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Connecting the agricultural and WASH sectors in self supply and community-based water tenure

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Innovative water solutions for sustainable development

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The new normal in the agricultural sector : supporting Farmer-led Irrigation Development (FLID)

IWMI's systemic support to FLID: 'Innovation Bundles' in a Water, Energy, Food WEF Nexus

Understanding the community's gendered production systems
Partnering with farmers and input providers and markets

Bundling support to:
a) Infrastructure to access water:

- Water technologies supplies and training – climbing the water ladder (e.g., waving import tariffs)
- Energy (manual 'yellow engine', electricity, solar)
- Financing facilities

b) Expertise to turn a water use into food, nutrition, and income

- Input and output markets
- Agronomy
- Training and capacity development






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Connections between FLID and WASH self supply

Findings FLID:

- Biased towards wealthier males
- Infrastructure is multi-purpose, certainly at and around homesteads (drinking, other domestic uses, livestock, other)
- Water is shared with neighbours, or sold, for domestic uses and also irrigation

Connection with Simple, Market-based, Affordable Technologies in WASH

- Leaving no-one behind
- Feminist intersecting domestic and productive spheres
- Ensuring that 3 lpcd is safe for drinking with point-of-use treatment

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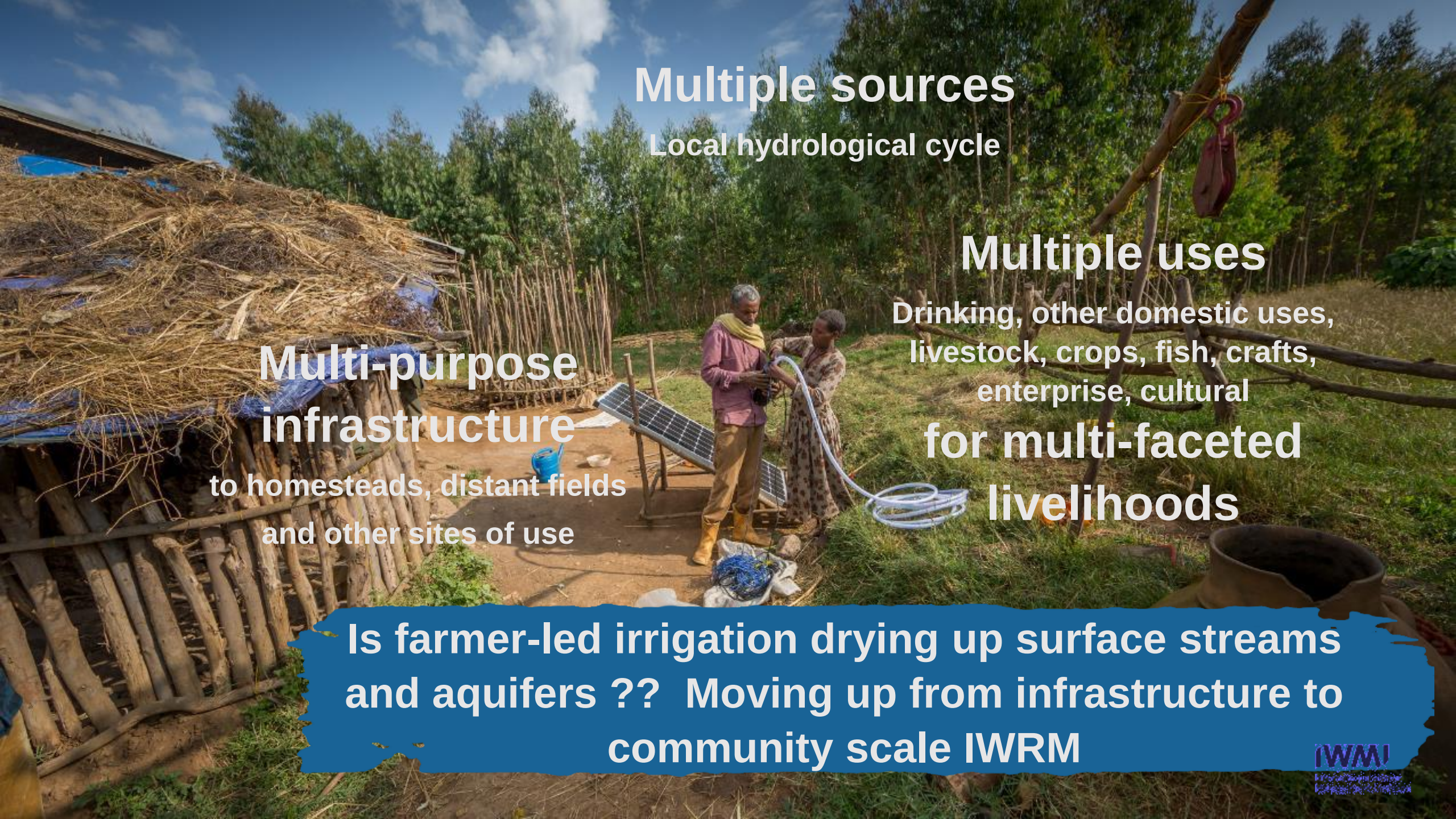

