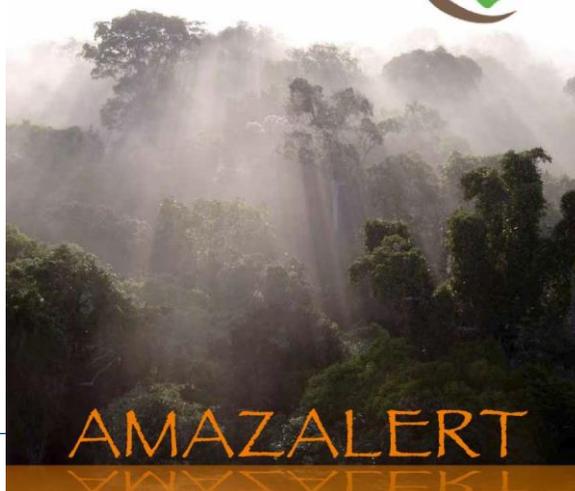


Break-out session II

SCENARIOS - Concepts and Background



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Agenda

Time	Activity
8:45-9:00	Registration + coffee/tea
9:00-9:10	Welcome, objectives of workshop
9:10-9:30	Participant introduction along two key questions: 1. What motivates you to attend the workshop? 2. What do you expect to get out of the workshop?
9:30-11:00	Presentations on background and results of Amazalert, land use modelling in Brazil, and policies in the Amazon. Presenters among others: Dr. Marco Gemmer. Project Officer European Commission DG R&I Dr. Bart Kruijt. Project coordinator Amazalert Dr. Mateus Batistella. Director, EMBRAPA Satellite Monitoring, Brazil. Dr. Arnaldo Carneiro. Has worked for government, research, and NGO in Brazil.
11:00-12:30	Break-out groups; session I. Central question: What is the current role of European policies and other actions related to deforestation in the Brazilian Amazon?
12:30-13:30	Lunch
13:30-14:00	Introduction to European and Brazilian scenarios
14:00-15:30	Break-out groups; session II. What future policies and other actions are needed to contribute towards the goal of reducing deforestation? Discussing key (policy) recommendations
15:30-17:00	Plenary reporting back and discussion on no-regret policy options
17:00-17:15	Conclusions and next steps
17:15	End of day



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Scenarios - a conceptual and actual overview

A few words on definitions and concepts

Explorative scenarios: What could happen?

European and Brazilian scenarios

Normative scenarios: What can we do about it?

Explanation backcasting

No-regret policies: combining exploration and backcasting

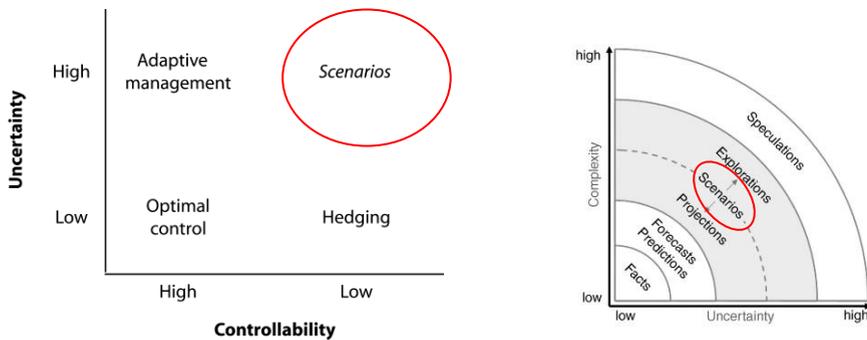


Scenarios - background

- 'Scenario' comes from the dramatic arts. In theater: it is an outline of the plot; for a movie: a scenario details relevant to the plot (before 1940s)
- Roots trace back to the Manhattan project (1940s)
- Kahn & Weiner used scenarios in a series of strategic studies for *military planning* purposes (1950s)
- Scenarios were refined at Royal Dutch/Shell and Shell became a leader of the scenario approach to *business planning* (1970s and 1980s).
- First scientific scenarios: *Limits to Growth* (1972)
- First global environmental scenarios: *Global Scenario Group* (1990s)
- Today, scenario development is used in a large variety of different contexts ranging from political decision-making, to business planning, to local community management, and to global environmental understanding



Scenarios - when to use?



	Low uncertainty	High uncertainty
High causality	Predictive	Explorative (circled in red)
Low causality	Projective	Speculative



Scenarios - when to use?

