OCP Policy Center Conference series

Water, food, trade – Energy and climate change

Tony Allan

11-13 June 2014

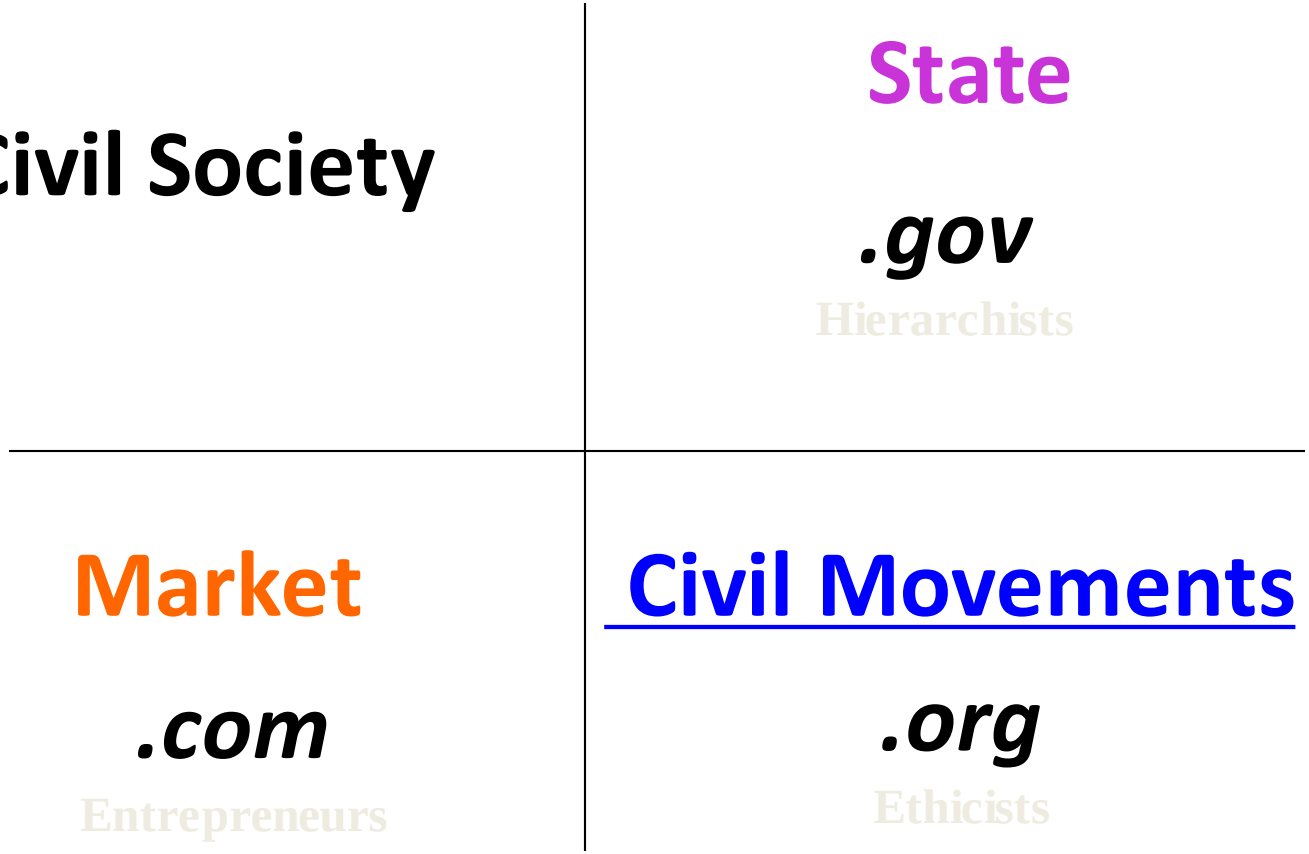
Agreeing assumptions

1 Who is involved
Public - Private - Civil Society
and in what political economy contexts

2 Previous and new development eras?

1 Who The 3 contributing social solidarities

Public/State – Private/Market – NGO



Douglas/Thompson - 'ways of life'

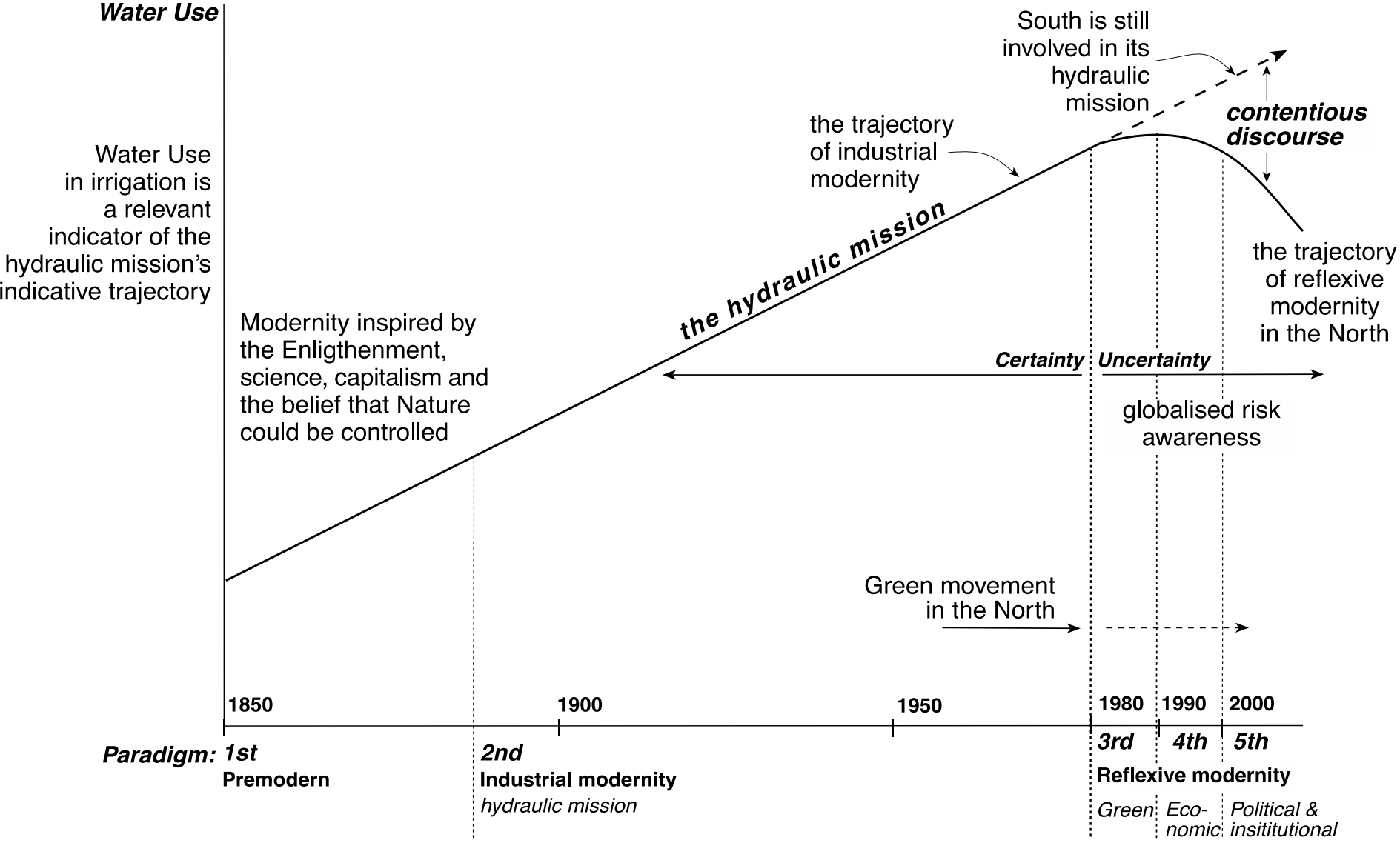
1 Who The 3 contributing social solidarities

