

A large concrete dam with multiple spillways is shown in operation. Water is cascading down the spillways, creating a thick mist or spray at the base. The dam structure is made of concrete and features a series of vertical supports and walkways. The sky is overcast, and the water downstream is turbulent and white with foam.

Water Nexus with other Development Factors: Energy, Food Security, Gender, Poverty, Ecosystem & Climate Change

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“Among the many things I learnt as a president, was the centrality of water in social, political and economic affairs of the country, the continent and the world.” (Nelson Mandela)

Water nexus with other development factor



Agriculture is key for **“Zero Hunger”** but is also highly dependent on **fresh water availability** and **affordable energy** for irrigation, as well as **gender equity**, **climate change** etc.

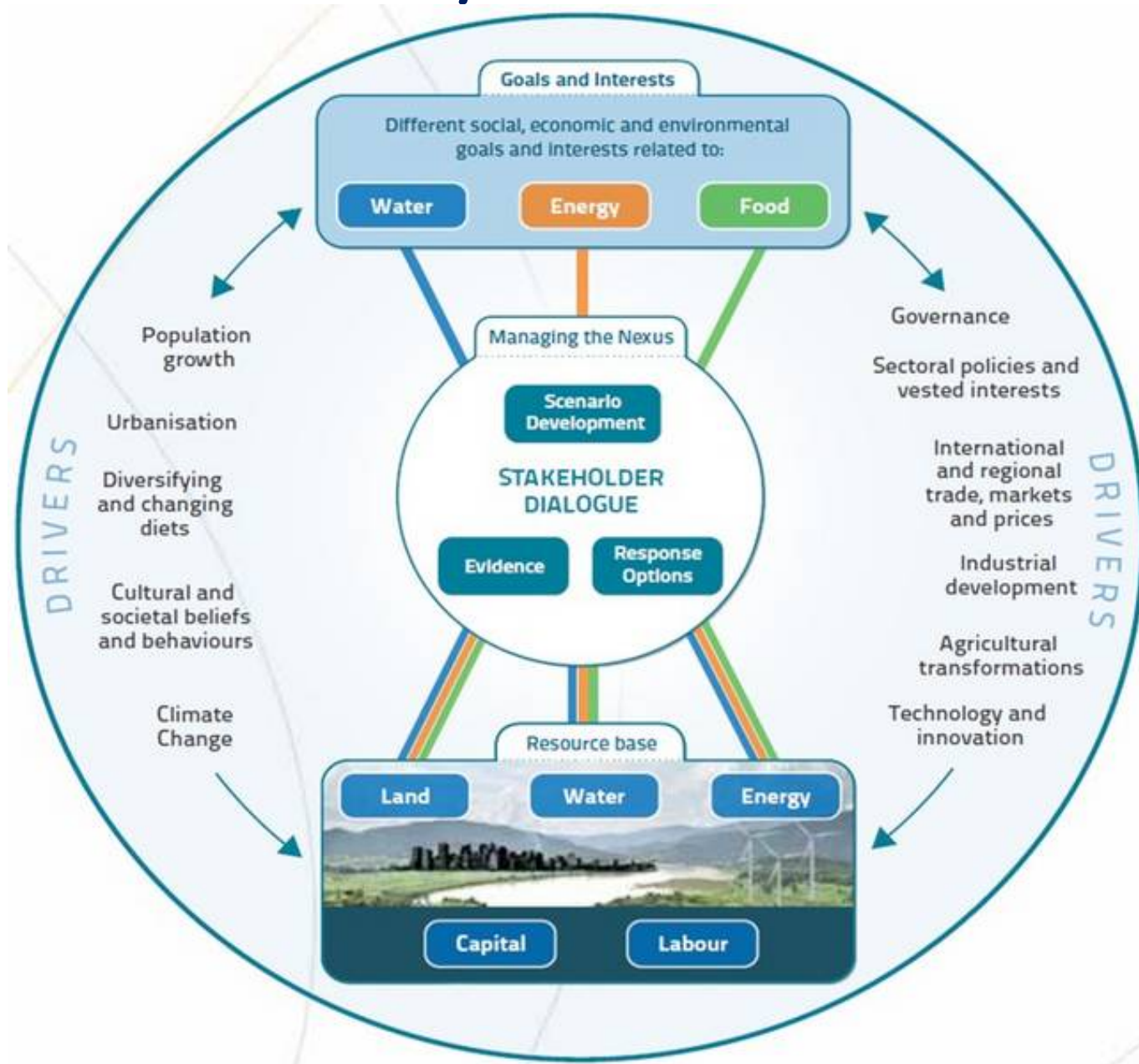
Fossil energy use and **land-use change** are key **contributors to climate change** which may adversely affect food security, fresh water supply, good health and well-being.