Multiple sources
Local hydrological cycle
Multiple uses
Drinking, other domestic uses, livestock, crops, fish, crafts, enterprise, cultural
for multi-faceted livelihoods
Multi-purpose infrastructure
to homesteads, distant fields and other sites of use
Is farmer-led irrigation drying up surface streams and aquifers ?? Moving up from infrastructure to community scale IWRM
IWMI

Community-based water tenure – key features

- abstracting water from multiple, variable natural surface and groundwater resources
- storing and conveying that water through multiple self supply and public infrastructures to homesteads, distant fields and other sites of use
- for multiple domestic and productive uses for intersecting health and wealth
- age-old, dynamic local norms to deal with climate variability, but growing competition

Water resource sharing

Winners and losers when storage cannot be increased or aquifers accessed

Boran: *"Water is either a source that you 'share in' as a member of a descent-based collectivity, or one that you 'share out' to signify respect"*

Source: Dahl and Megerssa 1990

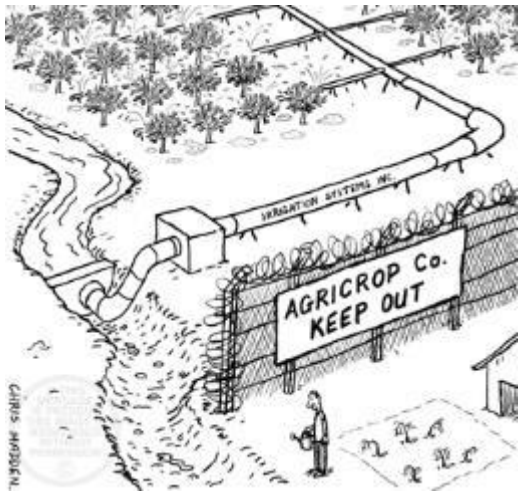
'Sharing in' within a community: birth/marriage rights to water resources on and under community's territories; prioritizing everyone's domestic and basic productive uses; conflict resolution

'Sharing in/out' along pastoral routes e.g., zoning wells; priorities livestock – human uses

'Sharing out' with neighbouring communities: e.g., informal river boards along hill furrows Tanzania

Source: Komakech 2013

'Sharing out' with powerful third parties: decolonizing water legislation



Inequalities in natural water resource distribution between formal and informal water economies

*Wami Ruvu Tanzania: **30 registered users use 93%; 930 use 7%**
*South Africa Inkomati Catchment: **7% largest registered users use 84%; 30% smallest use total 0,01%**
* South Africa Olifants basin: **Gini coefficient 0.96**

Colonial water legislation in Latin America and sub-Saharan Africa: permits for minority settlers, over-riding customary water tenure.

Contemporary state as public trustee imposes permits on all users above a threshold: the powerful administration-proficient high-impact users get lawful access; the informal majority cannot be reached logistically

Domestic uses and basic productive uses are ‘negligible’ and exempted from permits, so invisible

Even if basic domestic uses or all exempted uses are lawfully prioritized, there is no enforcement.

