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Sustainable Hydropower Financing in the Mekong River Basin

Global Hydropower Development

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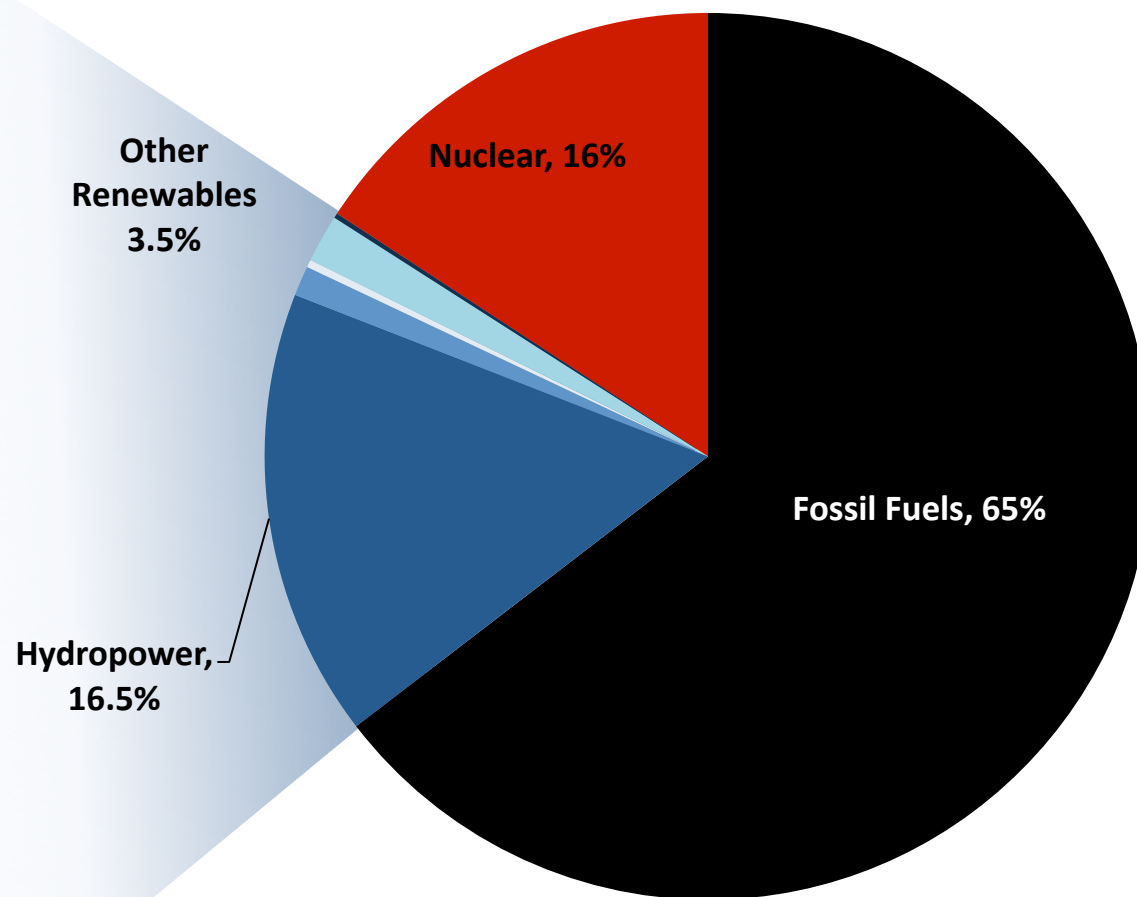
iha

international hydropower association

- Mission to Advance Sustainable Hydropower
- Non-profit organization formed in 1995 under the auspices of UNESCO
- Central Office in UK
- Regional Office in South America
- National Office in China
- 95 Corporate Members, including 27 Sponsors, active in 80+ countries



