

CRITICAL ROLES OF WATER IN ACHIEVING THE PROPOSED SDGs: A NEXUS PERSPECTIVE [WATER-ENERGY-FOOD- CLIMATE CHANGE]

**Presented at the Workshop on “Capacity Development
in Advancing Water and Sustainable Development”,
United Nations, New York City, NY**

24-25 February 2015

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OUTLINE

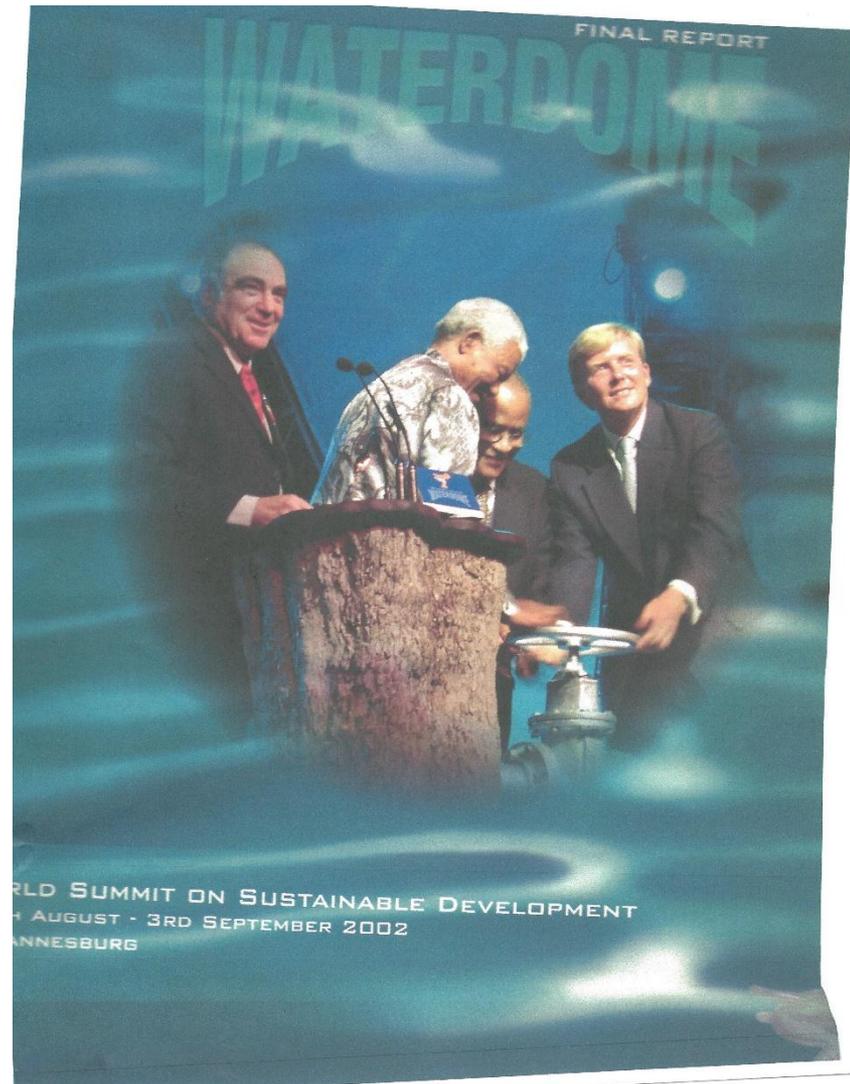
1. Water and the MDGs
2. “Nexus”: What does it mean?
Attention to Planetary Boundaries
3. The Proposed SDG on Water and Sanitation
4. Water and the Other SDGs
5. Conclusion: Adopt a Systems Approach
6. Recommendations

Source:

The Critical Role of Water in Achieving the Sustainable Development Goals: Synthesis of Knowledge and Recommendations for Effective Framing, Monitoring, and Capacity Development

WATER AND THE MDGs

- Water & sanitation constituted one target under the Environmental Sustainability MDG (7):
 - “Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation”
 - Received strong emphasis only after WSSD in Pretoria, 2002
 - WSSD also led to a focus on IWRM—but much of it was aimed at environmental conservation; planning but not implementation capacities strengthened

