



## When the Organization faces the Sustainable Development Challenges

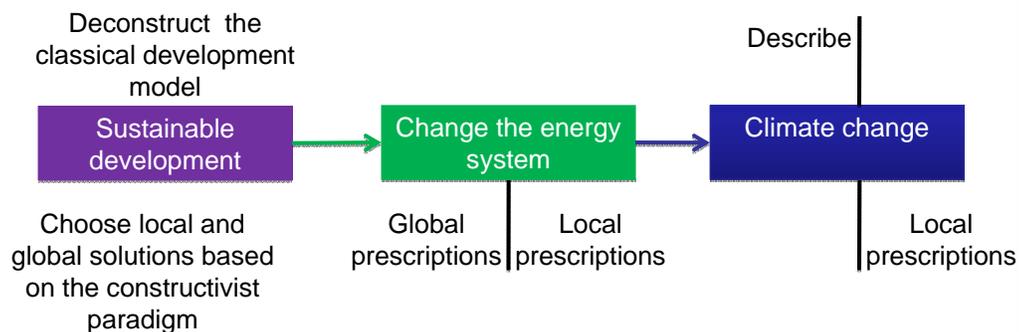
*How to manage risks induced by climate change?*

*A sustainable development plan for a public institute in the field of industrial environment and risks*

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Frédéric MARCEL  
Iceland, June 9<sup>th</sup> 2010

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### Sustainable development (syndrome) and climate change (symptom)

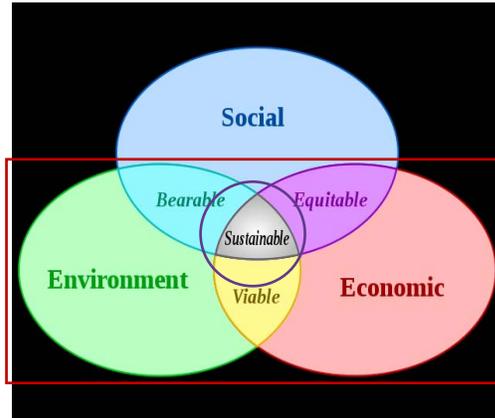


**Use new governance models: deliberative and participative models**

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## Sustainable development



ISO 26 000 Corporate Social Responsibility

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## Different decision and governance processes

(1/3)

- Representative democracy:

Émile Durkheim

(a)- Value of information:

- Identify and use stakeholders' information.
- Representativity.
- Precision.

(b)- Decision analysis:

- Decision-Maker and Analyst.
- Other stakeholders.
- Problem: choose the right model considering uncertainties on data (mathematical problem).
- Models: OR, MCDA (Choquet integral, ...).

(c)- Condition of validity:

- Model (data uncertainties)

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## Different decision and governance processes

(2/3)

### Participative democracy:

#### (a)- Value of information:

- Jürgen Habermas:
  - Participative approaches: Dialogic reason, communicational action (consensus building) and strategic action (manipulation).
  - Value polytheism (different model, cultures, ...).
  - All stakeholders give an important information;
  - Give a typology of validity conditions: Intelligibility, Scientific truth, Normative accuracy and Sincerity.

#### (b)- Decision aid:

- Decision-Maker and Analyst. Other stakeholders.
- Problem: frame problematics and choose a model (multicriteria aggregation, BNW...).
- Models: MCDA (inter-active, Outranking like ELECTRE ...).

#### (c)- Condition of validity:

Process.

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## Different decision and governance processes

(3/3)

### Deliberative democracy:

#### (a)- Foundations

- How to build proactive democracy?
- Joshua Cohen.
- Pierre Rosenvallon: Conter-democracy – distrust politic.

#### (b)- Decision aid:

- Problem: role of the decision analyst, frame reflexive approaches.

