



Integrated Water Management

Week 4:

Water, Food and Energy

(and some other minor things like biodiversity, population, etc.)

Erik Mostert / Nick van de Giesen

Water Management

Civil Engineering and Geosciences

Technical University Delft



Week 4: Water, Food and Energy

Course Outline

Day		Subject	Teacher
1-9	Morning Afternoon	1: Introduction Introduction course and IWRM Challenges of food, energy and climate change Computer lab WEAP: WEAP River	Van de Giesen Van de Giesen/ Mostert Van de Giesen
8-9	Morning Afternoon	Scenario's and tools Computer lab WEAP: Rhine & Volta	Van de Giesen Van de Giesen
15-9	Morning Afternoon	Role-play transboundary water management Computer lab WEAP: Rhine & Volta	Mostert Van de Giesen
22-9	Morning Afternoon	Governance and stakeholders: case study from The Netherlands Computer lab WEAP: Rhine & Volta	Mostert Mostert
29-9	Morning Afternoon	Water, food and energy (Discussion) Computer lab: actor analysis Rhine & Volta	Van de Giesen/ Mostert Mostert
6-10	Morning Afternoon	IWRM revisited Work on Rhine & Volta	Van de Giesen Van de Giesen
13-10		No lecture. Work on draft report	
20-10	Morning	Draft final report ready. Presentation	Van de Giesen/ Mostert
29-10		Before 9.00 am: Handing in final report and indication of everybody's contribution to it.	



Week 4: Water, Food and Energy

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1-9	Morning Afternoon	Introduction course and IWRM Challenges and Opportunities Computer lab WEAP: WEAP River	Van de Giesen Van de Giesen/ Mostert Van de Giesen
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1: Introduction

2: Scenarios & Stakeholders



Week 4: Water, Food and Energy



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15-9	Morning Afternoon	3-day transboundary water management Computer lab WEAP: Rhine & Volta	Mostert Van de Giesen
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1: Introduction

2: Scenarios & Tools

3: Institutions

IWM Fall 2013



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8-9	Morning Afternoon	2: Scenarios & Tools Scenarios & tools Computer lab: WEAP, Inflow@Delta	Van de Giesen Van de Giesen
15-9	Morning Afternoon	3: Institutions One-day transboundary water management Computer lab: WEAP, Inflow@Delta	Mostert Van de Giesen
22-9	Morning Afternoon	4: Water, food & energy Governance and stakeholders: case study from the Netherlands Computer lab: WEAP, Inflow@Delta	Mostert Mostert
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Week 4: Water, Food and Energy

Outline

- **Global brainstorm**
 - Regional strengths & constraints
 - Energy: Biofuel & solar
 - Blue, Green, Virtual water
- **Group work**
 - Literature
 - Additional info / calculations
 - Conclusions for Rhine/Volta (2020 & 2050)
- **Plenary reporting**
 - Short presentations
 - Discussion



Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints

Total 800-2800

m³ pp / year

- | | |
|----------------------|----------|
| – Drinking water | 1 |
| – Cooking etc. | 5 |
| – Washing etc. | 10 |
| – Toilet | 20 |
| – Industry | 200 |
| – Vegetarian diet | 500 |
| – Meat diet (extra) | 500-1000 |
| – Biofuel 1000 liter | 1000 |

