

# Hydropower:

## A Key Tool for Sustainable Development



**Hydropower projects can make a significant contribution to sustainable development, when they are developed and operated in an economically viable, environmentally sound and socially responsible manner.**

### How hydro contributes to the three pillars of sustainable development:

#### ECONOMIC DEVELOPMENT

- Sustaining multiple uses of water
- Fostering regional and industrial development
- Advanced technology, low operating costs, long plant life and independence from fuel prices
- Potential revenue from power sales/export and ancillary services

#### ENVIRONMENTAL CAUTION

- Renewable, eco-efficient resource
- Supporting biodiversity by providing new habitats
- Avoiding air pollution
- Slowing down climate change
- Reducing acid rain by offsetting other forms of power generation

#### SOCIAL JUSTICE

- Alleviating poverty by encouraging economic development and bringing water, power and light to those in need
- Providing wider access to a resource that is not evenly distributed in time and space
- Offsetting adverse climate impacts and preserving finite resources for future generations
- Passing on an electricity source with long viability and low maintenance costs for the benefit of future generations



#### HYDRO SUSTAINS LIVELIHOODS:

- **WATER** (supplying communities and industries)
- **ENERGY** (clean and renewable source)
- **HEALTH** (clean drinking water and sanitation)
- **AGRICULTURE** (improved irrigation)
- **BIODIVERSITY** (new habitat / combating global warming)

In addition, hydropower can improve: **SAFETY** (flood mitigation), **TRANSPORT** (new water ways) and **QUALITY OF LIFE** (leisure and tourism)

*“Water, Energy, Health, Agriculture and Biodiversity (WEHAB): Five key areas in which progress is possible with the resources and technologies at our disposal today.”*

# Hydropower:

## At the Crossroads of Two Basic Human Needs

### Energy

**History shows that hydropower is one of the first technologies to contribute to...**

- ...lighting and power for basic needs
- ...alleviating poverty by:
  - Powering industry and creating employment
  - Increasing productivity through provision of lighting
- ...freeing women and children from drudgery by:
  - Reducing the time for basic household tasks
- ...sustaining education by:
  - Facilitating basic services to run schools
- ...reducing mortality rates by:
  - Improving indoor and outdoor air quality
  - Distributing power services to hospitals and dispensaries
- ...supplying reliable refrigeration for food and medicine
- ...increasing the benefits achieved through telecommunications systems

*With good planning and management, hydropower is a catalyst for the sustainable improvement of people's lives.*



### UN Millennium

#### Development Targets

*Halve, by 2015, the proportion of the world's people whose income is less than US\$1 a day and the proportion of people who suffer from hunger.*

*Halve, by 2015, the proportion of people without access to safe drinking water and to basic sanitation.*

*Achieve universal primary education in all countries by 2015 and eliminate gender disparity at all levels of education.*

*Reduce, by 2015, mortality rates for infants and children under 5 by two thirds, and maternal mortality rates by three quarters, of the prevailing rate in 2000.*

*Halt and reverse the spread of HIV/AIDS as well as the incidence of malaria, tuberculosis and other major diseases by 2015.*

### Water

**Storage schemes help to manage irregular and unevenly distributed supplies of water. They contribute to...**

- ...ensuring safe and sufficient drinking water and sanitation
- ...enhancing food security
- ...increasing productivity through improving public health and reducing time spent collecting water
- ...improving opportunities for activities requiring water (industry and agriculture)
- ...improving accessibility of controlled water quality in the project area
- ...sustaining education by reducing time spent by children collecting water from distant sources
- ...reducing mortality rates by minimising water-borne disease through water management and specific health programmes (financed by the project)

