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Deutsches Institut für
Entwicklungspolitik

German Development
Institute

International standards for sustainable dam development: dynamics and conditions enhancing their implementation

Sixth Dialogue on Water

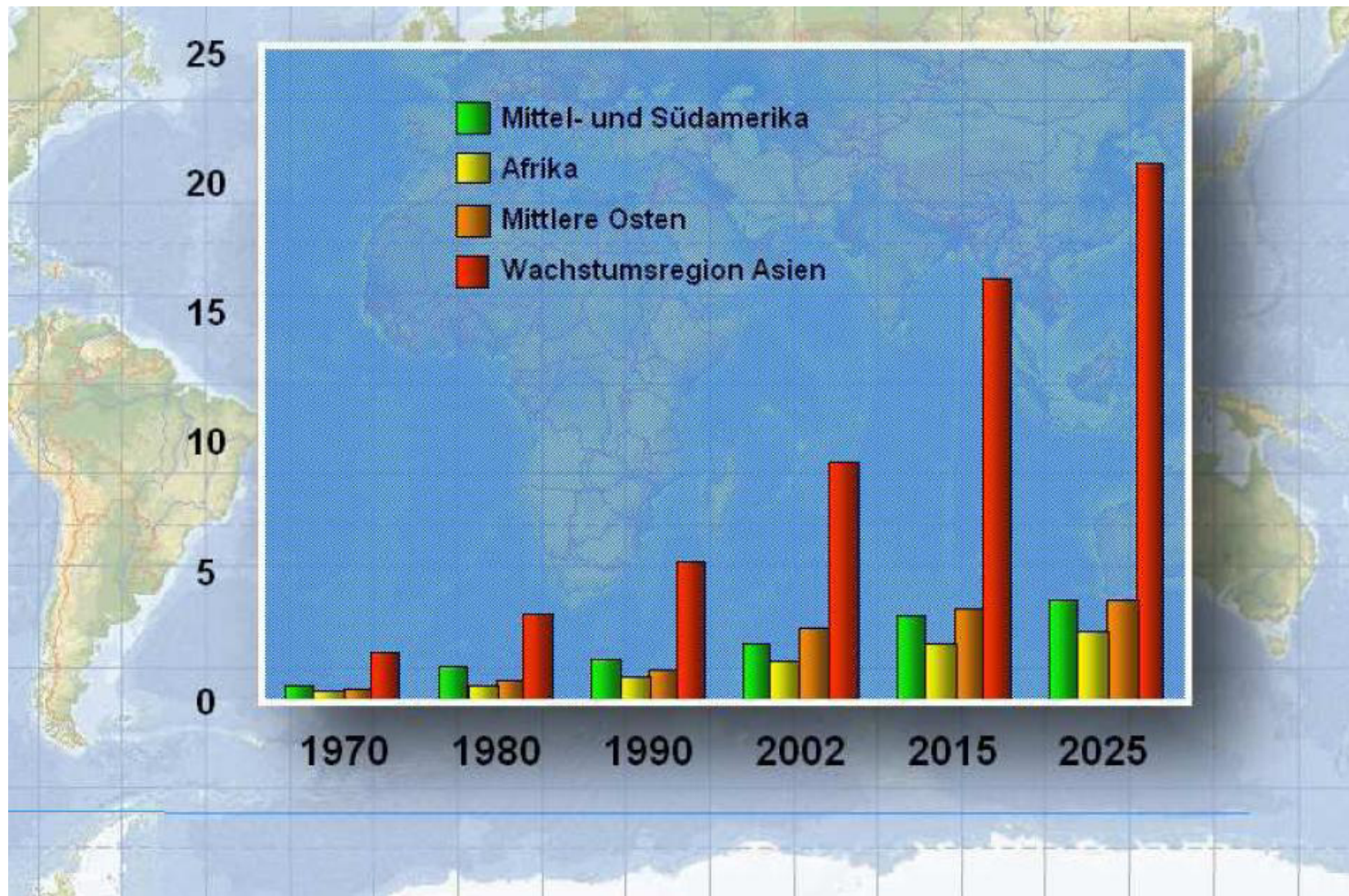
Waltina Scheumann

Bonn, 15-16 October 2009



- Dams for development
- Hydro is part of low carbon development path
- Constraints to dam development are not only financial
- Landmark set by World Commission on Dams (WCD)
- Impacts of the WCD

World energy outlook: increasing demand



Source: BMZ (in 10^{10} joule per year)

