

# CDM Implementation Experiences from Bhutan

(Development of Dagachhu Hydropower Project)

8<sup>th</sup> September, 2010, Manila.

Mr. Pema Dorji

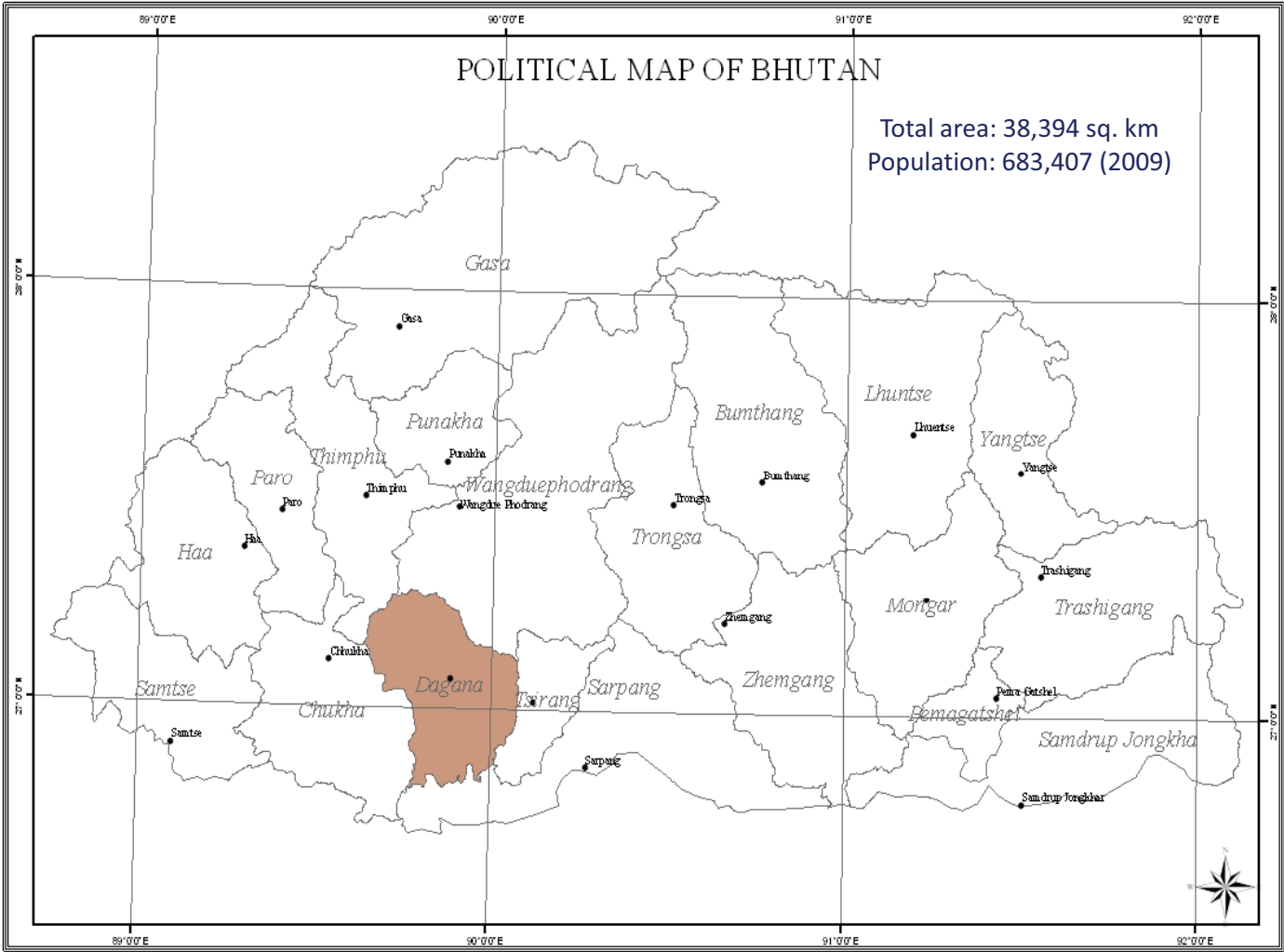
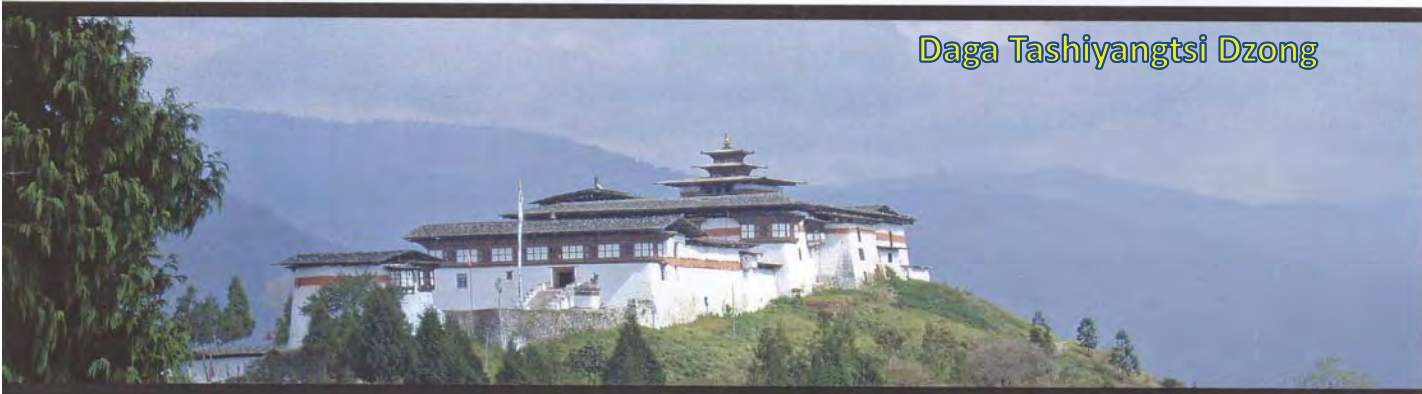
(pema.dgpc@gmail.com)