Scenarios are a good tool when:

- Uncertainty is high, and
- Controllability is low, or
- Complexity is high, or
- Causality is high



Scenarios - definition

There are many definitions, with only partial agreement. Two important ones are:

- Scenarios are *plausible* descriptions of how the future may develop, based on a *coherent* and *internally consistent* set of assumptions about key relationships and driving forces. (focus on system description)
- Scenarios are *credible*, *challenging*, and *relevant* stories about how the future might unfold that can be told in both words and numbers. (focus on value for end users and other stakeholders)



Scenarios - types (van Notten et al., 2003)

A Project goal - exploration vs decision support:

- I. Inclusion of norms? : descriptive vs normative
- II. Vantage point: forecasting vs backcasting
- III. Subject: issue-based, area-based, institution-based
- IV. Time scale: long term vs short term
- V. Spatial scale: global/supranational vs national/local

B Process design - intuitive vs formal:

- VI. Data: qualitative vs quantitative
- VII. Method of data collection: participatory vs desk research
- VIII. Resources: extensive vs limited
- IX. Institutional conditions: open vs constrained

C Scenario content - complex vs simple:

- X. Temporal nature: trend vs snapshot
- XI. Variables: heterogeneous vs homogenous
- XII. Dynamics: peripheral vs trend
- XIII. Level of deviation: alternative vs conventional

XIV. Level of integration: high vs low



Scenarios - main types

Scenarios can be used to answer two fundamentally different questions:

1. What could happen?
2. What can we do about it?

Different questions call for different methods:

1. "What if" explorations. What if the EU breaks up? What if Chinese eat 1 hamburger per week? What if multi-nationals buy most of the land in the Amazon? → Exploring, forward-reasoning.
 2. Vision-based discussion of desirable options. Given a certain desired end point, what actions need to be taken to reach that end point? → Normative, backward-reasoning
-



What could happen?



Explorative scenarios - What could happen?

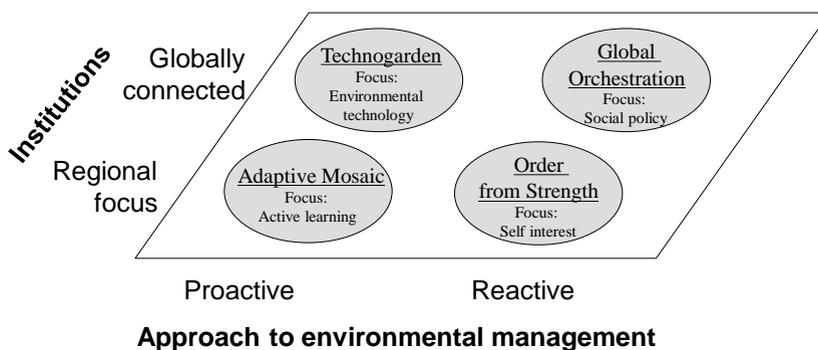
There are many sets of existing (global) scenarios that sketch possible future developments.

In AMAZALERT, we decided to build on this information rather than develop our own explorative scenarios.

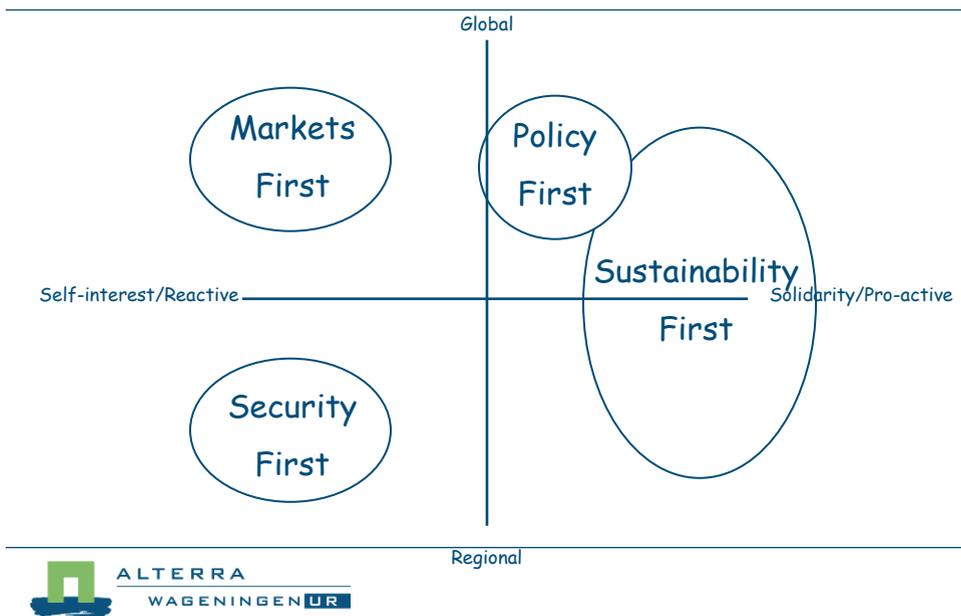
We have looked at various sets, including Millennium Assessment, Global Environment Outlook, Emissions scenarios (IPCC SRES), etc.



