

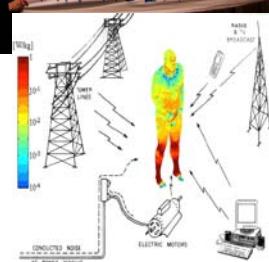
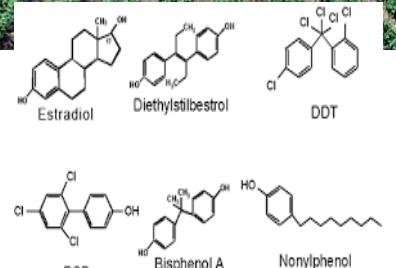
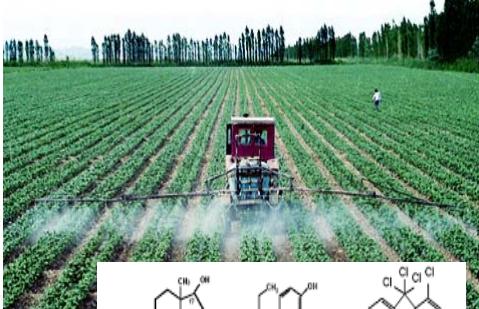
Pragmatisme et conflictualité

La dynamique des controverses
saisie par les milieux en interaction

Francis Chateauraynaud

« Le Développement durable à l'épreuve de la société du risque »

Paris, Réseau ACDD, 22 juin 2016



DISEASE QUARANTINE VIRAL DEATH
FATIGUE OUTBREAK PAIN
FEVER BLEEDING VACCINE
FOREST DESTRUCTION
EBOLA
MEDICAL CONTAGIOUS VIRUS
PEOPLE INFECTION DANGER AFRICA

Un conflit peut être aussi productif, sinon plus, qu'un accord déconnecté des formes de vie

- un accord obtenu par euphémisation des oppositions ou des malentendus peut produire les conditions d'explosions ultérieures alors qu'un conflit assumé permet de déployer des articulations différentes entre des valeurs et des formes de vie
- On retrouve ici une des vertus cardinales mises en avant par le pragmatisme : le pluralisme

Socio-informatique et argumentation

sociologie argumentative des controverses, concepts et méthodes socio-informatiques

ACCUEIL À PROPOS RÉDACTION



L'histoire des OGM n'est pas une controverse ratée mais un conflit réussi

[9 réponses](#)

Francis Chateauraynaud

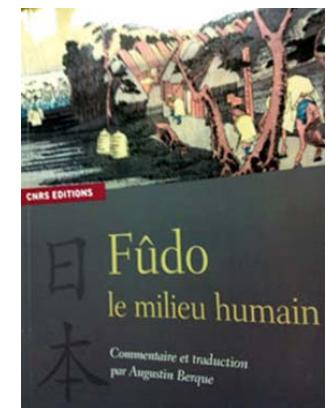
Dans un billet qui faisait suite à [un séminaire consacré aux OGM à l'EHESS en septembre 2010](#), j'annonçais la diffusion prochaine d'un rapport de recherche issu de plus de trois ans de travaux collectifs. Les dernières formalités ayant été adressées à l'ANR, ce rapport est enfin disponible sur le site du GSPR. Voici la référence et le lien :

Francis Chateauraynaud, Antoine Bernard de Raymond, Marie-Angèle Hermitte et Gilles Tétart, [*Les OGM entre régulation économique et critique radicale*](#), rapport ANR OBSOGM, Paris, GSPR, 2010.

Le premier volume contient trois parties : « *Chronologies et périodisations d'un dossier complexe* » (*partie I*), « *Controverses publiques et logique de conflit* » (*partie II*), « *Visions du futur et ouvertures d'avenirs* » (*partie III*). Le second volume concerne très directement ce carnet puisqu'on y trouve deux annexes, l'une consacrée à l'architecture du corpus étudié et aux principales données produites par Prosnéro, l'autre à des extraits de dialogue avec Marlène

1.

Repartir des échanges sensibles au cœur des milieux







Organic vineyards (left) versus conventional vineyards using chemicals (right)
(source : Médoc, enquête FC –JD Estuaire de la Gironde, 2013-2015)

marine protected area

DYNAMIQUES ENVIRONNEMENTALES
À la croisée des Sciences

Sous la direction d'Hervé LE TREUT

Les impacts du changement climatique en Aquitaine

Actualité | Sports | Faits divers | Annonces | Boutique

Publié le 06/11/2013 à 06h00 | Mise à jour : 06/11/2013 à 08h25 | 0 commentaire(s) | Par JÉRÔME JAMET jjamet@sudouest.fr

Centrale du Blayais : les risques nucléaires sont-ils bien anticipés ?

La Commission locale d'information nucléaire travaille sur la gestion des conséquences d'une catastrophe à la centrale de Braud-et-Saint-Louis



La centrale de Braud n'a jamais connu d'incident majeur sur ses installations, mais l'inondation d'une partie du site en 1999 est encore dans toutes les mémoires. (archives Guillaume Bonnau)

Dans quelle mesure les services de l'État et la population sont-ils prêts à faire face à une catastrophe nucléaire ? Question vertigineuse à

Partager

J'aime 78

French wine industry's love affair with pesticides blamed for worker health problems

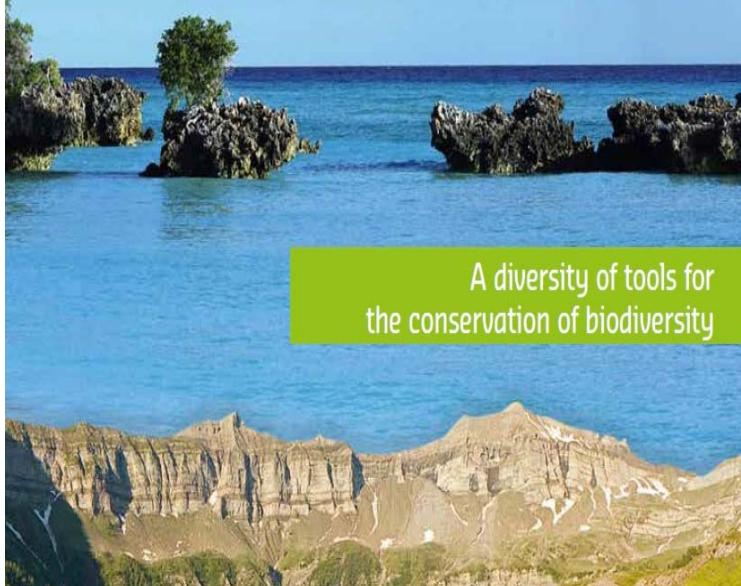
A growing number of lawsuits in France have begun to expose the serious risk faced by those working on non-organic vineyards