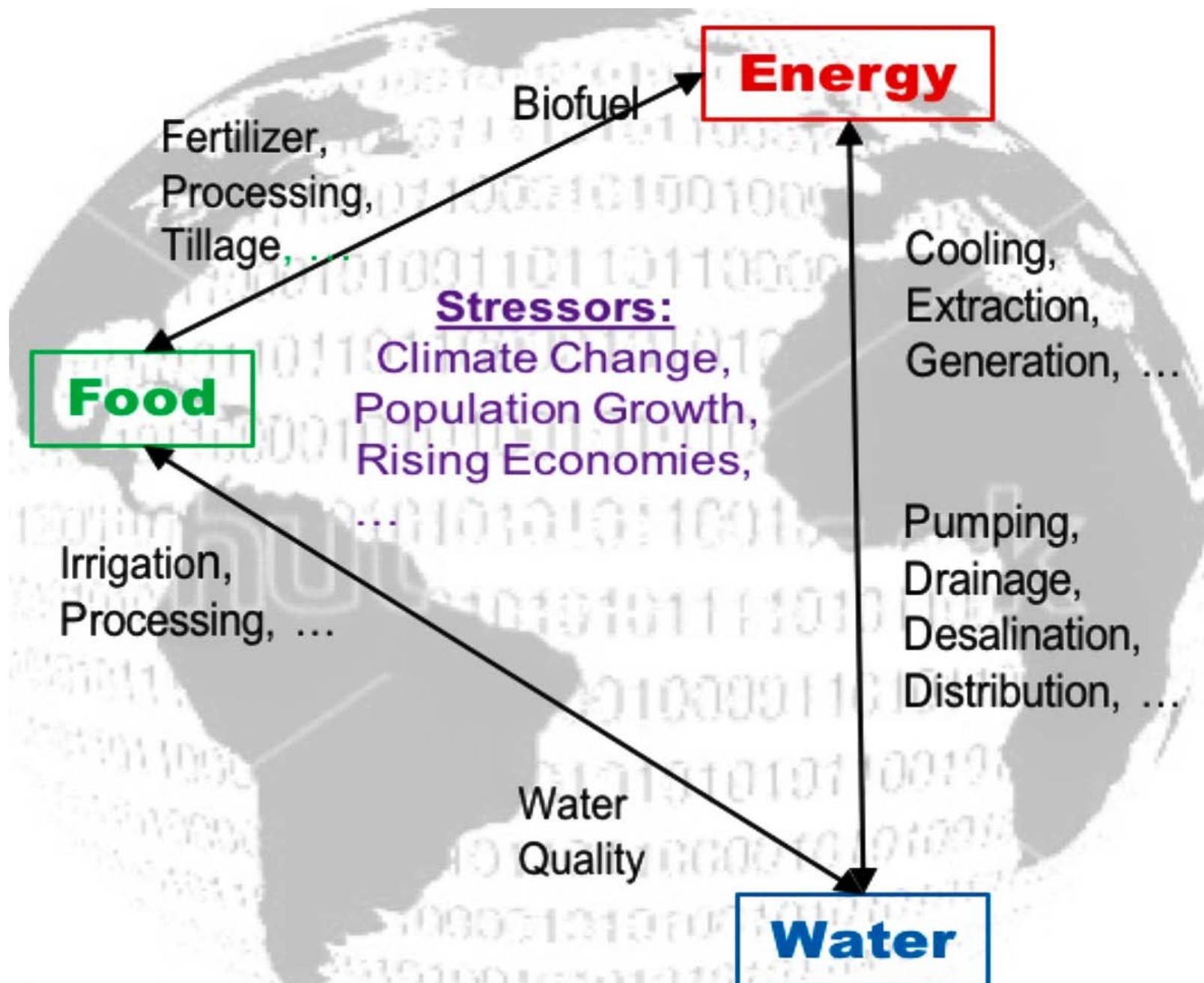
Access to **affordable energy** services is needed for **poverty eradication**

The global demand for water is expected to grow significantly for all major water use sectors...



