



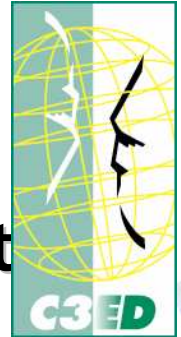
◆ *TERRAINS* ◆ *TOOLS* ◆
◆ *TASKS* ◆ ...

“BUILD YOUR PROBLEM”

MARTIN O’CONNOR – C3ED (FRANCE)
SUSTAINABLE DEVELOPMENT FORUM 2007, TALINN
STRATEGIES AND POLICIES FOR ENVIRONMENTAL INTEGRATION



CONSIDERATIONS FOR...



**A. Integrated Environmental/Resource Management
... via Stakeholder Deliberation**

**B. Inclusive Risk Governance
(... via Stakeholder Deliberation...)**

**C. CSR: Corporate Strategy & Communication
(... via Dialogues with Stakeholders)**

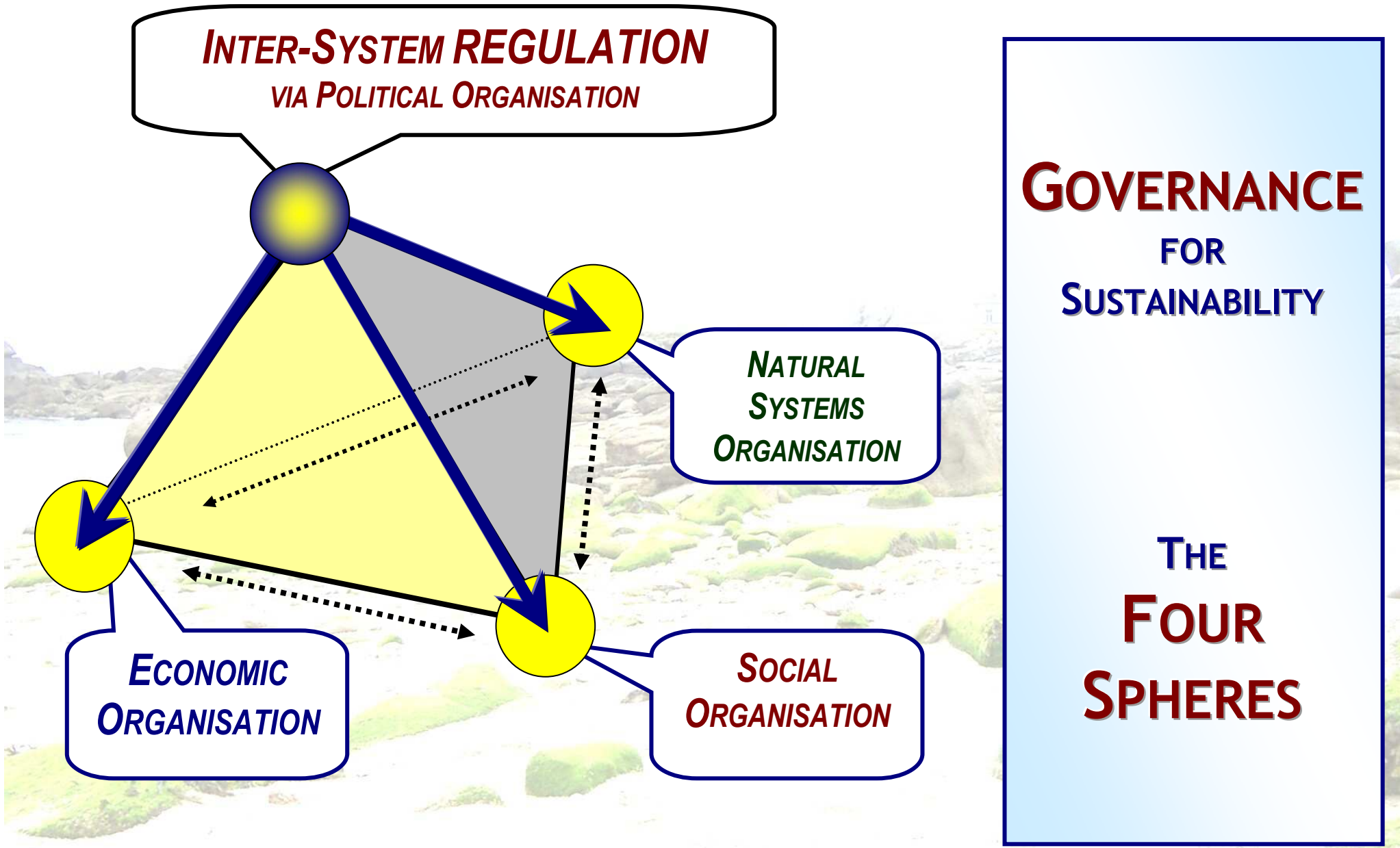
**SUSTAINABLE DEVELOPMENT FORUM 2007:
STRATEGIES AND POLICIES FOR ENVIRONMENTAL INTEGRATION**
8 November, 2007 in Tallinn, Estonia
Conference Centre of the Estonian National Library

SUSTAINABILITY OF WHAT, WHY AND FOR WHOM ?