Public/State – Private/Market – NGO ON RISK

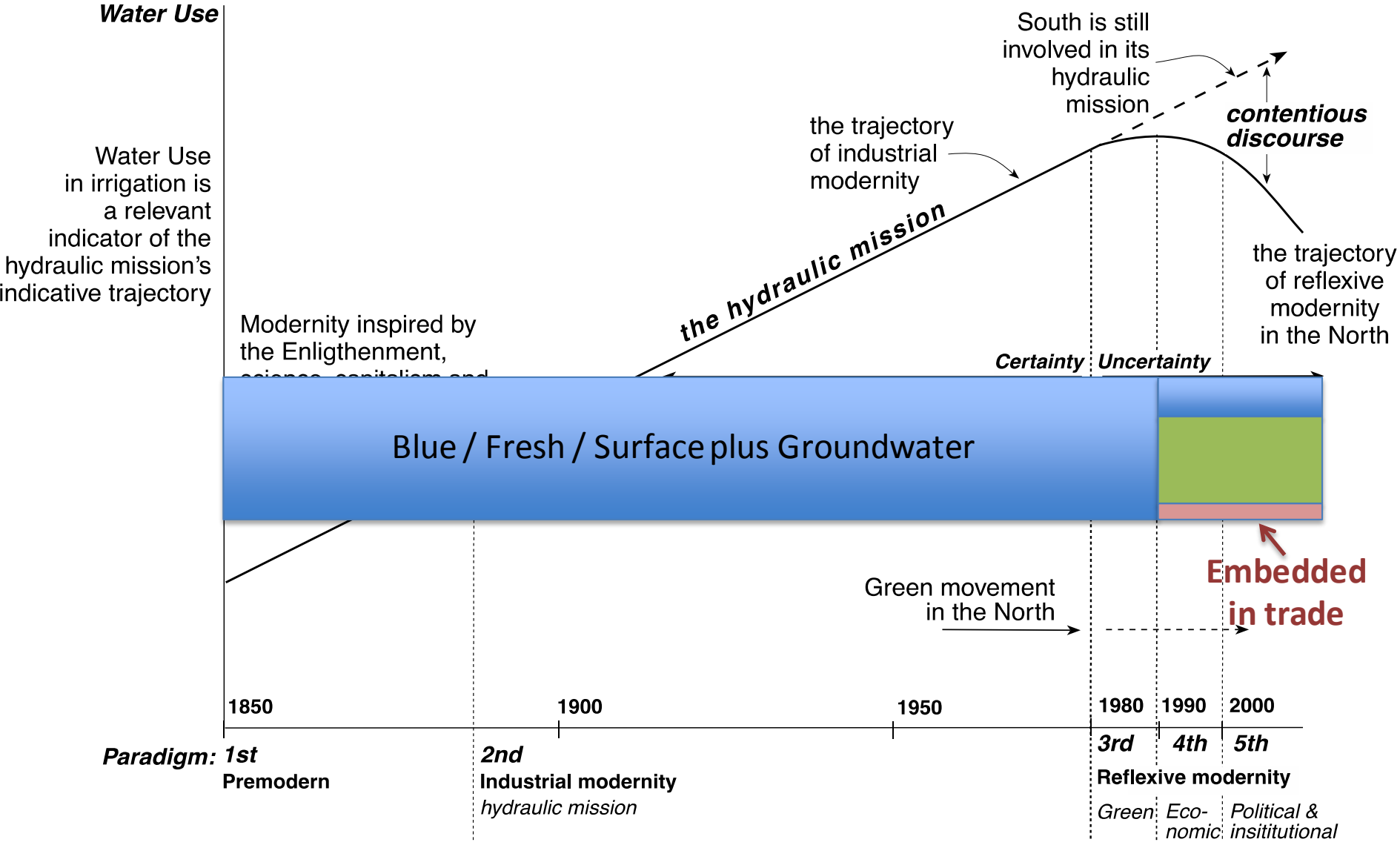
Civil Society	**Risk managing** ***.gov*** Hierarchists
Risk taking ***.com*** Entrepreneurs	**Risk avoiding** ***.org*** Ethicists

Douglas/Thompson - 'ways of life'

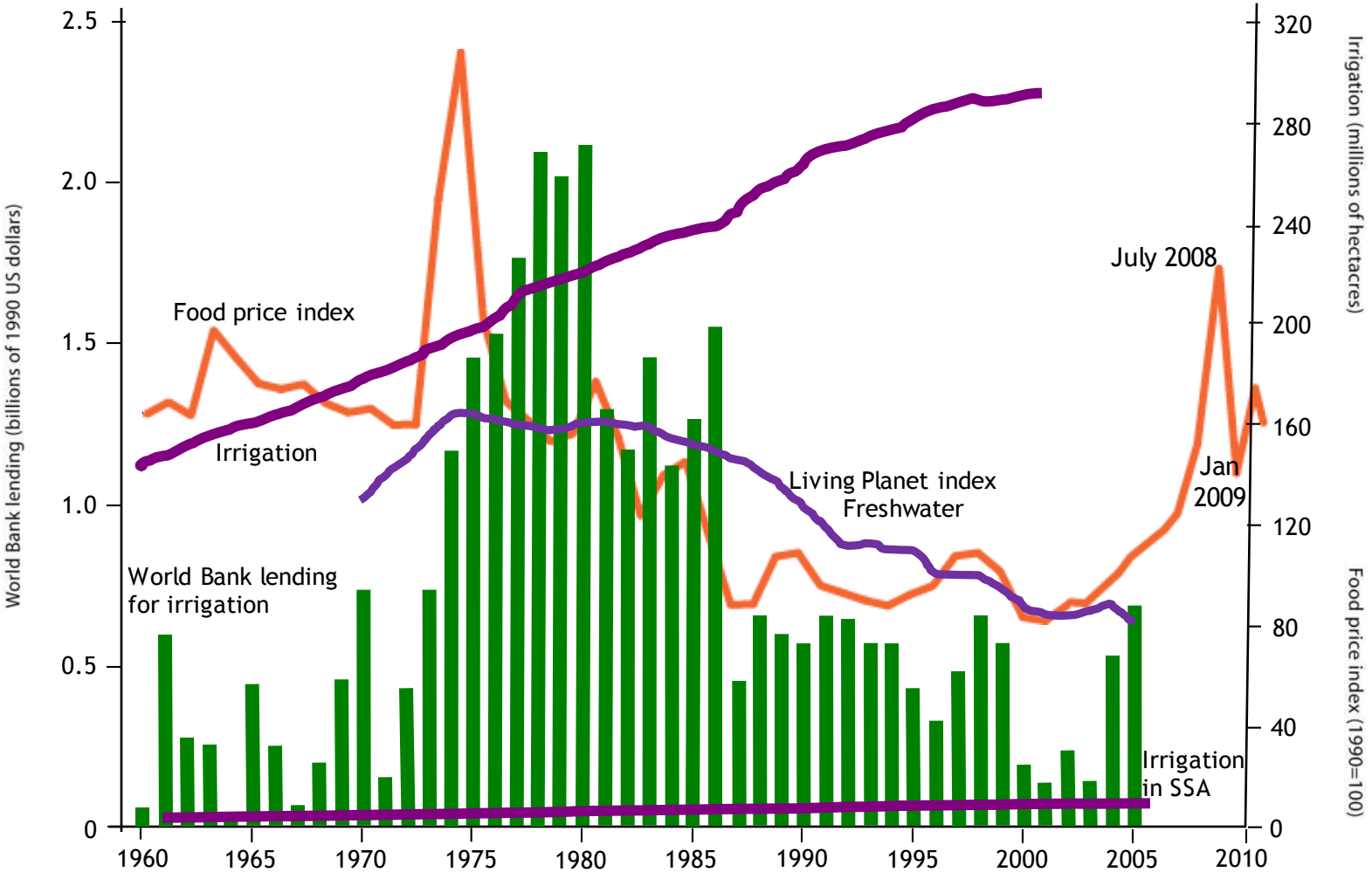
2 Previous and new development eras?



2. Previous and new development eras?



Trends in investment, food prices & environmental impacts



Source: Based on World Bank and Food and Agriculture Organization data.

Comprehensive assessment of water management in agriculture

Will there be enough water?