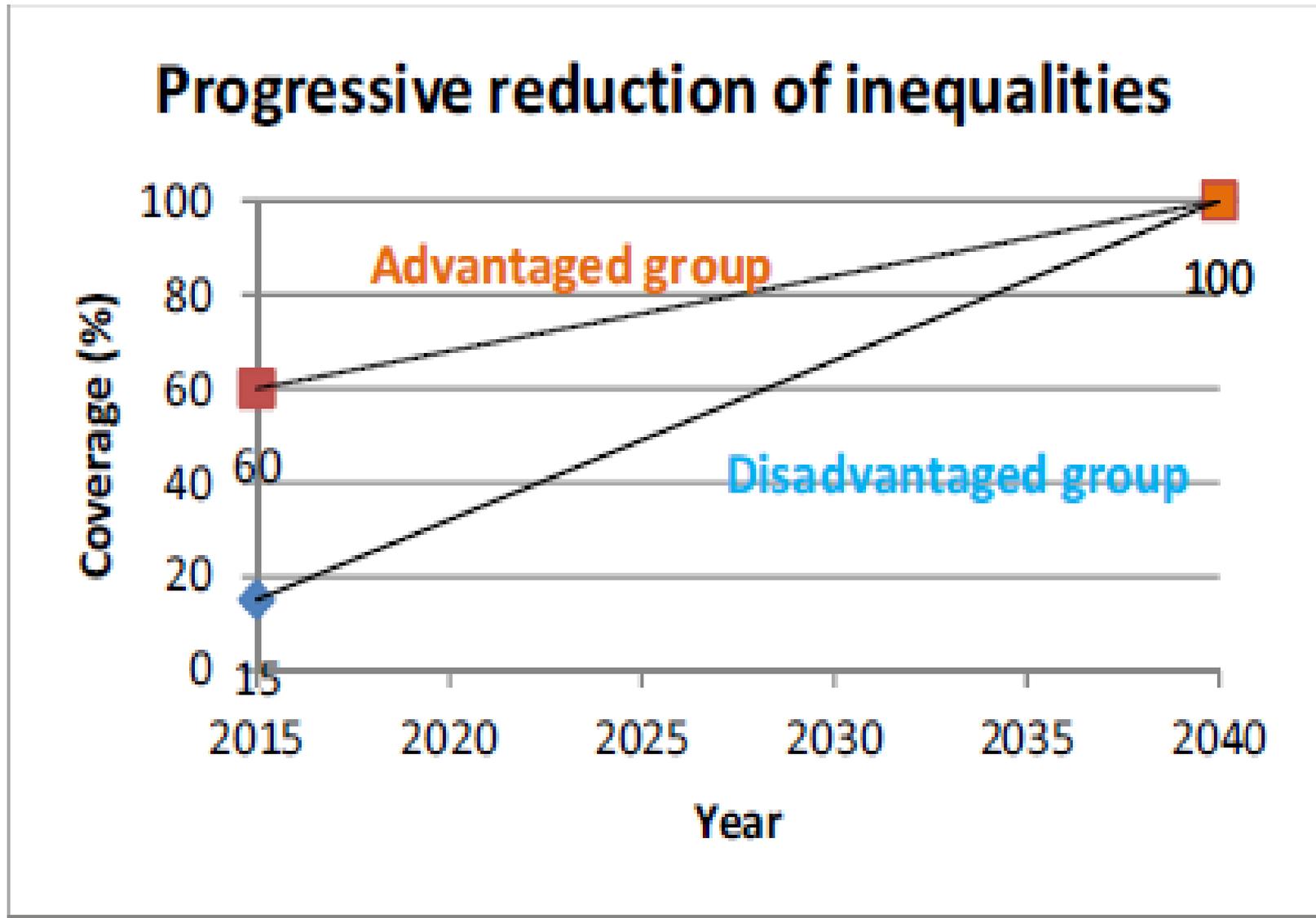


SOME KEY LESSONS FROM MDGs:

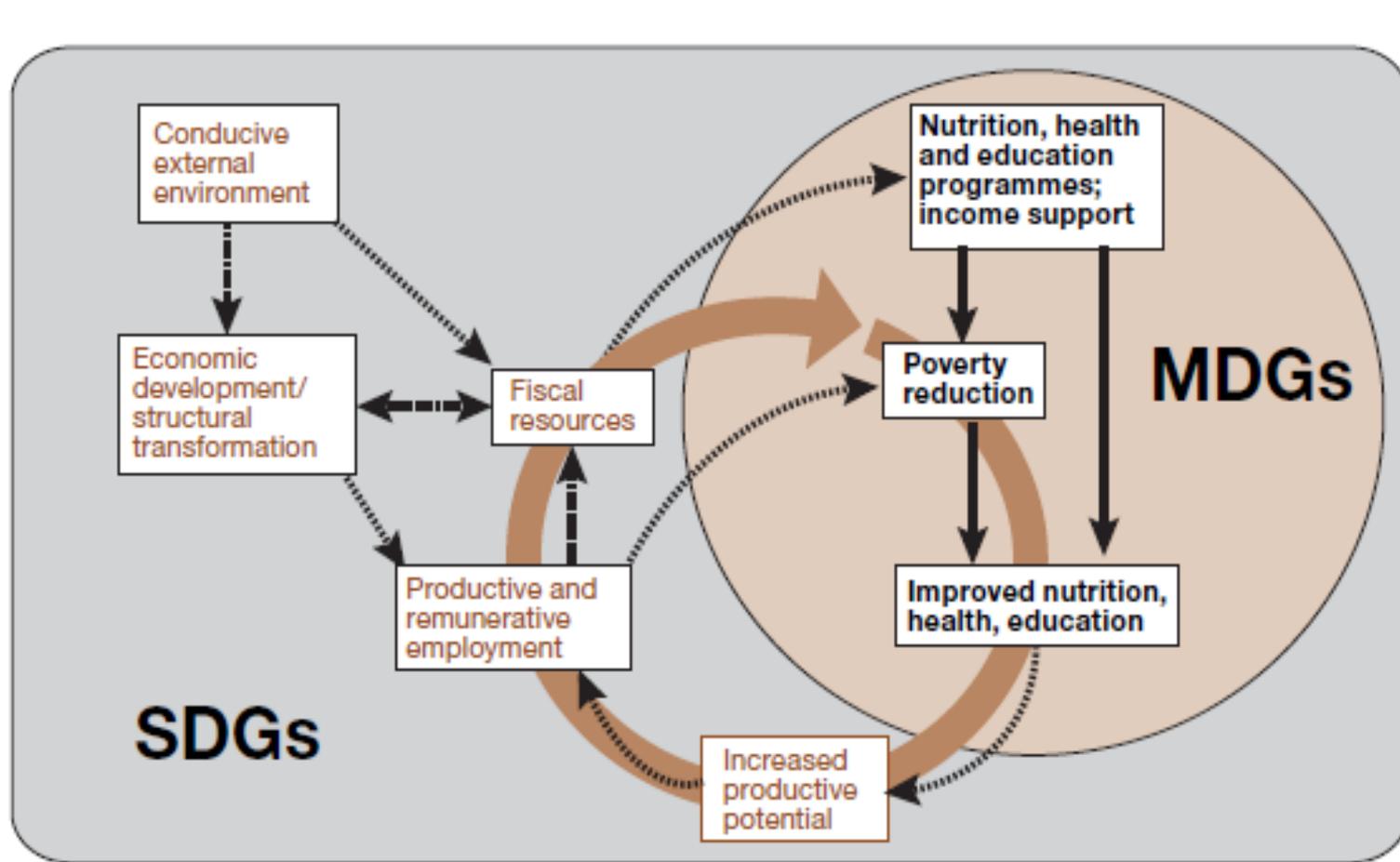
1. Need to address multiple roles of water --synergies
 2. Address inequity of access: countries achieved targets by focusing on “low hanging fruits”, neglecting the poorest
 3. Despite improvements, more work on data collection, analysis & use
- Base SDGs on sustainability in the context of planetary system changes & emerging “nexus” perspectives
 - Prioritize policy & institutional reform & capacity strengthening at all levels