the guardian

PROTECTED AREAS in France

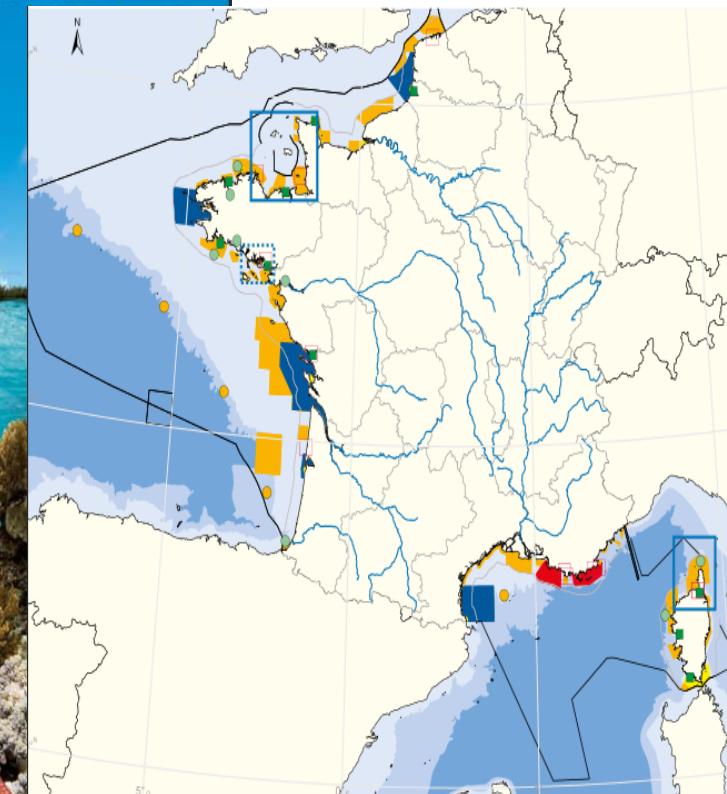
A diversity of tools for
the conservation of biodiversity



November 2015
edition

National strategy for the creation and management of marine protected areas

SUMMARY



The Natural Marine Park of the Gironde estuary and the sea of Pertuis, 7th French marine park was established in April 4, 2015 by decree of the Ministry of Ecology (Ségolène Royal)



PARC NATUREL MARIN DE L'ESTUAIRE DE LA GIRONDE ET DE LA MER DES PERTUIS

EDITEE LE :

27/03/2015

Périmètre du parc naturel marin



“Le Signal” A building on the South-West French coast ,threatened by erosion, which is growing fast. Climate change will increase the threat and will produce transformation of the estuary ecosystem including artificial facilities and devices.





Nuclear Power Plant in Blayais, flooding of the buildings, 28th dec 1999
(Cyclone Martin)

IMPACTS SOCIO-ÉCONOMIQUES

Château Lafitte, Château Margaux, Saint Estèphe, Saint Julien... dans un rayon de 10 km

La centrale se trouve au milieu des grands domaines viticoles du Bordelais | Des activités viticoles de grands crus ne sont pas « transférables » | Chiffre de près de 4 milliards d'euros annuel | Région très touristique avec plus de 100 000 000 de visiteurs par an



RISQUES ET CONSÉQUENCES

SÛRETÉ

Parois simples des enceintes de confinement | Générateurs de vapeur en inconel non traités thermiquement sensibles au risque de rupture de tube | piscines non confinées, fragiles en cas de vidange et d'échauffement du combustible

SÉISME

Incertitudes fortes sur la prise en compte de l'aléa sismique | Normalement, sismicité faible dans la région mais centrale dimensionnée pour un séisme de 6,5 (Richter) | La question est posée à EDF |

SÉCURITÉ, CHUTE D'AVION

Proximité de l'aéroport de Bordeaux | Topographie plane, réacteurs très accessibles | Piscines accessibles, non confinées et situées en hauteur | Réacteurs avec paroi simple |

POPULATION

Environ 1,5 millions de personnes à moins de 70 km | L'agglomération Bordelaise avec son million d'habitants se trouve à 45 km |

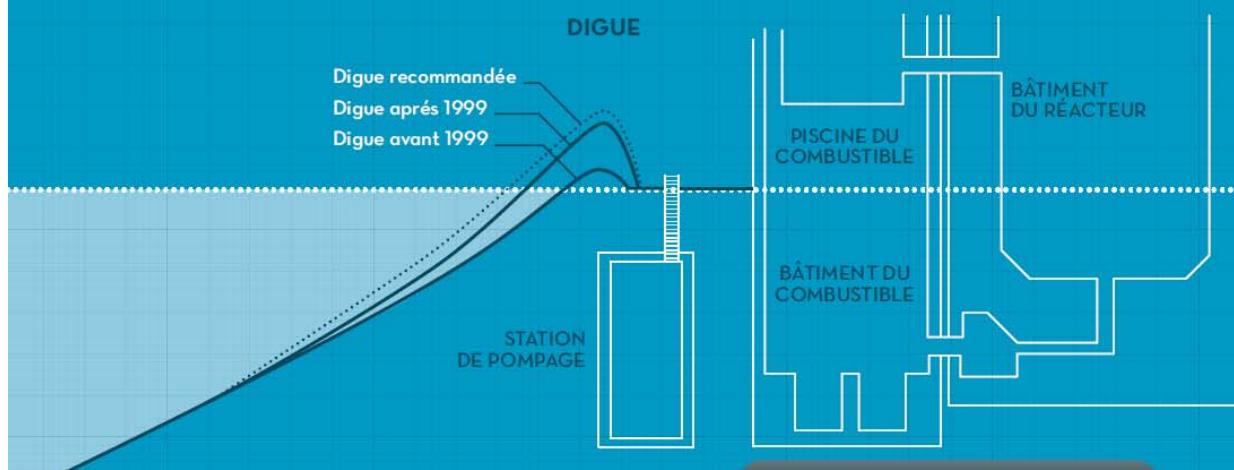
CONTAMINATION

Les vents dominants montrent que la contamination irait plus vers Bordeaux et les terres agricoles et viticoles alentours que vers l'océan |

INONDATION

La tempête de 1999, le scénario du pire est toujours possible

Lors de la tempête de 1999, une des situations les plus critiques jamais vues sur le parc nucléaire français : rupture de l'alimentation électrique, systèmes de secours des réacteurs n°1 et 2 inondés, centrale isolée et inaccessible | La digue est encore sous dimensionnée : de 5,2 m en 1999, elle a été rehaussée à 8,5 m mais sa hauteur devrait être à 9 m |



Blayais, estuary of Gironde



Gravelines, côte d'Opale



Hinkley point, estuary of Severn



Dungeness, Kent



[...] in reference to previous studies of extreme water levels, it is salutary to consider the implications of the storm surge from **Windstorm Martin on December 27, 1999** in the Gironde estuary in southwestern France. At the **Blayais nuclear power plant** on the Gironde, home of four reactors, the storm surge reached one meter higher than had been considered the maximum possible water level at the facility. As a result, the water overtopped the defenses and flooded several meters of the lower level of the facility. Without any internal flood protection system, the water spread over a large network of galleries, damaging pumps and electrical circuits. [...] On the Bristol Channel, the **reactors at Hinkley Point and at Oldbury are also vulnerable to being flooded** by extreme water levels higher than anticipated in the design of the facilities. Where accompanied by an intense windstorm, the operations and even safety of these facilities could potentially be significantly challenged by the repeat of a surge with tide event comparable to 1607.

Risk Management Solution, “conclusion”, *1607 Bristol Channel Floods: 400-Year Retrospective*, special report, 2007.

Nuclear sites in the UK at risk of flooding



Dounreay, Caithness
● Waste store, plant
being decommissioned
● None
● None

KEY
● Facilities
● Flood risk 2010
● Flood risk 2080s
● Erosion risk

UK nuclear sites at risk of flooding, report shows

Rising sea levels because of climate change put 12 of 19 sites at risk, unpublished government analysis shows

• Map: sites at risk of flooding



Sizewell nuclear power plant, seen from across the sea at Southwold, Suffolk. Unpublished government analysis shows sites are at risk from flooding due to climate change. Photograph: Graham Turner for the Guardian Graham Turner/Guardian

As many as 12 of Britain's 19 civil nuclear sites are at risk of flooding and coastal erosion because of climate change, according to an [unpublished government analysis](#) obtained by the Guardian.