Social justice in water resource allocation

- Prioritize water resources that meet human rights to water *and food*; monitor and enforce
- Respect and protect customary water tenure in sharing out of water resources
- Target permits with strict conditions at the few high-impact users, with lowest priority

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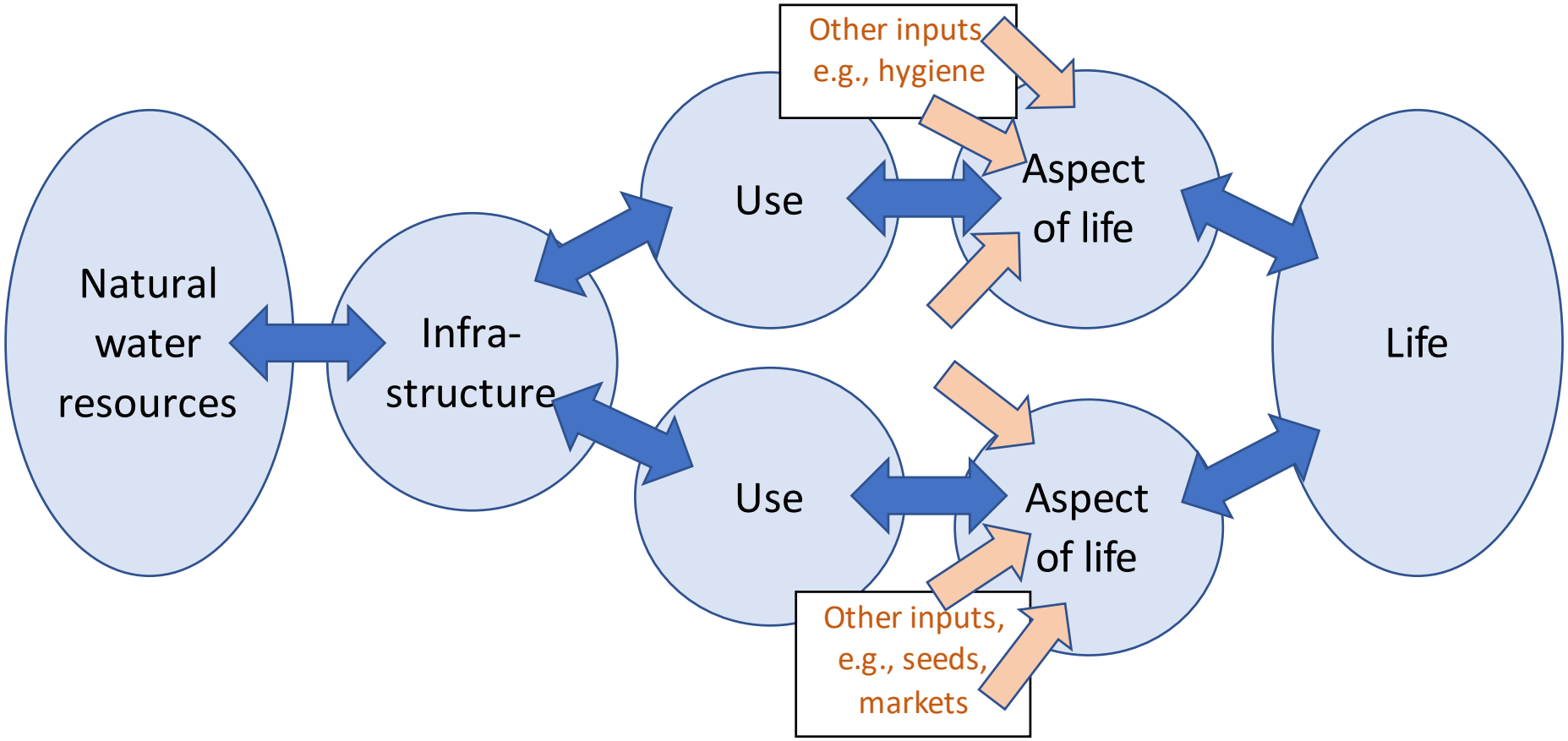
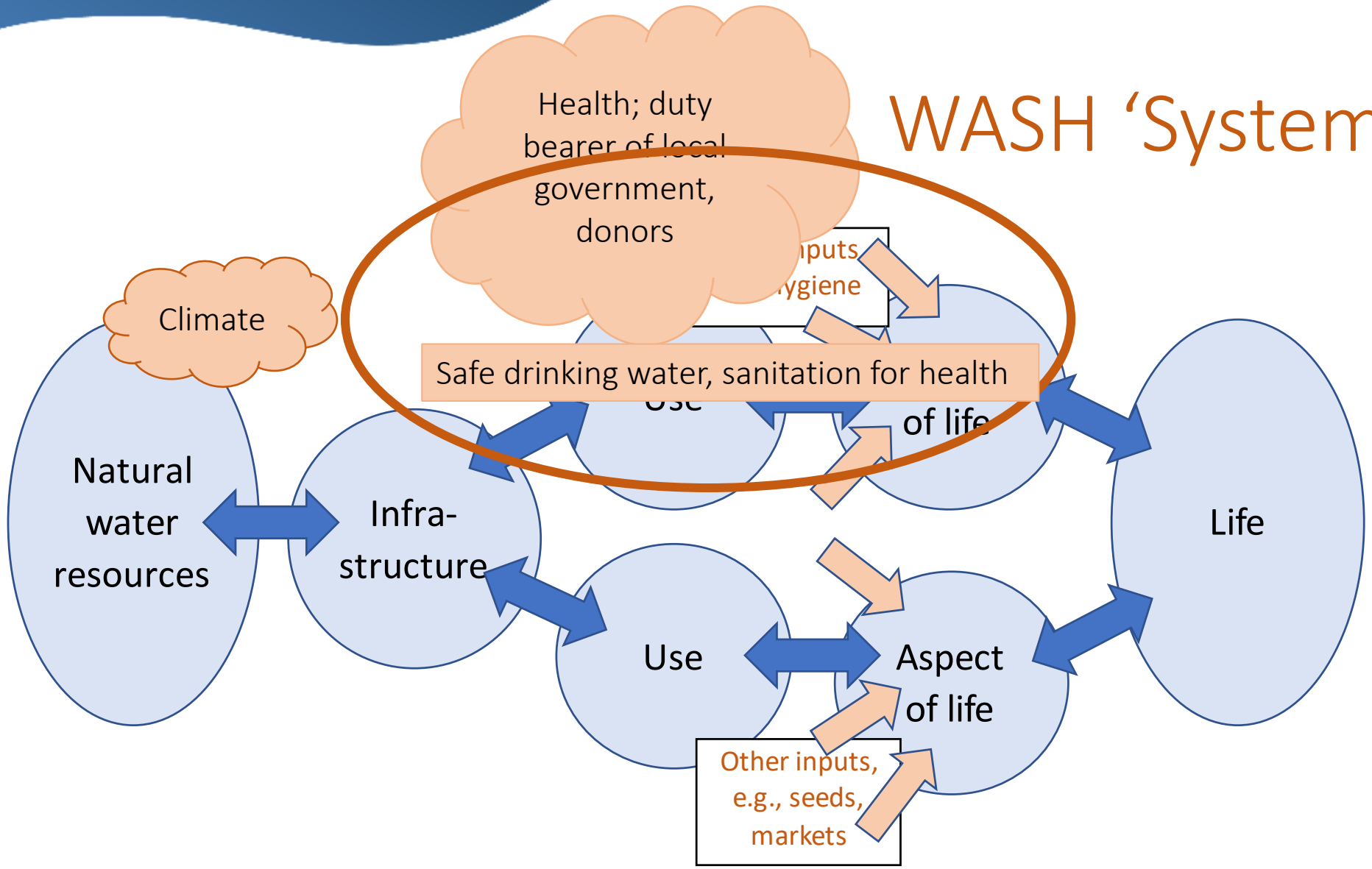
Key example groundwater overdraft: when deep-boring high-impact users deplete aquifers, the shallow wells for domestic uses dry up first.