TO ACHIEVE EQUALITY, PROGRESSIVE REDUCTION OF INEQUALITIES

UNICEF-WHO JMP



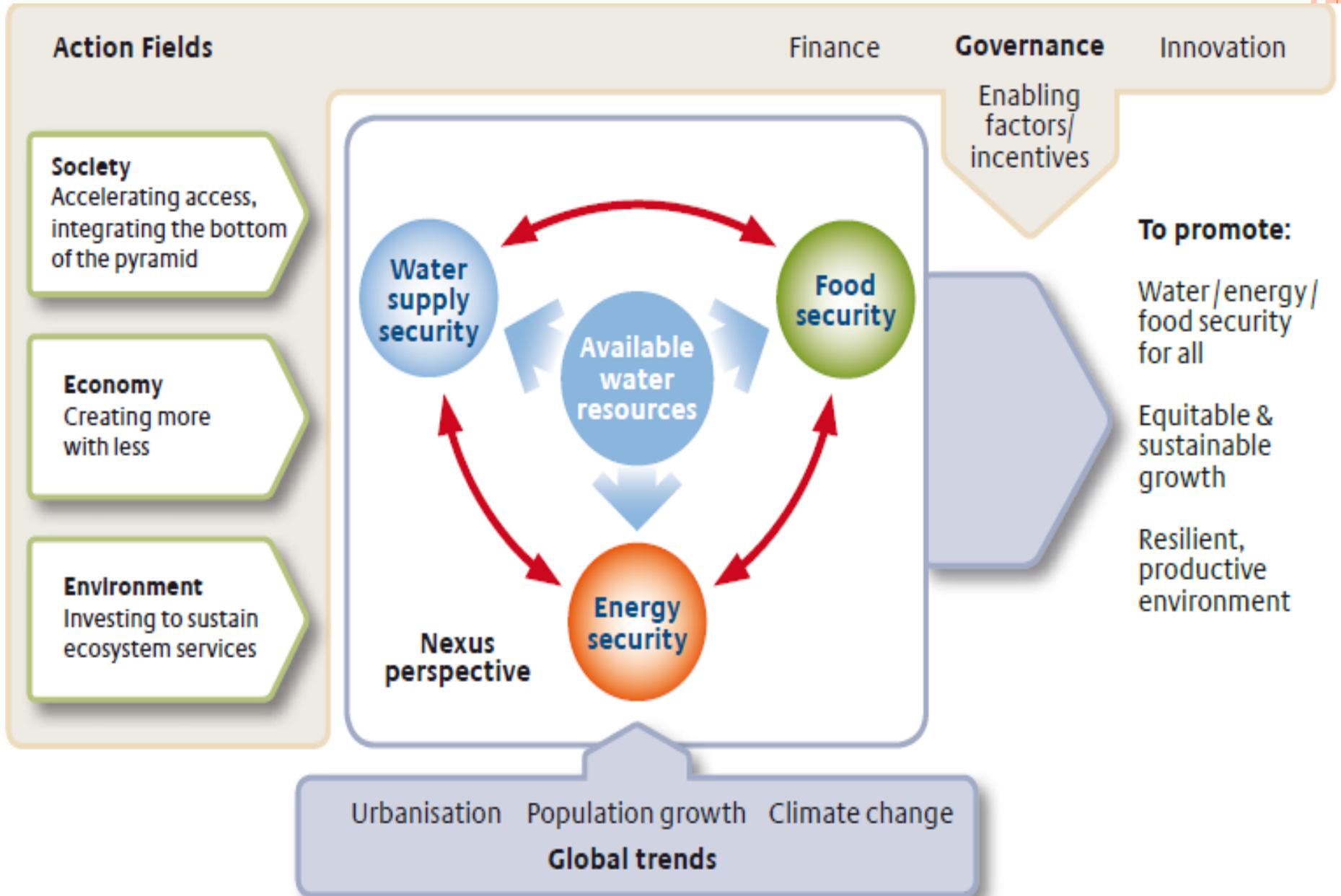
A FRAMEWORK FOR INTEGRATING ECONOMIC GROWTH AND SDGs FROM UNCTAD