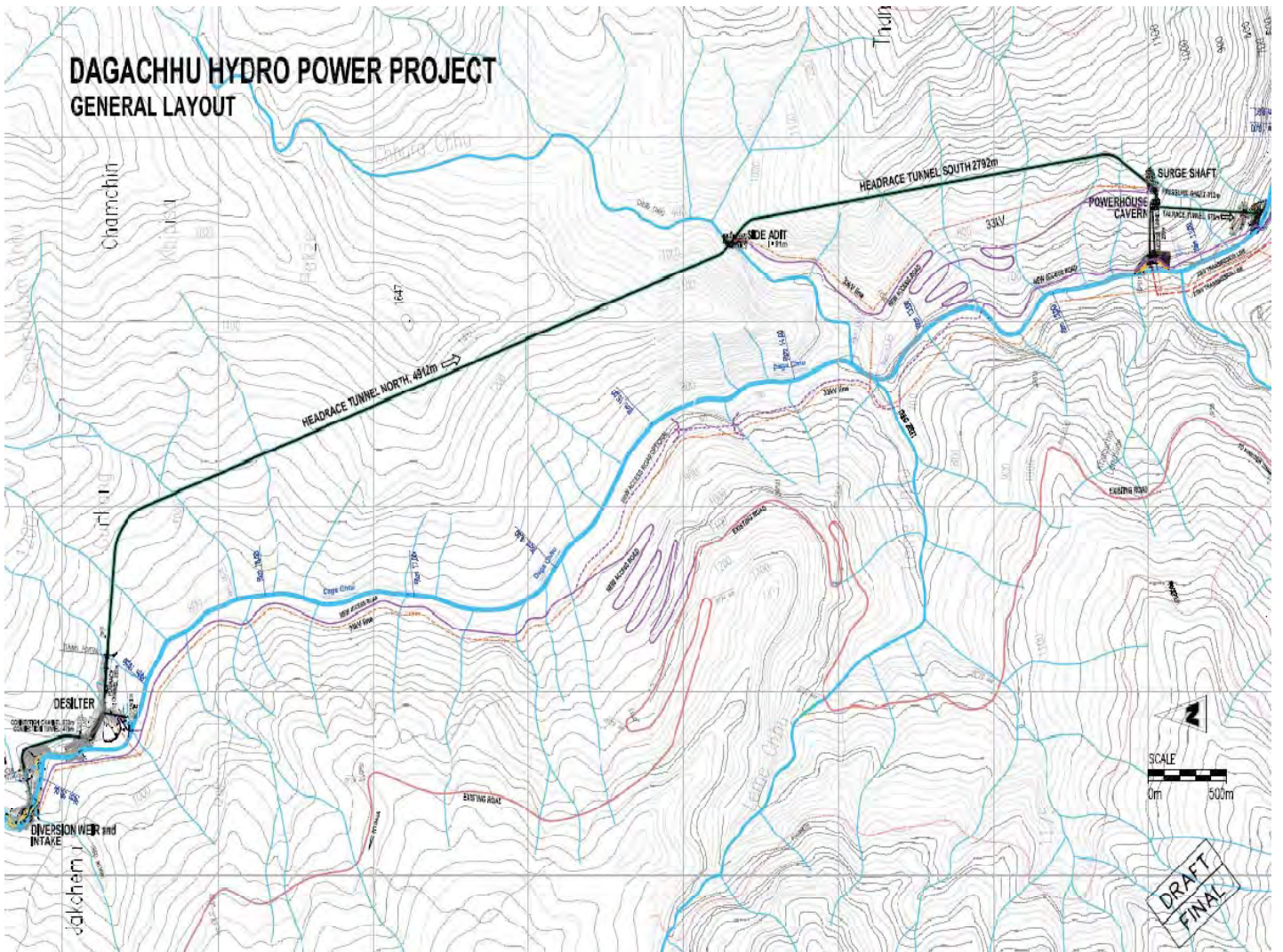
Druk Green Power Corporation Limited