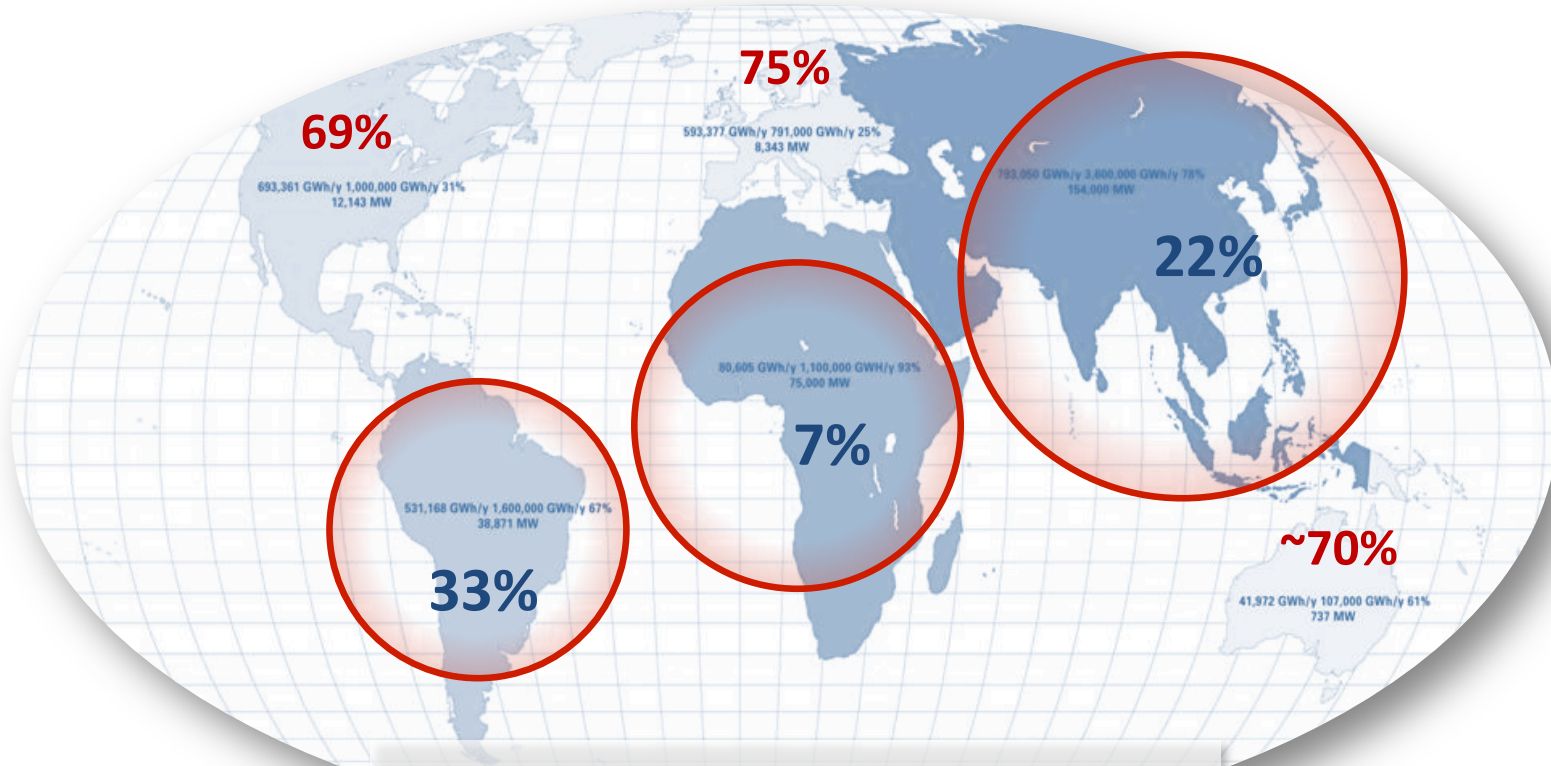
Scale of Hydropower Development



Source: IEA 2008

Scale of Hydropower Development

Hydropower Potential: World's developed
hydropower potential



World's realistic potential developed: ~ 1/3

Current hydro production: 2889 TWh/y

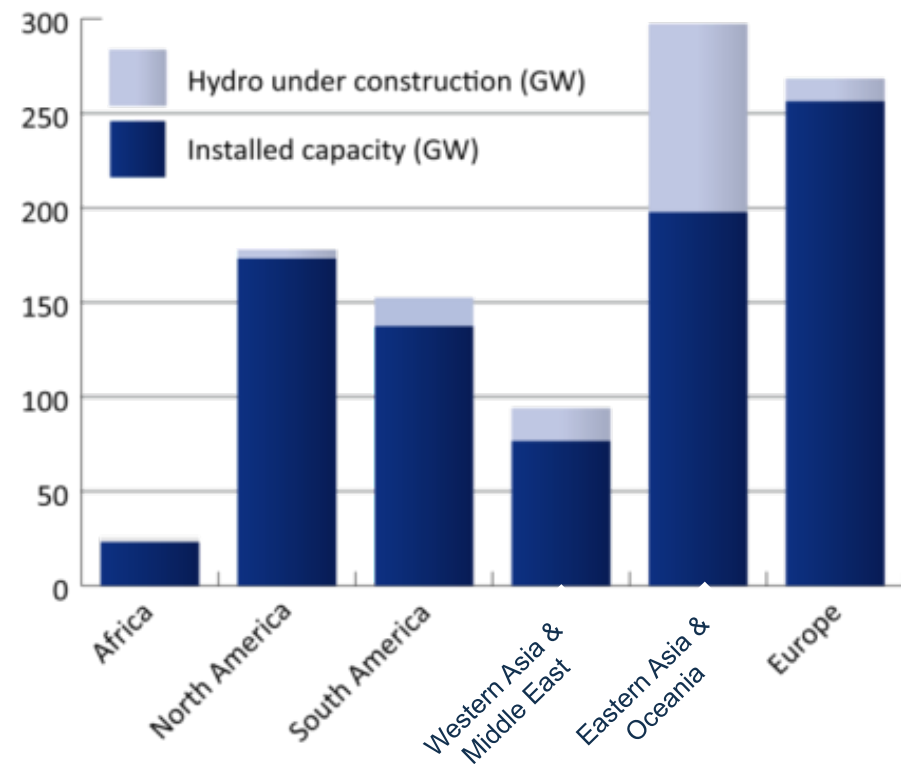
Realistic potential production: ~ 9000 TWh/y

Source: IHA

Where is Development Occuring?

Hydro under construction

- China leads with 110 GW of new hydro targeted by 2020
- Europe and North America increasing commitments
- Funding impedes more rapid development in Africa



