



Accelerating Energy Access in Rural Mindanao: Knowledge Transfer from Indonesia to the Philippines

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Access to Renewable Energy is key to alleviating Poverty in Mindanao

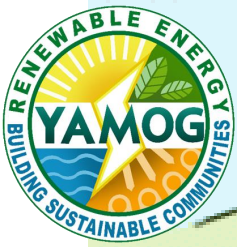


The government is counting on the private sector to energize the far-flung off-grid sitios (villages).

There are still 4,954 sitios all over the country that are without electricity, of which 1,628 are located in Mindanao. (NEA)

1,135,055 households.

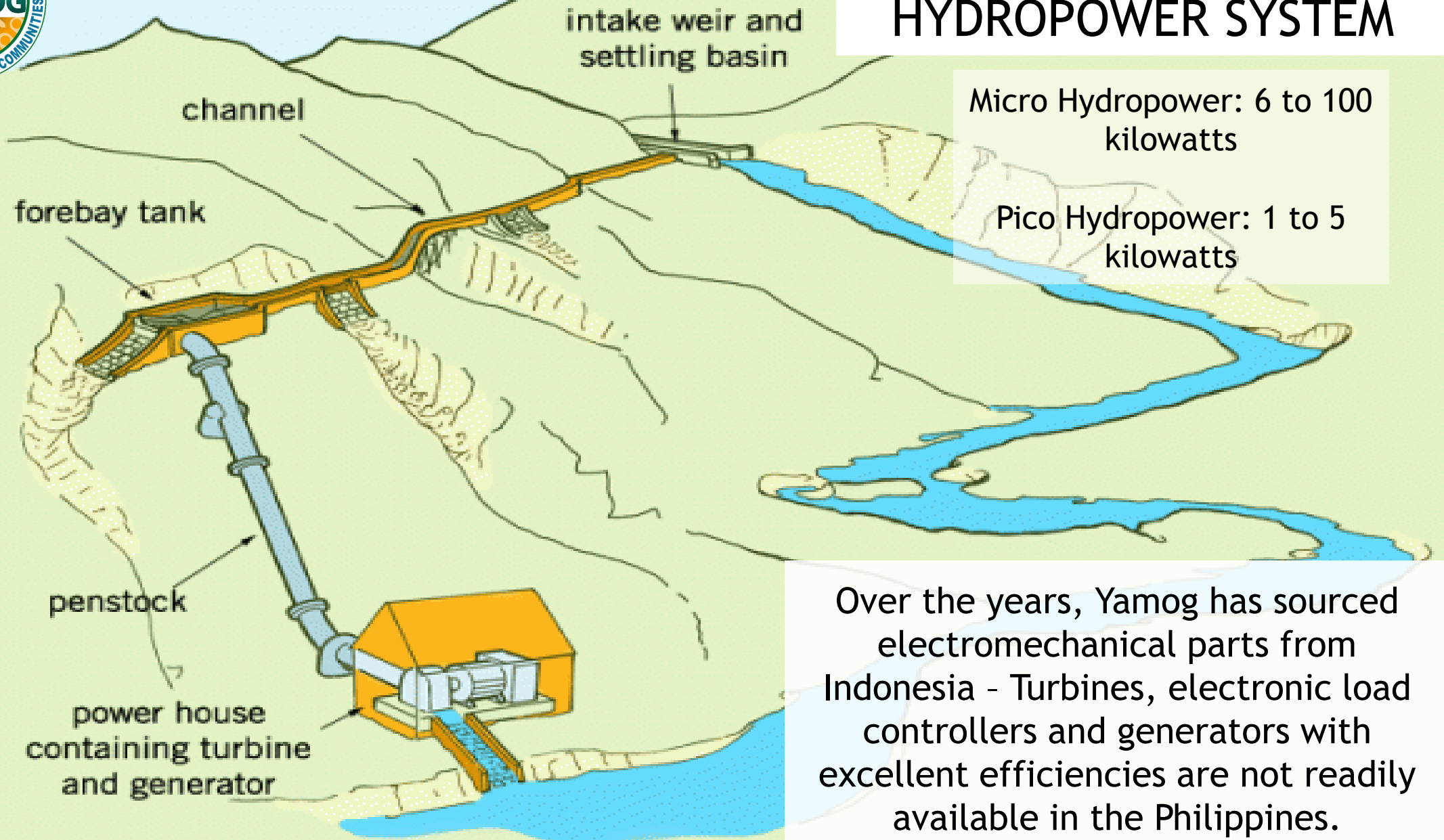