Electricity will supply an increased share of total demand



- Growth slower in OECD than non-OECD countries where demand goes unmet:
 - >30% in developing countries without electricity supply
 - worst in sub-Saharan Africa with 75%
- Economic growth translates into electricity demand:
 - increase of electricity generation 3.5%/year (China and India)
- High oil prices combined with concerns about impact of green house gas emissions renews interest in alternatives to fossil fuels:
 - nuclear and **renewable energy sources**



➤ Share of renewables of world electricity generation:

19% (2006) to 21% (2030)
hydropower contributes 54%, and wind 33%

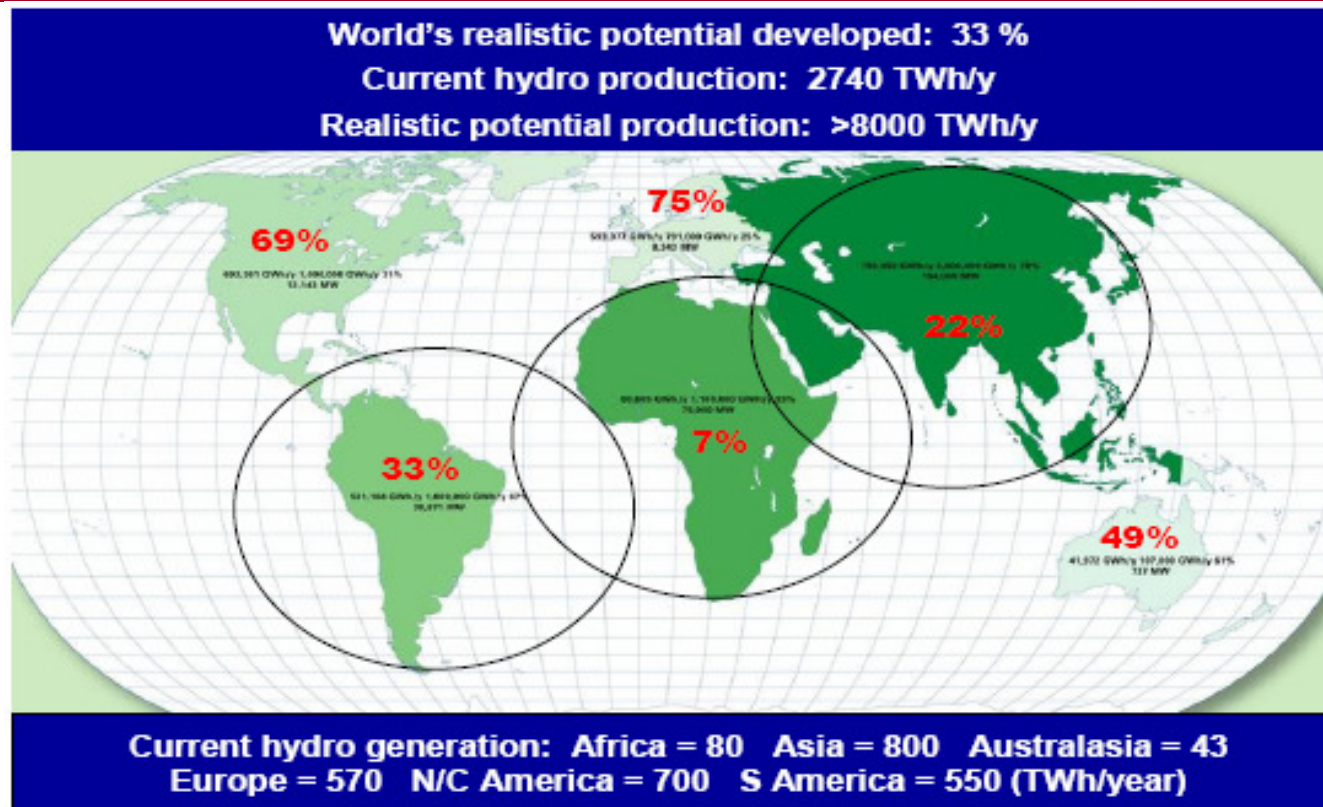
➤ **Regional outlook for hydro**

OECD: only Canada and Turkey have significant untapped potential

Non-OECD: hydro is expected to become the predominant source
(China, India, Vietnam, Malaysia, Pakistan, Myanmar and Iran)

Electricity supply from hydro dominates in South America:
Brazil (84%), Venezuela, Paraguay, Columbia, Chile and Peru(~55%)