The Hinkley Point C boondoggle: a dangerous waste of money

October 26, 2015 by Alex Russell and Peter Strachan — 10 Comments



Hinkley Point C artist's impression

The UK Government's pursuit of a new nuclear plant at Hinkley Point C represents not just a colossal waste of money, but could also be real danger to the UK's national security, write Professors Alex Russell and Peter Strachan of Robert Gordon University. "Let us hope that the Prime Minister and Chancellor's actions do not lead to the radicalisation of unemployed steel workers who are now being joined by unemployed renewable industry personnel."

The Conservative government, arguably, has completely lost the plot in continuing to pursue its so called [energy policy that depends so heavily on building a new fleet of nuclear power stations](#) to keep the lights on in Britain. The government want to have 16 GW of new nuclear power stations built in the UK all using EDF's troubled Generation-III design, of which Hinkley Point C (3.2 GW) is only the first installment.

With this project is George Osborne seeking an entry in the Guinness Book of Records as the first Chancellor of the Exchequer to commission the world's most expensive nuclear power station? The Chancellor says the project represents good value for money. But the facts suggest otherwise. Further, and with the recent [signing](#) of a new nuclear accord as part of the State Visit of the President of China, not enough attention appears to have been given to national security issues.

Economic madness

Planned Hinkley Point nuclear power station under fire from energy industry

Energy analyst says that for same price as Hinkley Point C, providing 3,200MW of electricity, almost 50,000MW of gas-fired power capacity could be built



Artist's impression of Hinkley Point C, which it is predicted will cost as much as the combined bill for the London 2012 Olympics and the revamped Terminal 2 at Heathrow. Photograph: EDF Energy/PA

Hinkley Point, the planned £24.5bn nuclear power station in Somerset, is under mounting criticism from the energy industry and the City, even as the government prepares to give the final go-ahead for the [heavily subsidised project](#).





“[C]contaminated diversity is **recalcitrant** to the kind of ‘summing up’ that has become the hallmark of modern knowledge. Contaminated diversity is not only particular and historical, ever changing, but also relational. It has no self-contained units; its units are encounter-based collaborations. Without self-contained units, it is impossible to compute costs and benefits, or functionality, to any ‘one’ involved. No self-contained individuals or groups assure their self-interests oblivious to the encounter. Without algorithms based on self-containment, scholars and policymakers might have to learn something about the cultural and natural histories at stake. That takes time, and too much time, perhaps, for those who dream of grasping the whole in an equation. But who put them in charge? **If a rush of troubled stories is the best way to tell about contaminated diversity, then it's time to make that rush part of our knowledge practices.** Perhaps, like the war survivors themselves, **we need to tell and tell until all our stories of death and near-death and gratuitous life are standing with us to face the challenges of present.** It is in listening to that cacophony of troubled stories that we might encounter our best hopes for precarious survival.”

- Anna Tsing, *The Mushroom at the End of the World. On the Possibility of Life in Capitalist Ruins* (2015)

Anna Tsing, 2005.

***Friction: an ethnography of global connection*, Princeton University Press.**

Connue pour son ethnographie menée dans les Monts Meratus de la forêt Kalimantan en Indonésie, publiée dans *In the Realm of the Diamond Queen* (1993).

Tsing s'oppose aux analyses de la globalisation sous l'angle de la diffusion de standards ou de projets, conçus comme l'expression d'un mode de domination hégémonique, essentiellement par le biais de la logique de marché, mais aussi par l'emprise militaire. Symétriquement, elle va à l'encontre des études de terrain qui renversent la perspective en valorisant les résistances locales, souvent essentialisées.

Tsing développe une anthropologie selon laquelle la rencontre des cultures génère toujours du frottement, celui-ci étant à la fois source de conflit et de créativité. Il n'y a pas de processus linéaire et le résultat n'est jamais joué d'avance. Tout dépend des éléments mis en présence au fil des épreuves, les milieux et les dispositifs se configurant à travers des éléments contingents dus à leur rencontre ou leur juxtaposition.

2. Les prédateurs de l'anthropocène et les risques systémiques



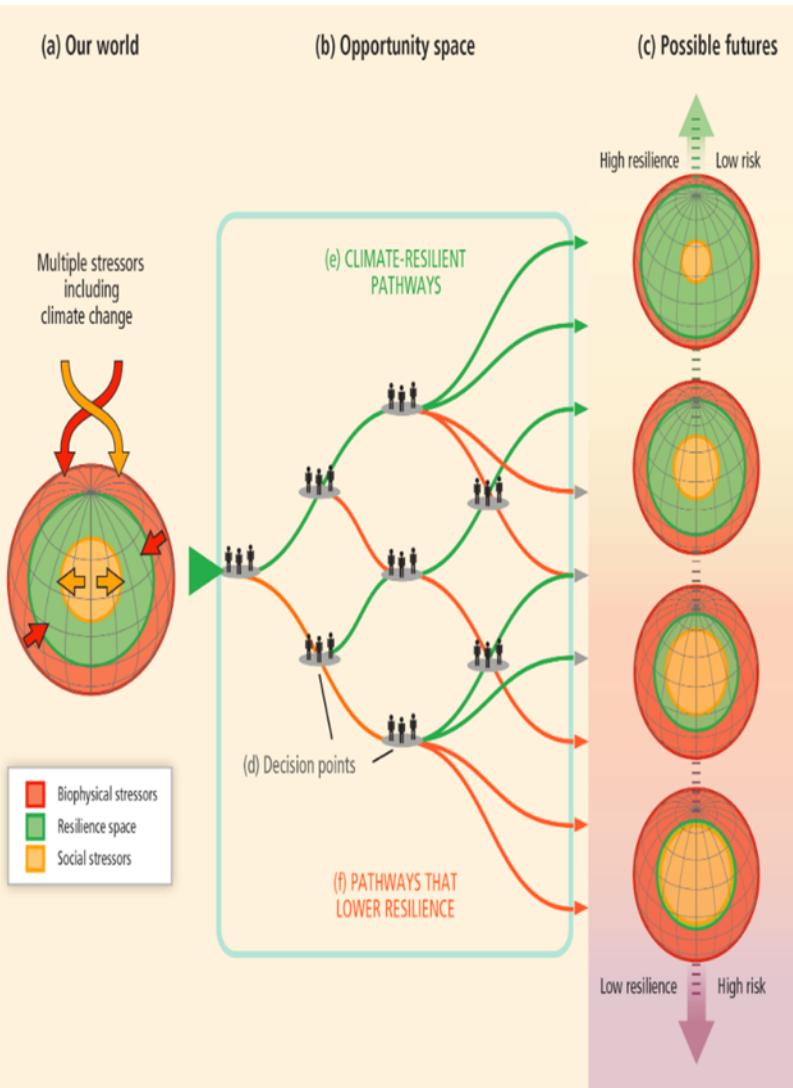
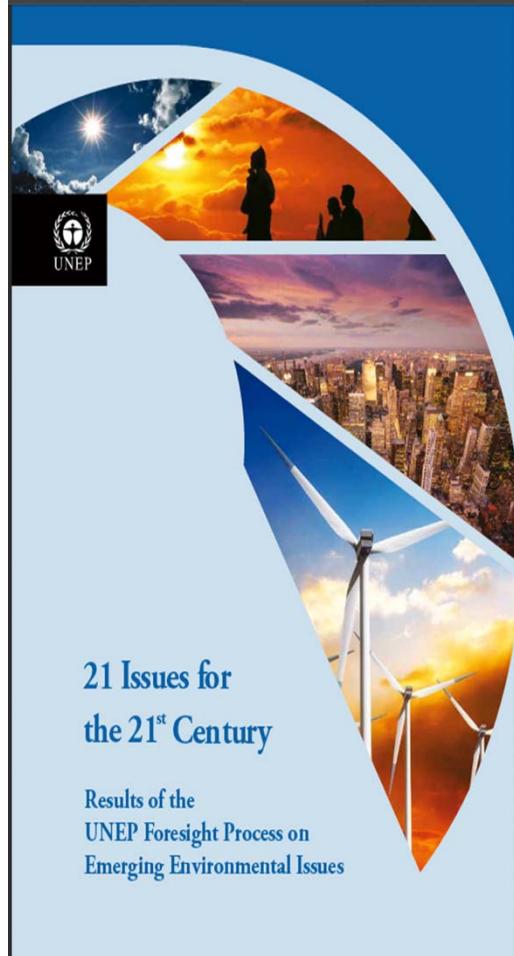