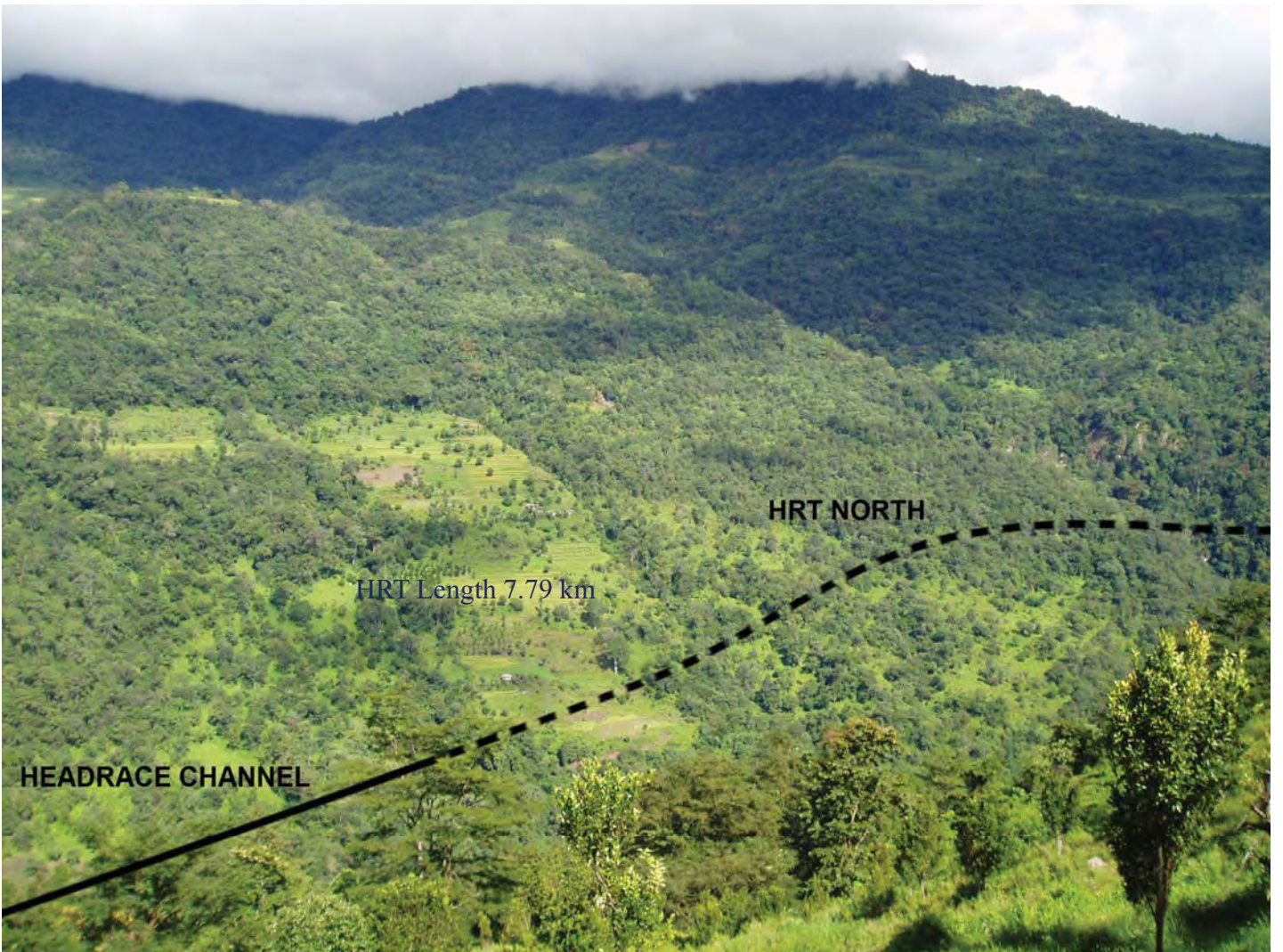
## Presentation Outline

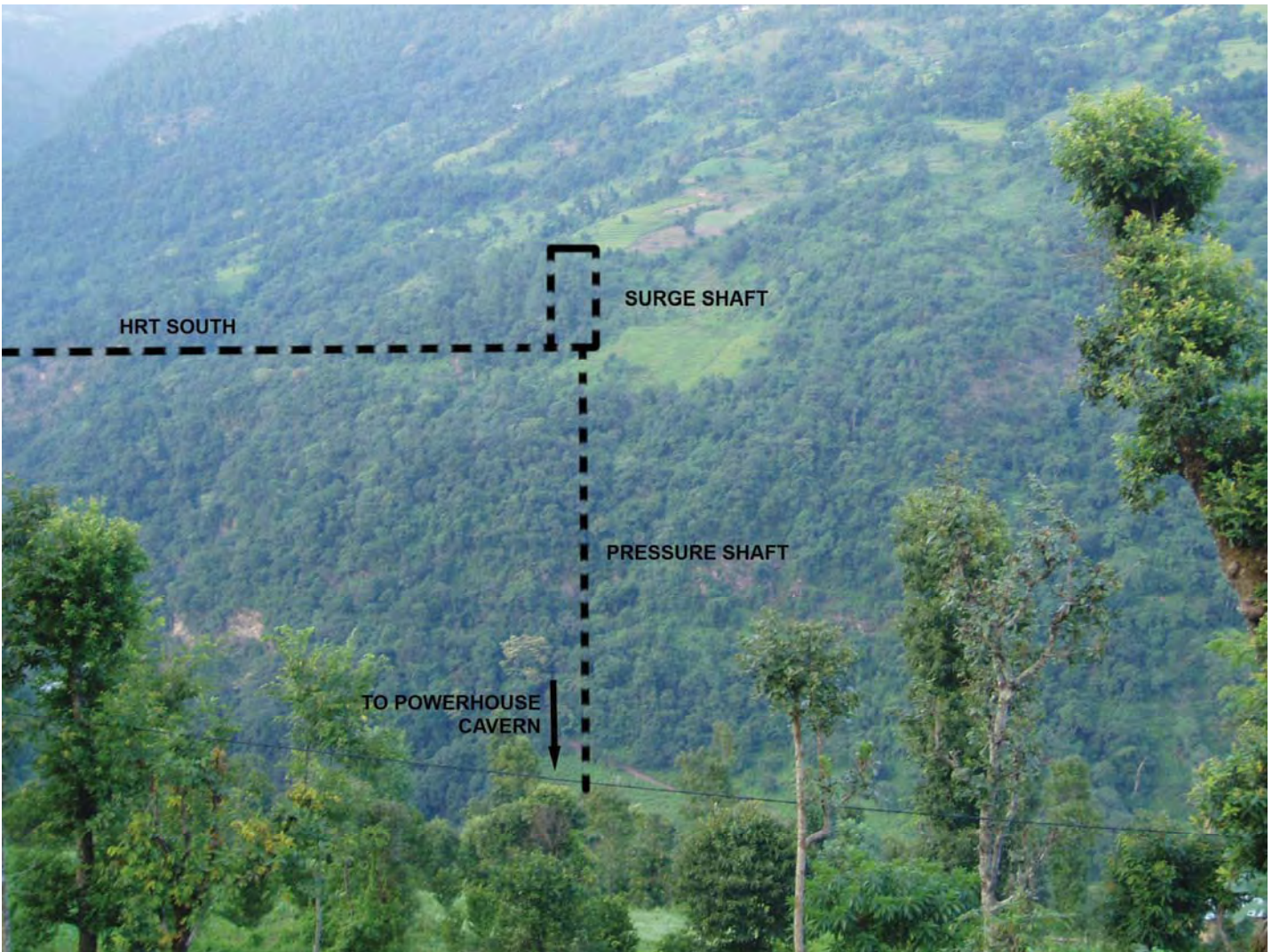