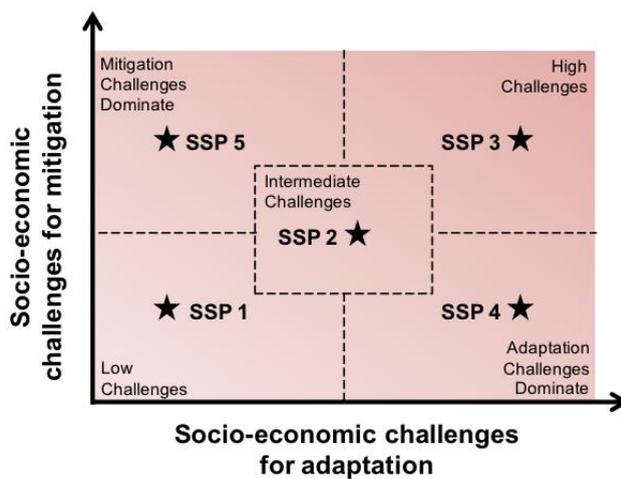
Millennium Ecosystem Assessment (MA)



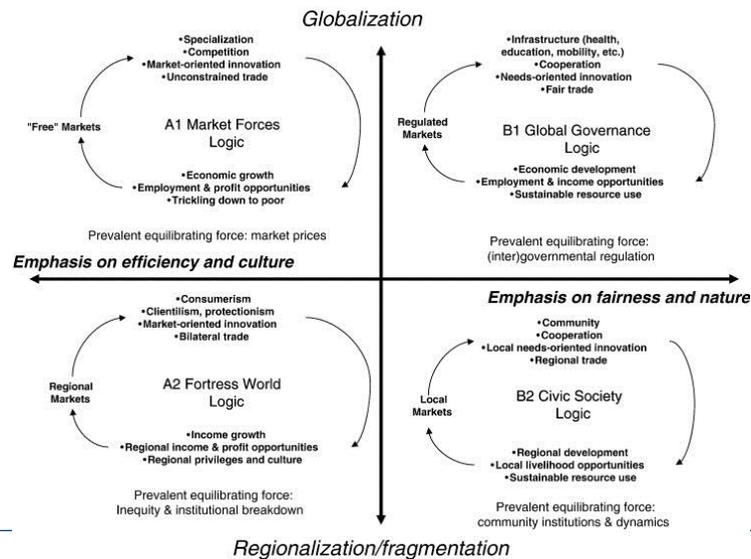
Global Environment Outlook 3/4



IPCC-guided Shared Socio-economic Pathways



Explorative scenarios - Archetypes



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Explorative scenarios - Three scenarios as starting point

1. Sustainability. Civic society logic.
2. Fragmentation. Fortress world logic.
3. Markets rule. Economic forces logic.



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Sustainability

Local needs

Community-based

Regional trade

Livelihood security

Regional development

Sustainable resource use



Fragmentation

Consumerism

Protectionism

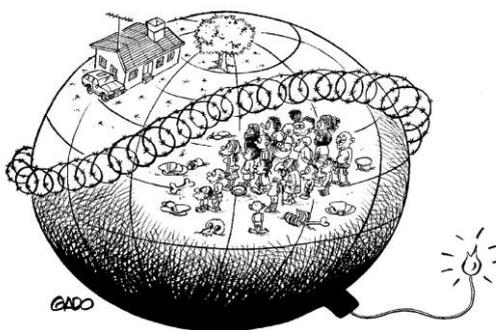
Market-related innovation

Income growth

Inequality

Regional privileges

Institutional breakdown



Markets rule

Specialisation
Competition
Unconstrained trade

Economic growth
Employment and profit
Trickling down to poor



What can we do about it?
(Backcasting)



