

# Integrated, global aluminium company

With robust positions across the value chain



- Global provider of alumina, aluminium and aluminium products
- Leading businesses along the value chain; raw materials, energy, primary metal production, aluminium products and recycling
- 13 000 employees involved in activities in more than 50 countries
- Market capitalization ~R\$ 20 bi (~NOK 60 bn, March 2014)
  - Annual revenues ~NOK 65 billion
- Included in Dow Jones Sustainability Indexes and FTSE4Good

# Implications of Climate Change – Coastal Areas & Regions Likely to Become Wetter

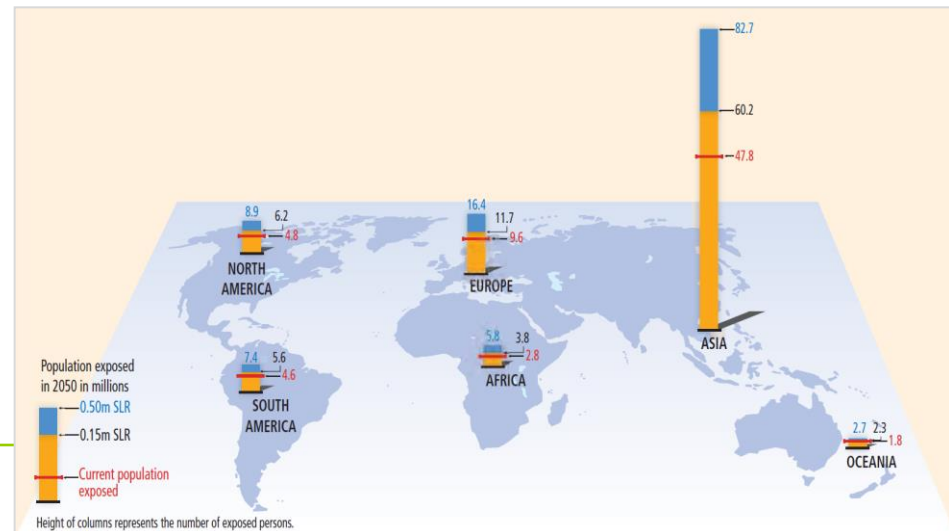
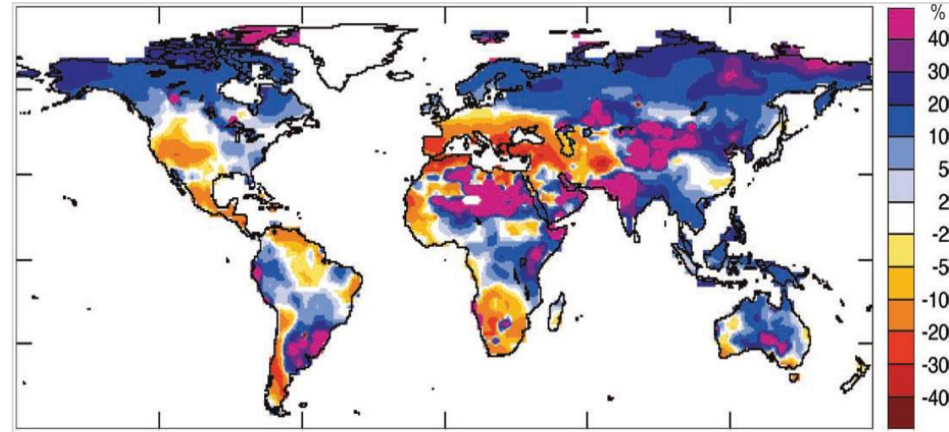
Potential for:

- Coastal flood damage;
- Changes in water balance;
- Changes in timing or flow of receiving bodies.

Impacts on:

- Capacity to handle heavy rainfall & flooding;
- Stability of open pit highwalls, tailing storage ponds, embankments;
- Long-term water quality.

