



**The e8 Ifugao Mini-Hydropower Project:  
'Empowering local communities to preserve Philippines ancient  
cultural heritage'**



**By  
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# The e8 Bhutan Micro-hydropower Project



- **Chendebji Micro-Hydro Project (Central Bhutan), completed in 2005;**
- **A 70 kW run-of-river type facility;**
- **Electricity supply to 50 households, a dispensary and a school in the village of Chendebji;**
- **Registered as a CDM project: 474 CERs issued in April 2007.**





# UNESCO World Heritage Philippine Cordillera Rice Terraces in Ifugao Province



Fig.2-1 Location Map of Ifugao Province and Project Site

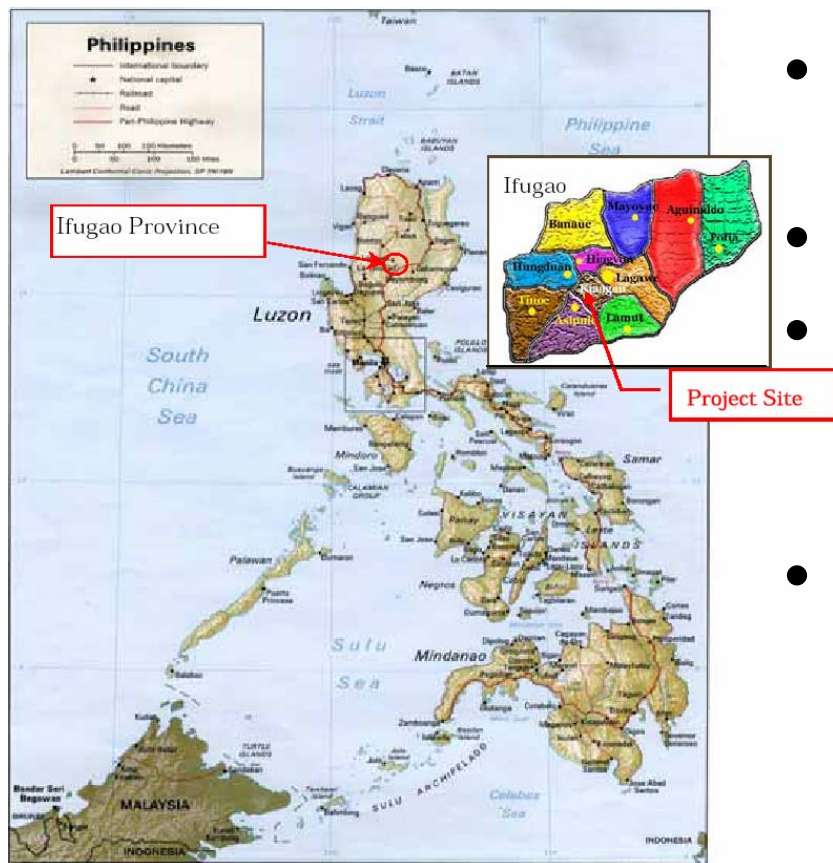


In the mountainous Ifugao Province, communities have managed to conserve the 2000 year-old unique rice terraces listed as a UNESCO World Heritage Site in 1995.

However, the rice terraces are gradually deteriorating and have been listed as a World Heritage Site in danger.