#### (c)- Condition of validity:

- Empowerment

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 <h2 style="color: red;">Sommaire</h2> <ol style="list-style-type: none"> <li>1. Context and theoretical considerations. <ul style="list-style-type: none"> <li>▪ Chronology of engagements.</li> <li>▪ INERIS mission.</li> <li>▪ Sustainability: The Organizations and the sustainable development.</li> <li>▪ Decision aid methodology.</li> </ul> </li> <li>2. A sustainable development plan for INERIS</li> <li>3. New challenges.</li> </ol>	1. Context - theory
	2. SD Plan for INERIS
	3. Challenges


  
mission de risque pour un développement durable

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 <h2 style="color: red;">Chronology of engagements</h2> <ul style="list-style-type: none"> <li>• Our mission: Risk prevention applied to chemical and petrochemical Industry sector <ul style="list-style-type: none"> <li>• environmental pollution and health impact,</li> <li>• <b>major hazards and process safety</b> (vs. occupational safety).</li> </ul> </li> <li>• Public Establishment and firms' Sustainable Development (SD) Charter</li> <li>• What does it mean for an expertise Institute? <p style="margin-left: 40px;">«Taking into account, within it <b>internal management process</b>, it <b>missions</b> and it <b>relation with the stakeholders</b>, the need to reconcile both <b>economic, social</b> and <b>environmental</b> concerns».</p> </li> </ul>	1. Context - theory
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## Participative decision aid methodology

- **Accountability of decisions.**
  - Transparent process.
  - Reduce or avoid intuitive and collective biases.
- **Methodology:**
  - For who? (Level of decision? Stakeholders?)
  - Why? (law, ...)
  - Who is also concerned by these information?
  - Who decide?
  - Who will be impacted?
  - Who will be in charge of collecting the information?
  - What are the objectives?
  - What must we assess?
  - What next?
- **Problem structuring:**
  - Mathematical formulation.
- **Frame final recommendations:**
  - What must we consider at first?
  - Is it robust?
  - What about legitimacy?
  - Does it work?
  - Are we satisfied?

1. Context - theory

2. SD Plan for INERIS

3. Challenges

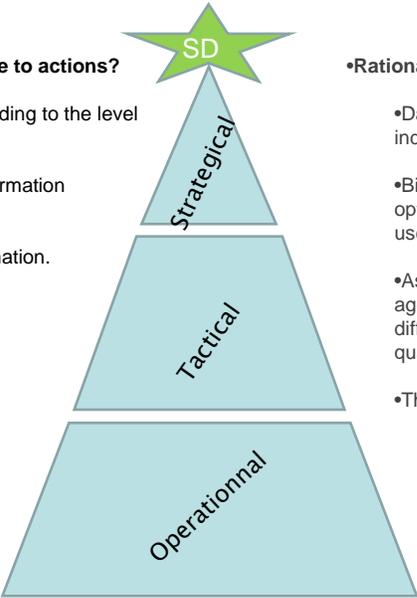
**Multi-criteria decision aid approach based on Participative democracy**



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## The Organizations and the Sustainable Development

- **How to move from the SD principle to actions?**
  - Proportioned information according to the level of decision.
  - Global consolidation of the information (coherence and significance).
  - Avoid the redundancy of information.
  - Transparency of choices.



- **Rationalize actions:**
  - Dashboard with a set of indicators.
  - Biases: Decision-makers optimize the criteria that are used to evaluate them.
  - Assess the set of actions: aggregate information from different nature (qualitative, quantitative).
  - There are many *referentials*.

1. Context - theory

2. SD Plan for INERIS

3. Challenges



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## Methodology

- Identify a set of SD actions at INERIS:
  - Participatory process with engineers, management and representative.
  - Health and Safety Reports, Social report and financial report.
- Benchmark of actual practices: Organizations (Public and private sectors), local communities, NGO,....
- Working groups organized by the French Ministry of Environment and French Ministry of Finance and Industry (MEEDDM-MINEFI).

## A set of actions

- Each action is described in an action-form and coordinated at an operational level.
- Each SD coordinator is responsible of the coherence of the action with the general politic of the Institute.
- For each action, quantitative and qualitative objectives are fixed.