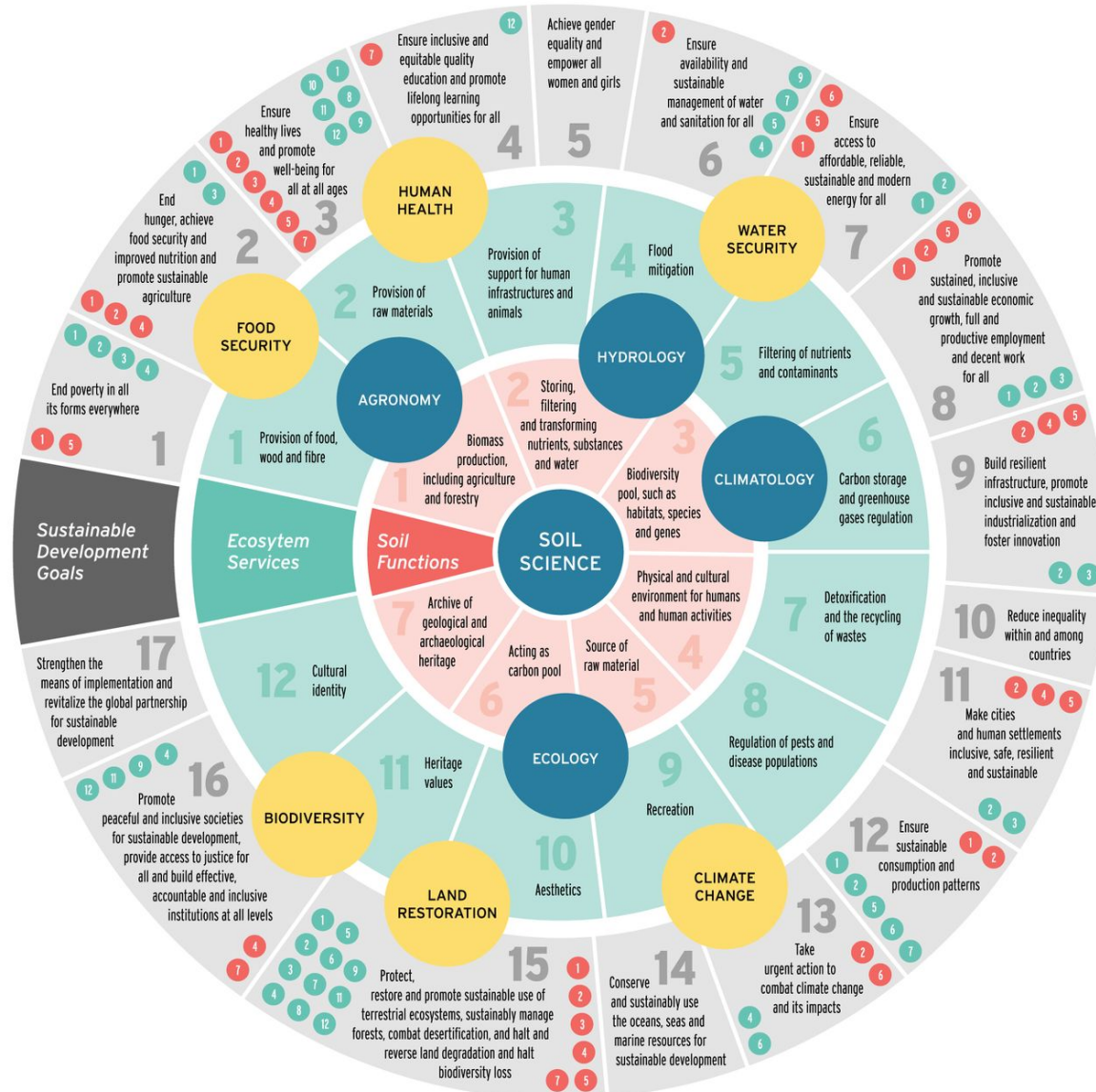
The nexus- an analytical framework





The nexus- talking about complexity?

Links between soil science, soil functions, the ecosystem services they underpin and the 17 UN



Nexus interactions are complex and dynamic

Nexus interactions are about **management of natural resource systems**:

- understanding interdependencies (depending on each other),
- constraints (imposing conditions or trade-offs) and
- synergies (mutually reinforcing or having shared benefits).