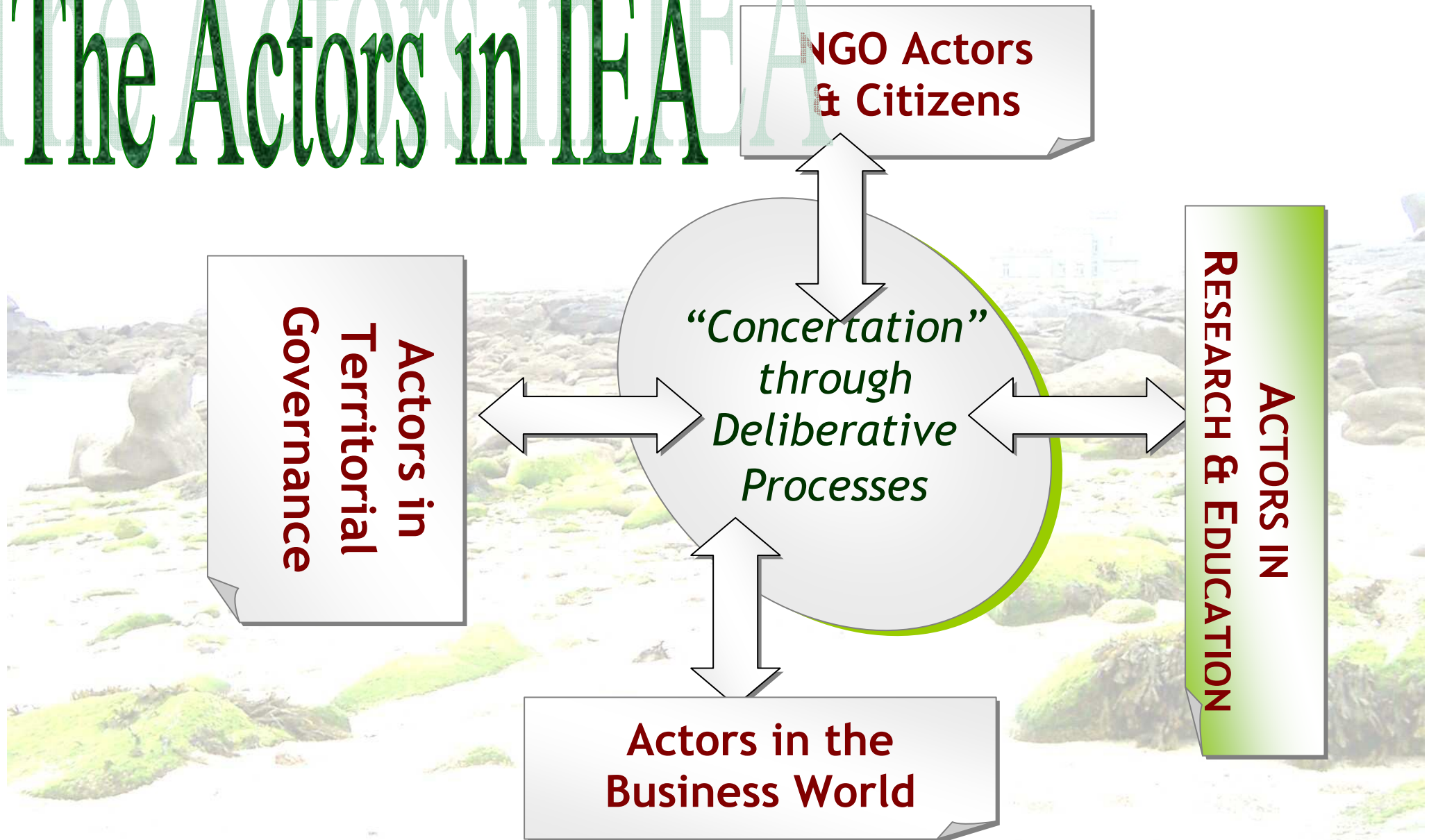
Achieving sustainability would mean a process of (*governed*) co-evolution respecting a “**TRIPLE BOTTOM LINE**”, that is, GOVERNANCE for *simultaneous respect for (or satisfaction of) quality/performance goals pertaining to each of the SOCIAL, ECONOMIC, BIOPHYSICAL “spheres” or dimensions of being.*

- ❑ The corners of the “tetrahedron” evoke the four organisational forms.
- ❑ The edges signal dimensions of system inter-dependence, which can be characterised through investigation of the “claims” or “demands” made by each sphere relative to the others.