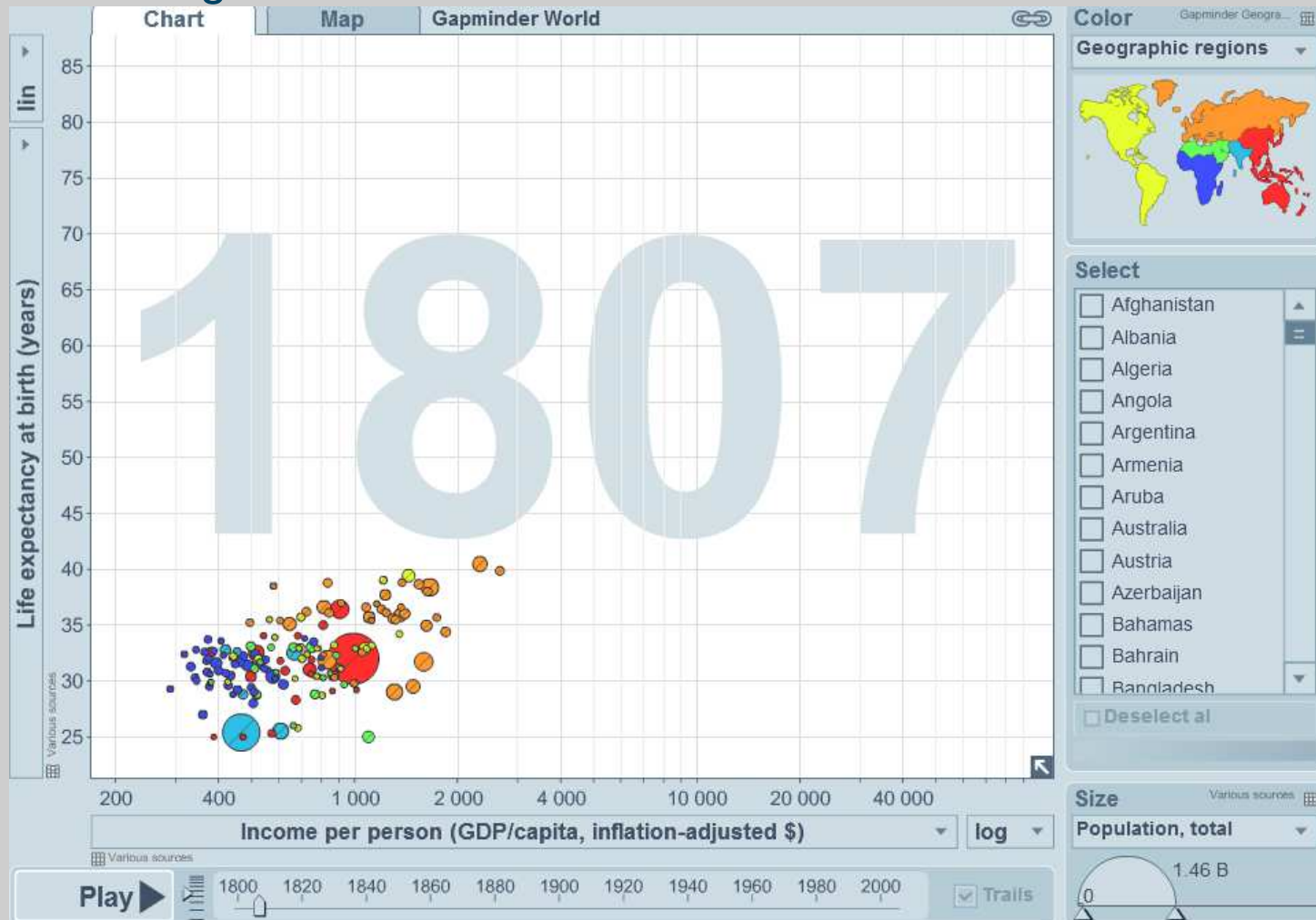


Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints

