

# **Energy and Water**

**- The ignored link -**

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# The global water crisis

- 1 billion people without safe drinking water
- available water per capita to drop by one third until 2025
- water is tapped in an unsustainable way



# Water consumption of power plants

Conventional coal combustion (l / kWh)

Once-through cooling 1.2

Cooling towers 2.6

Oil and natural gas combustion

Once-through cooling 1.1

Cooling towers 2.6

Nuclear generation (LWR)

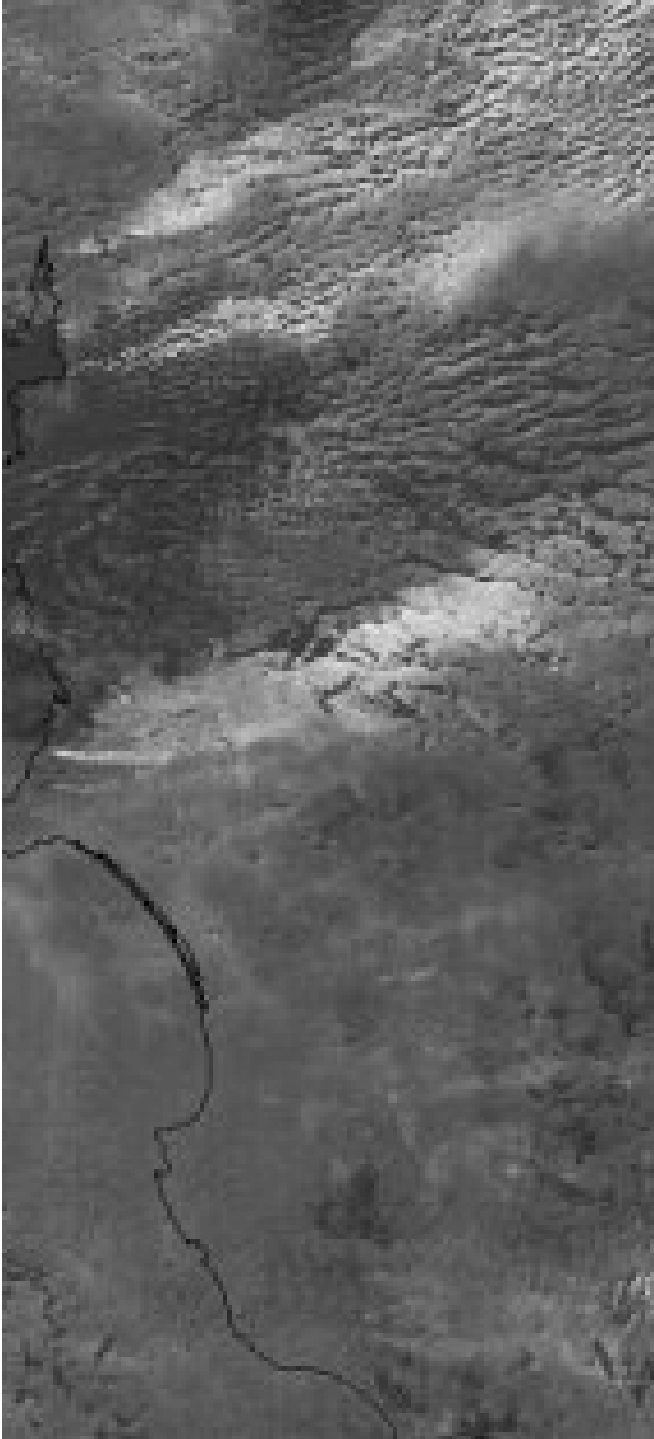
Cooling towers 3.2



# Mining, transportation, processing

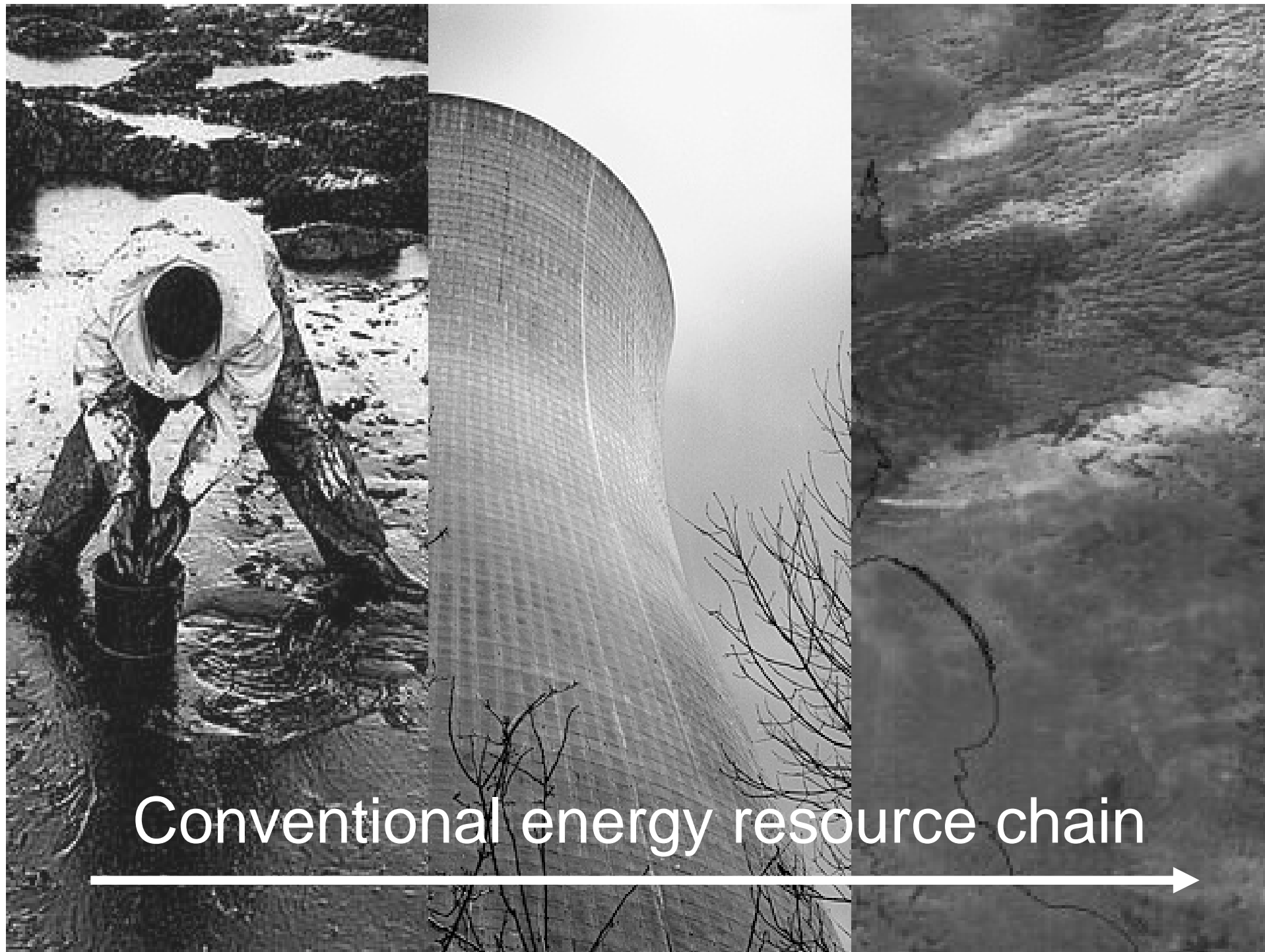
## Water impacts:

- oil production
- pipeline spills, tanker wrecks
- oil refining
- coal mining
- nuclear fuel cycle



# Emissions

- **Precipitation shortfall**
- **Global climate change**
- **Water contamination**



Conventional energy resource chain



# Most renewables consume no water

- water pumping
- waste water treatment
- water purification



# International conferences

International Conference on Water and Environment (1992 Dublin)

World Water Fora (Marrakesh 1997, The Hague 2000, Kyoto 2003)

Water and Sustainable Development (Paris 1998)

UN Millennium Summit (2000)

International Conference on Freshwater (Bonn 2001)

World Summit on Sustainable Development (Johannesburg 2002)