Figure SPM.9 from IPCC report Climate Change 2014:
Impacts, Adaptation, and Vulnerability: Opportunity space
and climate-resilient pathways



21 Issues for the 21st Century

Results of the
UNEP Foresight Process on
Emerging Environmental Issues

Issue 014 Coastal Ecosystems: Addressing Increasing Pressures with Adaptive Governance (Ranked #19)

Where we stand

The world's coastal ecosystems are coming under increasing pressure from human activities. Among these pressures are: growing coastal development; expansion of capture fisheries and fish farming; increased pollution caused by agricultural and industrial activities (including oil exploration and production); and rising demands on coastal resources from global markets and urban areas. Moreover, the consequences of climate change such as sea level rise, ocean acidification and ocean warming are also becoming apparent.



Credit: UNEP Grid Arendal/Peter Prokosch

Under threat are domestic economies, food security, the well-being of small-scale fishermen, and the integrity of coral reefs and other coastal ecosystems. The Millennium Ecosystem Assessment (2005) reported that over the last few decades approximately 35% of mangroves have been lost or converted, and approximately 20% of coral reefs worldwide have been destroyed and 20% degraded. A UNEP report in 2009 confirmed that key habitats

In the same vein, beaches and sandy shores provide services such as recreation and tourism which produce a substantial number of jobs for people living in the coastal zone. Coral reefs also support a rich variety of marine life, which in turn supports a thriving and valuable tourism industry.

Globally speaking, mangroves, sea grasses and other so-called 'blue carbon habitats' play an essential role in climate regulation. UNEP (2009) has estimated that the uptake of atmospheric carbon dioxide by these habitats adds up to around 120 to 329 teragrams of carbon per year. When the uptake by estuaries is added, the total carbon dioxide stored is estimated to be between 235 and 450 teragrams of carbon per year – or the equivalent of up to about half the emissions from the entire global transport sector.

These examples highlight the importance and urgency of seeking a workable management approach for coastal ecosystems.

Options for Action

How then to respond to increasing pressures on the coastal environment? One answer lies in the concept of adaptive governance which provides a new way of achieving sustainable management of the coastal zone. This approach has been used on the Great Barrier Reef system in Australia, the Baltic Sea, southern ocean fisheries and numerous coastal areas.

Adaptive governance is a flexible, integrated and holistic form of governance that takes into account the inherent problems of complexity, uncertainty, change, and fragmentation associated with the interrelated social, economic and environmental systems of the coastal zone. Adaptive governance addresses these problems by creating conditions that:

The Anthropocene as Rupture

Perspectives and controversies

Clive Hamilton¹

Getting the Anthropocene so wrong

Clive Hamilton

Abstract

Rather than clarifying it, a recent paper by Simon Lewis and Mark Maslin, ‘Defining the Anthropocene’, adds to the confusion about what has happened. It claims that a paradigm shift has occurred, one in which environmental science has been replaced by Earth System science. The story tells of an Anthropocene epoch, not based on an accurate understanding of the Earth System. I argue that this is not so. I find a ‘golden spike’ the paper confuses stratigraphy with events. When there is no event and ignores an event when there is one.

Keywords

Anthropocene, Earth System science, new paradigm, paradigm shift

‘Defining the Anthropocene’, written by Simon Lewis and Mark Maslin and published in *Nature*, does nothing to advance the debate. The main source of misinterpretations can be reduced to two essential points.

The first is soon apparent: Lewis and Maslin claim that a paradigm shift has occurred, one in which ecology or environmental science has been replaced by Earth System science. Ecology is the science of the relationships between living organisms and their environment, whereas Earth System science is the science of the Earth as a system of interacting parts. The gulf between the two remains large, and the two ways of thinking are aggregated up to the ‘global environment’ or the ‘Earth System’.

In the paper the object in question is variously described as ‘the environment’, ‘the Earth’, ‘geology’ (as in ‘human geology’) and ‘the Earth system’. When considering the Anthropocene epoch, only the last is correct, yet it is used in the paper as if it were synonymous with ‘the environment’,

The debate over the Anthropocene – what it is, when it started and what it means – is blossoming, as befits an idea that is monumental in its importance. Yet it is bedevilled by misunderstandings that go to the heart of this very original scientific concept.

Some of those who weigh in to the debate, including in prestigious journals, begin from a vital misconception. I will explain why this is so, but my essential point is that

the Anthropocene concept cannot legitimately be separated from Earth System science and that Earth System science represents a recent paradigm shift in the earth and life sciences (Hamilton and Grinevald 2015). It replaces our current scientific conception of the Earth as a whole and supersedes traditional geographical, geological and ecological thinking (and all compartmentalized scientific disciplines). I will argue that the paper misinterprets the Anthropocene in a way that deprives it of its profound significance.

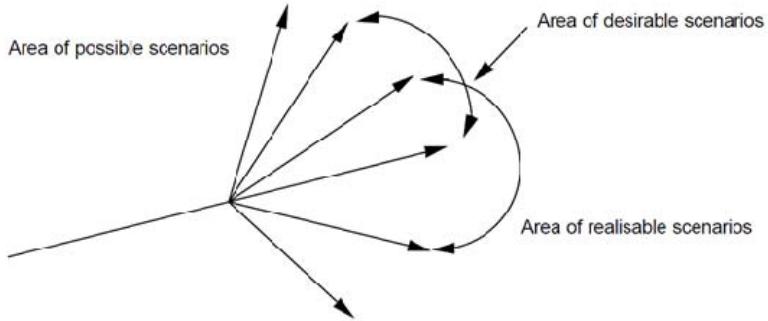
The making of Earth System science

“The Anthropocene is much more than a proposed new geological epoch that marks the transformation of the earth system wrought by humanity; it has become a **contentious term** and a lightning rod for political and philosophical arguments about what needs to be done, the **future of humanity**, the **potential of technology** and the **prospects for civilization**. This paper argues that the politics of this is likely to get **increasingly contentious in the near future** and because these themes go to the heart of the geographical discipline **where arguments about humanity and environment intersect**, the debate deserves widespread participation by geographers.”