GapMinder



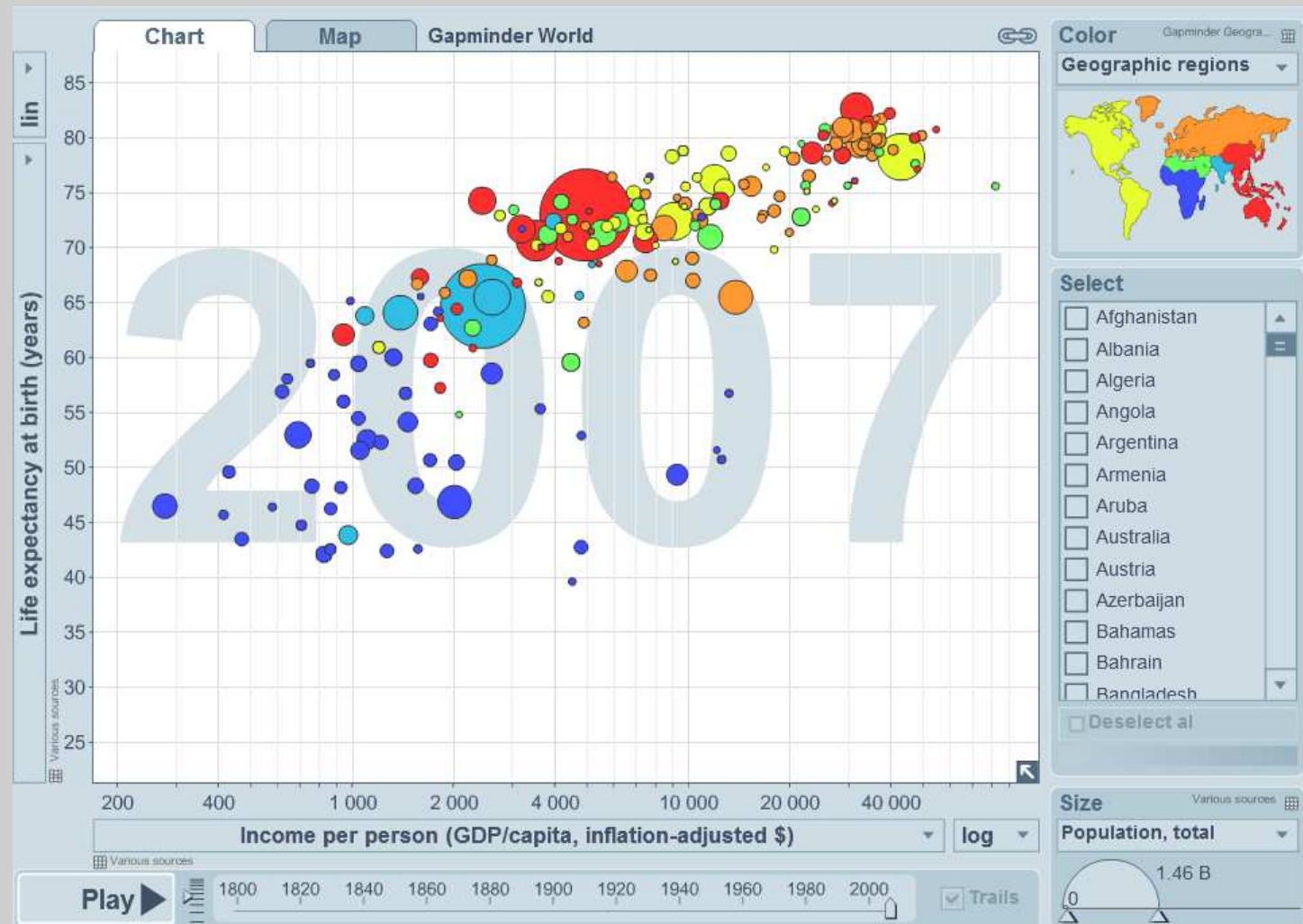


Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints

GapMinder



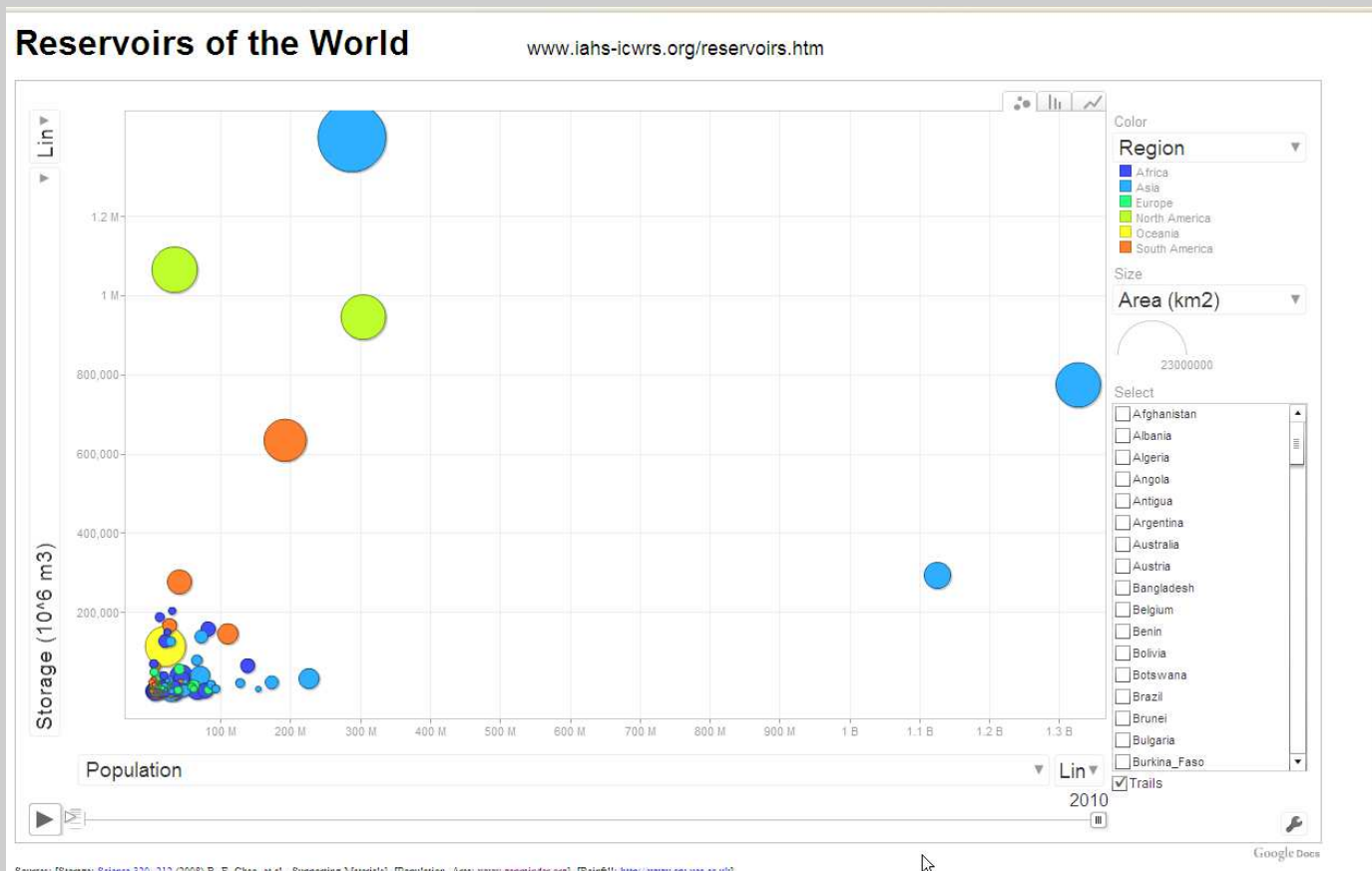


Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints

GapMinder: iahs-icwrs/reservoirs.htm

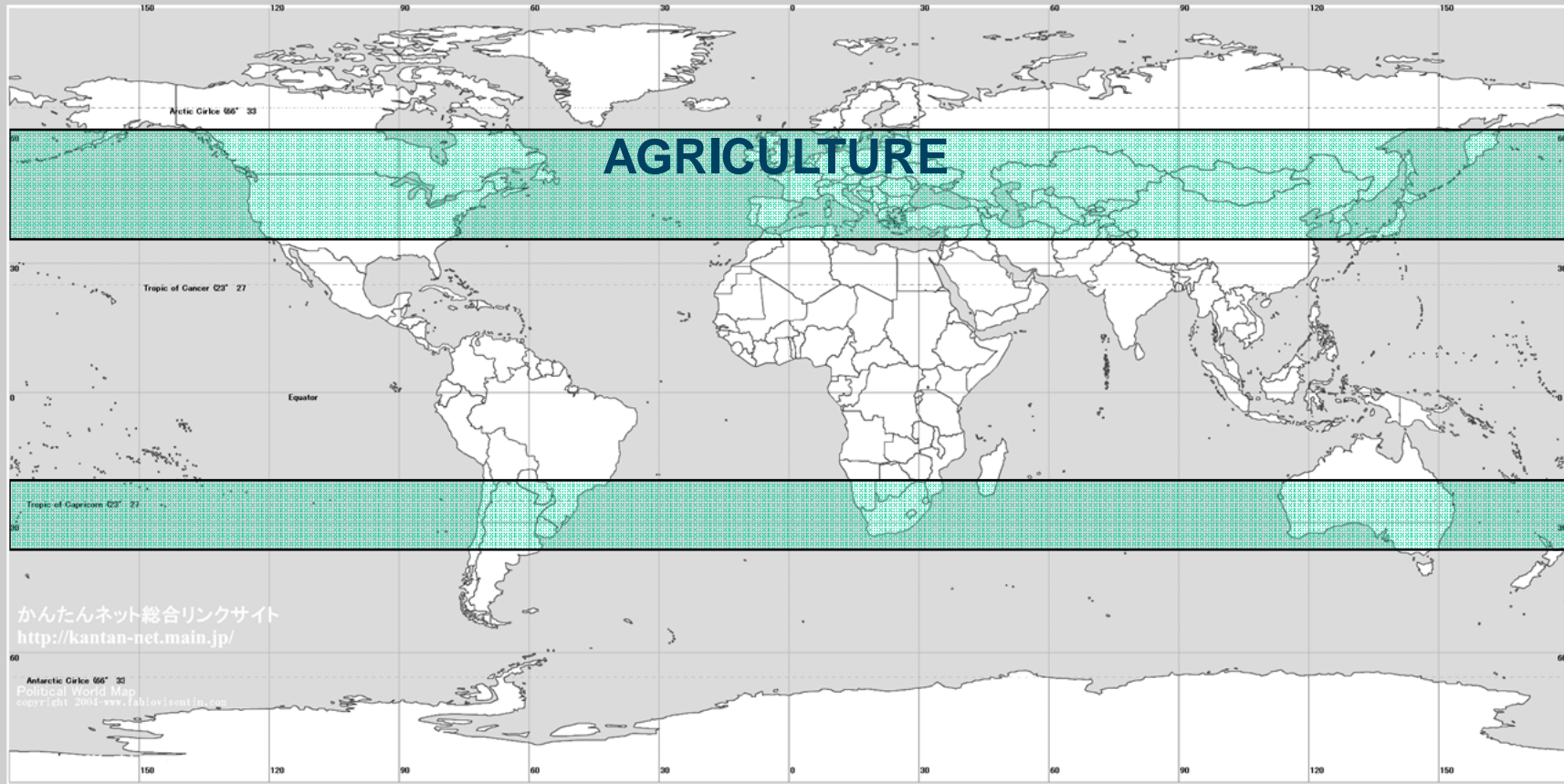




Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints



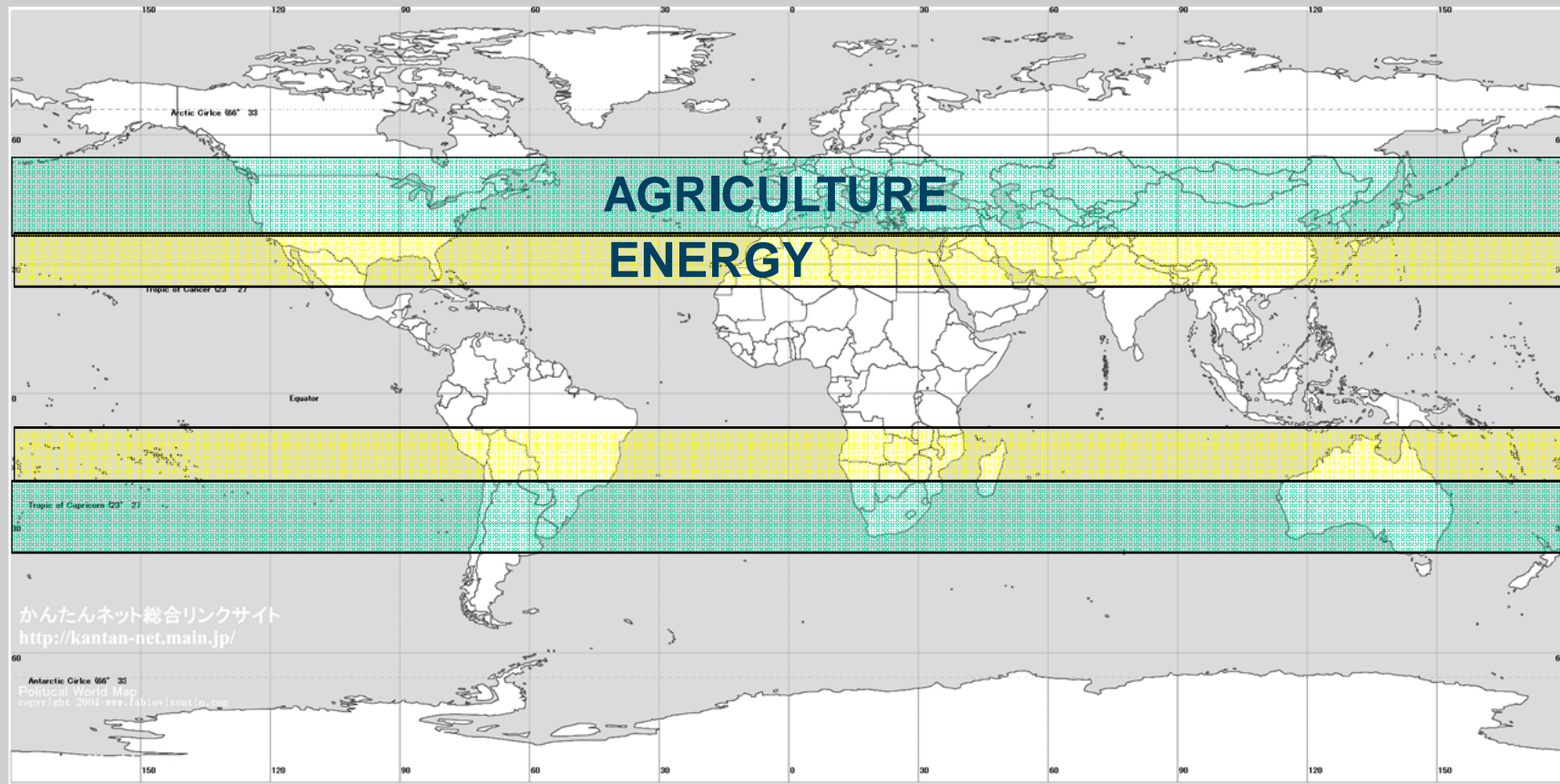
(Schellnhuber)



Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints



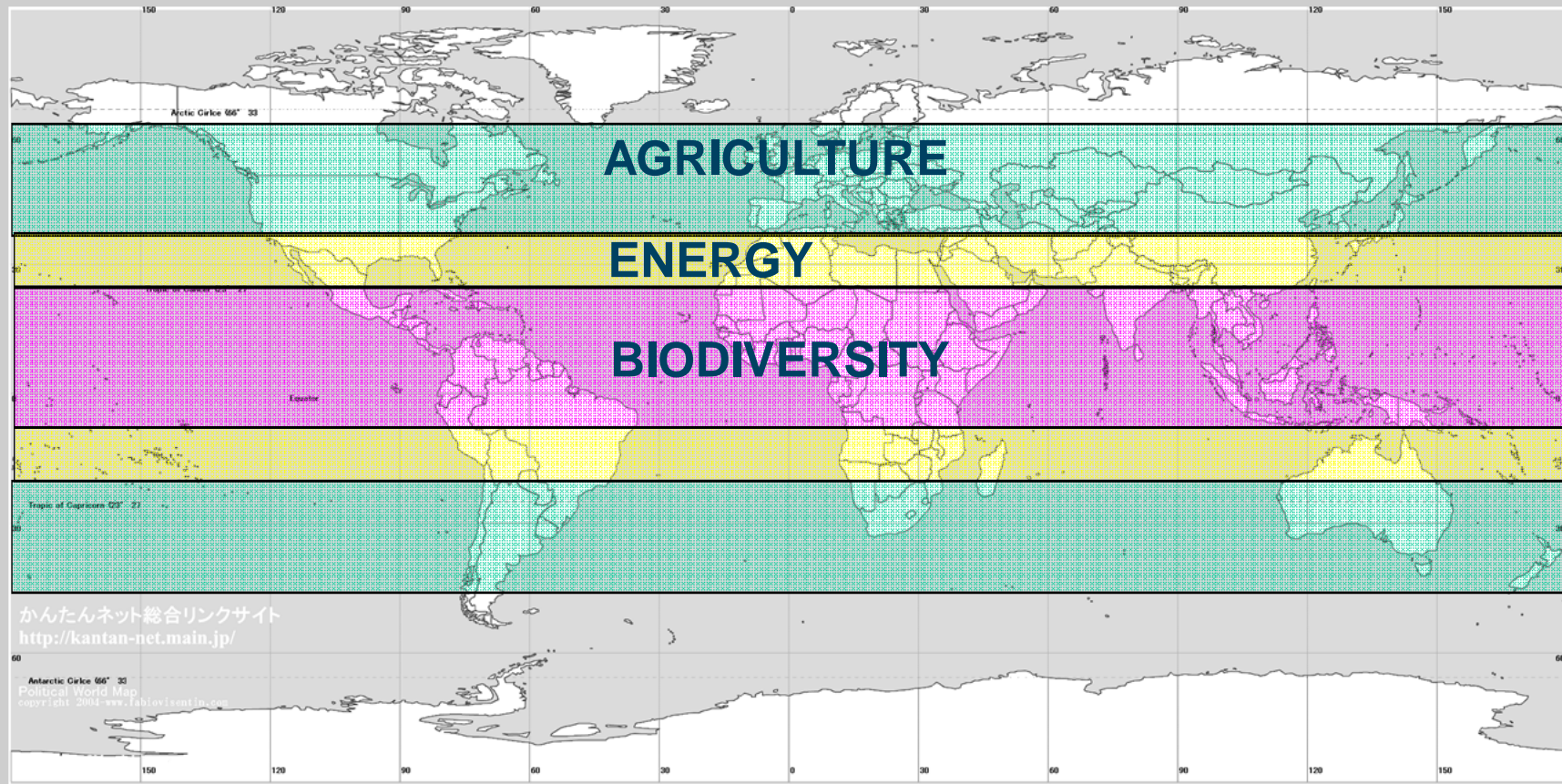
(Schellnhuber)



Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints



(Schellnhuber)