More people – 6.5 to 9 billion people by 2050

More calories & more meat, fish, milk

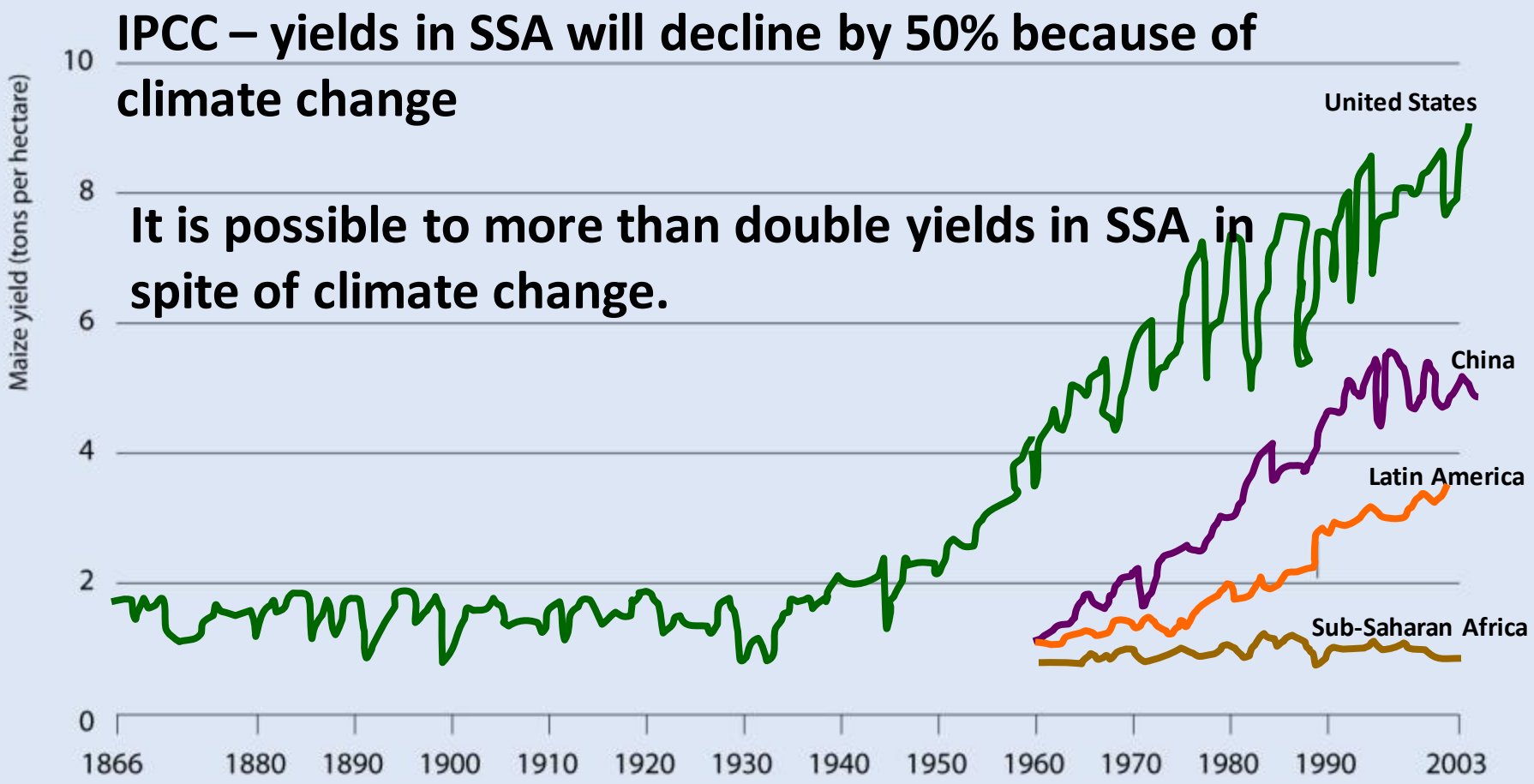
More food production – need to increase grain production by 2050 – 40%? 70%? 100%?

More water for food – via sustainable intensification

Pessimists are wrong but useful

Optimists are right but dangerous?

Growth in Yields



Source: U.S. data, U.S. Department of Agriculture's National Agricultural Statistics Service; all other countries and regions, FAOStat.

Comprehensive assessment of water management in agriculture

IWMI International Water Management Institute

These trends are not understood

These trends are not understood

Nor are the increases in water productivity

Who will deliver water security - FAO

Farmers will save the world

Accountants will save the world

Optimists will save the world

Water demand is determined by consumers
who have beliefs and expectations
that are based
on experience, cultural preferences, history
and NOT on science

Water consumption is mainly determined by the
farmers who manage most of it

Some take away messages
- solutions in the water sector require effective **public/private/civil society engagement**

Sustainable intensification – Increased returns to water and good water resource stewardship.

We must protect farm livelihoods EVERYWHERE so that farmers can protect ecosystems.

We must understand food supply value chains

Waste

Consumption – demography, food choice, individual & environmental health

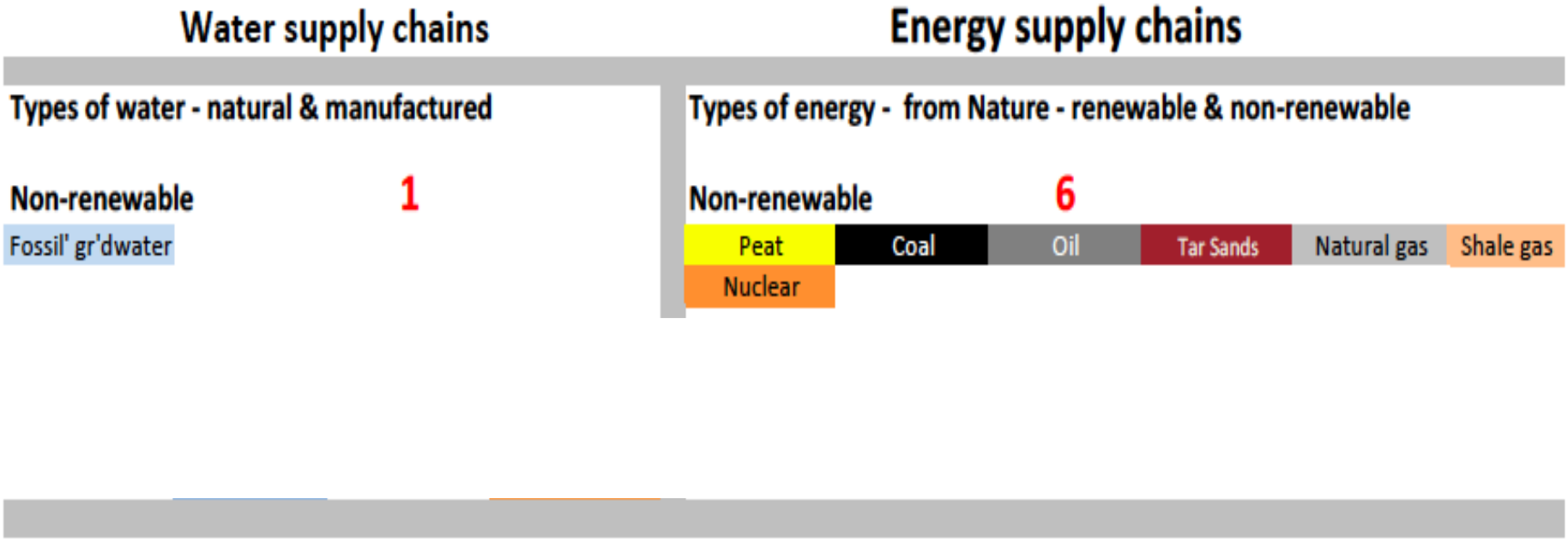
Why do the sub-nexi not synergize as a grand nexus?

Because the centuries of operational food and energy supply chains are managed to produce goods and services via market (private sector) supply chains with inadequate 'rules'.

Existing reporting and accounting rules do not account for natural resources - such as water

- as inputs
- or the consequences of mismanaging them

What types of water and energy are available?



Source: Allan, J. A, 2014, current research.

