 7.1.1 proportion of population with access to electricity | **1.2 billion** people without access to electricity | **733 million** people without access to electricity (2020) |
| 7.1.2 Proportion of population with primary reliance on clean fuels and technology for cooking | **3 billion** people without access to clean cooking | **2.4 billion** people without access to clean cooking (2020) |
| 7.2.1 Renewable energy share in total final energy consumption | **16.1%** share of total final energy consumption from renewables | **17.7%** share of total final energy consumption from renewables (2019) |
| 7.3.1 Energy intensity measured as a ratio of primary | **5.6 MJ/USD** primary energy intensity | **4.7 MJ/USD** primary energy intensity (2019) |
| 7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy | **11.2 USD billion** international financial flows to developing countries in support of clean energy | **10.9 USD billion** international financial flows to developing countries in support of clean energy (2019) |



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# A response to this challenge: The REPIC-Plattform

## REPIC in short

- REPIC stands for ***R**enewable Energy, **E**nergy and Resource Efficiency **P**romotion in **I**nternational **C**ooperation*
- A common initiative and platform of four Swiss government agencies SECO, SDC, FOEN, SFOE
- Interdepartmental collaboration (three ministries)
- Project support, communication and coordination
- Operational since 2004
- About 200 supported projects
- In more than 50 countries

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# REPIC objectives

## Objectives

- Promotion of Knowledge and Technology Transfer in Developing and Transition Countries
- Deployment of Renewable Energy, Energy and Resource Efficiency
- Contribution to Sustainable Development through International Cooperation

## REPIC aims to achieve

- Contribution to SDGs
- Sustainable Impact
- Scalability and Multiplication

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# REPIC approach

## Relevant project features

- Focus on realistic, sustainable and market oriented projects that reflect local needs for identified beneficiaries
- Innovation in technology, business models, regulatory frameworks or customer relationships
- Two options: REPIC Pilot (technical / commercial feasibility) or REPIC Rollout (early commercial phase)
- Sustainability in all dimensions
- Sound project planning and management
- Generally: hands-on, concrete and practical approaches

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# Let’s have a closer look

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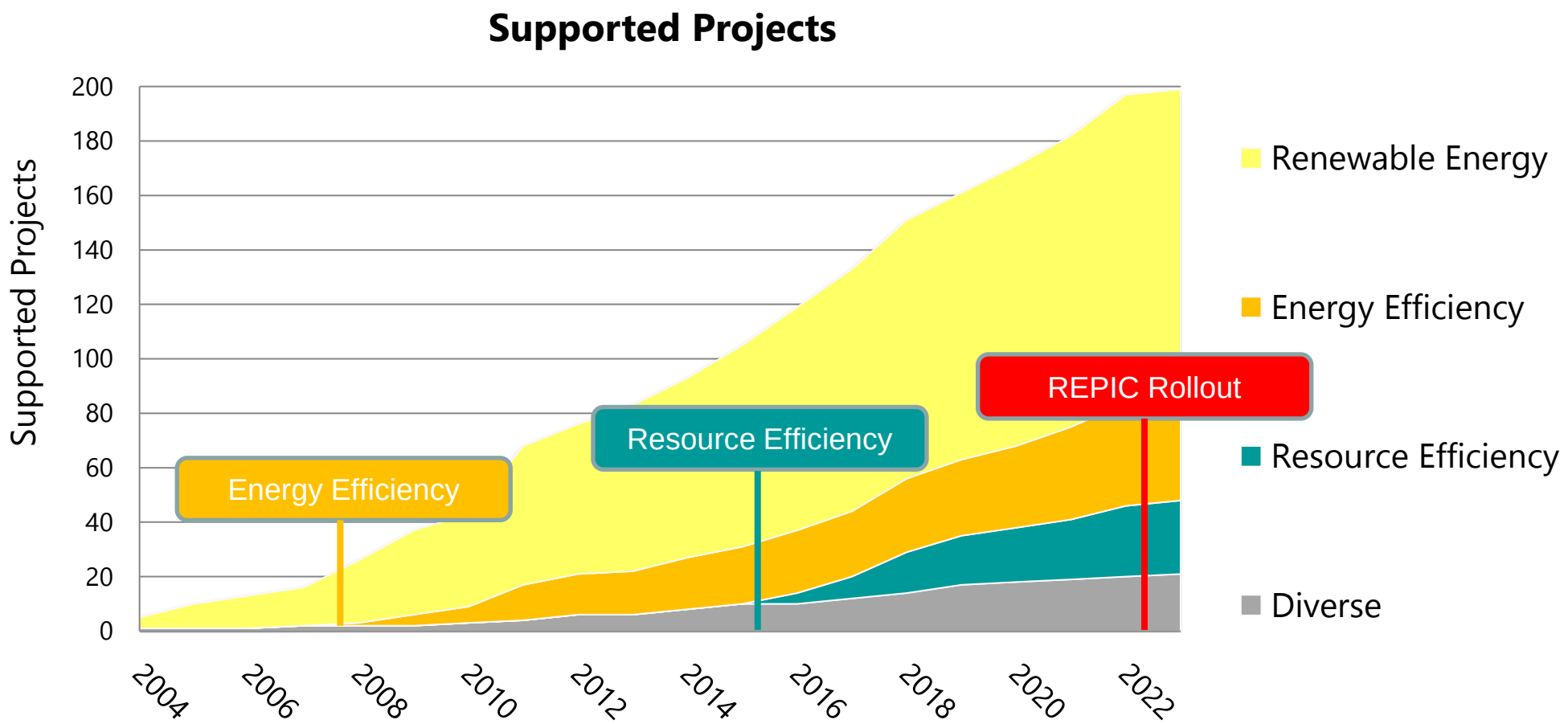
# Overview project support