TYPICAL MICRO HYDROPOWER SYSTEM

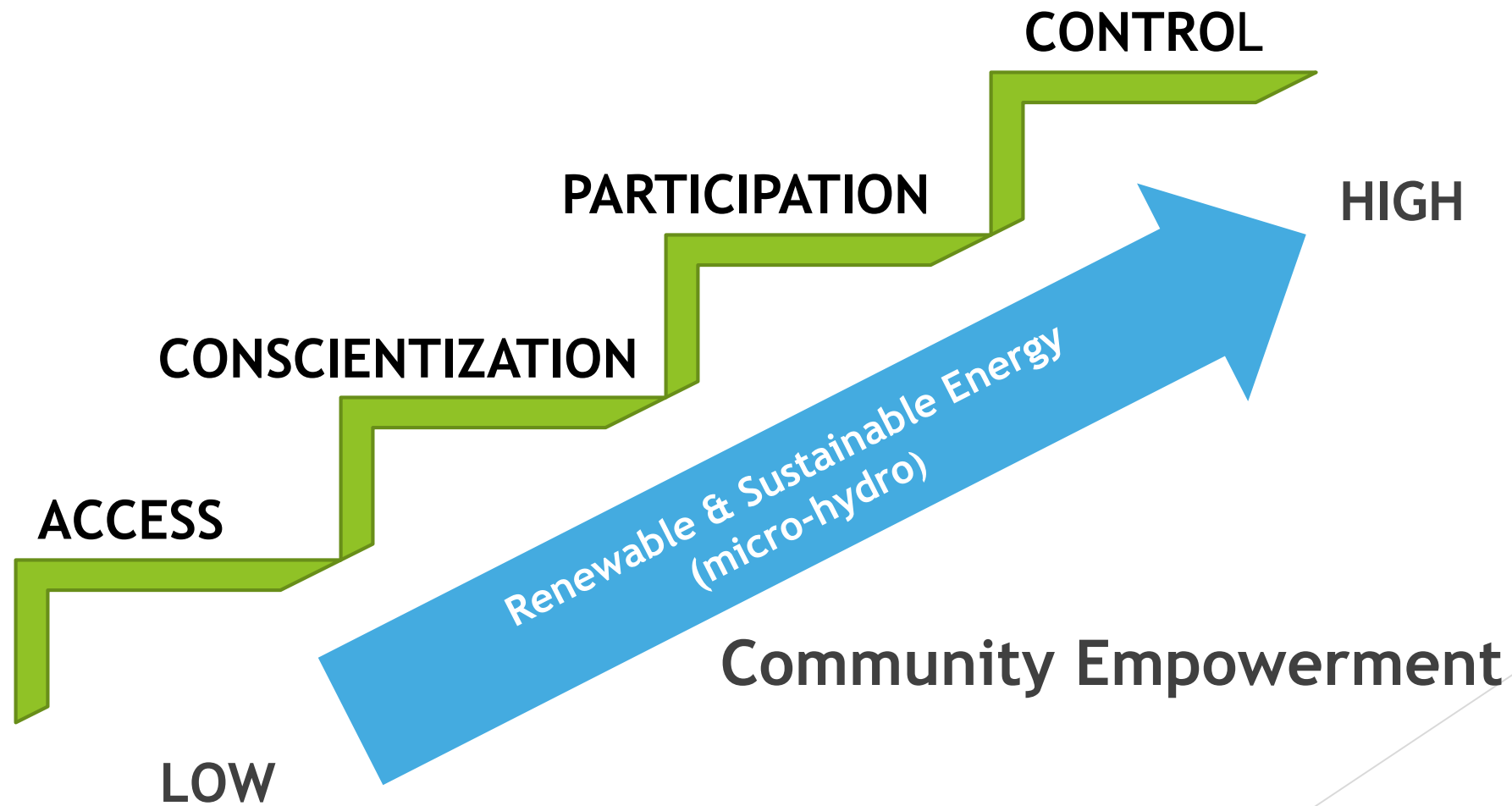
Micro Hydropower: 6 to 100 kilowatts

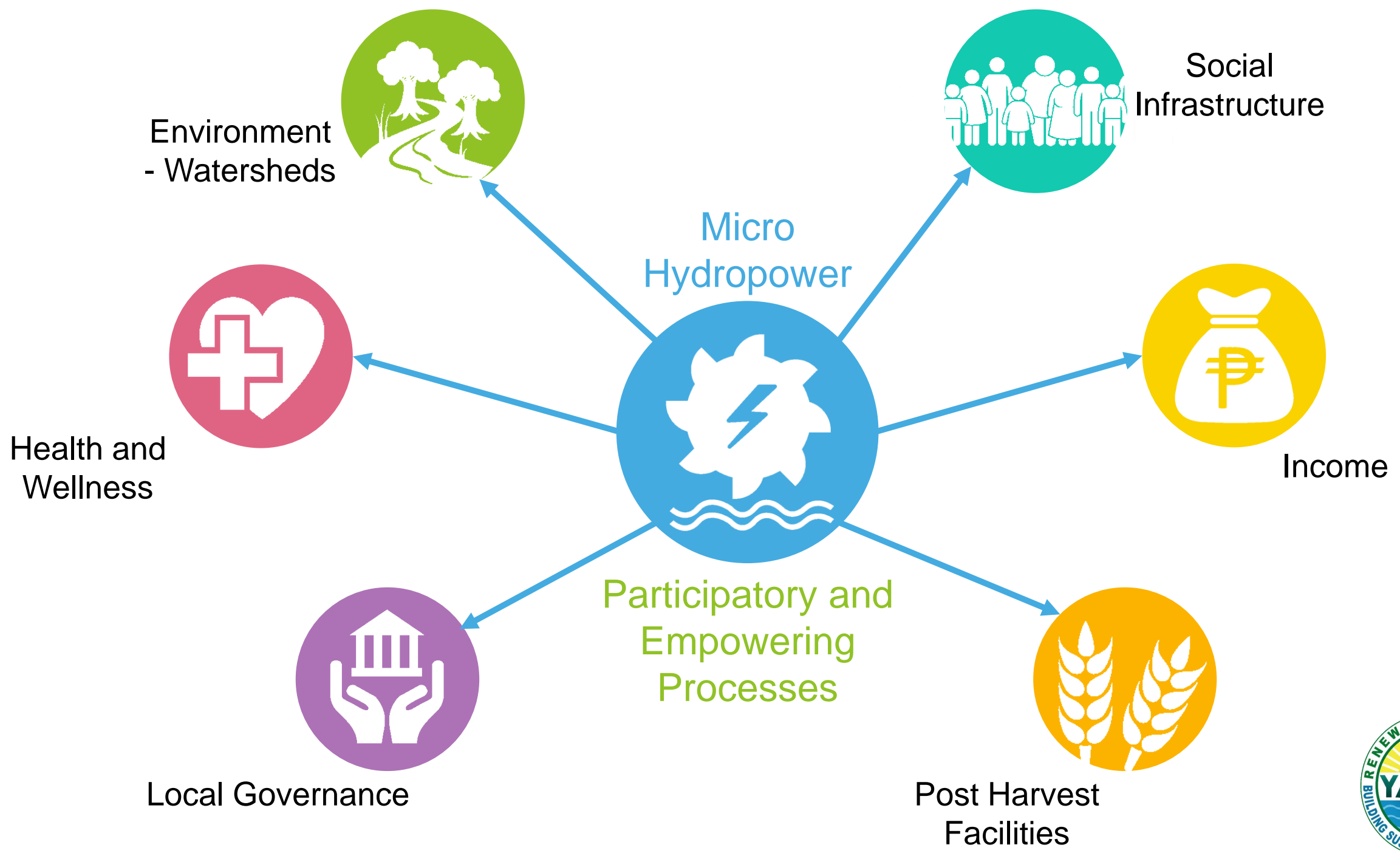
Pico Hydropower: 1 to 5 kilowatts



Over the years, Yamog has sourced electromechanical parts from Indonesia - Turbines, electronic load controllers and generators with excellent efficiencies are not readily available in the Philippines.

Beyond access, micro-hydropower development empowers communities in off-grid areas in Mindanao.





OUTCOMES

Social

- ▶ Community human capital build-up with the accumulation of knowledge and technical skills
- ▶ Improved learning environment and study habits for children
- ▶ Heightened people's participation in collective undertakings,
- ▶ Easing up of workload of women,
- ▶ Revitalized social dynamics & community interactions,
- ▶ Improved security within communities with the establishment of lamp posts in strategic locations.



OUTCOMES

Economic

- ▶ Savings from not having to spend on kerosene and diesel for lighting.
- ▶ Livelihood enhancement from energy-driven productive end-uses.
- ▶ Women engaging in income generating activities.