Totally ignored outside WASH sector, hidden behind sectoral silos!
Breaking silos: recognize intra-sectoral differences and rural people's multiple water needs

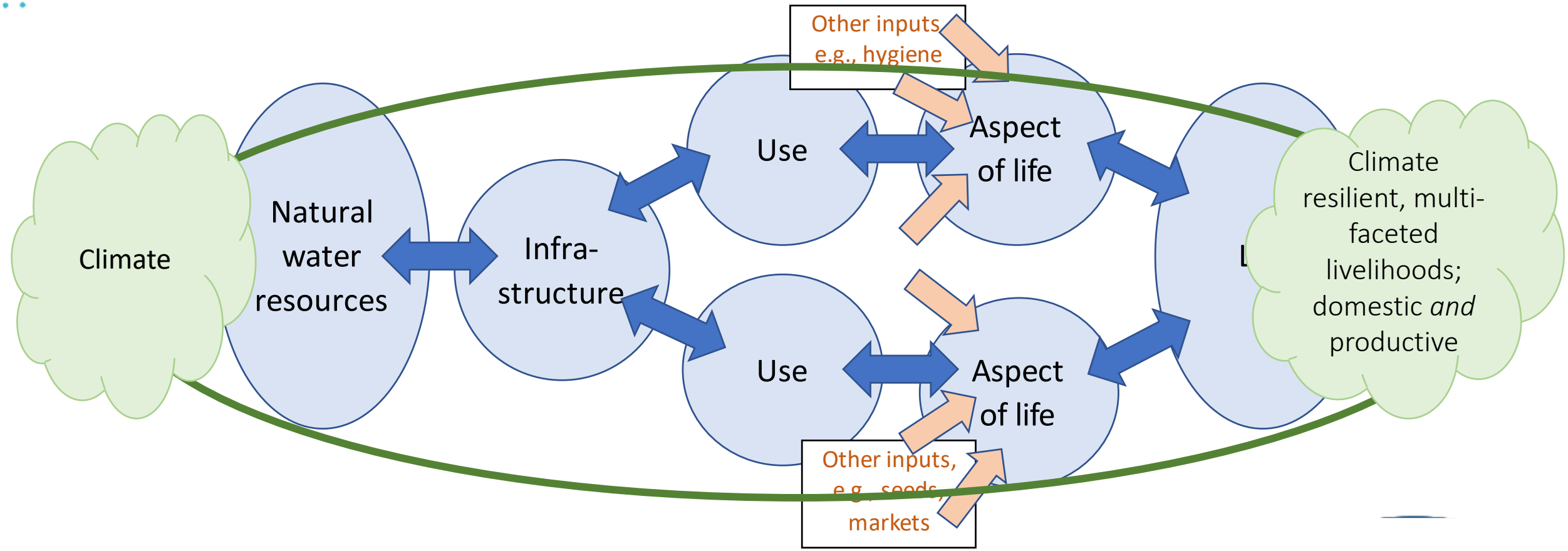
Sectors and systems in linking natural water resources and multi-faceted life



WASH 'Systems'



‘Livelihood systems’ in water tenure



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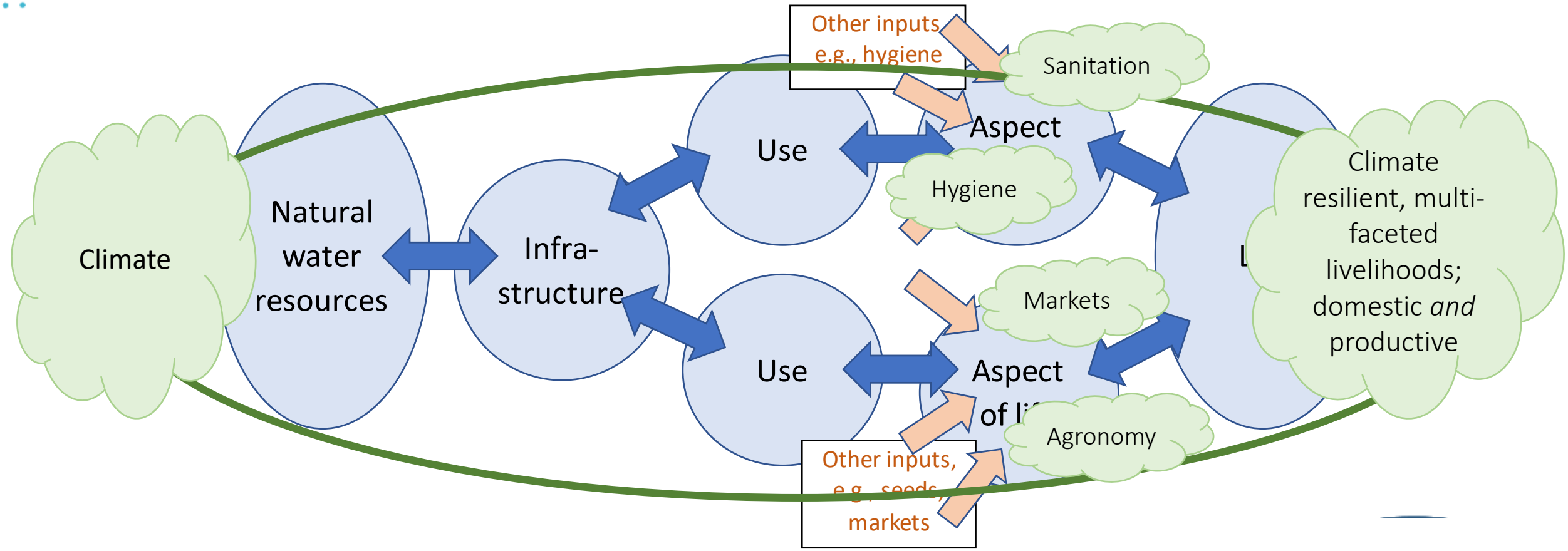