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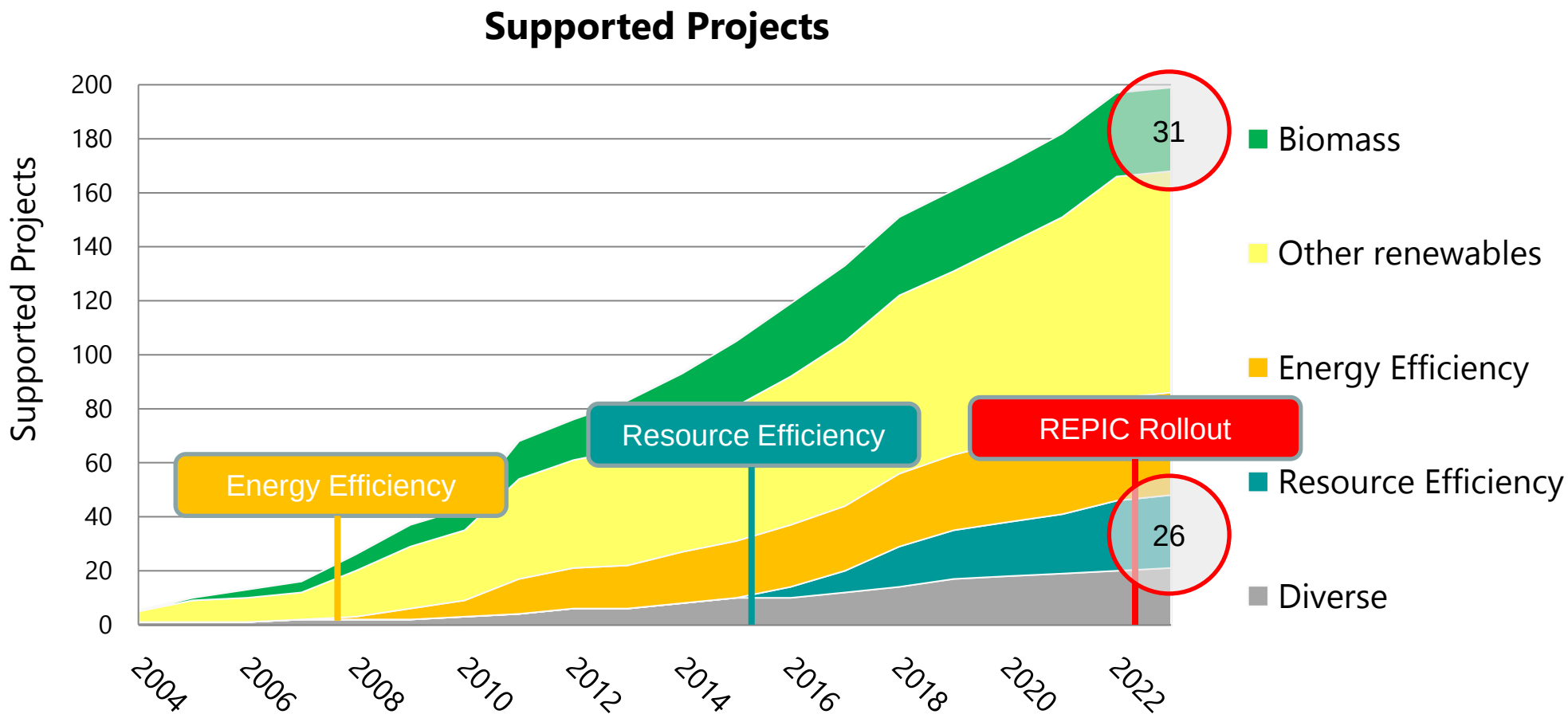
# Overview project support