Simon Dalby, “Framing the Anthropocene: the Good, the Bad and the Ugly”, panel on “Planetary Politics”, Chicago, April 2015.

“[A] globalized knowledge offers **de-contextualized top-down views** of the planet and the processes of knowledge making become detached from **the ways that knowledge is made meaningful.**”

Esther Turnhout, Art Dewulf, Mike Hulme, “What does policy-relevant global environmental knowledge do? The cases of climate and biodiversity”, *Current Opinion in Environmental Sustainability*, 2015

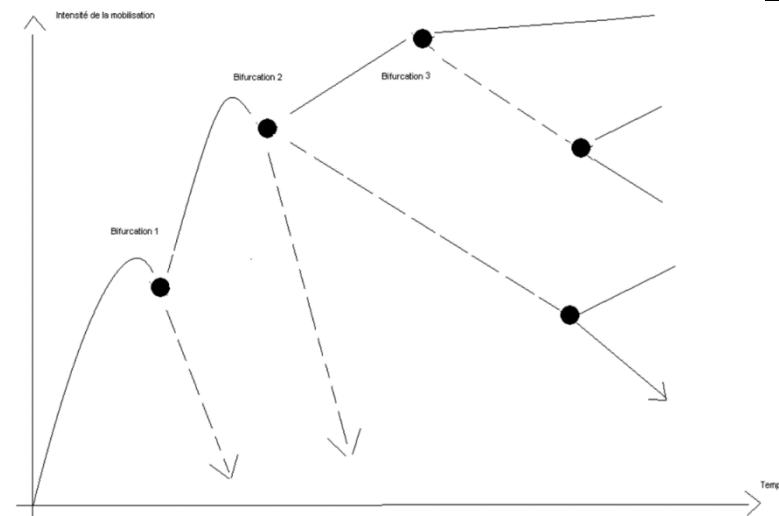


Michel Godet and Fabrice Roubelat
*Creating the future :
 The use and misuse of scenarios* (1996)

*"The future is not yet written
 but remains to be constructed"*
 Gaston Berger



*A sociological Ballistics of
 complex critical processes
 (2011)*



L'agrégation des savoirs ne procède pas de manière linéaire

- oscillations entre :
 - épuration paradigmique de la production scientifique,
 - conflit de paradigmes introduisant des ruptures ou des discontinuités
 - et basculement plus ou moins provisoire et plus ou moins profond dans la figure de la science postnormale ou de la complexité insistant sur l'incomplétude des modèles, la non-linéarité et l'incertitude générée par les changements d'échelle d'observation

Turbulences épistémiques et perturbateurs endocriniens #1 L'avènement d'un autre paradigme

26 novembre 2013

FRANCIS CHATEAURAYNAUD ET JOSQUIN DEBAZ

Au sein du mouvement pragmatiste américain, George Herbert Mead occupe une place particulière. Ayant largement contribué à l'inscription de la plupart des préceptes du pragmatisme dans les sciences sociales, il a notamment ouvert la voie à la psychologie sociale et à l'interactionnisme symbolique. Cela dit, on oublie souvent ses contributions concernant la science et la théorie de la connaissance. Dans un texte qui forme *La philosophie du savoir*, il explique que les scientifiques doivent se servir de leurs interprétations, en se souvenant qu'il n'y a pas de vérité objective. Il ajoute : « Ce qui résiste, aux bords du savoir, au débat et au doute, nomme « fait émergent », résulte de nouvelles expériences et de nouvelles connaissances. »

Turbulences épistémiques et perturbateurs endocriniens #2 Les effets cocktails

12 décembre 2013

FRANCIS CHATEAURAYNAUD ET JOSQUIN DEBAZ

Le doute est un état de malaise et de mécontentement dont on s'efforce de sortir pour atteindre l'état de croyance. Celui-ci est un état de calme et de satisfaction qu'on ne veut pas abandonner. Au contraire, on s'attache à croire précisément ce qu'on produit tous deux sur nous des sensations qui nous font agir de telles que nous agirons de certaine façon. Le doute n'a pas le moindre effet de ce qu'il ait été détruit.¹

Socio-informatique et argumentation

Sociologie argumentative des controverses, concepts et méthodes socio-informatiques

Turbulences épistémiques et perturbateurs endocriniens #3 Vers une toxicologie combinatoire

21 décembre 2013

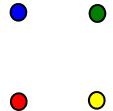
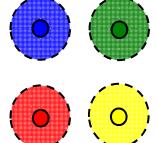
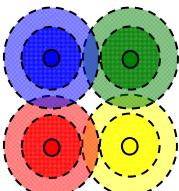
FRANCIS CHATEAURAYNAUD ET JOSQUIN DEBAZ

Les recherches menées en sociologie des controverses se réfèrent très souvent à John Dewey et à sa théorie de l'enquête (1938). Par « enquête », le philosophe pragmatiste entendait :

la transformation contrôlée ou dirigée d'une situation indéterminée en une situation qui est si déterminée en ses distinctions et relations constitutives qu'elle convertit les éléments de la situation originelle en un tout unifié¹

Il ne s'agit pas d'éliminer toute possibilité de preuve ou de clôture des épreuves de vérité, comme porte à le croire le soupçon de lien intime entre pragmatisme et relativisme – au demeurant complètement à côté du sujet – mais bien de saisir le travail de la preuve comme un processus à travers lequel une personne ou un groupe, une communauté d'enquêteurs, confrontée à une situation « indéterminée », « opaque » ou « problématique » engage une série d'expérimentations, faisant jouer à plein le raisonnement abductif, fait d'hypothèses et de questions, de prémisses et de règles d'inférence

Evolving environmental challenges: from specific to systemic

Characterisation of key challenges	Key features	In the spotlight in	Policy approaches (examples)
Specific 	linear cause-effect, large(point) sources, often local level	1970s / 1980s (continuing today)	targeted policies and single-issue instruments
Diffuse 	cumulative causes, multiple sources, often regional level	1980s / 1990s (continuing today)	policy integration and raising public awareness
Systemic 	complex causes, interlinked sources, often global level	1990s / 2000s (continuing today)	policy coherence and systemic approaches (long- term transitions)

Source: EEA, SOER2010

Cosmopolitan science is composed of patches - and is richer for it. Yet individuals and events sometimes make a difference. Like mushroom spores, they may germinate in unexpected places, reshaping patch geographies.

Anna Tsing, *The Mushroom at the End of the World. On the Possibility of Life in Capitalist Ruins* (2015)

Landscapes and landscape knowledge develop in patches. Matsutake shiro (mycelial mats) model the process: Patches spread, mutate, merge, reject each other, and die back. The hard work - and the creative, productive play - of science, as well as emerging ecologies, happens in patches. But one might also sometimes wonder: What moves beyond them, making them? For matsutake, there are also flying spores. Both in forests and in science, spores open our imaginations to another cosmopolitan topology. Spores take off toward unknown destinations, mate across types, and, at least occasionally, give rise to new organisms - a beginning for new kinds. Spores are hard to pin down; that is their grace. In thinking about landscapes, spores guide us to -in-population heterogeneity. In thinking about science, spores model open-ended communication and excess: the pleasure of speculation.