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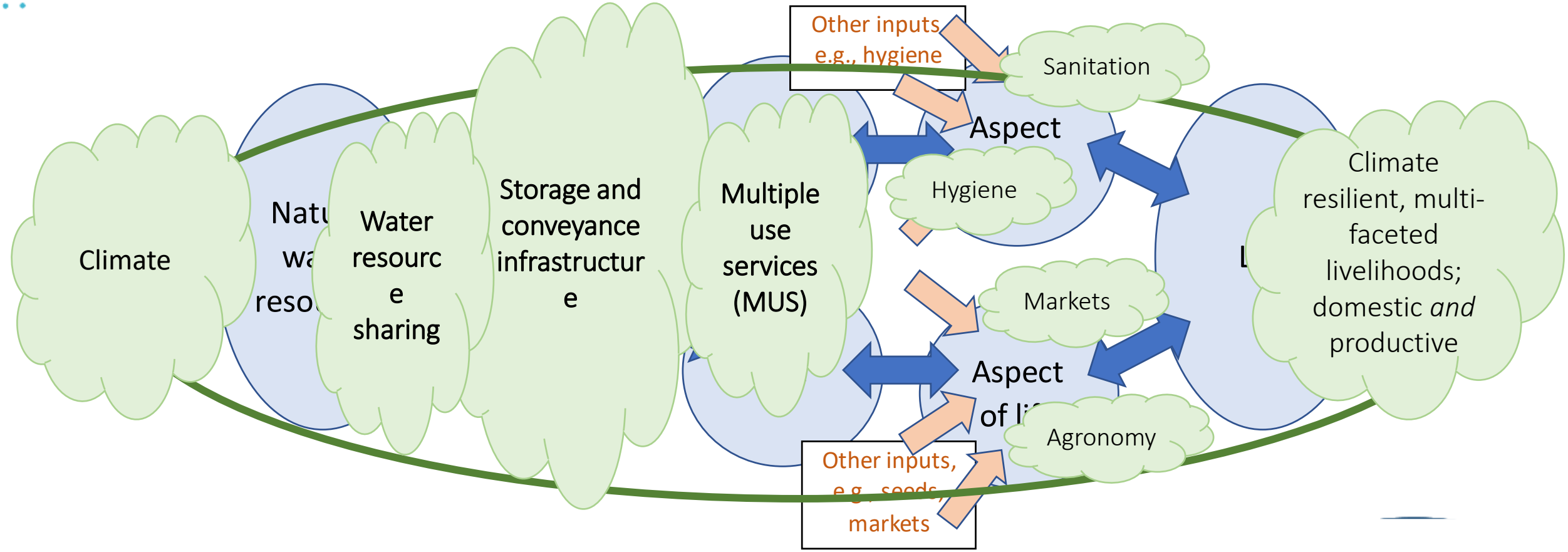

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