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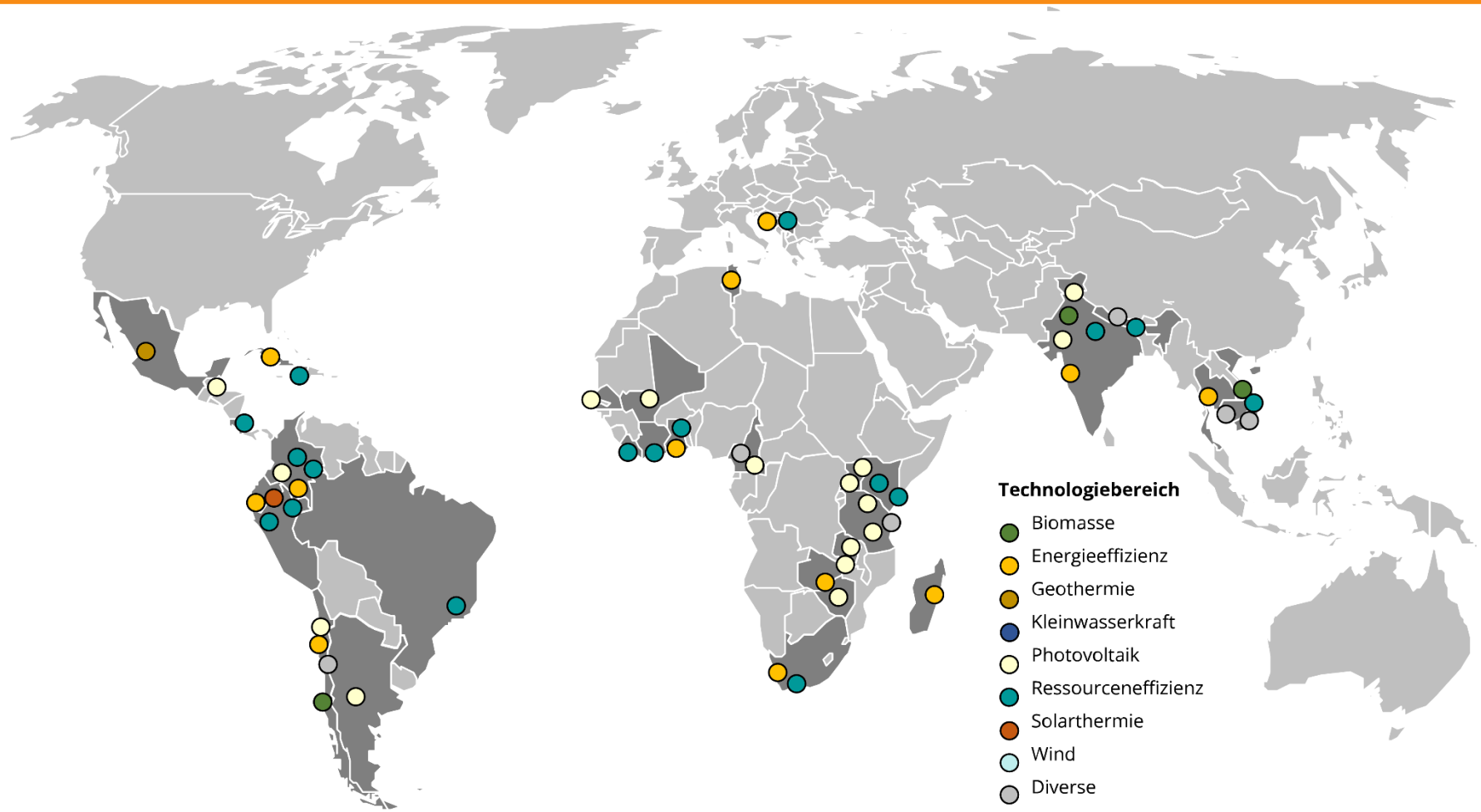
# Geographical Distribution