Factors Stimulating Development

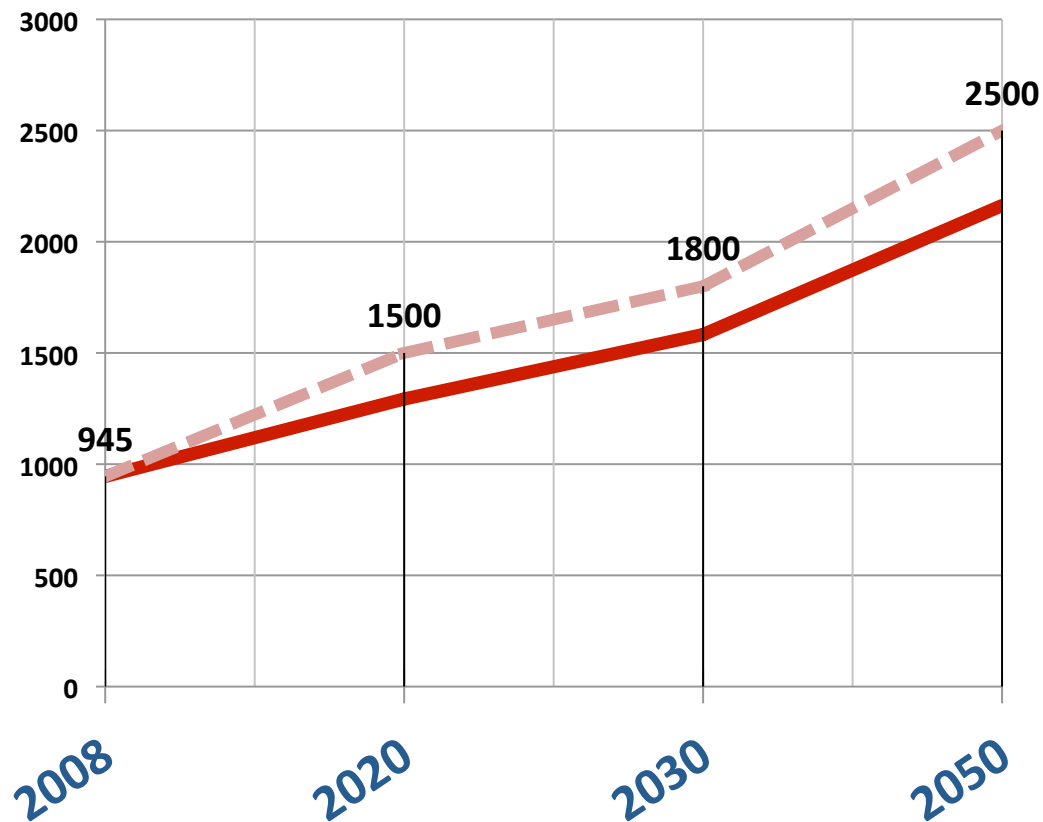
Changing Role of Hydropower

- Growing global demand for energy production
- Increasing concerns over water and energy security.
- Policy interventions with improving incentives for renewable technologies.
- Hydropower a renewable solution to the intermittency issues associated with wind and solar.
- Pumped Hydropower a solution to excess power in a the grid at times of low demand.
- Increased industry emphasis on sustainability.

Scale of Hydropower Development

Worldwide Installed Capacity Forecasts for Hydropower

Installed Capacity (in GW)



— Conservative Scenario
(Source: REN21 Global Status Report)

- - - Optimistic Scenario
(Source: IHA, Members' Data and Projections)



Issues Facing Hydropower Development

Sustainable development ??

- Demonstrated Need
- Options Assessment
- Policies & Plans
- Political Risk
- Institutional Capacity
- Technical Issues & Risks
- Social Issues & Risks
- Environmental Issues & Risks
- Economic & Financial Issues & Risks



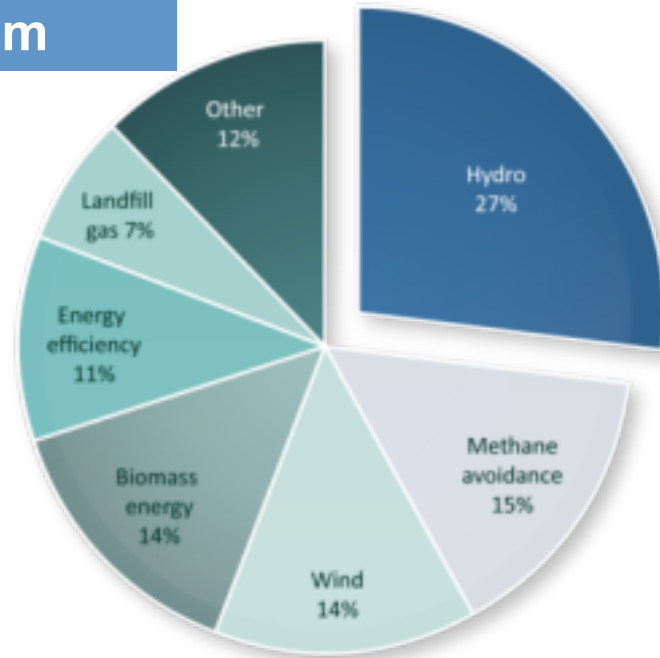
Climate Change ??

- Greenhouse Gas Emissions
- Hydrological vulnerability
- Mitigation and Adaption

Incentive Schemes

The Clean Development Mechanism

- 1,989 projects registered at Jan 2010.
 - 27% are hydropower.
- Hydropower represent 52% of the credits delivered
- First hydro transboundary CDM project approved – this is of major importance for hydro.



European Emissions Trading Scheme

- Largest multi-national emissions trading scheme allows CDM credits as offsets against emissions.
- **But:** hydro above 20MW must meet 'relevant' sustainability criteria – Differences in application of this obligation has resulted in an unwillingness of carbon exchanges to accept such credits.