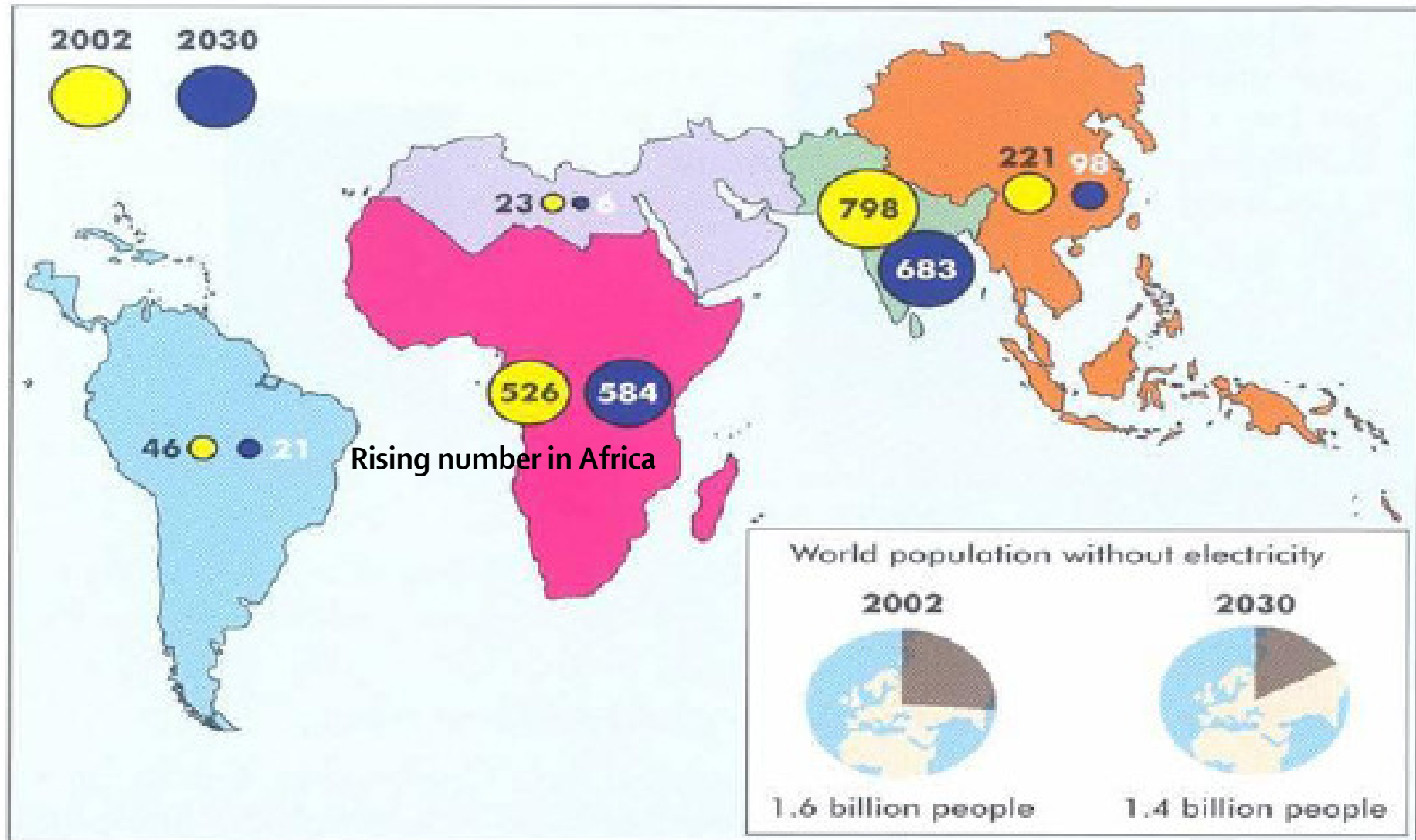
Hydropower in Africa (only 7% used)



(International Hydropower Association)

North Africa:	exhausted
Southern Africa:	60% exploited
East Africa:	20% exploited
West Africa:	high!
Central Africa:	e.g. Congo only 1% exploited

World population without electricity



Growing consensus: Low-carbon development path with hydro



International Energy Agency (2008)

„Preventing catastrophic and irreversible damage to global climate requires decarbonization of world energy sources...“

African Ministerial Conference on Hydropower ... (2006)

„...to unlock the potential, ... sound environmental and social impact assessments, mitigation and management plans should be the norm ...resettlement principles with full participation of affected communities ...must derive benefits ... “

Ministerial Conference on Water for Agriculture and Energy in Africa (2008)

„...has a great role to play in solving energy security and access to water issues ...small hydro in remote off-grid communities“

World Bank Group / Asian Development Bank / African Development Bank

„... is a critical renewable energy resource ... scaling up hydropower“

Bilateral donors, e.g. German BMZ only if strict criteria are applied (WCD) ...