Anna Tsing, *The Mushroom at the End of the World. On the Possibility of Life in Capitalist Ruins* (2015)

Cumulative impacts, risk assessment and environmental Justice

California Environmental Protection Agency

Cumulative Impacts: Building a Scientific Foundation

Public Review Draft

August 19, 2010



Linda S. Adams, Secretary
California Environmental Protection Agency



Joan E. Denton, Ph.D., Director
Office of Environmental Health Hazard Assessment

OEHHA Authors:

George Alexeeff
John Faust
Laura Meehan
Carmen Milanes
Karen Randles
Lauren Zeise

OEHHA Editors:

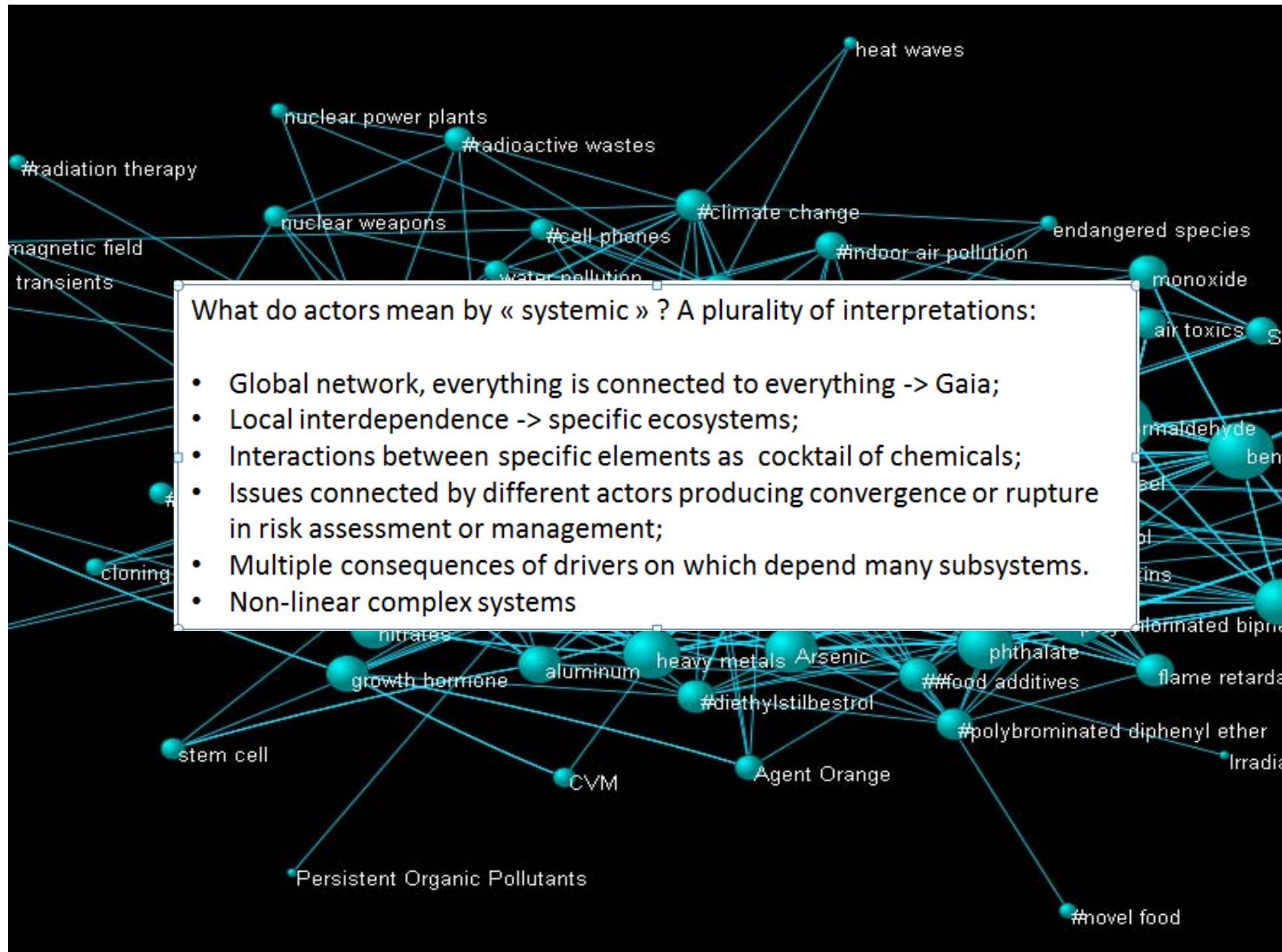
Sam Delson
Colleen Flannery
Janet Rennert

Reviewers:

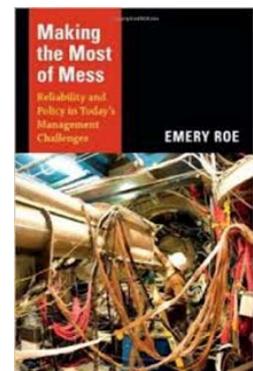
OEHHA:
Joan Denton
Allan Hirsch
Cal/EPA Office of the Secretary:
Cindy Tuck
Ricardo Martinez
Malinda Dumisani

Administrative Support:

Janet Rennert



2. Comment modéliser des processus non-linéaires dans une épistémologie pragmatique



Pragmatisme et raisonnement par les conséquences

Conséquentialisme de type 1 :
la liste des conséquences est établie et rendue calculable

Conséquentialisme de type 2 :
la liste des conséquences ne peut
se découvrir au fur et à mesure -
déclenche des enchaînements non
et des choses se produisent qui ne
anticipées. Création de nouvelles
nouvelles opportunités.

THE UNANTICIPATED CONSEQUENCES OF
PURPOSIVE SOCIAL ACTION

ROBERT K. MERTON
Harvard University

I

IN SOME ONE of its numerous forms, the problem of the unanticipated consequences of purposive action has been treated by virtually every substantial contributor to the long history of social thought.¹ The diversity of context² and variety of terms³ by which this problem has been known, however, have tended to obscure the definite continuity in its consideration. In fact, this diversity of context—ranging from theology to technology—has been so pronounced that not only has the substantial identity of the problem been overlooked, but no systematic, scientific analysis of it has as yet been effected. The failure to subject this problem to such thorough-going investigation has perhaps been due in part to its having been linked historically with transcendental and ethical considerations. Obviously, the ready solution provided by ascribing unanticipated consequences of action to the inscrutable will of God or Providence or Fate precludes, in the mind of the believer, any need for scientific analysis. Whatever the actual reasons, the fact remains that though the process has been widely recognized and its importance equally appreciated, it still awaits a systematic treatment.

Although the phrase, unanticipated consequences of purposive social action, is in a measure self-explanatory, the setting of the prob-

“Hormones and Endocrine-Disrupting Chemicals: Low-Dose Effects and Nonmonotonic Dose Responses”

Laura N. Vandenberg, **Theo Colborn**,
Tyrone B. Hayes, Jerrold J. Heindel,
David R. Jacobs, Jr., Duk-Hee Lee, Toshi
Shioda, **Ana M. Soto**, **Frederick S. vom
Saal**,
Wade V. Welshons, **R. Thomas Zoeller**,
and John Peterson Myers

Endocrine Reviews, June 2012



Chemicals in the European Environment: Low Doses, High Stakes?

Figure 4.