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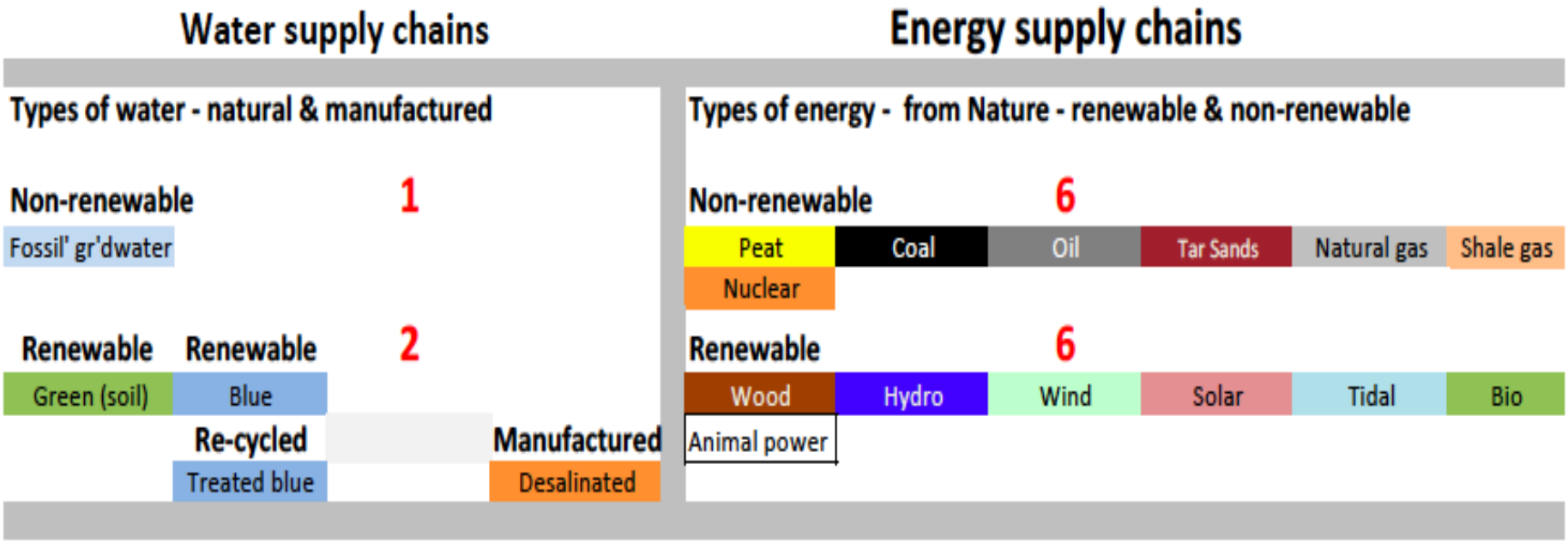

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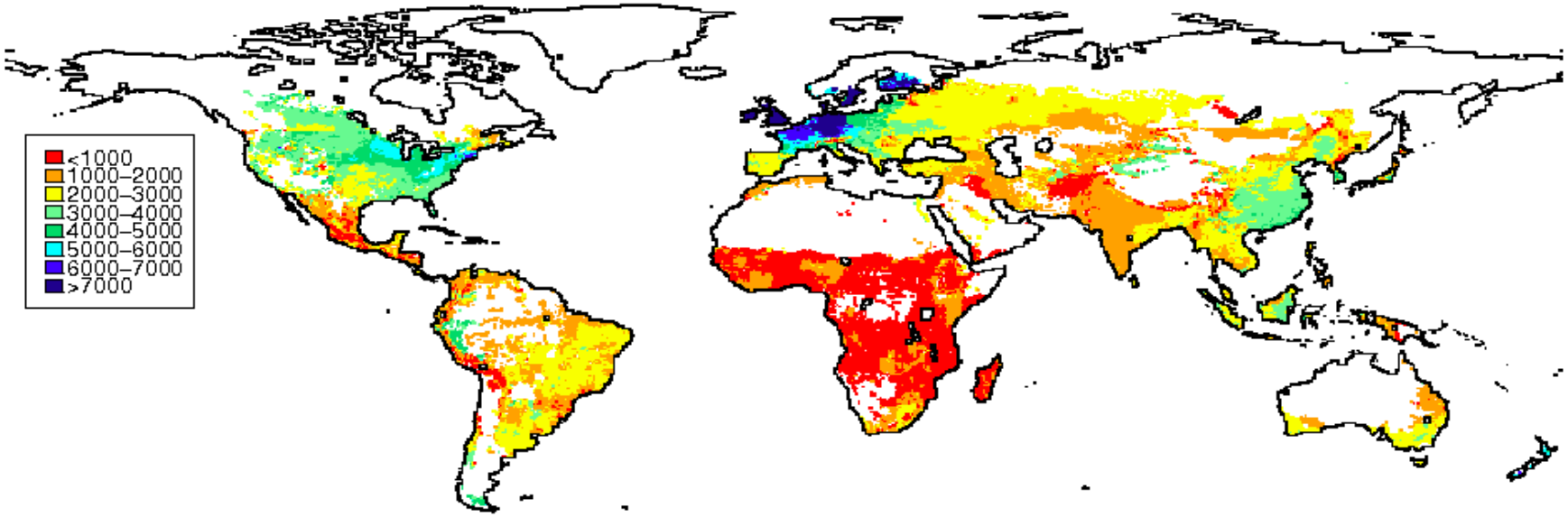
Agricultural water productivity

Farmers manage all the inputs that together determine water productivity



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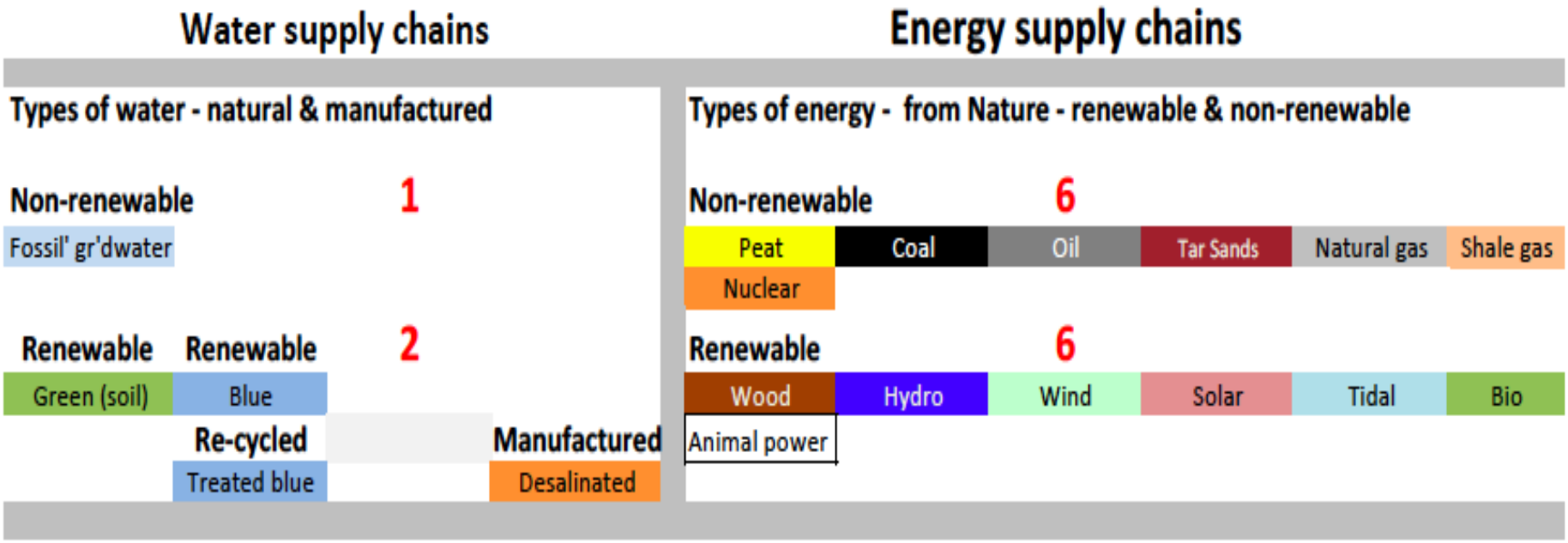