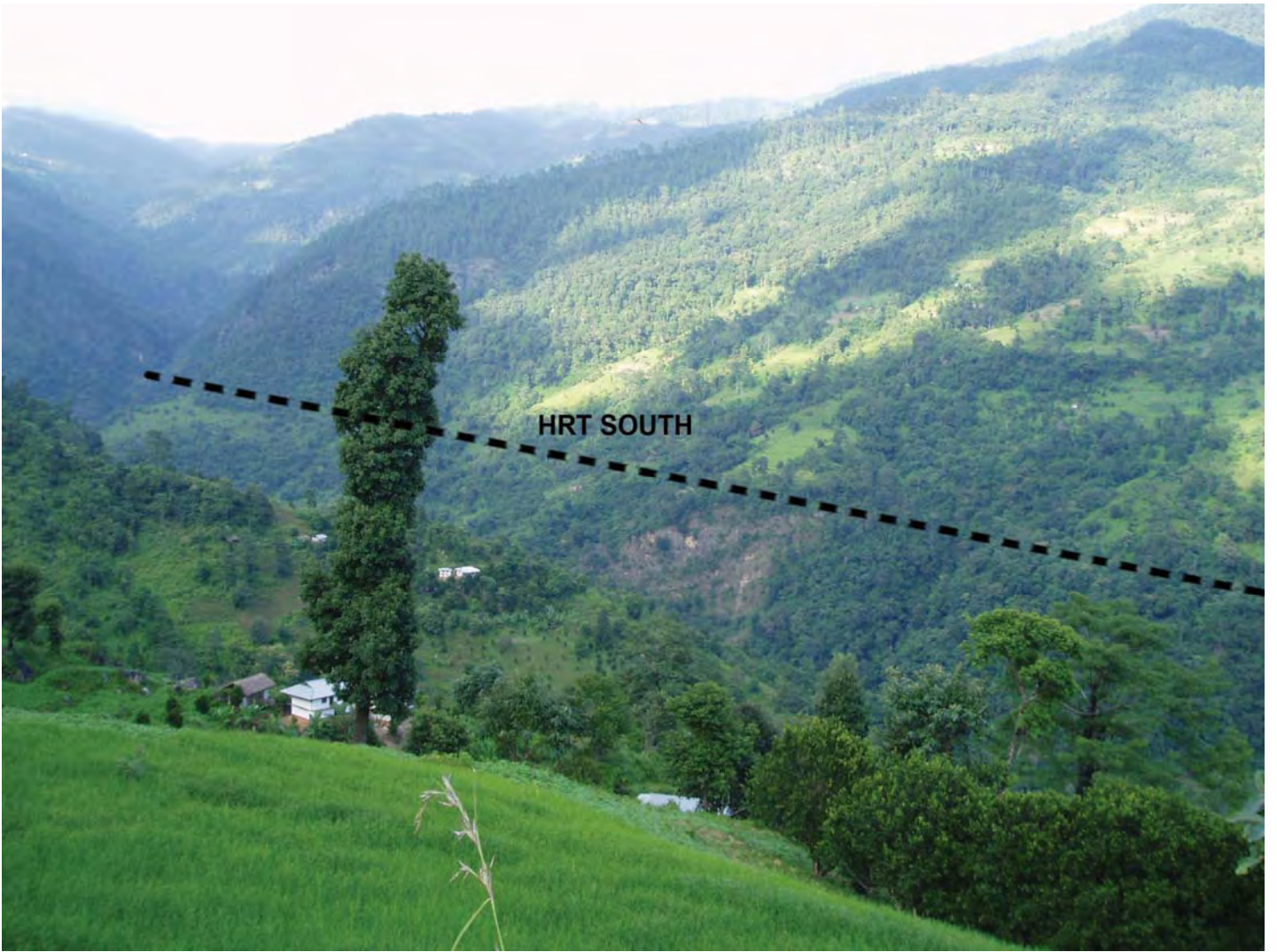
- Glimpse of Dagachhu HPP-Pictures
- Salient Features of the Project
- Sustainable Project Benefits
- Dagachhu Hydropower as a CDM Project
- Challenges
- Way forward