GOVERNANCE FOR SUSTAINABILITY must identify QUALITY-PERFORMANCE CHALLENGES for each of the four spheres and thus, also, the Q-P concepts and criteria arising as “interferences” of two (or more) organisational forms.



The Actors in IEA



CHALLENGES FOR IEA:

- ❑ Scientific knowledge (including social & economic sciences) advising of irreducible uncertainties and/or irreversibilities associated with courses of action;
- ❑ Plurality of value systems, political and moral convictions, and justification criteria within society;
 - ❑ High decision stakes including economic interests and strategic security concerns for nations or entire communities (e.g., long-term high levels of unemployment and poverty), and also consequences of environmental change for public health, organism integrity and future economic possibilities.

(cf. Funtowicz & Ravetz “POST NORMAL SCIENCE”)

LINES OF FRACTURE CONFRONTATION AND CONCILIATION

- **Between 'growth' and the 'protection of the environment'**
 - **Between 'us' and the 'other' (e.g., NIMBY)**
 - **Between present and future generations (Brundtland's sustainability)**
 - **Between self-interest and interest in the lives of others (problems of altruism, duty, responsibility)**
 - **Between the human and the non-human world (and "intrinsic value")**
 - **Between 'our' culture and other cultures (racial, ethnic, religious intolerances & incomprehension)**
 - **Between what is 'internalised' in the marketplace and the 'externalities'**
 - **Between any given region or territory and its "Rest of the world"**
- Sustainability is the preoccupation – scientific, economic, moral & political – for reconciliation & coexistence of interests and forms of life that are in conflict with each other and at risk.**

SUSTAINABILITY POLICY & DIALOGUE

"... the policy process will enter the realm of the hermeneutic where there is no prior agreement on the key questions, appropriate framework or essential facts. With an expansion of worldviews and a broader conception of knowledge, we will find little consensus on questions, methodologies and data for determining optima. Good policymakers will be those who can lead enlightening conversations between scientists with different disciplinary backgrounds and between people of different cultures and knowledges."

– Richard Norgaard (1988), "Sustainable Development: A Co-evolutionary View", in Futures, 20, pp.606-620.

ACTION-RESEARCH (AND DOCUMENTATION OF ACTION-RESEARCH): MOBILISING HUMAN AGENCY IN SUPPORT OF SUSTAINABILITY OBJECTIVES



The key task for socio-economic research
in integrated (& participatory)
environmental resources management is not
the modelling of socio-ecol-economic systems,
it is the **MOBILISATION** of
HUMAN AGENCY in relation to
sustainability challenges and purposes

RATIONALES FOR “DELIBERATION” (1)

The mobilisation of knowledge, of human agency, and of collective capacity requires DELIBERATION

Deliberation about sustainability challenges and policy options and purposes must be structured...,

... and this presumes ACTION-RESEARCH with

TOOLS, METHODS & PROCESS DESIGN

Yet, deliberation may merely clarify tensions and contradictions between groups, societies, stakeholders, without resolving them....

SO, ... RATIONALES FOR DELIBERATION (2)

"...as there is no hope of founding anything durable on the short-change of a pseudo-universality imposed by violence and perpetuated by the negation of the other party, the venture is warranted that there is indeed a common space of fraternal coexistence yet to discover and construct." — Serge Latouche

(Ethic of Coexistence, and Hope)

SUSTAINABILITY AS A PROCESS OF COLLABORATIVE LEARNING

- Facing up to the dilemmas of action;
- weighing up the insights from different sources of knowledge,

? TOOLS, METHODS & PROCESS DESIGN ?

DELIBERATION SUPPORT TOOLS
TOOLS FOR INFORMING DISCUSSIONS, DEBATES AND DELIBERATION

DST = “Deliberation Support Tools”

TIDDD = Tools for Informing Discussions, Debates & Deliberation

TIDDDs or DSTs may combine multi-scale spatial representations, scenario simulation, indicators, multiple criteria evaluation and a variety of navigation opportunities within interactive user-friendly computer interfaces.