# e8 Ifugao Project Overview

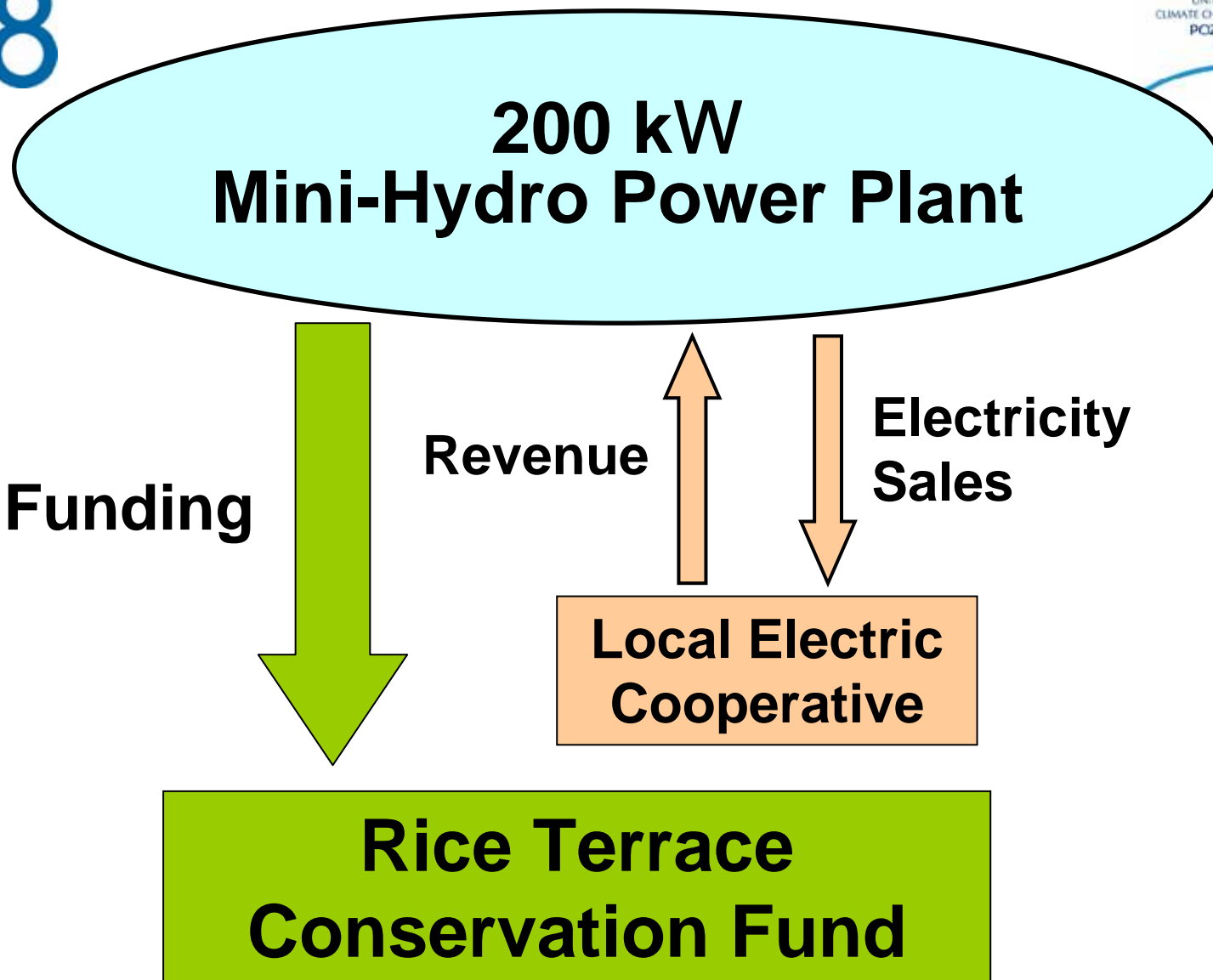


- A 200 kW mini-Hydropower plant;
- Entirely funded by the e8;
- Coupled with the establishment of a rice terrace conservation fund;
- In line with UNESCO's recommended strategies for the conservation of the Ifugao World Heritage Site.

Fig.2-1 Location Map of Ifugao Province and Project Site



# Project Structure





# Objectives



- **Support local activities in the preservation of rice terrace farming and contribute to the protection of a World Heritage Site in Danger;**
- **Provide a model for locally-based renewable energy development and regional vitalization;**
- **Promote the development of sustainable mini-hydropower resources in the region and elsewhere.**

## **The Rice terrace Conservation Fund established to:**

- **Rehabilitate damaged rice terraces;**
- **Build and rehabilitate communal irrigation systems;**
- **Create a source of revenue for the local community;**
- **Enhance agricultural activities and promote traditional culture programmes.**



# Summary of the Feasibility Studies



## Project effectiveness

- 1,442.9MWh/year
- Maintenance Fund  
US\$70,000/year  $\Rightarrow$  2ha/year

## Environment & social Impact

- No Dam, no impact on fish, trees, aboriginal culture, etc.

## Support from the local government & inhabitants

- Creation of a local management organization (Plant O&M fund management )

## Facility design

- Compact waterwheel (200kW)
- Consider maintenance



# Timeline



- **Pre-feasibility & feasibility studies:** Apr.2006-Jun. 2008
- **Groundbreaking Ceremony:** Dec. 2008
- **Construction:** Dec. 2008-Dec. 2009
- **Commissioning and asset transfer:** Jan. 2010
- **Monitoring phase:** Jan.2010 – Jan. 2012





# Key Success Factors



**At this stage of the project development:**

- **Extensive Environmental & social Impact studies;**
- **Support from the local government & community;**
- **Alignment with UNESCO's conservation programme and recommendations;**
- **Strong project management team.**





# MOA Signing Ceremony



A MOA was signed between DOE, Ifugao Province and e8 on July 2, 2008 in Manila.





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# THANK YOU

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