Tourism in the virtual lab: opportunities for AI and tourism collaborations

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Erosion and sea-level rise
Unexpected events

Courtesy of Andhiela van Hoof
Simulation games

Modelling
Simulation sessions

Ecological systeem

Stakeholder simulations
Simulation games

Limited number of rounds

Players

Scenarios
Ongoing human-environment interactions
Number of individual actions

- tourism-returns
- pollution-change
- cost-pollution
- SLR-increase
- pollution-threshold
- min-acceptable-elevation-above-SL

Number of collaborative actions

- tourism-returns
- pollution-change
- cost-pollution
- SLR-increase
- pollution-threshold
- min-acceptable-elevation-above-SL

Sensitivity indices:
- Total
- 1st order
- 2nd order
Model insights for human-environment interactions

- Changes over time
- Sensitivity analysis
- Scenario discovery
Demand

Tourism

- Hotel
- Boat
- Sailboat
Climate change

Ecological system

Tourism

Climate change
Demand

Ecological system

Tourism

Climate change
Supply and demand

Tourism system

Diagram showing supply and demand relationships in a tourism system.
SUPPLY

• Decisions to collaborate
• Change tourism product strategies
• Crisis and disaster management
• Policy testing
• Training

DEMAND

• Movement
• Changes in activities
• Adding richness and context
• Responses to change
Where can we go?
Extra: model interface