Impact of Global Earth Observation
Systemic View Across Societal Benefit Areas

Felicjan Rydzak, Ian McCallum, Steffen Fritz
Overview

why?
model
dynamics
simulator
path forward
Value of information?
Model ...

simplified representation of reality
Structure ... determines behavior
Agriculture Land

Forest Land

Population

Total Water Demand

International Institute for Applied Systems Analysis

EuroGEOSS Advancing the vision of GEOSS
Scenarios

what if?
GEOSS Benefits Overview:

173.1 billion $
- total ecological value saved in 2100

7734.4 billion $
- total ecological value saved over the simulation scenario period

Drought
- Agricultural Water Demand
- Mean Species Abundance
- Forest Land
- Population

Biodiversity
- Forest Land
- Mean Species Abundance

Forest
- Forest Land
- Population

Industrial Water Demand
- Rainfed Agriculture Land
- Irrigated Agriculture Land
- Desired Available Water Resources
- Water Safety Stock Coverage
- Available Water Resources Adjustment

Scenario: (D1+D2+D3+D8:200%+B2+F1+F2:1.5)
path forward
improvements ...
... but keep the model useful

development ...
... further scenarios

application ...
... design of policies