...but not only hydro generation



Water supply for all sectors



A water vendor in Kibera, near Nairobi



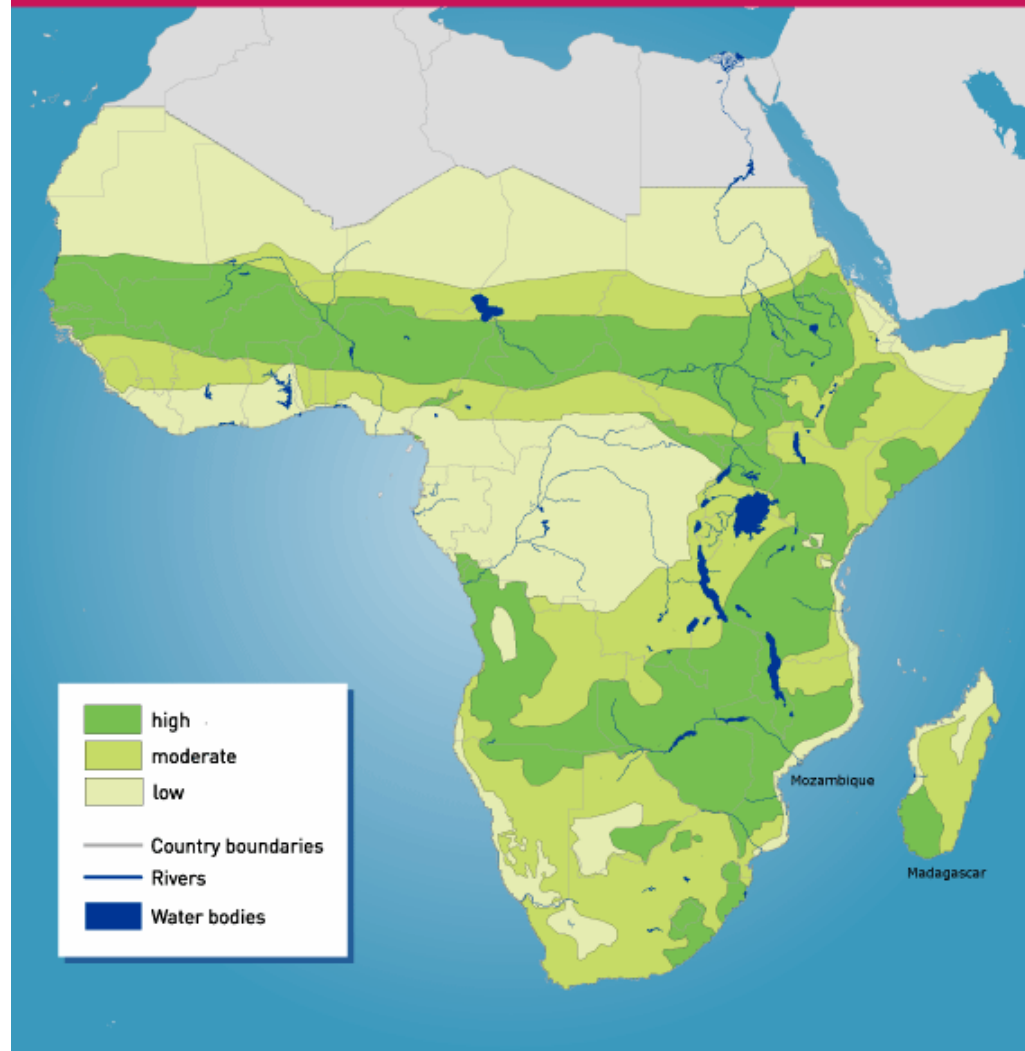
Flood control



2/3 of SSA's rural poor could benefit from water investment



Potential for poverty reduction in SSA through water interventions
low, moderate and high impact areas



...water one of most important production assets. ...Only 3% of SSA's land is under irrigation systems. (FAO/IFAD 2008)



Natural / climate impacts

decreasing precipitation

(Swiss and Tanzanian reservoirs; diversification in Brazil due to droughts)

Financial crisis

delays in bringing current projects to completion, not expected to have long-term effects on investment; recession dampens electricity demand ...

Financial constraints reduce its potential, but not as much as the notion of acceptability on social and environmental levels.
(Canadian NGO)

Negative impacts on environment and people





Core Values

equity, efficiency, participatory decision-making, sustainability, accountability

Strategic Priorities

1. Gaining public acceptance / participation of affected groups
2. Comprehensive options assessment
3. Improving operation efficiency of existing dams
4. Sustaining rivers and livelihoods
5. Recognizing entitlements (rights) and sharing benefits
6. Ensuring compliance
7. Sharing rivers for peace, development and security





The Commission's mandate ended when the report was released.