- The “GOUVERNe” project (2000–2003) demonstrated feasibility of new ICT for user-friendly interactive stakeholder-based decision support with reference to river and aquifer water resources;
- The VIRTUALIS Project (2001-2004) demonstrated multi-function interactive “virtual realities” with the objective of “Social learning on enVIRonmental issues with inT_eractive information and commU_nicAtion technoL_ogLeS”;

Several subsequent EC projects have carried forward these prototypes and design concepts for Sustainability Assessment (e.g., SRDTOOLS) and Integrated Environmental Analysis, e.g., ALARM (biodiversity), SPICOSA (ICZM).

PROGRESSIVE DISCOVERY & COLLECTIVE COMPETENCE

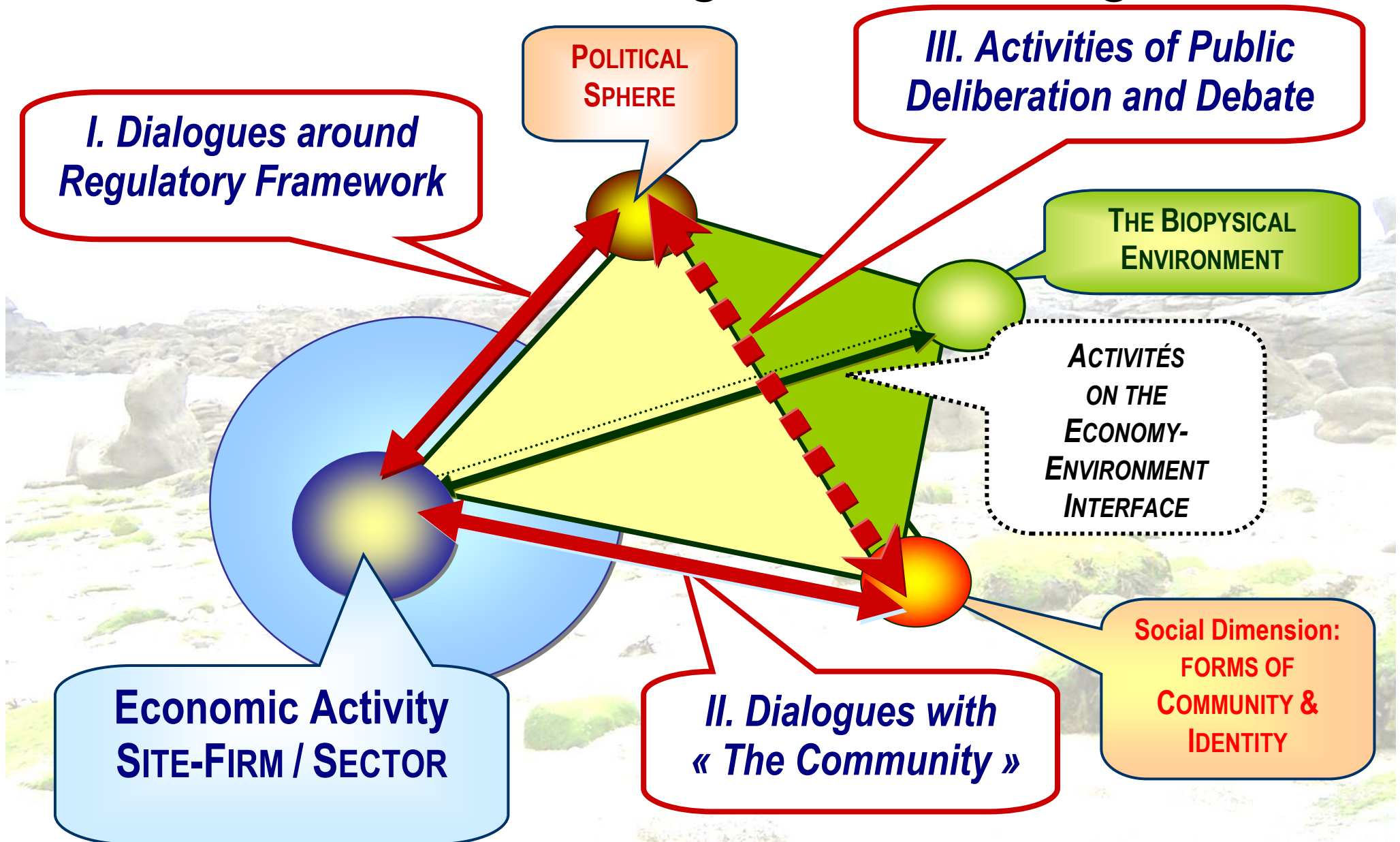
WITH THE ON-LINE DELIBERATION SUPPORT TOOLS