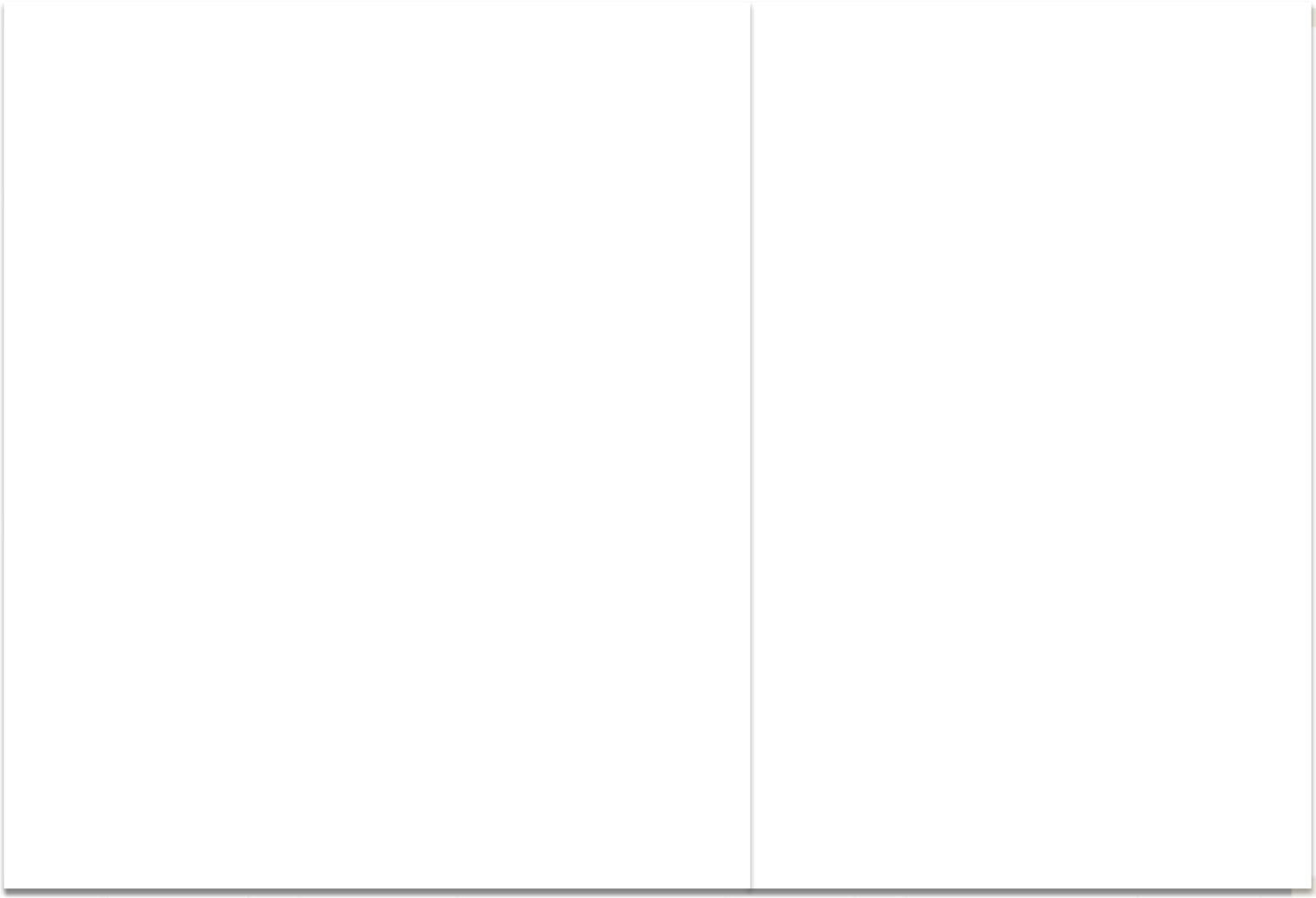
Source: Allan, J. A, 2014, current research.

Very limited substitution

Lot's of substitution and competition

How do we allocate, use, consume and deplete water and energy - in private sector supply value chains?

Global water & energy CONSUMPTION providing goods & services in private sector supply chains



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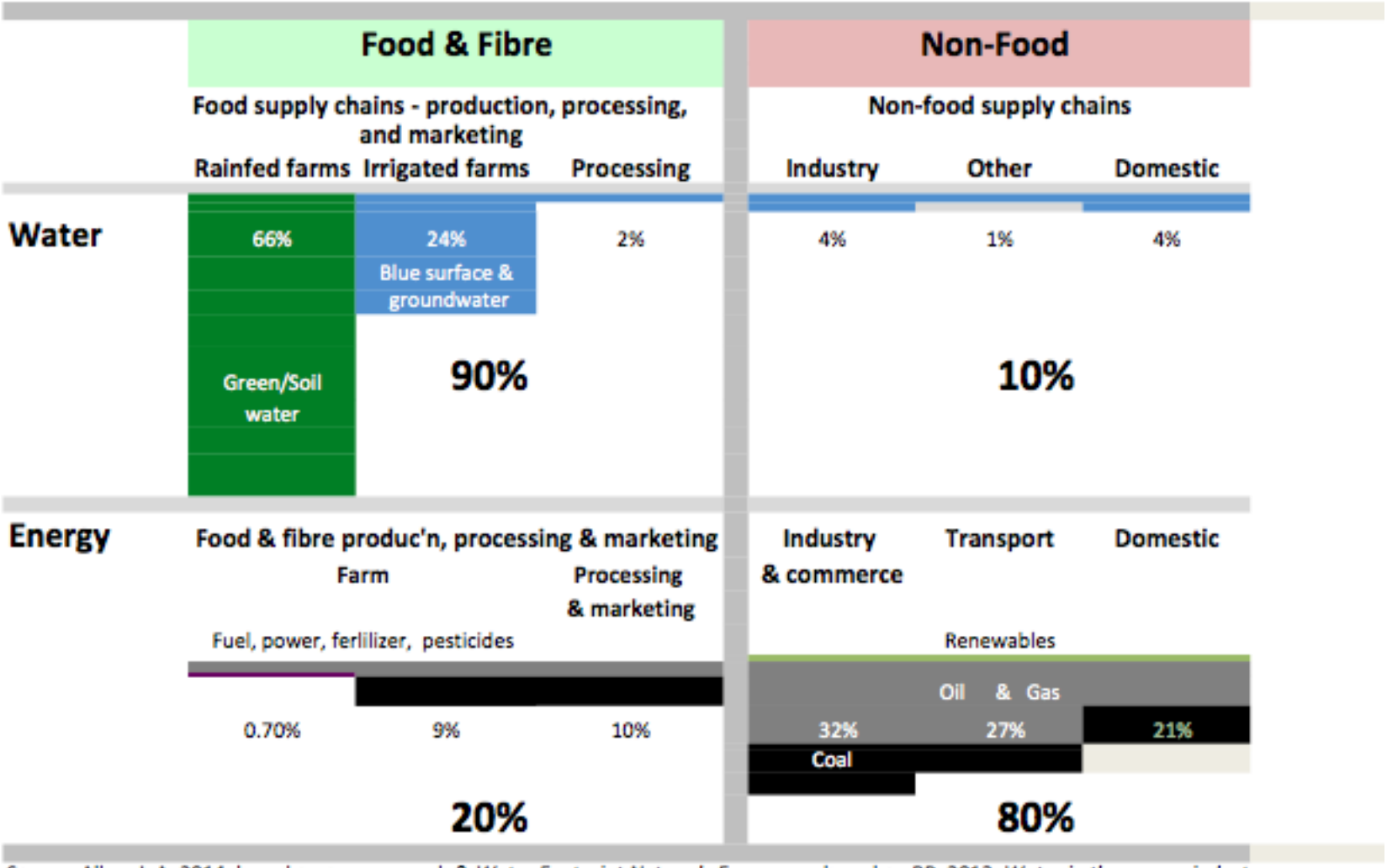

