

Change *(the)* analytics for

Change' analytics

Needs & Participatory Challenges for Change Aiding

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Policy-making steps

PREPARE
PARTICIPATION

DIAGNOSIS

SCENARIO
EXPLORATION

DEFINITION OF
OBJECTIVES AND
PREFERENCES

IDENTIFICATION
OF ACTIONS
AND PLANS

CHOICE,
PRIORISATION
AND VOTE

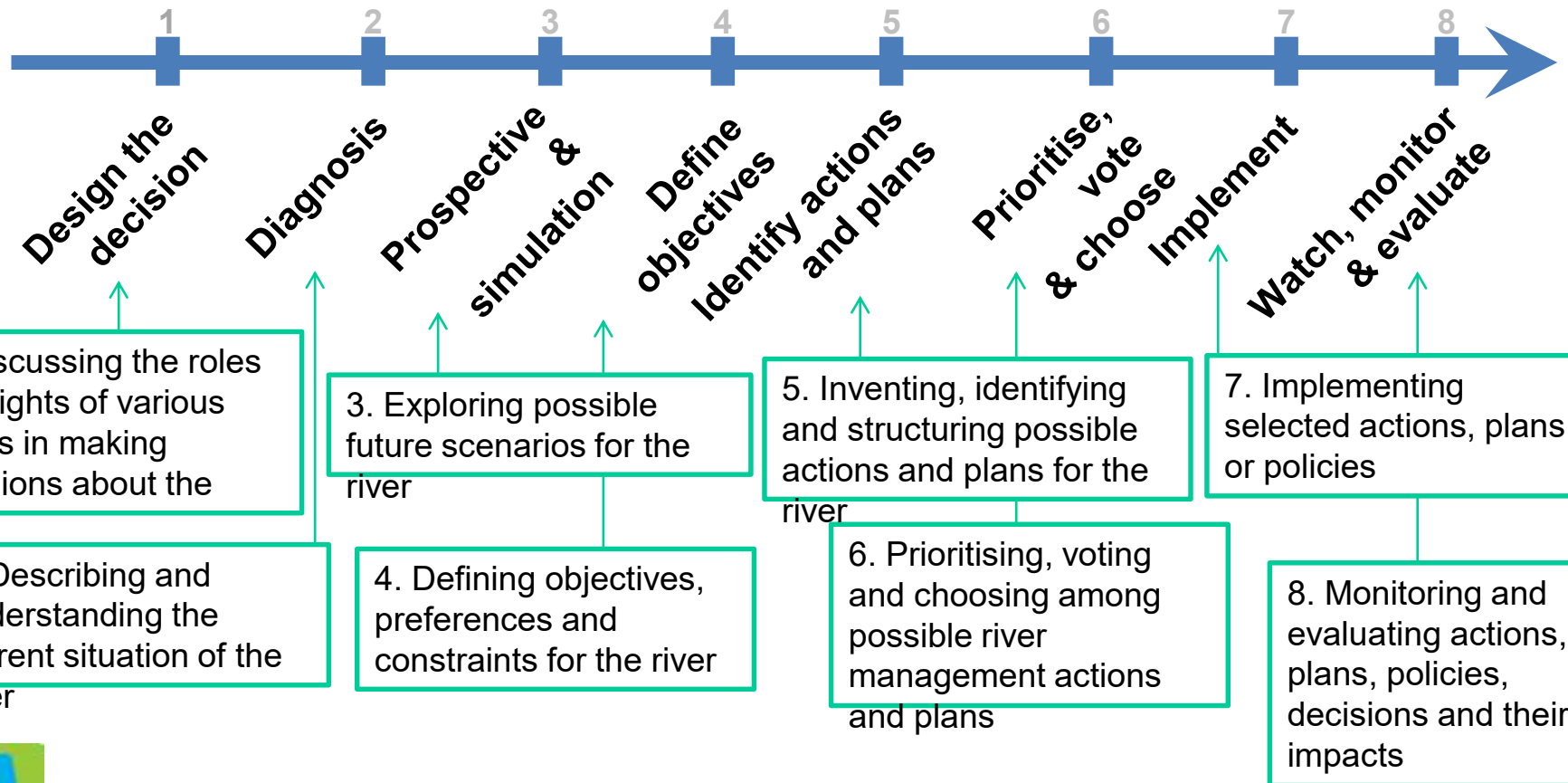
IMPLEMENTATION

MONITORING AND
EVALUATION

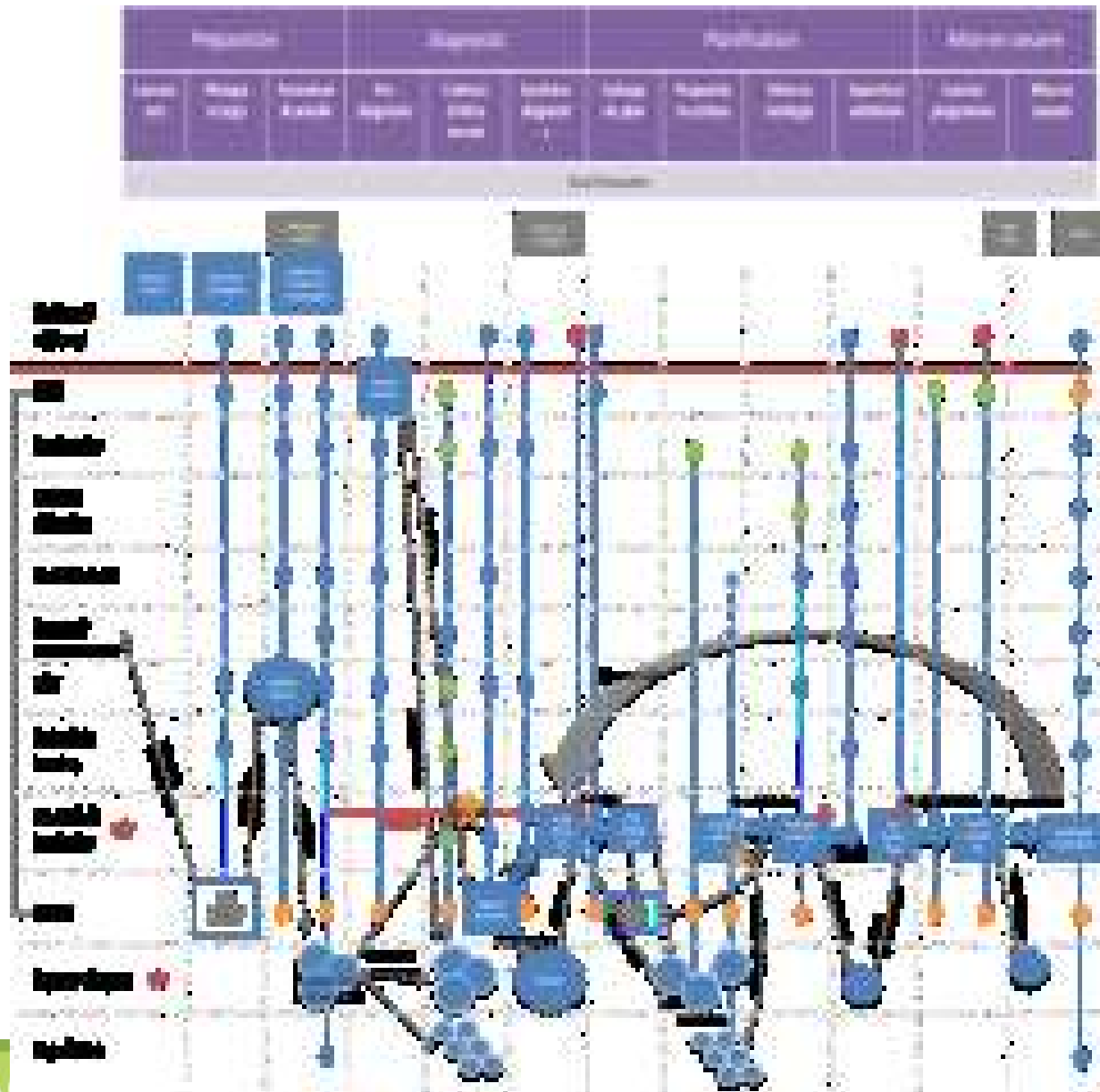
8 decision steps in PrePar design procedure

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Stakeholders, including citizens, may be involved at any of the following decision steps:



PrePar: 4 Design Analytics on future governance of territorial change



Focusing Analytics on (fair & significant) change

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1. Urges on / for **change** overwhelms our infosphere and the public policies, with limited apparent impact.

- « Whose » change? Who's behind the claim?
- Which rationale? Who would win and loose?
- « Justice » of change vs. locus of request
- « Autonomous » change vs. inductive policies
- Long-lasting structural change

2. « Significant » change: a change of dynamical model, of structure, recognized by the actors as a transformation of their lifestyle, their values or even their identity

$$X'_i = F(X_i, E, t) \rightarrow X'_i = G(X_i, E, t)$$

*A multi-inter-disciplinary / *-sectoral issue*

3 cases for (significant) change: locus of change?

Tackling legitimation & acceptocracy

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- Heteronomous
 - Assessing a current distortion between expectations & situation, a « principal » (policy maker) decides a « need for change » and aims at getting the agents to accept and implement it
- Autonomous
 - Some agents (alone or as groups) elicit their own « need for change » and choose a strategy
- Exogenous
 - Agents are obliged to change by some uncontrolled external factors (e.g. hazards, crisis)

Questioning (significant) change with Analytics

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- By observing the dynamic of socio-environmental systems (SES), (how) can we qualify some categories of change?
 - Detecting structural / normative / strategic transitions
 - Tracking back the causes, rationales, intentions
 - Assessing the ex-post dynamic & stability of change
- Can we help stakeholders (Pol. Makers, citizens, Business...):
 - Structuring and qualifying their « change' intention »
 - Assessing the current SES state and the change opportunity
 - Designing, piloting, adapting a change process ?

