ENVIRONMENTAL DOOMSDAY SCENARIOS...

WATER

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GREEN PITCH ~ 11 FEB 2020
WATER IS COMPLICATED

A PRIVATE GOOD? A SOCIAL GOOD?
LET’S FOCUS ON DRINKING, FOOD, CLIMATE

- **Scale:** Local, regional, global
- **Governance:** Community, market, transnational
- **Dangers:** Public health, hunger, existence
DRINKING: SCARCITY

Drivers:

• More people
• More money (consumption)
• Falling supply

David Zetland

Living with Water Scarcity
DRINKING: INSTITUTIONS

Challenges:

• 3+ billion without safe water

• Rich have outdated institutions

• Early momentum is lost
DRINKING: INFRASTRUCTURE

Challenges:

• Expensive
• Missing and decaying
• Costly emergencies
DRINKING: A LOSING BATTLE

Bottom line:

• Falling supply

• Excess demand

• A return to cholera?
FOOD: USES 80% OF “DEVELOPED” WATER

Drivers:

• Historically “free”

• Farmer-controlled

• Environmental flows “wasted”
FOOD: VIRTUAL WATER

- Gains from trade… but risky
- Aggravates bad policies
- Non-reversible
FOOD: AQUIFERS

- Massive share of water supply
- Poorly understood / managed
- Emptying “savings account”
FOOD: RISING RISKS

- Weak political will
- Populists may block markets
- Hungry people will migrate
CLIMATE CHAOS: THE WATER VECTOR

- Mitigate the energy driver
- Adapt to the water vector
CLIMATE CHAOS: SCALE

- Oceans (2/3rds of surface)
- Global weather
- Power: 9 Feb 2020 ➞
CLIMATE CHAOS: FLOODS

• Bigger, badder
• New locations (surprise!)
• Made worse by bad policies
CLIMATE CHAOS: DROUGHTS

- Longer, hotter
- Dangerous
- No groundwater insurance?
CLIMATE CHAOS: SEA LEVEL RISE

- Slow but relentless
- Subsidence + storms
- Radical increase (+6-9m)?
CLIMATE CHAOS: OCEAN ACIDIFICATION

- Goodbye corals!
- Food chain collapse?
- 50+ percent of $O_2$ @ risk?
CLIMATE CHAOS: HEAT

- Wet bulb = heat + humidity
- Uninhabitable? +10°C —>
- Ecosystem collapse?
CLIMATE CHAOS: STORMS

- Biggest risk to NL
- 1953 every year?
- Managed Emergency retreat
LIVING WITH THIS FUTURE

- Protect your drinking water
- Secure your production, storage and trade of food
- Prepare for risks
- Adapt to a lower quality of life
- Enjoy what you’ve got