No institutionalized mechanisms but Dams and Development Project (UNEP) for dissemination of results (end 2009)

No formal representation of states

Commissioners represent regional diversity / competence

Only 7 countries represented

(not from East / West Africa, Middle East)

Consultative **Forum** of stakeholders (68 organizations, women and industry not adequately represented)

How do international norms for sustainable dam development reach decision-makers?



Sessions 1: ...diffusion in the **international arena**

Has the Dams and Development Project (UNEP) been effective in disseminating WCD?

To which extent did WCD influence standards of international organizations?

Do major financiers and the dam business community commit to international standards?

Session 2: ...implementation of international standards in **Brazil, China, India, and Turkey** (research at DIE on regional powers)

Session 3: ...role of **transnational NGO-networks** in diffusing international standards (Panel discussion with IR, WWF, academics and KfW)

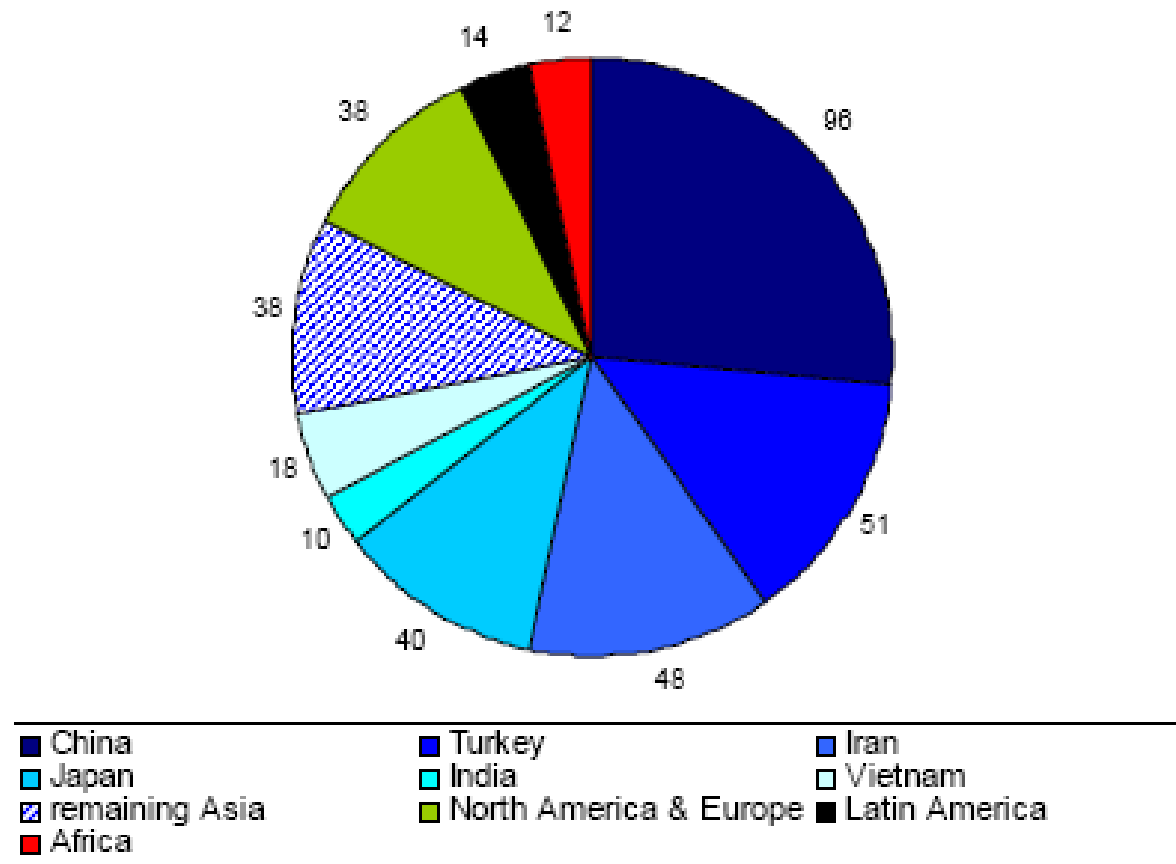
Session 4: ...implementation of international standards in typical **developing countries** (International Rivers, German Ministry, KfW+DEG)



Thanks for your attention.



Major dams (higher than 60 m) under construction in 2006



Source: 2006, Atlas of Hydropower & Dams