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# Observations and Impacts

- Ongoing demand from existing and new partners / stakeholders
- Increasing commercial / deployment orientation of projects
- More complex and system oriented projects
- All areas covered including storage
- Increasing crosscutting relationship to food, agriculture and materials


**1** 2’300’000 beneficiaries globally

**7** 18’200 MWh/year by renewable energy

**8** 3’500 educated professionals

**12** 4’250 t reduced waste

**13** 152’000 t avoided $CO_2$ emissions

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# Case study 1 – Waste to Energy Bio-CNG

- Renergon International, www.renergon.com
- India, project ongoing (2019 – 2023)
- Solid waste fermentation (dry digestion) of cattle manure and rice straw (18’000 t/y); residues are composted (7’000 t/y)
- Original plant size could be increased by 5
- Contributes to reducing amounts of agricultural waste being burned
- Commercial operation expected

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# Case study 2 – Added Value of Coffee Waste

- Sofies Group, now dss+, www.consultdss.com
- Peru, project completed (2018 – 2023)
- Pyrolysis of coffee waste / production of biochar (80 kW pilot plant)
- Adaptation / optimisation of an earlier project in Vietnam
- More efficient coffee drying and biochar as fertiliser for soil remediation
- Cooperation with the national association of coffee producers

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# Case study 3 – Recovery of palm oil production residues

- FiBL, www.fibl.org
- Ivory Coast, project ongoing (2022 – 2025)
- Composting of palm oil production residues
- Combination of  two composting systems (traditional and lombri-composting)
- Support of organic palm oil production
- Important component of technology transfer and training

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# Case study 4 – Sustainable coconut husk supply chain

- NaturLoop, https://naturloop.com/
- Philippines, project ongoing (2022 – 2024)
- Fiberboards made of coconut husk and organic glue
- Upcycling: Reduction and use of coconut waste
- Aimed at industrial scale of the value chain
- Commercial orientation

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# Lessons learned

- Technologies need to be adapted to the local conditions
- Durability and sustainability of processes and components are critical
- Socio-economic aspects including viable business models are key
- Customers need to be identified and involved
- Non-technical risks need to be systematically assessed
- Challenging contextual conditions may appear,
  e.g. COVID-19, political changes or unforeseen weather extremes
- Failures often relate to most unexpected reasons
- Cultural differences in various dimensions matter
- Good cooperation needs time and helps building trust

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# Conclusions

- Clean energy deployment and sustainable resource management in developing and transition countries are challenging…
- … rarely because of technology in the narrow sense
- … more often because of various broader issues
- REPIC strives to make best use of experiences made for future projects
- Achieving sustainable impacts remains our ultimate goal

# Thank you for your attention !

www.repic.ch info@repic.ch

Stefan Nowak, NET Ltd., Waldweg 8, 1717 St. Ursen, Switzerland

stefan.nowak@netenergy.ch