“NEXUS”: WHY IS IT IMPORTANT?

- “Normal” professional thinking is narrowly focused within sectors
- Reinforced by institutional silos that arbitrarily separate domains
 - E.g. specialized ministries, departments with narrow mandates
- Critical interdependencies water, energy, food security; & underlying natural resources – water, soil and land and related ecosystems
 - Ignoring these leads to contradictions [e.g. mobilizing water for energy at the expense of food production], resource degradation, & reduces systemic efficiency

WATER-FOOD-ENERGY NEXUS [AFTER HOFF 2011]



- A “nexus” approach tries to reduce trade-offs and enhance the efficiency of the entire system rather than increasing the productivity of specific sectors, often at the expense of other sectors

Essentially an approach based on a systems perspective

Larger context—Planetary Boundaries

EXCEEDING PLANETARY SYSTEM BOUNDARIES [CLIMATE CHANGE, BIODIVERSITY, NITROGEN CYCLE EXCEEDED]

Rockström et al.
2009

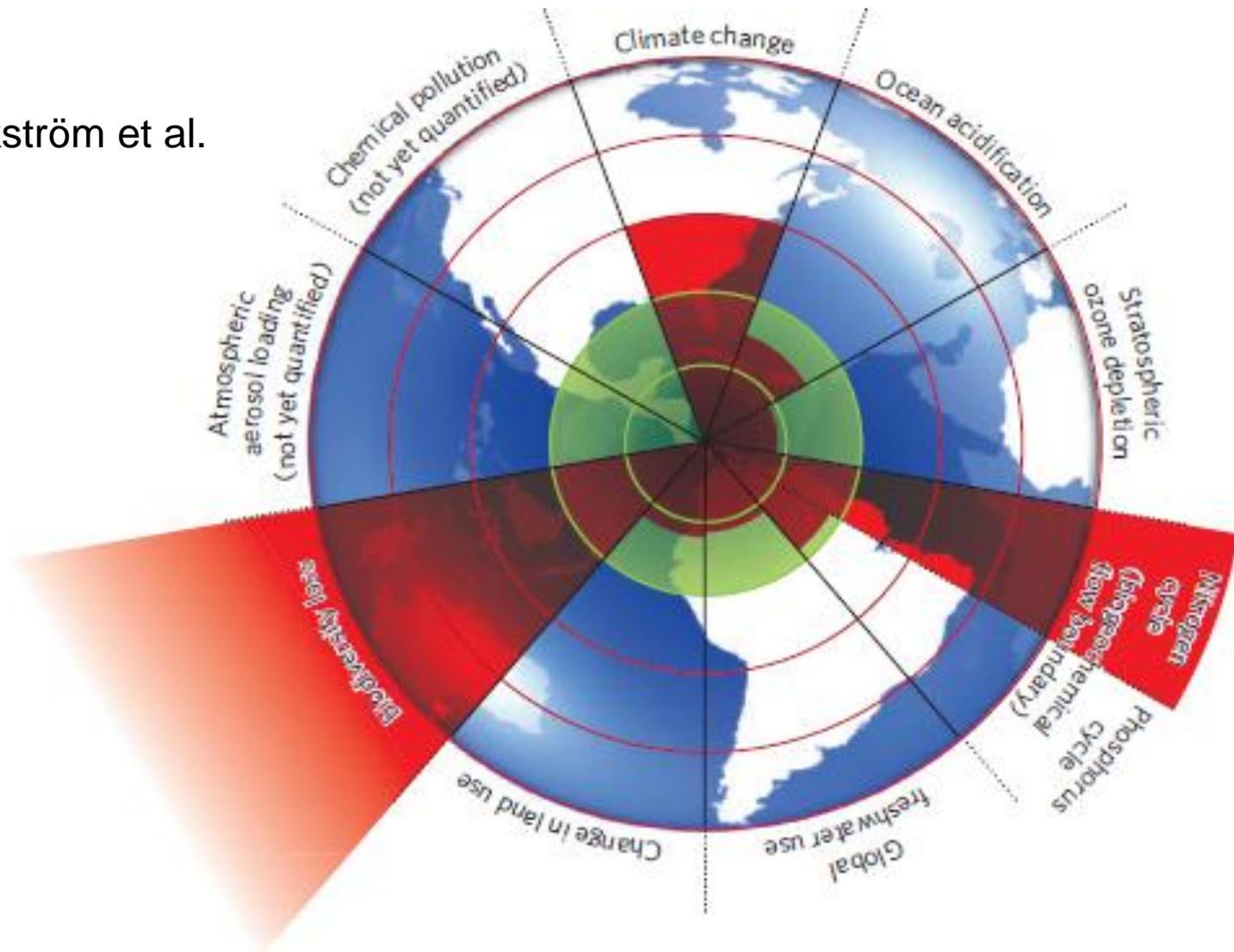
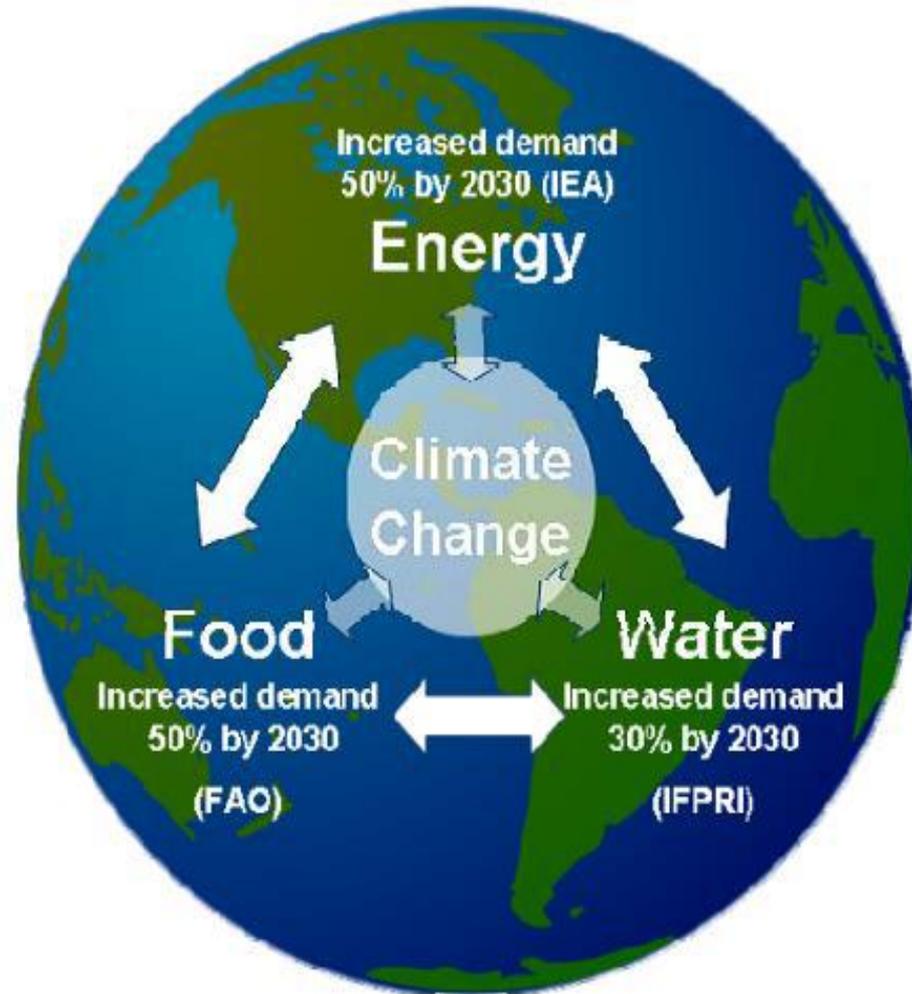


Figure 1 | Beyond the boundary. The inner green shading represents the proposed safe operating space for nine planetary systems. The red wedges represent an estimate of the current position for each variable. The boundaries in three systems (rate of biodiversity loss, climate change and human

PERFECT STORM SCENARIO

BEDDINGTON



It is predicted that by 2030 the world will need to produce around 50 per cent more food and energy, together with 30 per cent more fresh water, whilst mitigating and adapting to climate change.

WATER-FOOD SECURITY-ENERGY-CLIMATE CHANGE NEXUS

- “Nexus” applies broadly to interactions, tradeoffs, potential synergies
- Relates directly to several proposed SDGs:
 - **Goal 2**, achieving food security & promoting sustainable agriculture
 - **Goal 6**, ensuring the availability & sustainable management of water & sanitation for all
 - **Goal 7**, ensuring access to affordable, reliable energy for all
 - Impinges on others, e.g. transboundary water sharing
- Climate change → uncertainties, inter-sectoral tensions
 - Negative impacts through water: droughts, floods rising seas

ACHIEVING ONE GOAL AT EXPENSE OF OTHERS?