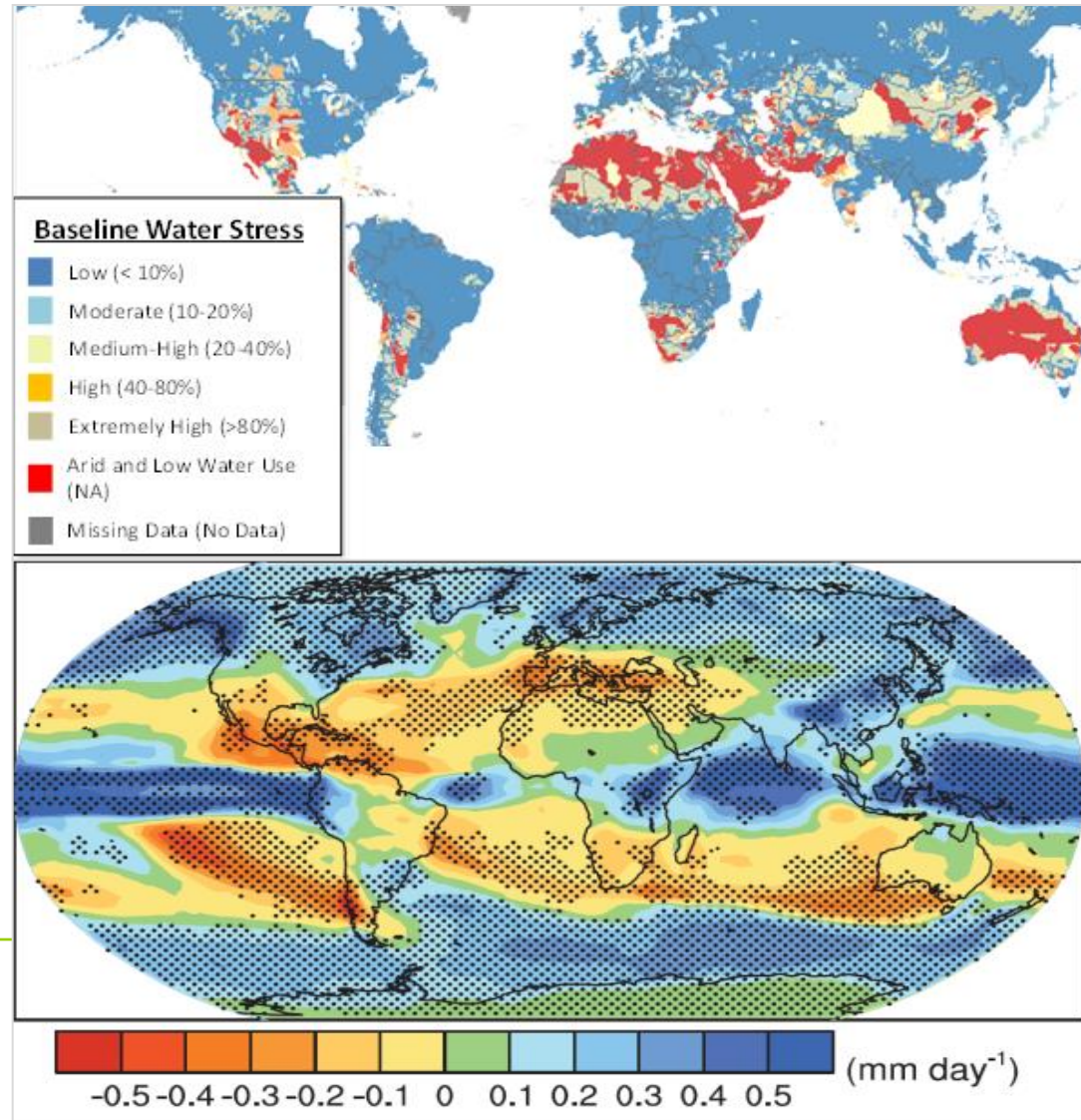
Sources: [13,14]



