

Wuppertal Institute
for Climate, Environment
and Energy

Access to electricity – Technological options for community-based solutions:

**Pilot project: Neighbourhood approach with
biogas based power**

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WISIONS

objective and activities 2004 - 2010

WISIONS objective is to to **combine spreading knowledge** of existing successful good-practice projects with progressing the **realisation of new project ideas**.
Focus on **grass-roots** initiatives in Developing Countries

Activities

PREP - Promotion of Resource Efficiency Projects

- Brochures on specific issues to showcase good-practices on successful projects
- Decision process based on SD criteria; Closed 2008

SEPS - Sustainable Energy Project Support

- Annual call for applications with a budget of 0.3 - 0.5 Mio. €
- The applications have to fulfil SD criteria and need an implementation strategy
- 6 rounds so far; support of 54 projects in more than 25 countries

Technology Radar

- Information platform on technological options for meeting human basic (energy related) needs.
- Need oriented, technology neutral and comprehensive

Regional Partnerships

- Build up longer cooperation with one reliable partner in target region to promote one specific technology (currently building up of partnerships)

Information platform - www.wisions.net launched May 2010



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 Technology Radar

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WISONS OF SUSTAINABILITY

The WISONS initiative has been actively promoting the introduction of sustainable energy solutions and resource efficiency since 2004. During these years, WISONS has not only become well established, it has also learned a lot about the barriers that still hinder the widespread dissemination of sustainable energy solutions and successful implementation models, especially in developing countries and emerging economies.

Our aim with the newly developed [Technology Radar](#) is to give a comprehensive overview of the existing renewable energy technologies and their possible future contribution to meeting basic energy needs.