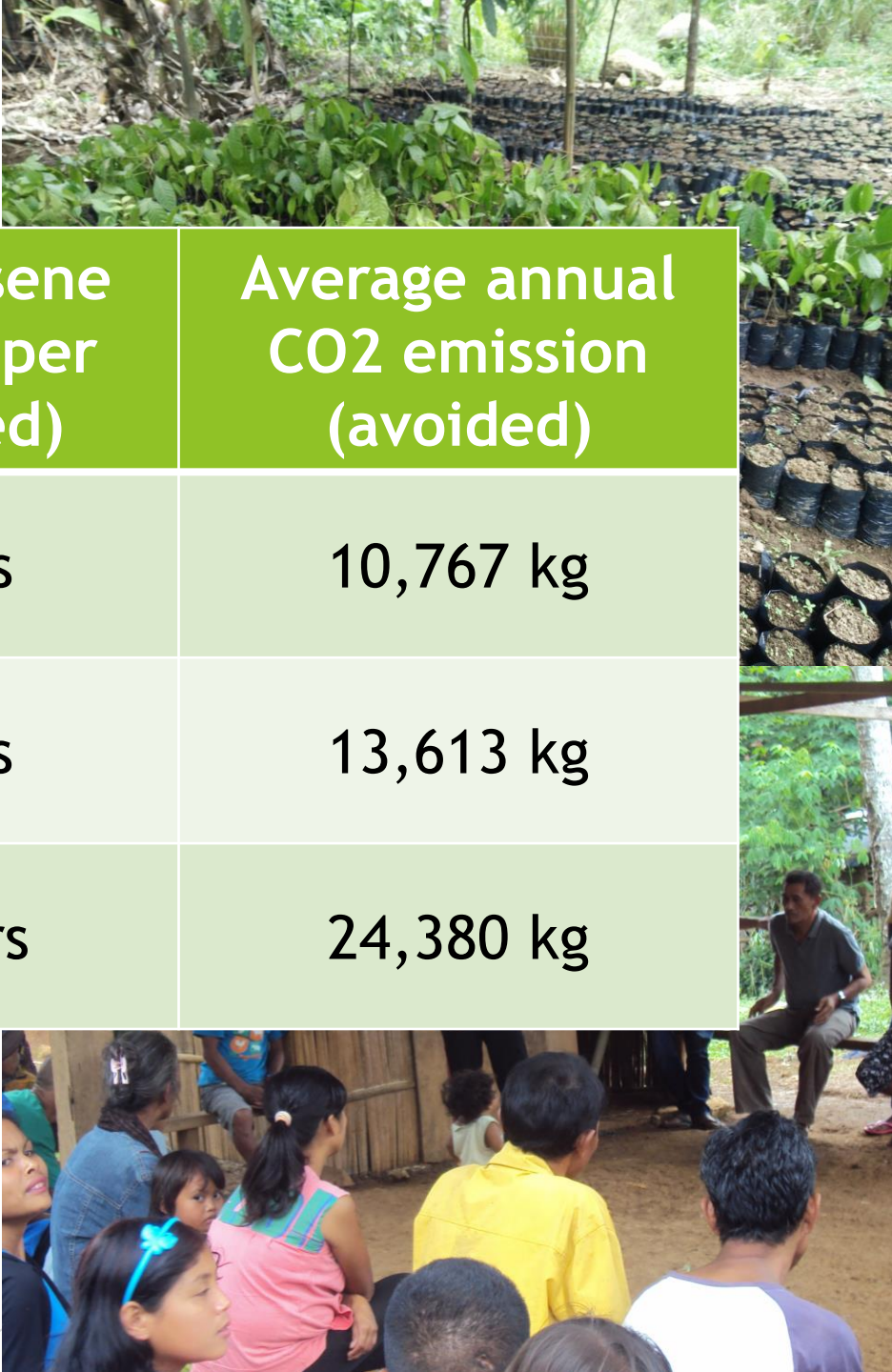


OUTCOMES

Environment and Health

		Number of Households	Average kerosene consumption per year (avoided)	Average annual CO2 emission (avoided)	
►		Sitio Timodos	87	4,524 liters	10,767 kg
►		Sitio Lubas	110	5,720 liters	13,613 kg
►		Total	197	10,244 liters	24,380 kg

destruction.

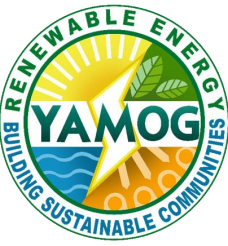


OUTCOMES

- ▶ Good Governance
- ▶ Application of the gender and development concept as more women assume positions of responsibility and men accept the contribution of women in community development work.
- ▶ Generation of local employment as local people participate in the actual construction of renewable energy systems and get involved in the operation and maintenance of the systems.



Renewable and Sustainable Energy Technologies (ReSET) Center



- ▶ Will serve as a renewable energy (RE) technical support service center for the increasing number of grassroots communities in Mindanao that have rewired their mindsets to the wisdom of embracing RE as an alternative approach towards improving their lives.
- ▶ In partnership with PT Entec Indonesia, the ReSET center will be set up in Mindanao.
- ▶ PT Entec has a lot to offer as far as the hardware aspect of micro-hydro development is concerned, while Yamog can share its abundant experience in the software aspect of building sustainable communities - in a holistic manner - through micro-hydropower.

Yamog Renewable and Sustainable Energy Technologies Center (ReSET)

Training



Fabrication and Repair



Research



Thank You