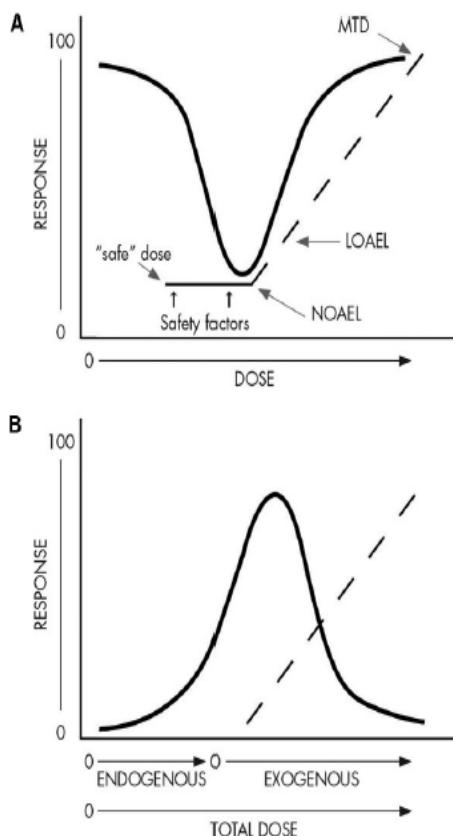


Figure 4. NOAEL, LOAEL, and calculation of a safe reference dose. A, In traditional toxicology testing, high doses are tested to obtain the maximum tolerated dose (MTD), the LOAEL, and the NOAEL. Several safety factors are then applied to derive the reference dose, i.e. the dose at which exposures are presumed safe. This reference dose is rarely tested directly. Yet when chemicals or hormones produce NMDRs, adverse effects may be observed at or below the reference dose. Here, the doses that would be tested are shown by a dotted line, and the calculated safe dose is indicated by a thick solid line. The actual response, an inverted U-shaped NMDR, is shown by a thin solid line. B, Experimental data indicate that EDCs and hormones do not have NOAELs or threshold doses, and therefore no dose can ever be considered safe. This is because an exogenous hormone (or EDC) could have a linear response in the tested range (dotted line), but because endogenous hormones are present (thin solid line), the effects of the exogenous hormone are always observed in the context of a hormone-containing system.

sis in others (503, 504), with the combined effect being an inverted U-shaped curve for cell number (505).

Why does one single cell type have different responses to different doses of the same hormone? The case of the prostate cell line described above is reminiscent of the re-

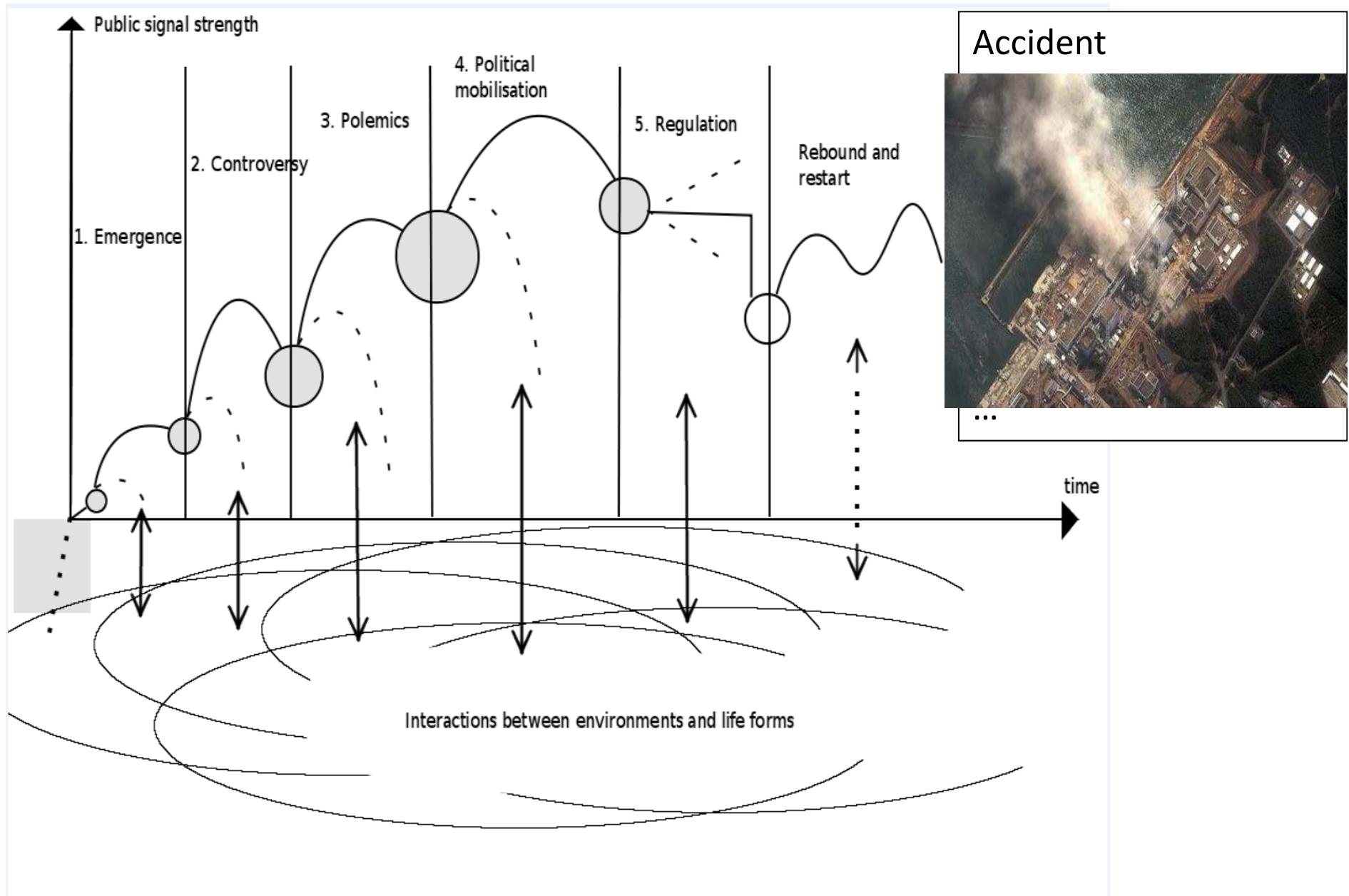
sults described from the transcriptome of MCF7 cells, whereby a discrete global response like cell proliferation manifests at significantly lower estrogen doses than the induction of a single marker gene (135). That a response like cell proliferation requires a significantly lower dose of hormone than the dose needed to induce a given target gene is counterintuitive but factual; it may be interpreted as consistent with the notion that metazoan cells, like cells in unicellular organisms, are intrinsically poised to divide (503, 506, 507) and that quiescence is an induced state (508, 509). The biochemical details underlying these different responses are largely unknown; however, recent studies showed that steroid receptors control only a portion of their target genes directly via promoter binding. The majority of the changes are indirect, through chromatin rearrangements (510, 511).

Why do different cell types (*in vitro* and *in vivo*) have different responses to the same hormone? One answer is that they may express different receptors, and these receptors have different responses to the same hormone. For example, some tissues express only one of the two major ER (ER α and ER β), and actions via these receptors are important not just for responsiveness to hormone but also for cellular differentiation and cross talk between tissue compartments (512). Yet other tissues express both ER α and ER β , and the effects of signaling via these two receptors often oppose each other; *i.e.* estrogen action via ER α induces proliferation in the uterus, but ER β induces apoptosis (154). Complicating the situation further, different responses to a hormone can also be obtained due to the presence of different co-factors in different cell and tissue types (513, 514); these coregulators influence which genes are transcriptionally activated or repressed in response to the presence of hormone. They can also influence ligand selectivity of the receptor and DNA-binding capacity, having tremendous impact on the ability of a hormone to have effects in different cell types (105, 515, 516).