Break-out session II

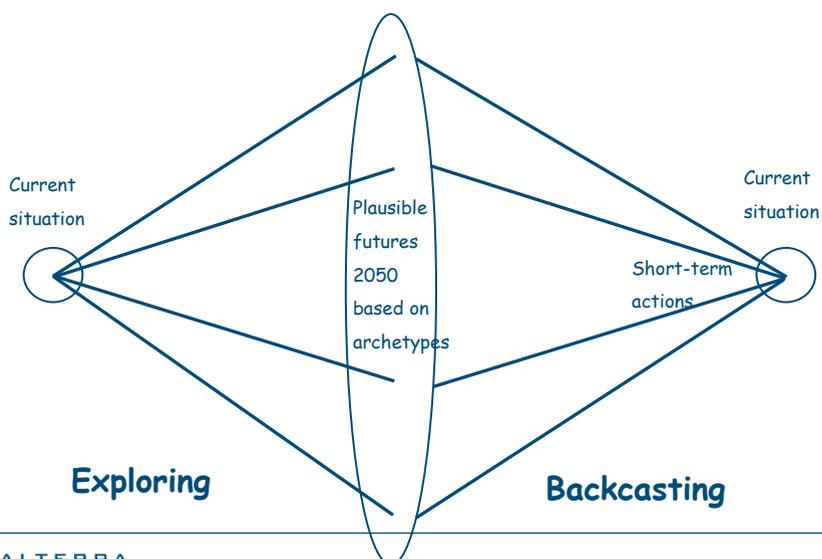
Central question: What future policies and other actions are needed to contribute towards the goal of reducing deforestation?

Main concept: focused discussion on how to stop deforestation in the Brazilian Amazon.

Main method: Backcasting in three groups



Exploring and backcasting



Backcasting: key concepts

Test how effective policy measures or other actions are, by evaluating them in a number of plausible futures

Identify a set of (policy) actions that will lead to a more desirable future, independent from the future that is portrayed, i.e. that form a robust strategy consisting of no-regret policies.

In other words, translate 3 diverging long term scenarios to one set of policy actions.



Backcasting: a definition

Definition:

Backcasting "involves working backwards from a particular desired future end-point or set of goals to the present, in order to determine the physical feasibility of that future and the policy measures that would be required to reach that point." (Robinson, 2003)

"The emphasis in backcasting is upon determining action, in a policy sense, with respect to possible futures." (Robinson, 2003)



Backcasting: background

AT&T in the 1950s proto-backcasting

Developed in the 1970s for business planning

First successful example Shell in scenario planning end 1970s

Current method developed by John Robinson in the mid 1980s;
method has not fundamentally changed since

Typically address a societal problem with the aim of finding a
real solution → normative



Backcasting: methodology

A backcasting exercise consists of the following steps in
group work:

1. Define a **desirable endpoint**
2. Define desirable intermediate **milestones and objectives**
3. Define **obstacles and opportunities** given the explorative
scenario that you find yourself in.
4. Identify and specify **(policy) actions** that need to be taken



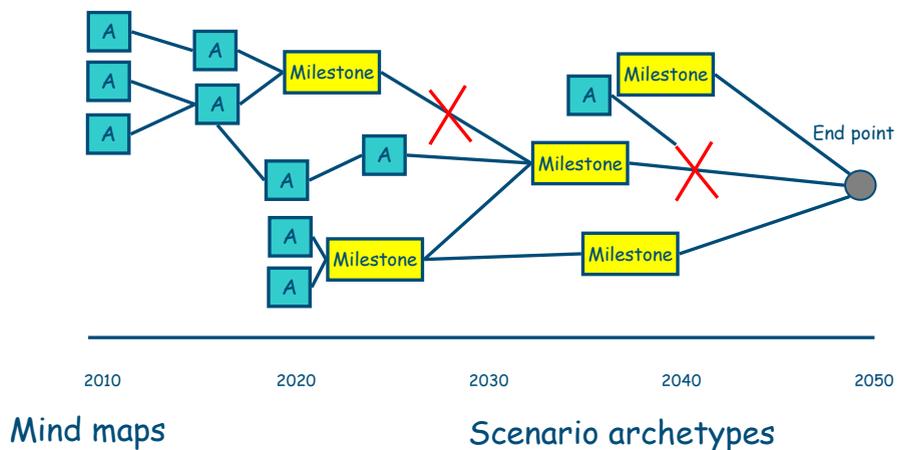
Backcasting: methodology

A backcasting exercise consists of the following steps in plenary:

7. **Compare actions** across 4 scenarios and identify similarities and differences
8. **Construct a robust strategy** consisting of (policy) actions that are effective in a large number of backcasting exercises.



Example (hypothetical)



Backcasting: practical implementation

- Divide into three groups similar to first break-out session
- Group 1: Sustainability; group 2: fragmentation; group 3: markets
- Go through a backcasting exercise in one hour with your group
- End point: **Zero/strongly reduced deforestation and degradation in 2050 in the Amazon.**
- Prepare 10 minute presentation focusing on the top 10 of actions / strategy lines that are most essential to be implemented.