Action n°		
Title		
Expected benefices	Costs	Maturity Progress
Strategic objectives	•Description	
Stakes:	Coordinator:	
What is already done?	Partners:	
What next?	Indicators:	

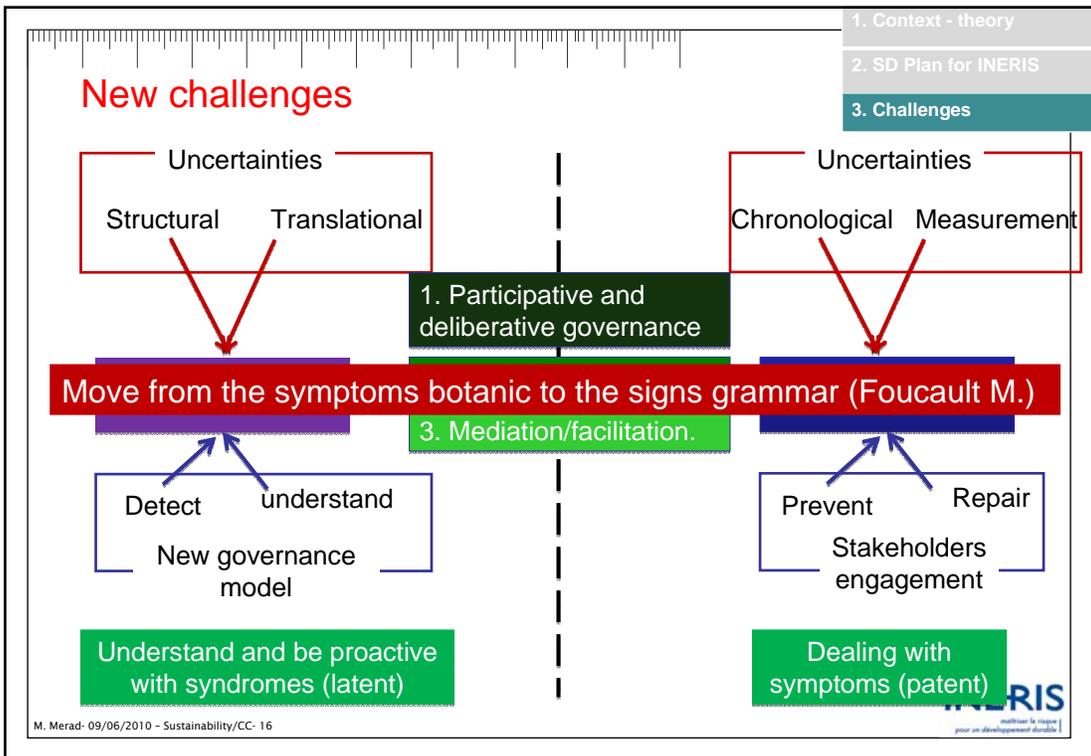
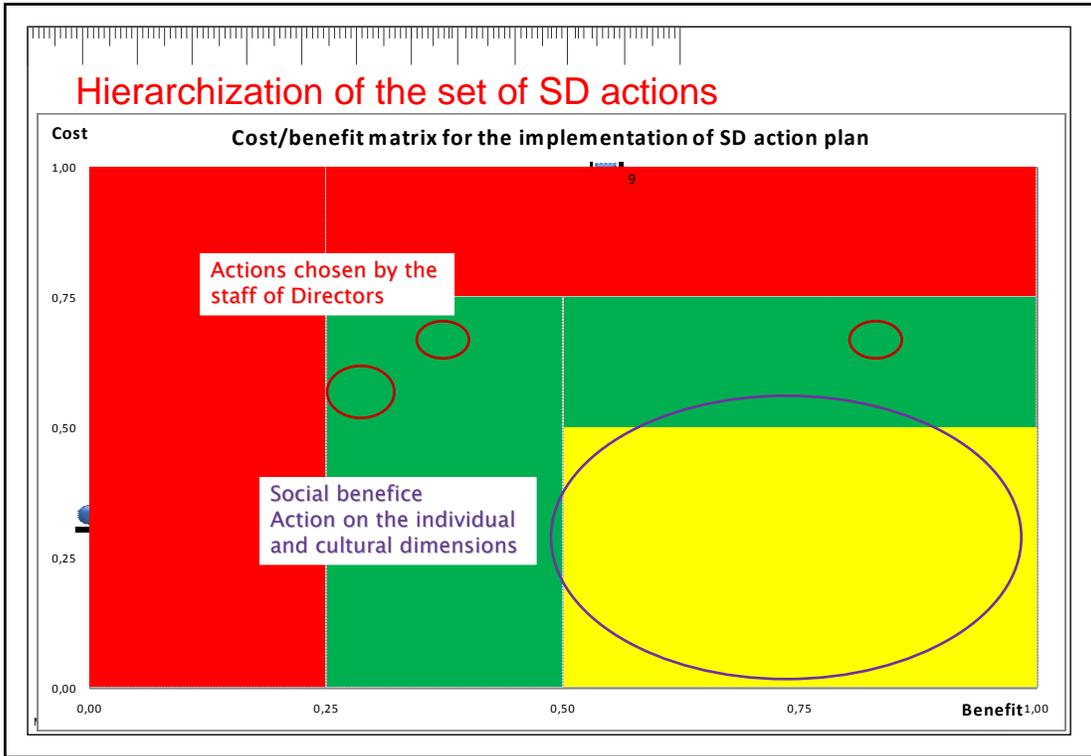
Id.	Description	SD domains		
		Environmental	Social	Economical
1	Office automation: for 2010, 60% of the new bought materials must have performances equivalent to the TCO Swedish reference, and to comprise a minimum percentage of recycled materials.	✓		
2	To increase the percentage of products coming from biological agriculture in the collective food services.	✓	✓	
3	To check the origins of wooden products.	✓	✓	
4	To use eco-labeled products for buildings cleaning.	✓		
5	To control the use of paper.	✓		
6	To form and sensitize with the staff to eco-driving during work displacements.	✓		
7	To have only vehicles (private cars) with less than 130g of CO2/km.	✓		
8	To implement a Company Displacement Plan.	✓		
9	To control waste management.	✓		
10	To have a reasonable management of Parks and of the arboreal patrimony within the Institute.	✓		
11	To remove ink-jet printers for 2010.	✓		
12	To control energy consumption of institute buildings.	✓		
13	To implement durable policy of sourcing.			✓
14	To contribute to the development solidarity social economy.		✓	✓
15	To consolidate the partnerships with the different actors of the SD.		✓	
16	To develop new managerial practices with respect to SD principle.		✓	
17	To develop a better career management and to improve the well being in the Institute.		✓	
18	To invest the Institute in the social responsibility by taking care of our responsibility in handicap integration.		✓	
19	To implement a strategic watch in the field of SD to support project leaders and managers within the Institute.		✓	✓
20	To develop the exchanges of knowledge and know-how with our foreigners partners and to capitalize the good practices.		✓	
21	To reinforce the links between INERIS and NGOs.		✓	
22	To develop a SD culture within the Institute.		✓	