- ❑ The kerDST Deliberation Matrix and the Indicator Kiosk (KIK) are features of the suite of on-line documentation, evaluation and communication interfaces designed & developed by the KerBabel™ group of the IACA team at the C3ED, France.
- ❑ Design of the DSTs is based on the principle of offering, to on-line users, a variety of “LEARNING PATHWAYS” that allow a “progressive discovery of information”.
- ❑ The idea is to start with information and ‘tasks’ that are very accessible (from “*where the user is*”), and then progressively offer opportunities for the users’ interactions to become “deeper”, for the types of knowledge and interpretation challenges to become more complex, for collective insights & outcomes to emerge.

STEPS OF AN INTEGRATED SUSTAINABILITY ANALYSIS

- ❑ **STEP ONE — Identify « OUR COMMON PROBLEM »**
(on what terrain(s), at what scale(s), for whom, with whom ?)
- ❑ **STEP TWO — ORGANISE THE PROBLÈM**
(in terms of ACTORS, OPTIONS and ISSUES (the SQPMBLs))
- ❑ **STEP THREE — Identify and Mobilise TOOLS for REPRÉSENTATION**
(e.g., maps, models of processes and systems)
- ❑ **STEP FOUR — Mobilise Actors for TASKS of DÉLIBÉRATION ABOUT ACTIONS to undertake... Multi-Actor Multi-Criteria Evaluation**
Mobilise « indicators » to describe & assess the situation and scenarios of action; Construct a « deliberative forum » facilitating collective learning & action; Decide Communication Challenges and Reporting Strategies (on what, why, by whom, for whom?)
- ❑ **STEP FIVE — Actions of PREPARATION, DISCUSSION/VALIDATION & COMMUNICATION of RESULTS & RECOMMENDATIONS**
- ❑ **STEP SIX — ... Return to STEP ONE...**

Communication & Negotiation Challenges



TERRAINS TOOLS TASKS:

ORGANISING THE “THEATRE OF KNOWLEDGE”

- **Task Type A: Build a Collective Learning Process:**
Determine key Decision, Evaluation & Communication challenges, and construct a multi-event “Deliberative Forum” facilitating learning & action.
- **Task Type B: Undertake Assessments or Evaluations:**
Assess current performance or options at appropriate scales (from farm to region to nation...) in a multi-stakeholder multi-criteria perspective (e.g., using the kerDST « Deliberation Matrix »).
- **Task Type C: Motivate and Prepare the Use of « Indicators »:**
Define the roles of indicators to describe & assess performance and quality for any existing situation and for scenarios of policy or investment actions;
Build up banks of indicators pertinent to monitoring/assessment needs.
- **Task Type D: Produce Benchmark & Strategic Reports:**
Communication around Assessment processes and outcomes (e.g., selection of indicators, determination of Reference values [by whom, for whom?])

SUSTAINABILITY ASSESSMENTS

THE CONTEXTS ARE EXTREMELY DIVERSE:

- ◆ The relevant scales are very different (from household to planet);
- ◆ Wide variability from place to place (sites, regions, countries...);
- ◆ The Targets, Goals & SQPMBLs are articulated in varied ways;
- ◆ The categories of Stakeholders are context-dependent;
- ◆ The Scenario framing (of futures & options) is situation-specific;
 - ◆ ... and also ... the availability/quality of data varies greatly...

... YET, ACROSS THIS VARIETY, THERE IS STRUCTURAL SIMILARITY WHICH IS IMPORTANT IN METHODOLOGICAL TERMS...