# Implications of Climate Change – Arid or Water-Stressed Environments

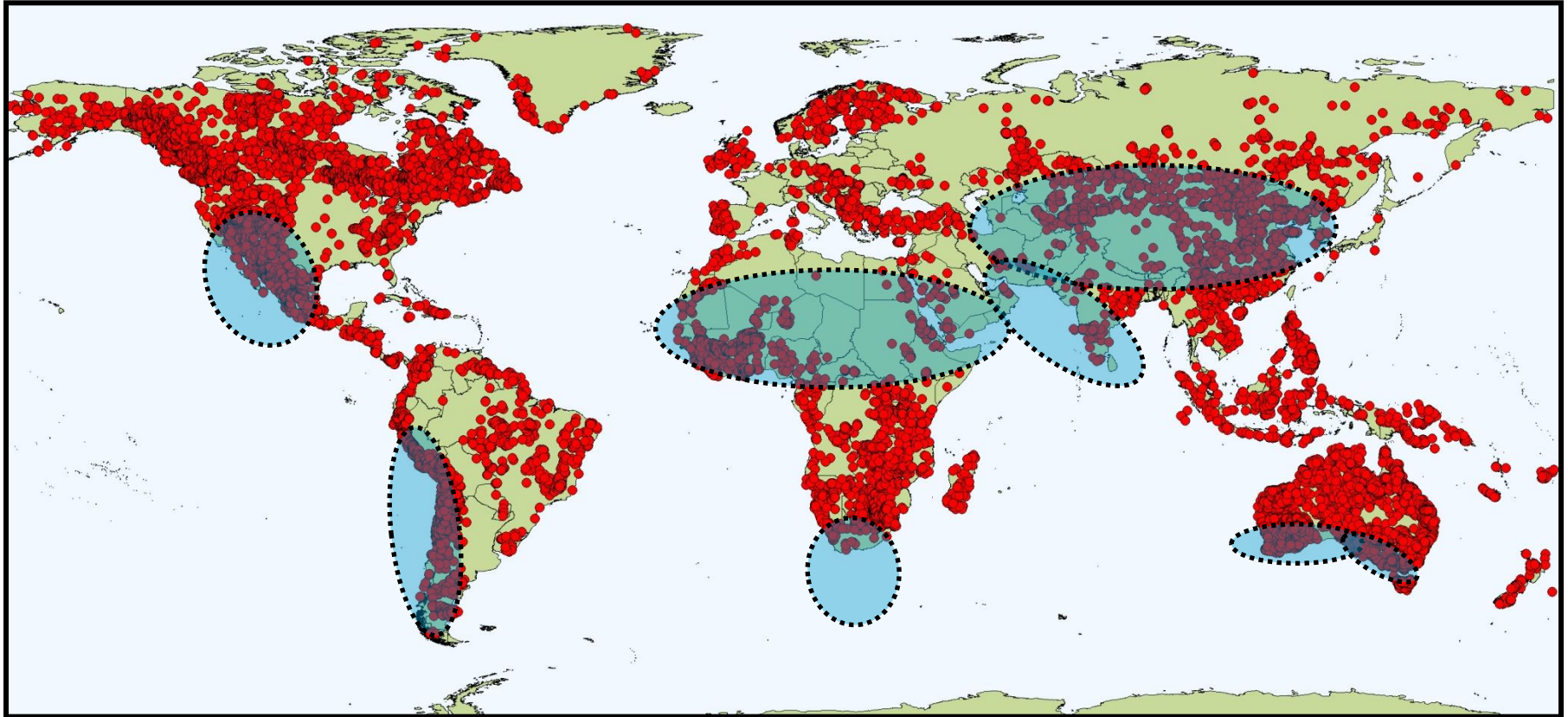
Risk of:

- Insufficient water supply for operations
- Reduced availability and reliability of electricity
- Challenges in post-closure rehabilitation and water quality management





# Distribution of mining projects globally



 **Areas of high/extreme water risk**

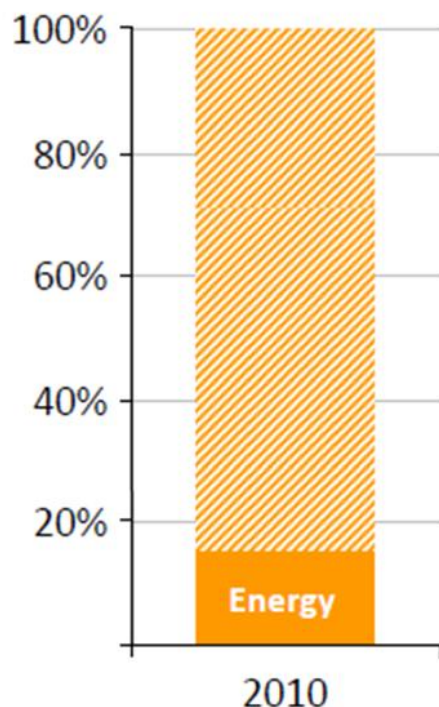
 **Location of mining projects**

Source: Intierra Resources Intelligence (October 2011)