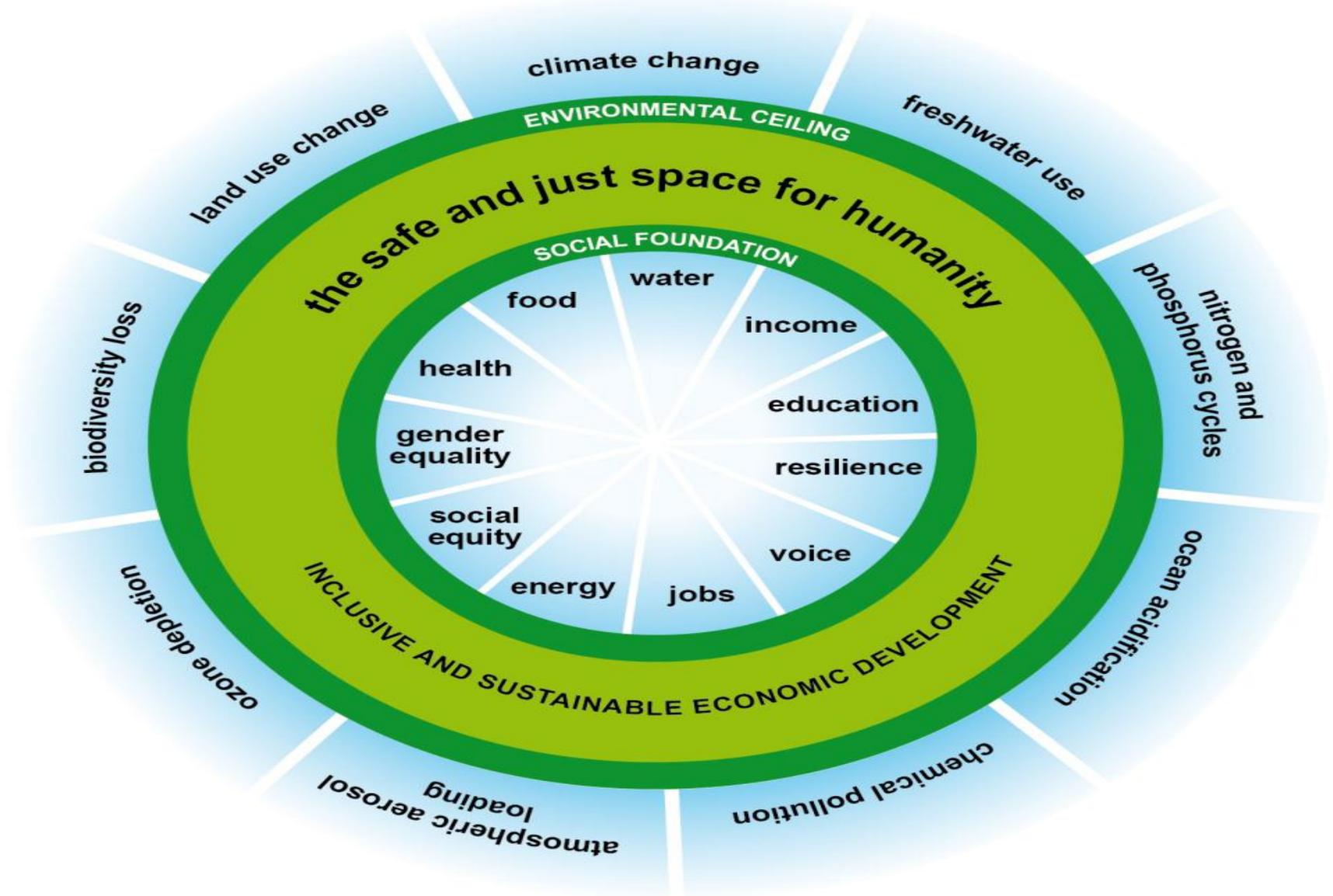
- Rapidly rising demand for energy & water
 - 90% of energy now produced is water-intensive
 - Agriculture largest user of water
 - Agriculture & food chain account for 33% of energy demand
 - Biofuels = largest source of growing agricultural water demand
- Renewable energy [solar, wind] not water-intensive [IRENA]
→ potential positive synergies
- Inherent tensions among proposed SDG Goals & Targets as currently formulated
 - E.g. water and sanitation (Goal 6), the energy Goal (7), & food security (Goal 2)
 - Achieving these without compromising natural resource base & planetary systems on which life depends will be a daunting challenge

In summary, need to integrate a nexus perspective into proposed SDGs and Targets

ADOPTING A “NEXUS” PERSPECTIVE ON SUSTAINABLE DEVELOPMENT AGENDA REQUIRES:

- Broad conceptual framework integrating SDGs and nexus perspective
 - Including links to “safe operating space” within planetary system and social boundaries
- Pragmatic use of the framework to identify potential trade-offs and synergies among Goals and Targets
- Indicators that monitor **systemic**, not only sectoral, progress
- Maintain focus on improving lives of poor people

A SAFE AND JUST SPACE FOR HUMANITY [RAWORTH 2012]