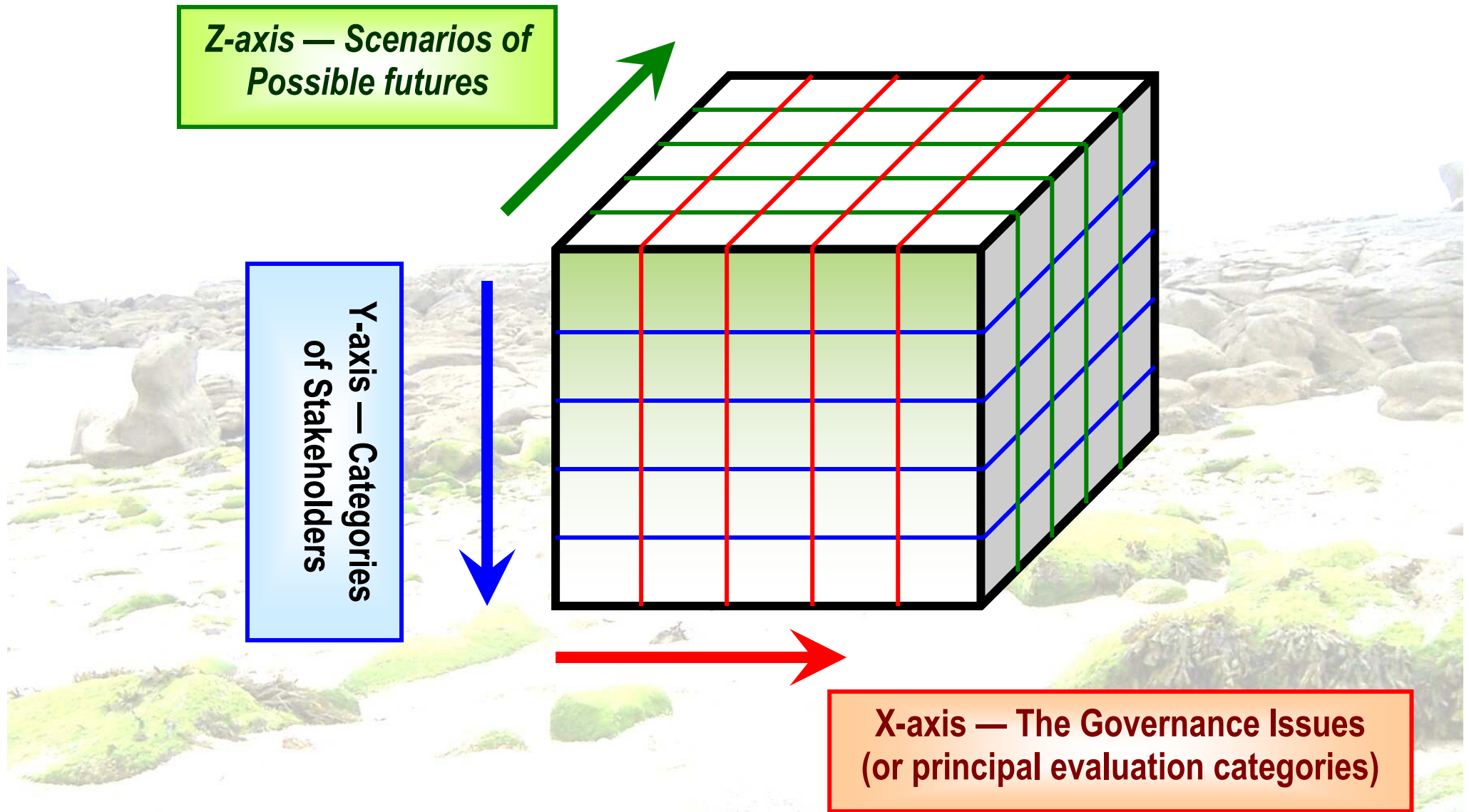
INDICATOR-BASED EVALUATIONS WITH THE KERBABEL™ DELIBERATION MATRIX

KERDST = AN ON-LINE DELIBERATION SUPPORT TOOL
FOR MULTI-STAKEHOLDER MULTI-CRITERIA EVALUATION

- ❑ **The Evaluation/Governance Issues:**
A small number of distinct Quality/Performance concerns
- ❑ **The Major Types of Actors or Stakeholders**
A pragmatic demarcation of “interests” and collective identities
- ❑ **The Policy Options or Possible Futures:**
A small number of Options for Action and/or Decision Scenarios [*]

*If the task is to evaluate a specific activity or to compare several situations, then the user specifies a **SITE** or **SITES** rather than **SCENARIOS**.*

THE STRUCTURE OF THE KERDST ‘DELIBERATION MATRIX’



KERDST – THE KERBABEL™ DST ON-LINE

KERDST is an on-line tool, offering to users a multi-stakeholder multi-criteria deliberation framework that can be applied to any situation of choice or debate.

