

## BRIEF

Date: 17 April 2014

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Subject: **Earthos Conversation Series Water Conversation Introduction**

*“Further research is needed to better understand the linkages across food, water, and energy systems; our response to the resource conundrum must be long-term and integrated across sectors to address systemic risks and root causes.”*

*-Global Resource Security Experts Workshop 2009*

## The Resource Conundrum and Earthos Conversation Series

**Why?** According to the Global Footprint Network, we are currently using resources at a rate 1.5 times greater than the rate at which the earth can produce them. If the twentieth century was about how to maximize the use of nonrenewable resources in an effort to stabilize, modernize, and develop nations, then the twenty first century is about how communities and regions must find better ways to live within the limitations of ecosystems. Our current challenge is not only to live within ecosystems limits, but to do so in humane, just, and even beautiful ways. For this to be possible, we must be address the resource conundrum together as a society, across sectors, scales and political and social boundaries. What knowledge (versus information) do we need? What integrated, long term actions do we need to undertake? Who needs to be involved? The purpose of the Earthos Conversations is to think about how we can incrementally move towards understanding of these questions.

***Inquiry:*** *What do we need to KNOW and DO to create resilient, self-sustaining regional resource systems, that support local efforts and lead to global sustainability?*

**The Bioregional Urbanist Frame:** This frame aims to: 1) increase understanding of the relationships between cities and their supporting regional systems of water, energy, food, biodiversity, land and waste-as-resource and 2) intentionally connect the science (data) of what these regional ecosystems can sustainably supply to decision making in policy, design, business and community 3) encourage the innovation of ways to live well on what ecosystems can renewably produce for us. How do we interface with ecosystems in such a way as to increase the optimization for human well-being and decrease the chance of overusing the ecosystems they can no longer support us? Our main challenges are 1) how to work with systems rather than in linear silloed norms that accompanied modernization, 2) how to work across scales from the hyper-local to the hyper-global, and 3) how to set goals/ budgets for resource use that are just and sustainable. This frame constructively use science in such a way to move forward to strengthen well-being and lifestyles for the long term.

[ecological budgets+climate science] → [design+policy+business+community decision making]

## The Resource Considered: WATER

**Why?** Water is essential for all life. It is also a finite resource on Earth. We are now facing a global water crisis. This crisis is intensifying as human populations grow exponentially, and as consumption per capital increases with combined improvements in quality of life in low income areas, and overconsumption patterns in high income areas. As we explore ways of addressing the water crisis/resource conundrum what do we need to consider?

### Initial Considerations:

#### 1. We have limited quantities of fresh water on the planet

What are the actual quantities?

- How much water is actually available? For human use?
- Is there a minimum that ecosystems need to thrive?
- What is the different between renewable and nonrenewable water sources?

What is the usage?

- How much water do we use per capita?
- What is the minimum required for human well-being?
- How are we using our limited water? What activities require the most water?

What are the impacts on available water?

- How does climate change impact water supplies?
- How does contamination?
- How does infrastructure?
- How do our political mechanisms?
- How do our designs impact water supplies?
- Technology?

How do people understand water availability?

- What are perceptions about water that impact its usage?

#### 2. Political will and decision making at different scales, across borders

- How do we make decisions about limited water supplies?
- At what scales?
- What are the challenges?

#### 3. Contaminated water supplies

- What are the main sources of contamination?

#### 4. How is water affected by the other key resources?

- food, energy, biodiversity, land, waste, people?

## 5. Privatization of water

- What is the privatization trend? Where is it happening?
- How does the “privatization trend” impact the global water crisis?

## Moving forward:

### 6. Are there quick fixes?

### 7. Desalinization?

### 8. Other?

### 9. Water budgeting and virtual water accounting

- What is water balancing? What is virtual water?
- At what scale(s) do we balance?
- How do we account for virtual water? Do we?

### 10. Designing resilient infrastructure

- What do resilient regional water systems look like? What do they include?
- What do we need to know?

### 11. Innovation and entrepreneurship

- Will innovation solve the water resource crisis?
- What kinds of innovation is possible/needed/helpful?
- Can limited water fuel entrepreneurial activity? If so, what kinds will be beneficial? What kinds will increase the crisis?

### 12. How do we build shared knowledge?

- What are mechanisms for understanding our water resources?
- Making decisions across scales? Political boundaries?