Week 4: Water, Food and Energy

Global brainstorm

- Regional strengths & constraints



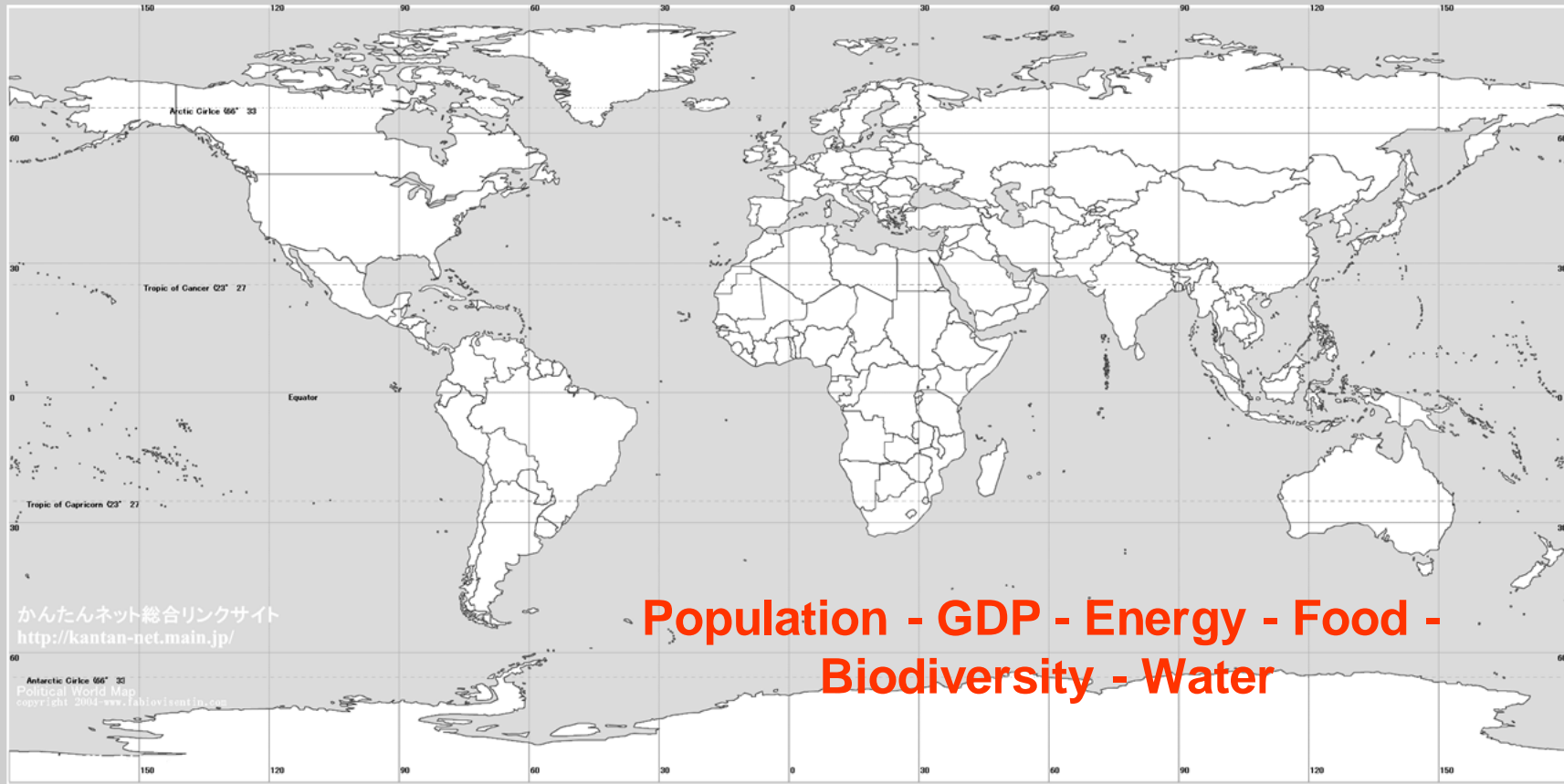
Source: fulsefond.co.cc



Week 4: Water, Food and Energy

Global brainstorm

➤ Regional strengths & constraints





Week 4: Water, Food and Energy

Global brainstorm

- Regional strengths & constraints
- Blue, Green, Virtual water



Week 4: Water, Food and Energy

Group work

- Literature
- Additional info
- (Calculations)
- Conclusions for Rhine/Volta (2020 & 2050)

Plenary reporting: 11h00