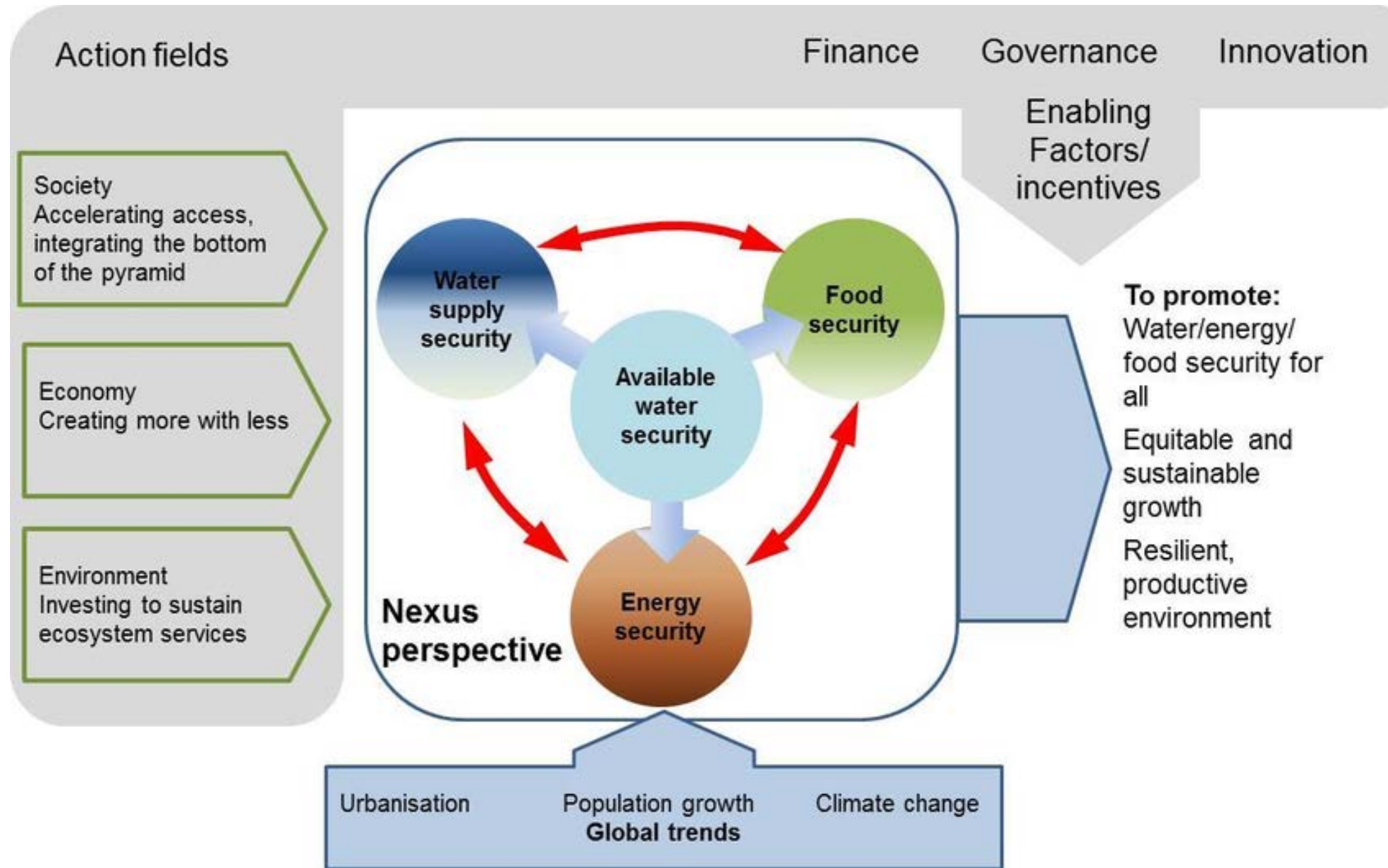
e.g. Large-scale water infrastructure may have synergetic impacts:

- producing **hydropower** and
- providing water storage for **irrigation**,
- **fisheries, recreation and municipal uses**

But this might happen at the expense of **upstream and downstream agro-ecological and social systems**, with environmental and social implications, such as

- loss of terrestrial ecosystems,
- displacement/resettlements of riparian residents
- loss of cultural heritage

What should we consider?



ONE
DAY...



Sudhir
Datta

NEXT
DAY...



IF ONLY **WATER**
AND **POWER** WOULD
WORK **TOGETHER!!**