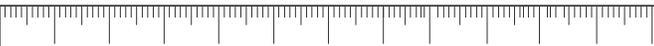
## Dashboard for the top management

- Assessment of the 22 SD actions.
- Two families of criteria:
  - 3 criteria for the expected benefices: environment, social and economic.
  - 3 criteria Costs: internal expenses, external expenses and investments.
- Performance table: qualitative.
- Compare all the SD actions one to the other for each criterion (indicator).
- Choose the right aggregation procedure: non compensatory.

Actions	Benefices			Costs		
	C <sub>Env</sub>	C <sub>Soc</sub>	C <sub>Eco</sub>	D <sub>Int</sub>	D <sub>Ext</sub>	Inv
1	4	2	3	0	0	4
2	3	2	1	1	2	4
3	4	1	2	1	0	0
4	1	4	3	0	1	0
5	1	3	1	1	0	0
6	1	3	3	2	0	0
7	1	3	2	1	0	1
8	4	1	1	0	0	1
9	3	1	1	1	1	0
10	4	3	1	0	3	1
11	3	3	1	0	2	2
12	3	1	1	0	1	0
13	4	1	1	1	2	0
14	1	2	1	1	1	0
15	3	1	1	0	0	2
16	2	4	3	1	0	2
17	2	4	2	1	1	0
18	1	4	3	1	1	0
19	3	4	4	1	1	0
20	1	4	1	1	0	1
21	1	3	2	2	0	0
22	1	3	3	1	0	1

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