Each cell (x,y,z) in the KERDST DELIBERATION MATRIX represents one dimension of the evaluation:

... by a specified category of STAKEHOLDERS (y),

... of a SITUATION or a SITE or a possible future SCENARIO (z),

... with reference to one of the PERFORMANCE CRITERIA (x)
(e.g., Societal Quality-Performance Bottom Lines)

SEE KERDST ON-LINE AT: <http://kerdst.c3ed.uvsq.fr>

Home

Welcome to the new version of KERDST : V3

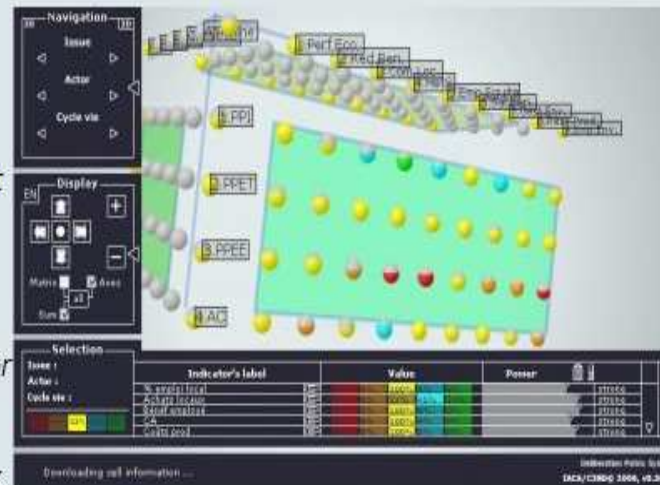
Submitted by Franck on Tue, 2005-10-04 07:03.

2007 : The new V3

The **KerDST** (Deliberation Support Tool) including the KerBabel™ Deliberation Matrix (DM) and the KerBabel™ Indicator Kiosk (KIK) is an on-line tool offering users a multi-stakeholder multi-criteria deliberation framework that can be applied to any desired situation of choice or discussion. With the third generation of **KerDST**, the tool adds to the existing deliberation structure (organising actors, issues and scenarios of a debate) the possibility to create and choose indicators within each vote that one actor gives about one scenario regarding one issue.

La "Matrice de Délibération" est un outil en ligne offrant aux utilisateurs un cadre de délibération multi-critères et multi-stakeholders applicable à n'importe quelle situation de choix ou de discussion.

How to do it / Mode d'emplois :



Debates v0.2

- La gestion des ressources en eau souterraines dans la Vallée du Souf (Sahara Algérien)
- La gestion de l'eau dans une commune
- OGM en France
- Développement du parc nucléaire français: le cas de la Bretagne
- Prolongement de la francilienne A104

more

Search

Who's online

There are currently 1 user and 5 guests online.

Online users:

- jean-marc

DELIBERATION SUPPORTED BY INDICATORS

In the Variations C and D of the on-line kerDST,

the judgement of a user for each Cell of the Matrix is informed by a “Basket of Indicators”.

- It is permitted to choose **UP TO 5 DISTINCT INDICATORS** for each “basket” corresponding to an individual Cell of the DM*
- For each indicator placed in a basket, the user must specify the **JUDGEMENT** [by choice of colour code] and the relative **WEIGHT** compared with other indicators*
- The Colour displayed on the Cell within the DM array, then is determined as a “composite” of the judgements and relative weightings attributed to each indicator in the ‘basket’.*

In the current on-line KERDST, the convention is to display the colour corresponding to the single most prevalent judgement, but only for the proportion of that colour’s presence.

SCREEN COPY OF AN INDICATOR “BASKET” FOR A CELL OF THE DM

The screenshot displays a software interface for a Decision Model (DM). At the top, a 3D visualization shows a blue cube containing several white spheres, representing an indicator 'basket'. Labels 'Scenario 1' and 'Scenario 2' are visible near the visualization. Below this, a table provides data for the indicator 'KIK'. The table has three columns: 'Indicator's label', 'Value', and 'Power'. The 'Value' column contains a horizontal bar chart with segments in red, yellow, green, and purple. The 'Power' column shows a battery icon and the text 'medium'. A red oval highlights the table area.

Indicator's label	Value	Power
KIK	[Bar chart with red, yellow, green, purple segments]	medium

SUSTAINABILITY INDICATORS

The kerDST framework of multi-criteria multi-stakeholder evaluation, defines roles for indicators, which are mobilised:

- (1) to describe situations (or scenarios for future situations), and
- (2) to compose judgements about performance and quality.

This implies the need to build up banks of indicators adapted to monitoring/assessment needs.

We need TOOLS AND METHODS to declare, classify and mobilise indicators as a function of their (perceived) pertinence to a specific assessment context.

SUSTAINABILITY ASSESSMENT (I)

In order to permit an assessment that is transparent and robust across the full spectrum of issues and stakeholders, SA needs to be organised in a multi-layered way.

□ BUILDING THE PROBLEM requires a **“TOP-DOWN AND BOTTOM UP” DIALOGUE** between generic sustainability concepts and situation-specific concerns, to obtain a discursively derived set of SQPMBLs (**SUSTAINABILITY QUALITY-PERFORMANCE MULTIPLE BOTTOM LINES**).