TECHNOLOGY RADAR



Identify those technologies that can be used to meet our energy needs

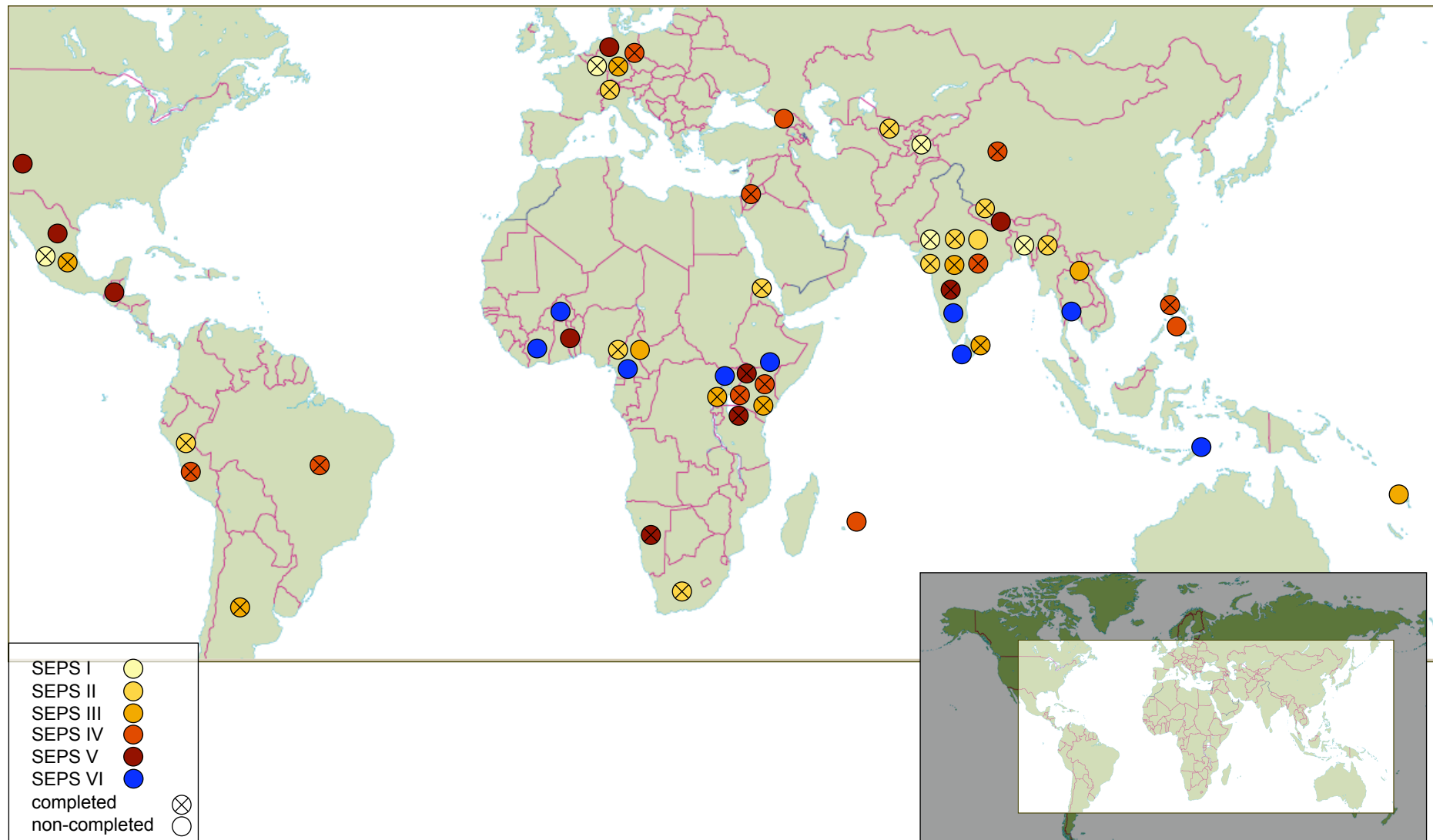
SEPS PROJECT MAP



Short descriptions of all the projects supported by SEPS

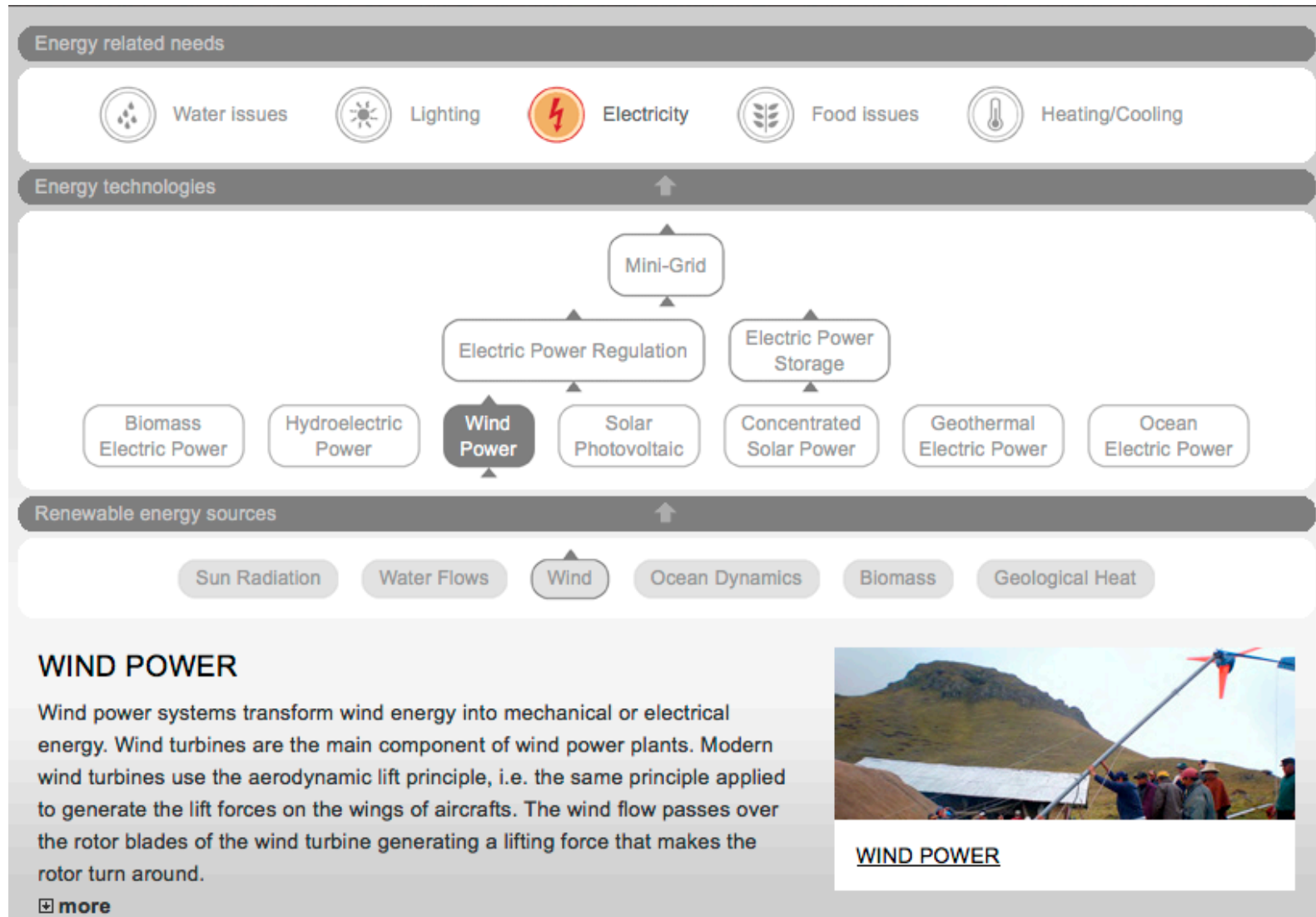
SEPS Project Map

Sustainable Energy Project Support



Technology radar

Online Tool – www.wisions.net



Access to Electricity

Pilot “Neighbourhood” solution based on biogas

Basic Facts

- Local Partner: Energy Forum (Sri Lanka)
- Location: 12 Project sites mainly in Moneragala district
- 11 Project sites dealing with domestic needs (48 Households, between 1,5 to 3 hours/day)
- One site with water pumping.
- Minigrids (2 – 20 Houses):
- Conventional petrol generators (mainly 1kW): Biogas is fed into the generator through the air inlet
- Biodigesters: mainly fixed dome (20 – 60 m³)



Access to Electricity

Pilot “Neighbourhood” solution based on biogas

Management System:

- Original idea was to have communal animal sheds. Sharing a shed was not accepted by the users
- Actual approach: Supply of manure from individual owned animal sheds.
- Group of neighbours organized in Energy Consumer Societies (ECS)
- Registration fee 50 EUR.
- The power generator is located by the partner that supplies the manure. He assumes also the O&M activities
- Each associate pays operation fees between 1,75 and 2 EUR/month/HH



Access to Electricity

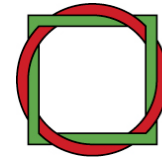
Pilot “Neighbourhood” solution based on biogas

- The systems are running since 2008
- The management approach through the ECS seems to be adequate.
- Three of the original sites will be connected to the grid in the short term

Improvement potentials:

- Feeding of gas directly in the air inlet is not an optimal solution!
- Using gas generators instead of petrol generators seems to be a better option. However, for the project realization it was not possible to find suitable equipments in the local market.





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Many thanks for your attention



For further information please
visit our websites:

www.wisions.net

www.wupperinst.org