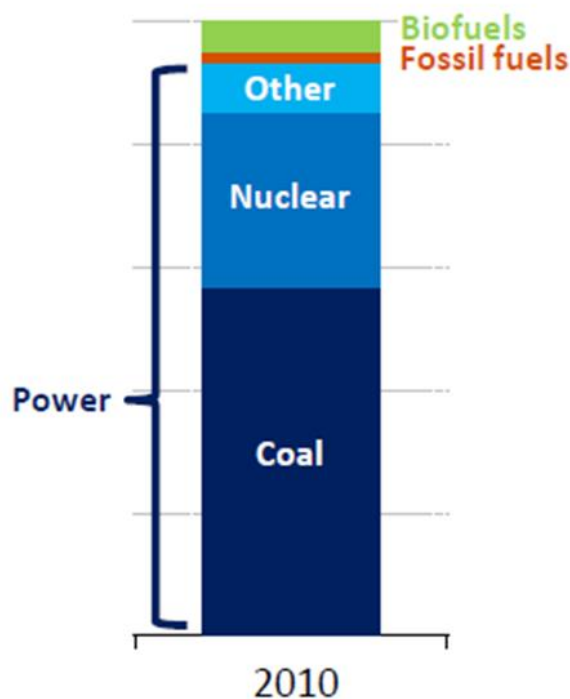
# Energy is becoming thirstier in the face of growing water constraints