Daga Tashiyangtshi Dzong









# Salient Features of the Project

- Installed Capacity: 57 x 2 = 114 MW
- Mean Annual Energy Production: 500GWh
- Type of Development: Run-of-the-river
- Type of Turbine: Pelton
- Catchment Area: 676 square km
- Design Flow (Maximum): 50 cumecs
- Gross Head: 304 m
- Project completion date: March 2013  
(estimate)
- Electricity to the regional grid consisting of Bhutan and the Eastern region of India.

## Sustainable Project Benefits

### Bhutan

- Benefit to national economy and environmental sustainability
- Socio-economic development at regional level

### India(contributes to achievement of national sustainability goals )

- Socio-economic well being: supply power to Eastern Indian grid reducing chronic deficit
- Environmental well being: displacing fossil fuel

# Dagachhu Hydropower as a CDM Project

- PDD Consultant: Poyry Energy GmbH, Austria
- PDD validator: DNV AS, Norway
- Project No.: 2746
- Registration Date: February 26, 2010
- Methodology: ACM 0002
- Version: 07
- GHG reducing measure: Grid connected renewable energy based power generation
- ER estimate: 498,998 tCO<sub>2</sub> per year
- Host parties: Bhutan and India
- First trans-boundary CDM project
- Reservoir power density: 3257 W/m<sup>2</sup>
- Crediting system: 7 years (renewable)

## Challenges

- Lack of in-house CDM expertise for handling such issues
- No Bhutanese baseline, had to use Indian baseline thereby necessitating two host countries
- First transfer border export of power using such baselines

# Way forward

- CDM Unit is to set up to look into all these issues
- Bilateral Agreement signed between India and Bhutan- Bhutan to use Indian baseline for CDM cases
- Need expertise from outside for developing the PIN and PDD documents for other projects such as Nikachhu HEP for which the Feasibility studies are now being undertaken

THANK YOU