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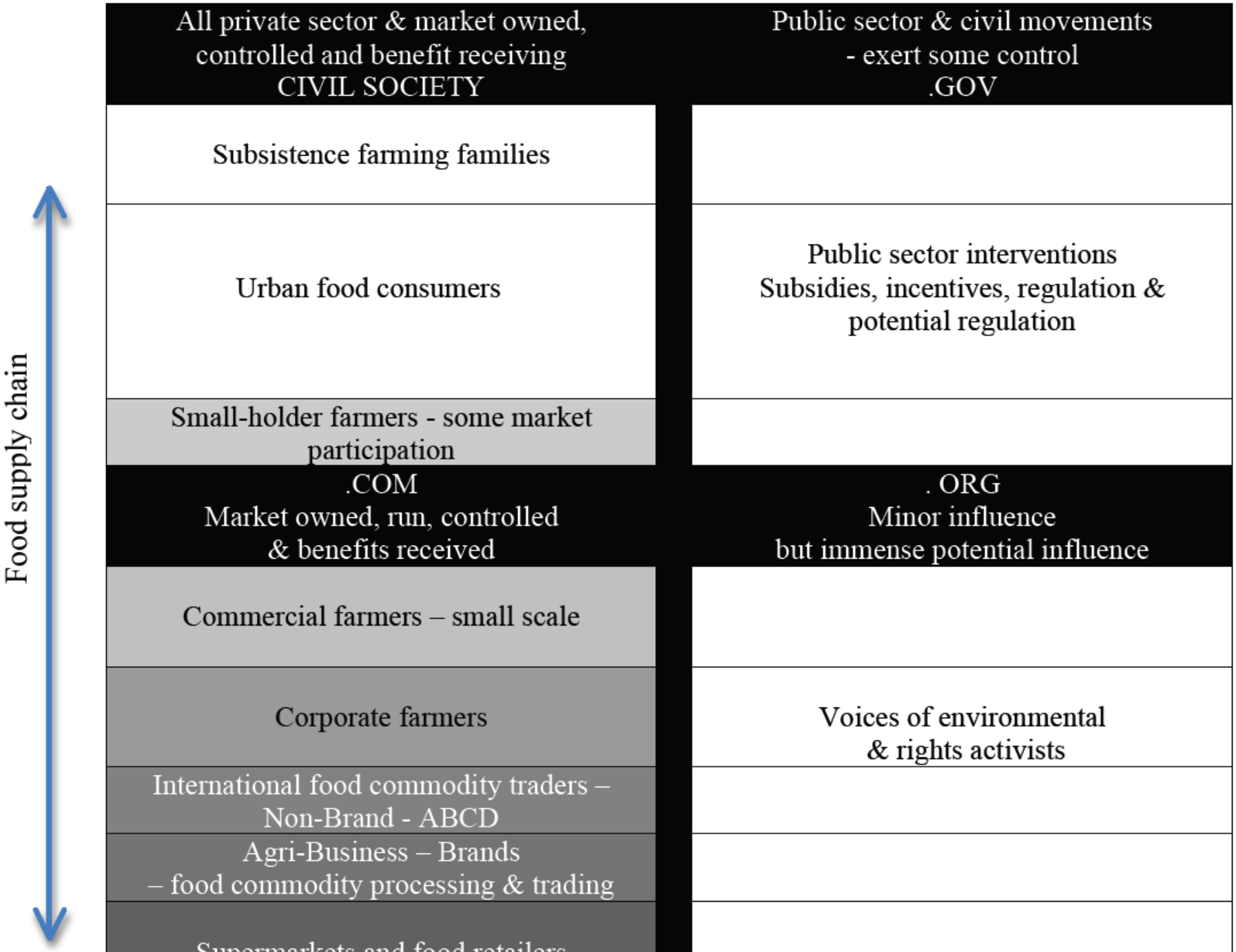
All private sector & market owned, controlled and benefit receiving CIVIL SOCIETY
Public sector & civil movements - exert some control .GOV
Subsistence farming families
Urban food consumers
Public sector interventions Subsidies, incentives, regulation & potential regulation
Small-holder farmers - some market participation
.COM Market owned, run, controlled & benefits received
. ORG Minor influence but immense potential influence
Commercial farmers – small scale
Corporate farmers
Voices of environmental & rights activists
International food commodity traders – Non-Brand - ABCD
Agri-Business – Brands – food commodity processing & trading
Supermarkets and food retailers
Food supply chain


Thank you
ta1@soas.ac.uk
It's what we suspected, he's become a vegetarian

Agricultural water productivity

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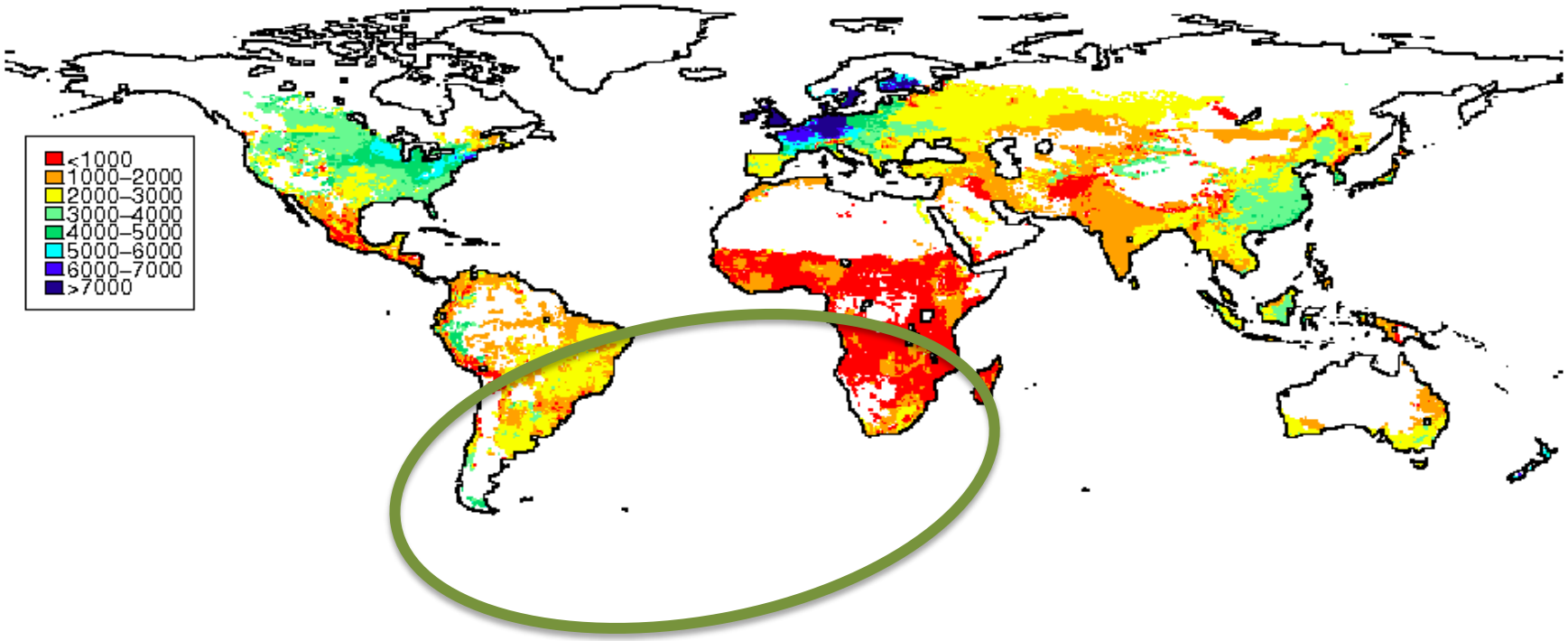


