

The two methods used in the "Anticipation Lab" with students and experts on the strategic issues addressed by the REDIAFOR project, such as forest management, creation and use of related products or services, and related conflicts of use, are presented below:

- Analysis of megatrends and local impacts on the "forest-timber value chain" system,
- Systems mapping (Iceberg model exercise).

## Analysis of megatrends and local impacts

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### Context of application with respect to a complete "futures exercise":

- documentation phase (focus on the strategic issue, collection of relevant data)
- visualization phase (exploratory)
- "grounding" phase (strategic)

### Premises:

Definition of megatrend: a change or a trend that has been active for a long time and promises to last for a long time (from several decades to entire generations), which can be described by several coherent variables and supported by numerous quantitative and qualitative clues. Its direction is plausibly considered "predetermined" and therefore the possibility of modifying a real megatrend is almost nil (Poli, 2019).

The analysis of megatrend impacts is pivotal to make any strategy robust in the medium- and long-term (e.g. 10 or 40 years), in order to identify the relevant impacts and the associated strategies for adapting and anticipating them.

### Purpose:

- to identify the driving forces locally relevant,
- to identify which changes are most important in terms of local impacts for the future of the issue,
- to identify possible strategies to manage, mitigate or avoid the related impacts.

**Approach:** qualitative, based on guided discussion and collective understanding that emerges from interaction and creativity.

**Participants:** group of  $10 \pm 2$  participants with interest in the strategic issue, including external stakeholders and experts, possibly with different backgrounds

**Timing:** 1.5-3 hours, depending on the level of study.

**Conduction:** with expert facilitator (with Futures Studies background).

### Output:

- list of change factors that are relevant to strategic issues, which need to be considered and monitored and which may have uncertain outcomes (unfavourable or favourable regarding the success of the related strategies)
- series of preliminary strategic indications.

**References:** background information from

The Megatrends Hub, [https://knowledge4policy.ec.europa.eu/foresight/tool/megatrends-hub\\_en](https://knowledge4policy.ec.europa.eu/foresight/tool/megatrends-hub_en)

Poli, R. (2019). Working with the future. Ideas and tools to govern uncertainty. Milano Bocconi University Press.

## Systems mapping (Iceberg model exercise)

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### Context of application with respect to a complete "futures exercise":

- documentation phase (focus on the strategic issue, collection of relevant data)
- visualization phase (exploratory)
- "grounding" phase (strategic)

### Premises:

Reality is generally complex and of this, like an iceberg, only the superficial elements are visible: the events. As an iceberg does not move due to winds (a pressure) on the visible emerged part but due to the underwater currents that push on the submerged part, so to "move" a complex problem / system it is necessary to intervene on the root causes. Their root causes are generally visible, as they are the result of circular causal dynamics and relationships between tangible and intangible variables.

All this applies to the issues of REDIAFOR project, namely the forest management, the creation and use of related products or services, and the conflicts of forest.

The tools of systems thinking are helpful to understand the complex reality of the problems, this understanding depends on the shared causal models and allows to identify systemic solutions or interventions that may have the desired effects in the medium and long term.

The procedure used with students and experts was adapted from an original facilitation scheme, named "Push the iceberg" (Scolozzi, 2020).

### Purpose:

- to identify the causal relationships between relevant variables (tangible and intangible),
- to identify the retroactive causal circuits (feedback loops) that most determine the behaviour of the systems of interest,
- to identify the leverage points of the systems of interest or the causal circuits on which it is more effective to intervene.

**Approach:** qualitative, based on guided discussion and collective understanding that emerges from interaction and creativity.

**Participants:** group of 10 ± 2 participants with interest in the strategic issue, including external stakeholders, possibly with different backgrounds

**Timing:** 1.5-3 hours, depending on the level of study.

**Conduction:** with expert facilitator.

### Output:

- causal map (with causal relationships and feedback loops between relevant variables) for the strategic question
- list of possible interventions described in their plausible development and impacts on the relevant variables (through the causal map).

### References:

[www.systemdynamics.org](http://www.systemdynamics.org)

Scolozzi, R. (2020). Push the iceberg – a systems and futures-oriented facilitation script for participatory strategic foresight. 38th International Conference of the System Dynamics Society, Oslo.

<https://www.systemdynamics.org/past-conferences>