THE PROPOSED SDG ON WATER AND SANITATION & TARGETS



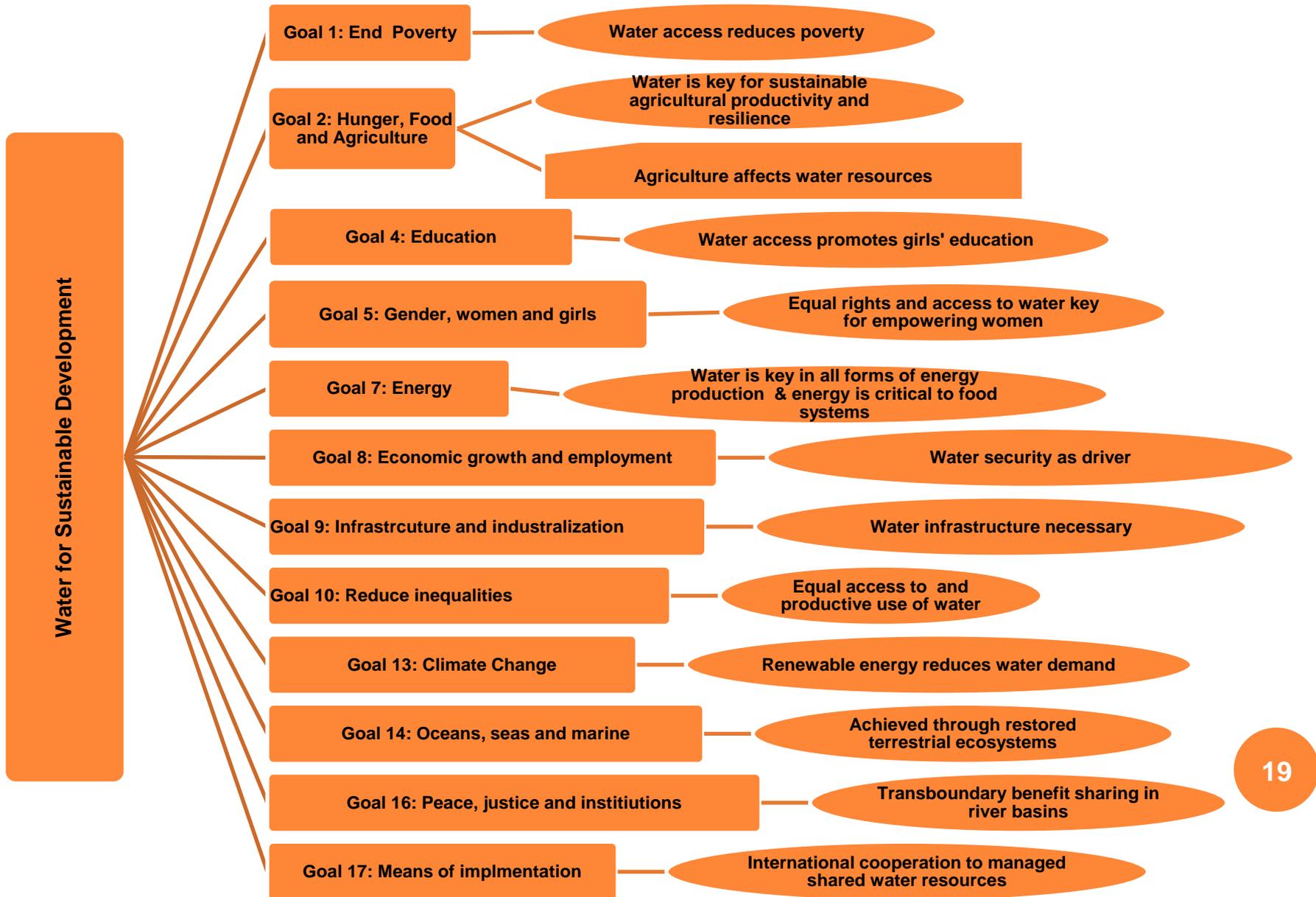
WATER AND THE OTHER SDGs

- Much discussion → how to frame water's role in the sustainable development agenda
- UNU & UNOSD (2013):
 - Water as a sector
 - Water as an enabler of other goals
 - Water as supporter of economic & social development
- Currently, aside from Goal 6, limited roles of water identified
 - Focus on environmental protection, not on positive roles in productivity and human well-being

MENTIONS OF WATER IN CURRENT SDGs AND TARGETS [OPEN WORKING GROUP]