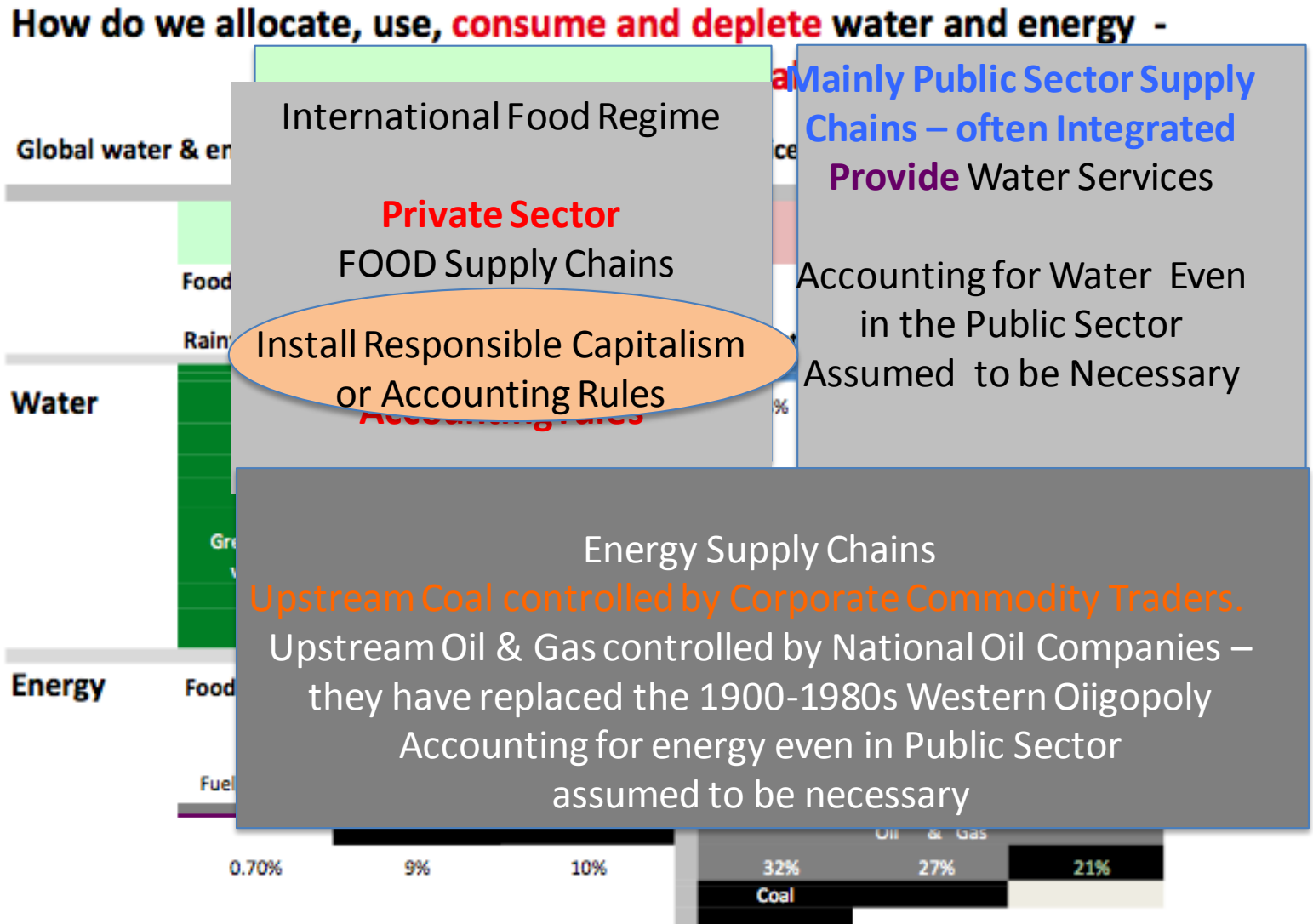
Global Water Security

http://www.dni.gov/files/documents/Special%20Report_ICA%20Global%20Water%20Security.pdf

INTELLIGENCE COMMUNITY ASSESSMENT

ICA 2012-08, 2 February 2012

This is an IC-coordinated paper.


How do we allocate, use, consume and deplete water and energy -
Global water & en
Water
Energy
Food
Rain
Gre
Food
Fuel
0.70%
9%
10%
32%
27%
21%
Coal
International Food Regime
Private Sector
FOOD Supply Chains
Install Responsible Capitalism
or Accounting Rules
Mainly Public Sector Supply Chains – often Integrated
Provide Water Services
Accounting for Water Even in the Public Sector Assumed to be Necessary
Energy Supply Chains
Upstream Coal controlled by Corporate Commodity Traders.
Upstream Oil & Gas controlled by National Oil Companies – they have replaced the 1900-1980s Western Oiigopoly
Accounting for energy even in Public Sector assumed to be necessary

Water

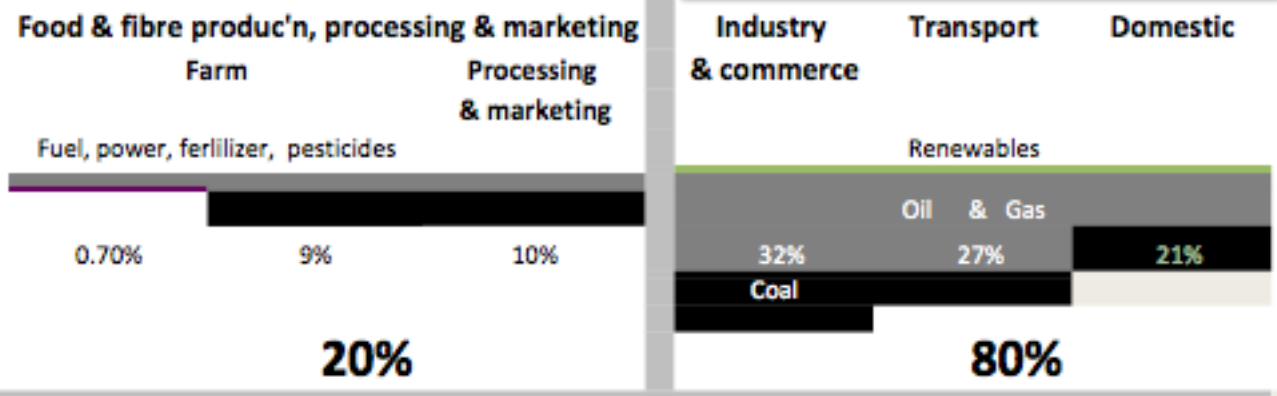
Private Sector
FOOD Supply Chains

No Water Reporting or Accounting rules

Mainly Public Sector Supply Chains – often Integrated
Provide Water Services

Accounting for Water Even in the Public Sector Assumed to be Necessary

Energy



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Energy Supply Chains
Upstream Coal controlled by Corporate Commodity Traders.
Upstream Oil & Gas controlled by National Oil Companies – they have replaced the 1900-1980s Western Oiigopoly
Accounting for energy even in Public Sector assumed to be necessary

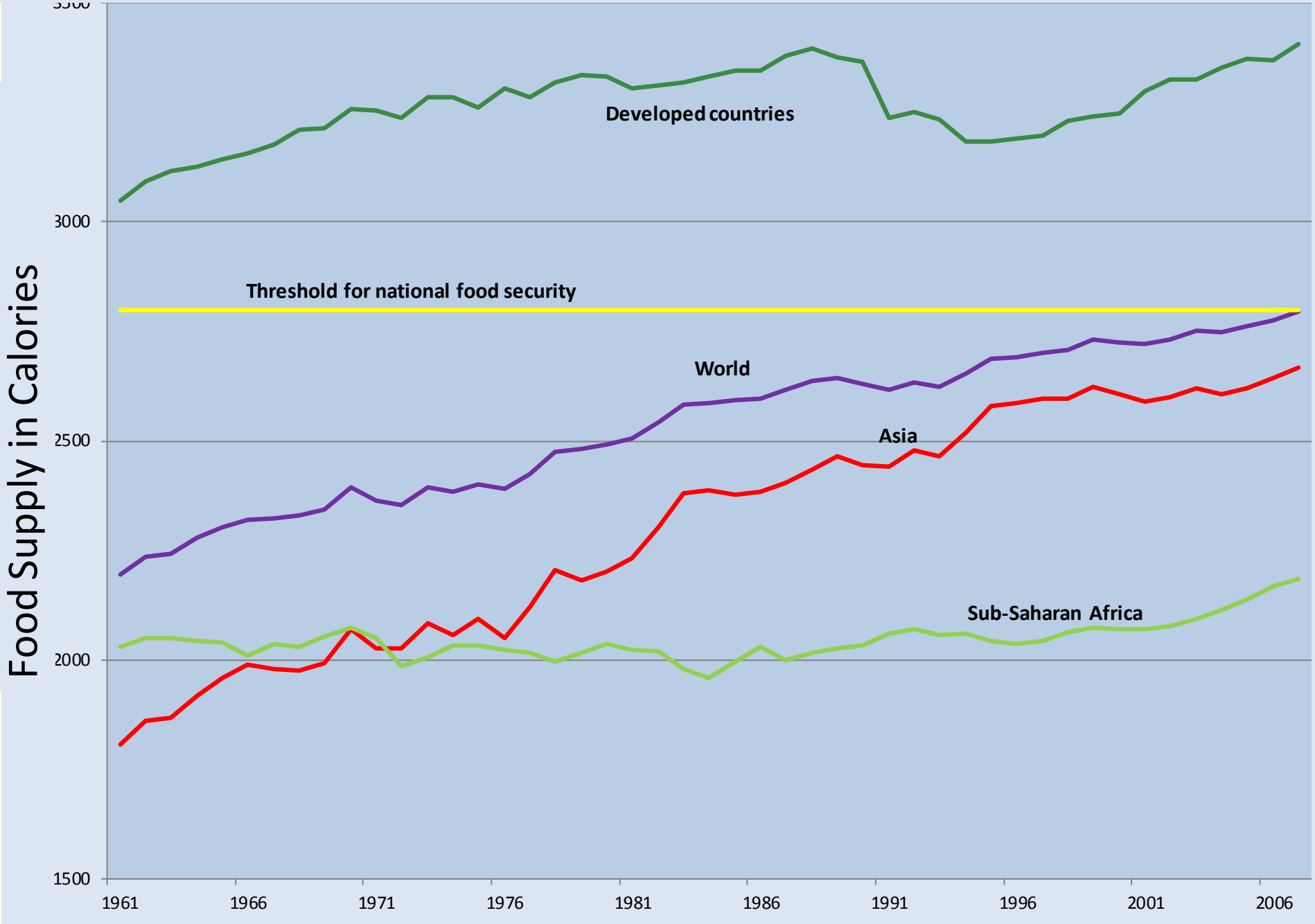
Purpose – highlight the role of the private sector

Especially the role of the demand for food
on
whether society can manage sustainably
the water resources on which food security depends.