Toward a Change Companion infrastructure



Questioning the Analytics for change

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- How can we tune the emerging Policy Analytics to this need?
 - assess the « need for change » from all actors
 - assess « weak signals » of structural transitions, widely
 - choose « change' robust » indicators
 - focus on processes and procedures, as drivers or triggers
 - reassess the mandate of Analytics (vs. binding on datasets)
- Intervention-research and participation as key instruments
 - Change Analytics as a transformative learning process
 - (real) Participation for enlightenment, autonomy and sustainable change in society
 - When Analytics aim at supporting Participation

Social experiments as a backbone principle

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- With / for stakeholders, a powerful investigation and transformation instrument on change
 - controlled parsimonious experiments (cf. economics)
 - role-playing / policy sessions
 - real-life experiments
- Testing Analytics & Exploring Change
- !!! Requalifying the “value” of Analytics (information, process)

Issues :

- *Limited by time scope and actual commitment (virtualization)*
- *Multi-dimensional factorial monitoring*



Challenges (1)

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- Program structuring
 - Identifying and engaging scientific and operational partners, with application cases
 - Setting and funding the support projects
- Conceptual and analytical foundations
 - Boundary definition of “significant changes” for individuals and organizations, as regime shift or structural transformation vs. “casual change”, out of scope.
 - Inventory and classification of Change configurations, case-based
 - Multi-disciplinary state of the art on change dynamics, triggers and support
 - Modelling change dynamics as a base for further aid system
 - Existing procedures, methods, strategies targeting change
 - Review of the Analytics instruments targeting significant change



Challenges (2)

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- Evaluation and ethical framework
 - Defining goals and conditions of the preferred Change Analytics
 - Identifying measurable indicators related to use and impact
 - Defining ethical rules for the whole information life cycle, including privacy, transparency of guidance, informed consent, participation
 - Setting monitoring and evaluation system
- Participatory design
 - On a case study base, identify and select an initial Pilot Group and other stakeholders groups
 - Participatory needs assessment using scenario analysis, evocation of options and focus groups with various stakeholders
 - Social experiments to test and compare various Analytics options
 - Participatory co-design of a change governance process including Change Analytics (with PreParticipation methods)

Challenges (3)

- 12 • Methodological design and development
 - Based on needs and the state of the art, propose a set of aiding protocols and specify the related information collection, processing, rendering services
 - Contact and negotiate with classical Analytics data providers to adapt their service
 - Develop and verify the services, aggregating existing standards (see below)
 - Test the services through unitary experiments with real users
- Participatory experiment
 - Set and start controlled in-lab experiments, abstract, or role-playing – process and feedback
 - Set and start field experiments – process and feedback
 - Set and start larger scale intervention research processes
 - Open capacity for autonomous experiments for local & emergent change processes
- Dissemination
 - Structure and publish documentation
 - Structure a dissemination network with civil society organizations and administrations
- Training

Measuring individual and collective capabilities related to public participation for water management: insights from the CappWag experiment.

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Introduction – Why evaluating capabilities related to public participation?

- Public participation is generally said to be beneficial to environmental management (Fiorino, 1990; Hassenforder 2015).
- It can spark the transformation of the local people and communities towards:
 - the achievement of change;
 - the emergence of individual and collective capabilities they value and that may help them work together and manage together environmental resources (Sen 2000; Pelenc, Bazile, and Ceruti 2015).
- → The evaluation of participation processes is crucial to determine whether they do impact people's capabilities:
 - To understand how participation impacts the capabilities of individual participants and the group itself
 - And eventually their decisions and practices in terms of autonomy and involvement into the management process.
 - To improve participatory methods and processes so that they specifically target the improvement of people's capabilities and their empowerment,
- → Strong need for a systematic and reliable measurement tool of these impacts.

Introduction – Focus on three capabilities

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- We focused on three capabilities related to important states of being and action in the field of participatory decision-making for WRM:

The individual capability “being able to express oneself and taking part to a discussion among a group of people”	→ Inclusiveness of the deliberation process.
The collective capability of a group of participant “being able to make a diagnosis on a problematic and complex situation of environmental management”	→ Sharing a common vision of a socio-system, an important stage leading to the engagement into collective decision-making.
The collective capability of a group to design and implement rules to organise a socio-environmental system.	→ Critical for actively engaging into common resource management.

Material and methods

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■ We use a social experiment: CappWag, a controlled role-playing game (RPG) used as a capabilities measurement tool:

- Generic, controlled & comparable
- Allows players to interact together thanks to an intermediary device
- Confront players to a complex management situation simulating two real-life issues: the collective management of a river and a lake.

■ Completed with 2 other qualitative tools (questionnaire + focus group) → cross-checking



Photo: Loudin, 2017

<http://watagame.info>

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Material and methods

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