WORLD  
ENERGY  
OUTLOOK  
2012

Global water use

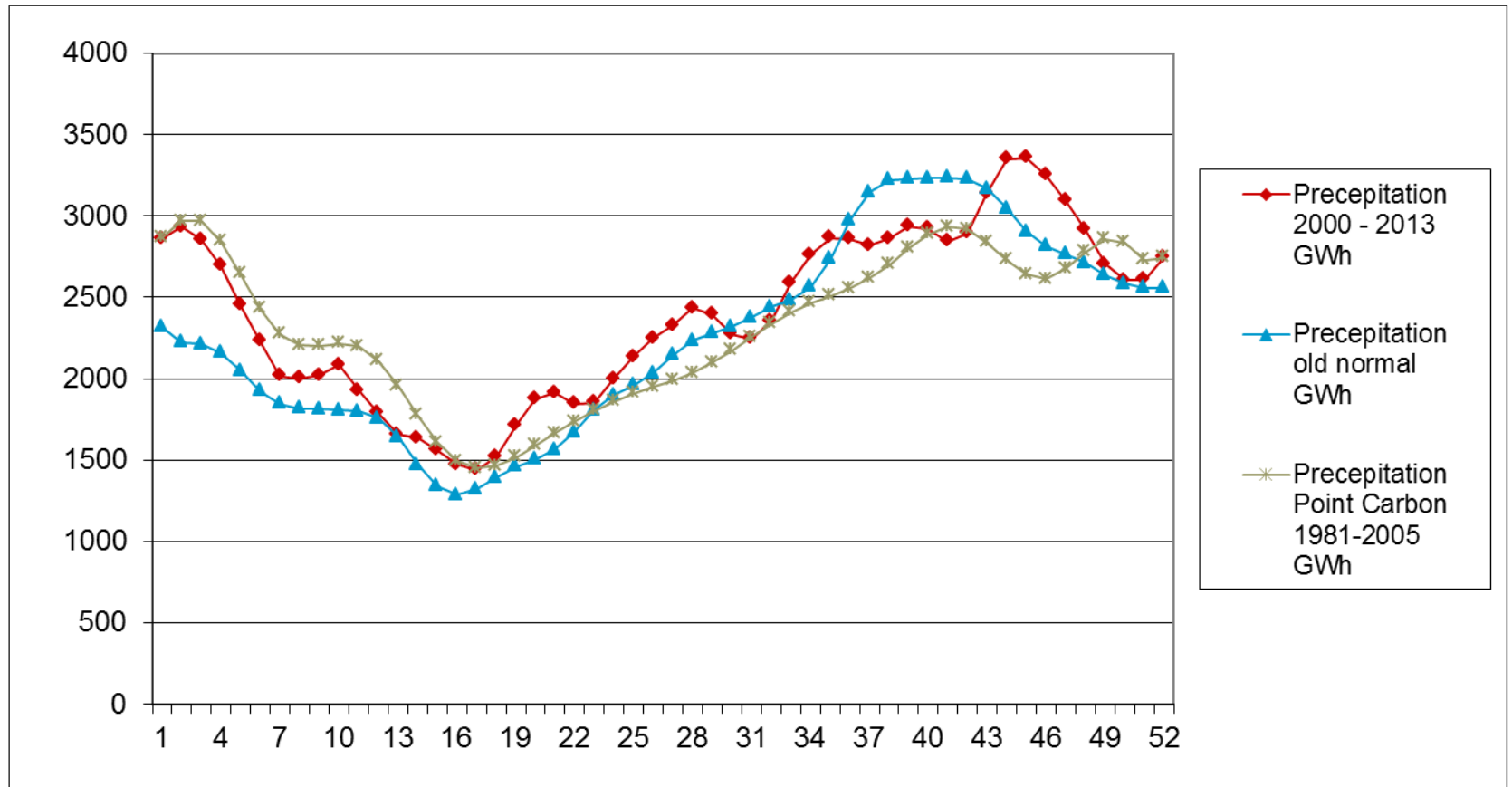


Water for energy

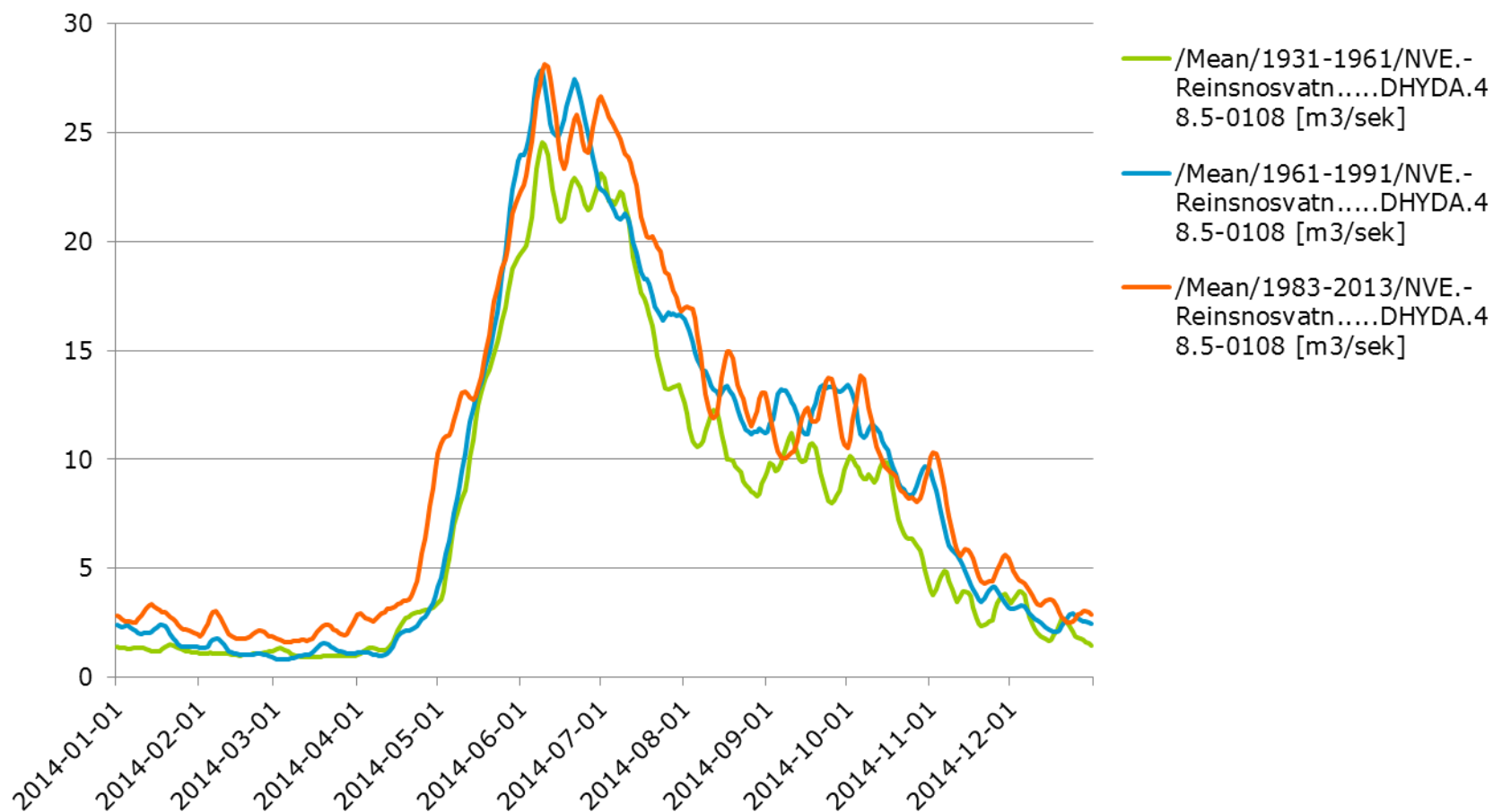


*The energy sector's water needs are set to grow, making water an increasingly important criterion for assessing the viability of energy projects*