Farmers manage water
and
Food consumers determine the demand for food.

We need to distinguish
FOOD WATER and NON-FOOD WATER

One liter of water produces one calorie on average



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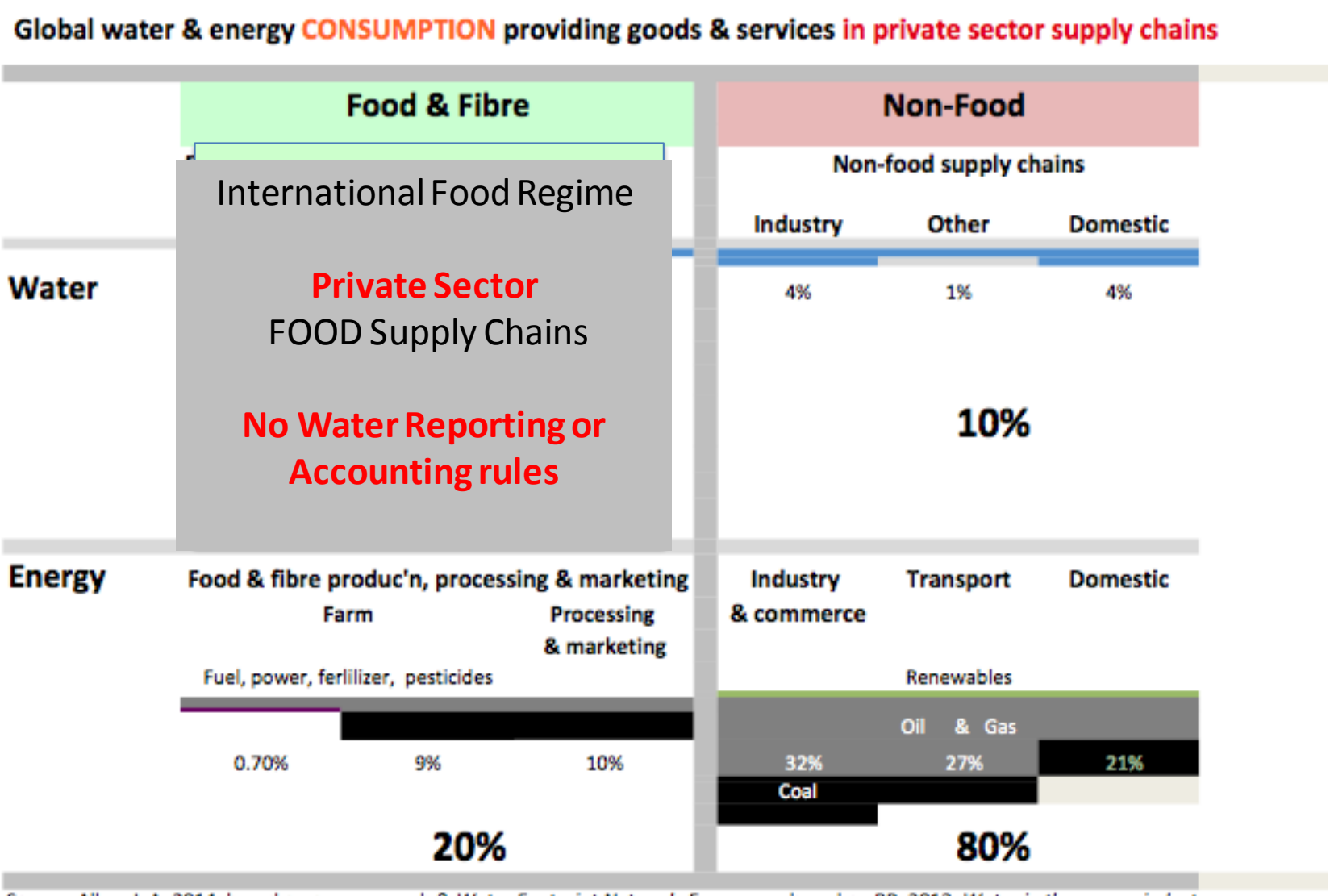

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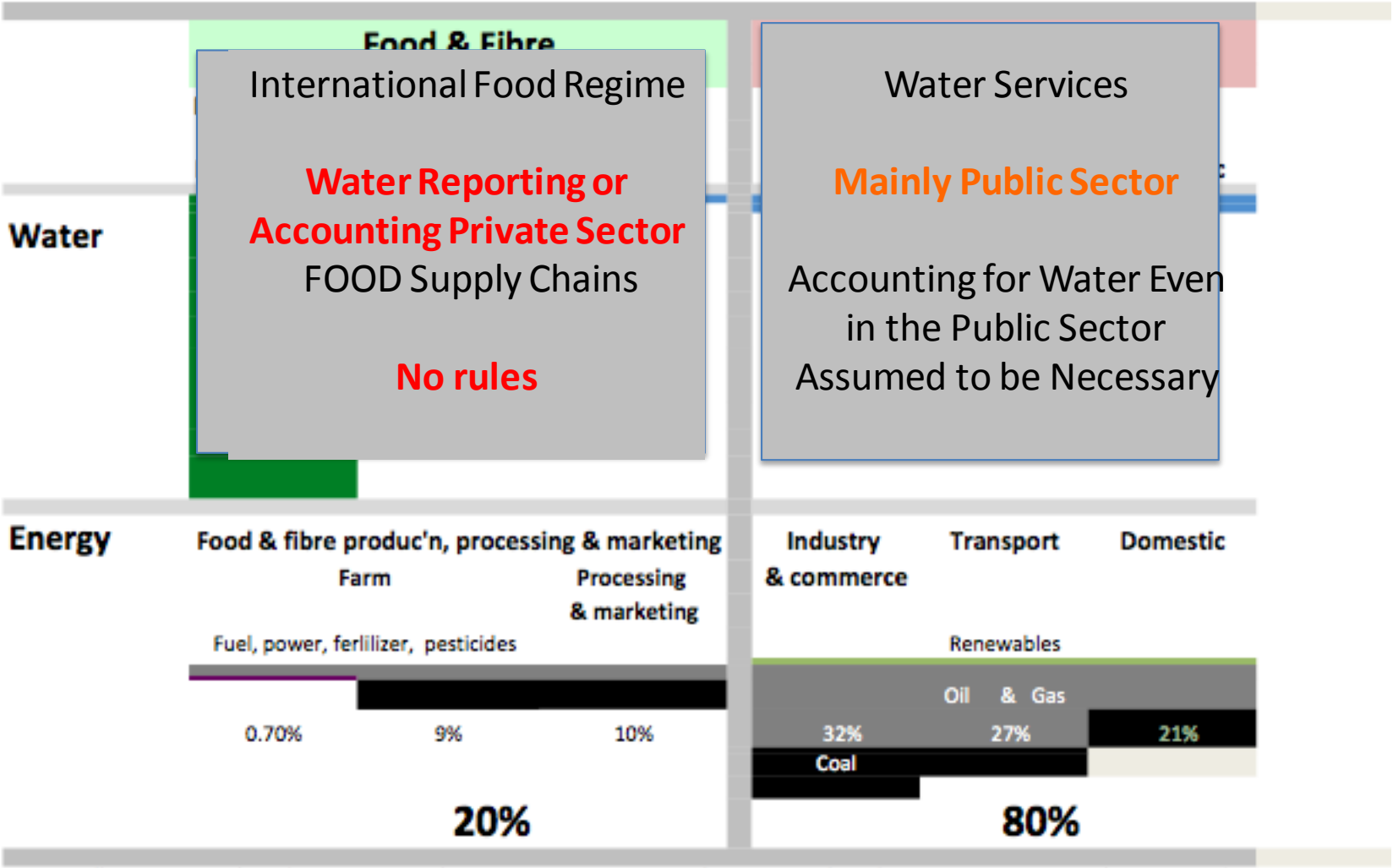

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