INDICATIVE ROLES OF WATER IN PROPOSED SDGs

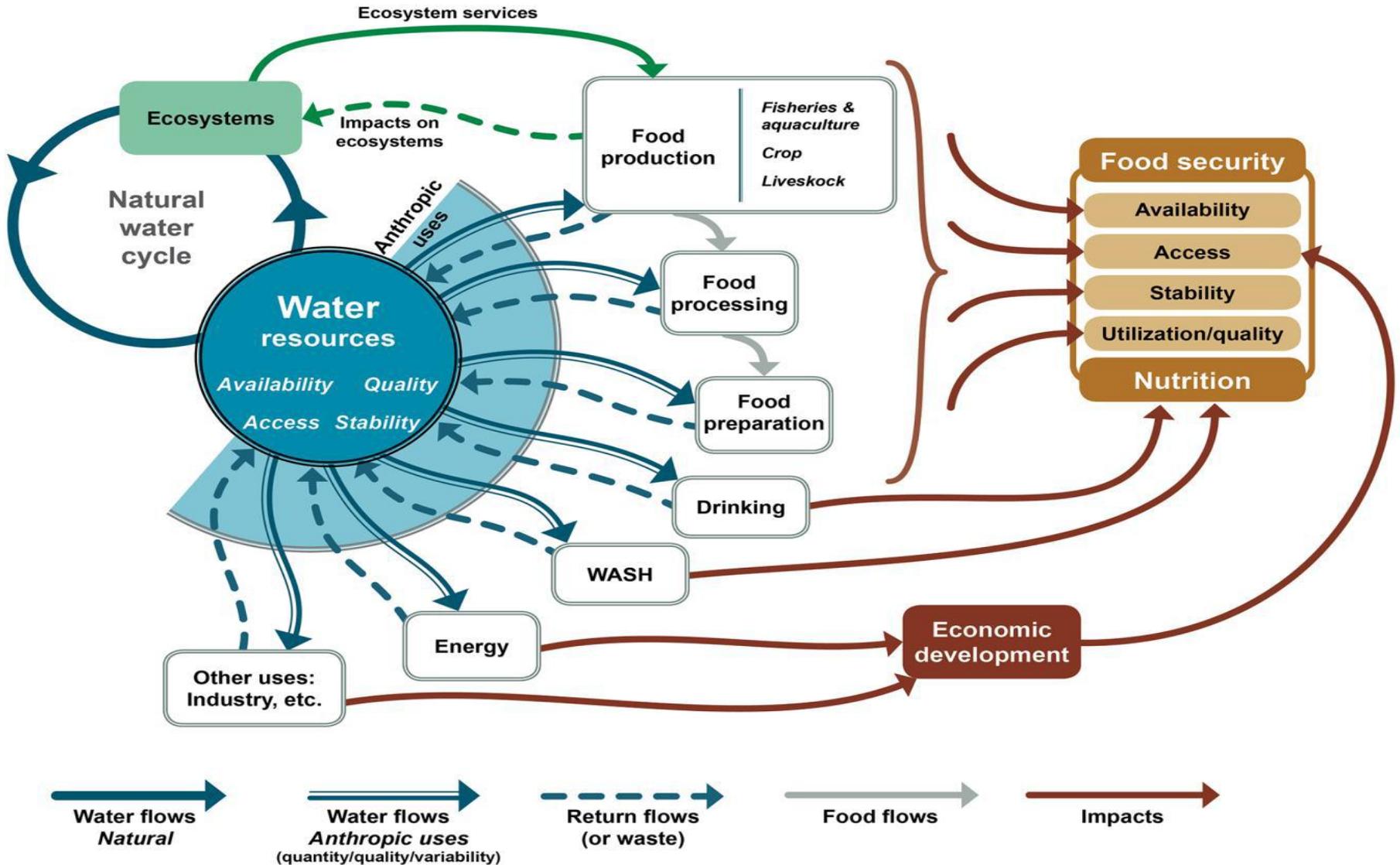


GOAL 2. END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION, AND PROMOTE SUSTAINABLE AGRICULTURE

- Water critically important to achieve this Goal & most Targets, but improving access to & productivity of water is missing, e.g.:
 - Ending malnutrition in all its forms (Target 2.2)
 - Target 2.3, doubling agricultural productivity and the incomes of smallholders
 - Target 2.4 on sustainable, resilient and productive agro-ecosystems
- The major threat to food security, especially of smallholders, is drought. **Reliable, secure access to water is a necessary condition for achieving food security**
- “Sustainable agriculture” may be too narrow—need “food systems” [food value chain] perspective

MULTIPLE LINKAGES OF WATER WITH FOOD AND NUTRITION SECURITY

HLPE COMMITTEE ON WORLD FOOD SECURITY 2015



CONCLUSION

- Water is an enabler – requirement – for achieving all of the core SDGs
- Significant water investments necessary condition to end poverty, hunger, ill-health, etc.
- Water could be given more emphasis in future agenda
- Two suggestions:
 - 1. Include a target to improve access to water for agricultural and other productive purposes [Goal 2]**
 - 2. More attention to policy & institutional reforms**

KEY MESSAGE

Replace narrow sectoral perspective with systems perspective

- **Humans are integral part of complex ecosystems and planetary systems**
- **Destroying these systems will threaten “The Future We Want”**

RECOMMENDATIONS

Water & Other SDGs

1. Investments in water as enabler & entry point for equitable and sustainable socio-economic development should be explicit.
 - **Enhancing access to water for productive use should be strongly emphasized in addition to access for domestic use and ensuring ecological sustainability.**
2. Revise Goal 2: “**end hunger, achieve food security and good nutrition, and promote sustainable agriculture and food systems**”, and include water in its Targets
3. Water professionals should continue working to ensure that water is explicitly included in final SDG targets, & appropriate indicators are included

RECOMMENDATIONS

Water & Nexus Issues

4. Frame a broad but easily communicated conceptual integrative framework drawing attention to critical nexus issues.
 - Include specific linkages to planetary, social boundaries
 - Use this nexus framework to critically proposed SDGs & targets to identify both serious trade-offs & potential synergies
5. Identify measurable useful indicators that can be used to monitor *systemic* as well as sectoral progress



"IF THERE IS MAGIC ON THIS PLANET, IT IS CONTAINED
IN THE WATER."

LOREN EISLEY