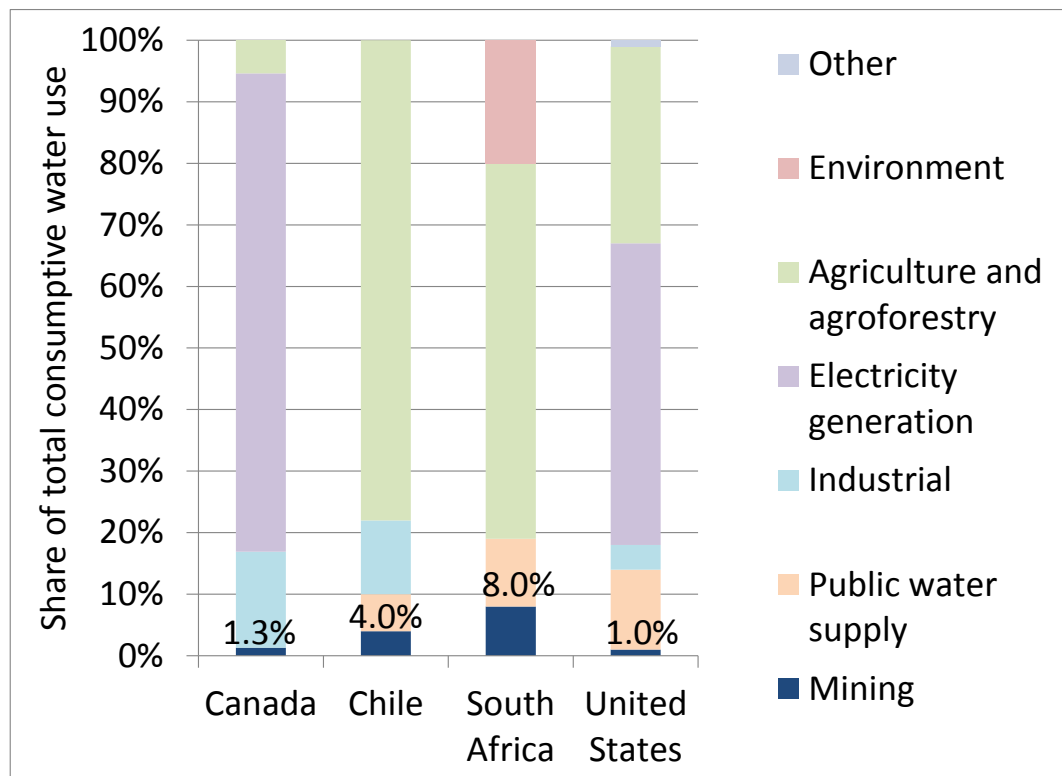
# Changes in precipitation affects production



# Also changes in inflow



# A Changing Climate in Context – Water affects power production



Consumptive water use [2,3,4,5]





# Also changes in inflow....