□ MAKING THE ASSESSMENT requires the mobilisation of a **REPRESENTATIVE DIVERSITY OF INDICATORS** whose role is to signal the preoccupations of the full spectrum of stakeholders across the spectrum of performance issues

SA LEVEL	ENVISAGED OUTCOME
CHARACTERISING “SUSTAINABILITY”	Adherence to a common vision of “Sustainable Development” or “Governance for Sustainability” as the pursuit or achievement of a coevolution of interdependent systems respecting simultaneously multiple “bottom lines”
ARTICULATING THE QUALITIES TO BE UPHELD: “<i>SUSTAINING OF WHAT, WHY AND FOR WHOM?</i>”	Agreement by Stakeholders on the set of Performance/Quality considerations that are affirmed as “Bottom Lines” for the SPECIFIC policy situation or class of challenges being addressed.
PROPOSING AND MOBILISING INDICATORS FOR EACH PERFORMANCE CATEGORY / SUB-CATEGORY	Consensus about baskets of appropriate INDICATORS to be mobilized, as a function of issues, stakeholder diversity and the range of sites, scales and options under discussion.

KQA AND STAKEHOLDER DIALOGUES

KQA — Scientific knowledge quality assessment (e.g., NUSAP profiles) — requires reflexive scientific expertise; but also (and more particularly...) — it requires ongoing dialogues between “producers” and “users” of knowledge (information).

Knowledge of What ???	(What is the ‘Object’ of Representation) (Observation/Visualisation at what scales?)
QUESTIONS OF PERTINENCE ARISE...	
Pertinence Why ???	What are the Stakes? The Issues?
Pertinence to Whom ???	Who (and where) are the Stakeholders?
Pertinence Where ???	In what senses a Local / Global problem?

FIRST LEVEL STRUCTURE OF THE KIK THE C3ED'S "KERBABEL™ INDICATOR KIOSK"

**THE INDICATOR CONCEPT: NAME, ACRONYM,
SHORT DEFINITION**

SCIENTIFIC PROFILE : Conventions for Description of the
Object/attribute (including Units of Measure if Quantification)

SCALE OF THE DESCRIPTION, and indications of 'Upwards' and
'Downwards' Changes-of-Scale along Economic-Institutional-
Environmental Dimensions

KNOWLEDGE QUALITY ASSESSMENT: Observation &
Measurement : **[KQA Profile (I), NUSAP]**

**CONVENTIONS OF THE FRAMEWORK OF
REPRESENTATION**
**(HOW DOES THE INDICATOR APPEAR IN THE
ANALYTICAL / VR SYSTEM ?)**

Pertinence at what Scale(s) of Description?
[Characterisation along the CHANGES-OF-SCALE Axes]

Pertinence Where?
[Characterisation across the SITE Axis]

Pertinence for What ?
[Characterisation along the PERFORMANCE ISSUES Axis]

Pertinence for Whom?
[Characterisation along the STAKEHOLDERS Axis]

THE TIME DIMENSION
Forward-looking Perspectives :
[Characterisation across the SCENARIO Axis]

KNOWLEDGE QUALITY ASSESSMENT for projections forward in time
[KQA Profile (II) — Uncertainty & Indetermination]

KEY META-INFORMATION CATEGORIES FOR SA

The KIK, for any specific assessment context, proposes fields that permit users to declare views on the PERTINENCE of an indicator relative to:

- each of the “PERFORMANCE ISSUES” identified for the multi-criteria evaluation
- each of the Actor/STAKEHOLDER CATEGORIES of deliberation perspectives
- the organisational SCALE(S) at which the indicator is applicable
- each of the SITES or activities or situations where SA is made or envisaged.

The KIK can also provide a declaration & documentation format for:

- specification of indicator values or ranges for SCENARIOS.
- KQA PROFILING, including uncertainties of current data and indeterminacies associated with indicators & models in scenario exercises.
- Specification of normative REFERENCE VALUES (or ranges) for assessing past, current or scenario outcomes against scientific & societal benchmarks.

SUMMING UP

□ This ‘generic’ Sustainability Assessment (SA) method is socially robust, in that it can be applied meaningfully...

... with very incomplete information sets;

... with a great diversity of ‘candidate indicators’;

... in a dynamic way (both contributing to and benefiting from improvements in the supporting information sets).

□ It can also be applied meaningfully

... with very modest technical expertise;

... and to build dialogues between constituencies holding very disparate knowledges and expertise.



THANK YOU