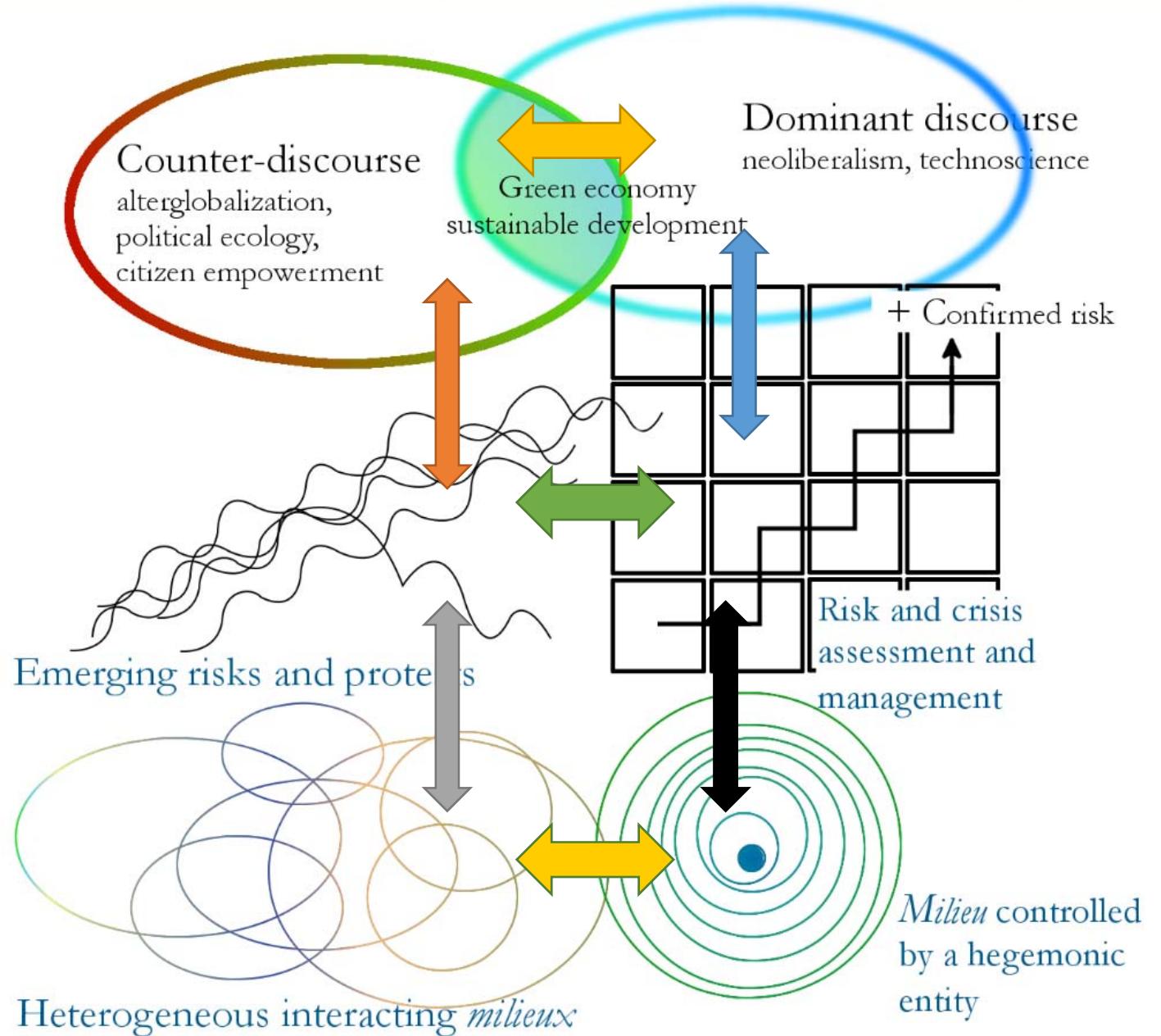
Although much of these activities occur on a biochemical level, *i.e.* at the receptor, there is also evidence that nonmonotonicity can originate at the level of tissue organization. The mammary gland has been used as a model to study inter- and intracompartmental effects of hormone treatment: within the ductal epithelium, estro-

From monotonic to non-monotonic reasoning

¹	Classical mode of reasoning: Modus Ponens / Modus Tollens	Monotonic Logics
²	<i>P implies Q; P is asserted to be true, so therefore Q must be true.</i>	<i>Foundation of classical rationality</i>
³	Pragmatist sociology of transformation: Events, actions and argumentations are transformed through interpretive activities, producing a new series of actions, argumentations and decisions, with a huge uncertainty on practical consequences	The plurality of interpretations creates both constant reevaluations of norms and rules, and a creative/collective activity with emerging actors, new ways of arguing and innovative devices or tools.
⁴	<i>In a situation S, E (event) or A (action) seized by I (interpretative activity) produces A (argumentation) from which proceeds the evaluation or valuation (V) of available rules (R0... Rn) but, at the same time, of known and unknown consequences (C) which evaluation or valuation (V) retroacts not only on the situation S but on a series of future situations (F)</i>	<i>Non-monotonic or complex logics with emerging and retroactive consequences (non-linear process and feedback)</i>



General Model of Transformation for Warnings and Controversies



Pragmatics of transformations: 6 spheres/6 sociologies
 Chateauraynaud & Debaz, to be published in 2016



Montreal, May 2014, prise de vue FC

3.

Un gradient de la critique

Du désaccord technique à la critique radicale

A gradient of critique: 6 regimes of critique

1. *0. Blissful indifference (nothing to discuss)*
2. **Technical critique:** counter-expertise, metrologic or epistemic controversy;
3. **Procedural Critique:** Modes of consultation, deliberation and dispute resolution;
4. **Accusation towards a specific entity:** claiming against an injustice or discrimination produced by a named entity (naming, claiming, blaming);
5. **Critique of injustice** created by a “system”: struggles against inequalities, environmental justice;
6. **Radical criticism against the “system” based on an alternative “system” :** deep disagreement, conflicting values and opposing worldviews ; alternative visions of the futures;
7. **Radical criticism without alternative vision:** catastrophism and prophecy of doom.
8. *7. Cynism ...*



MINISTÈRE DE L'ENVIRONNEMENT, DE L'ÉNERGIE ET DE LA MER

Etude sur les alternatives pour le développement aéroportuaire du Grand Ouest

Rapport 010459-01
établi par

Pierre CAUSSADE, Nicolas FORRAY et Michel MASSONI

Mars 2016

Conclusion

Deux contraintes pesaient sur la rédaction du présent rapport : la brièveté du délai imparti et la nécessité de s'appuyer sur des documents préexistants.

La mission a considéré que la commission du dialogue et les expertises « agricoles » et « eau » de 2013 avaient largement permis aux différentes parties d'exposer leur vision. Elle a reçu une documentation abondante et une synthèse intéressante de la part des opposants. Elle s'est fait ouvrir les archives tant des services locaux que de la DGAC pour mieux comprendre les positions tenues.

Le trafic de l'aéroport de Nantes Atlantique est d'origine essentiellement régionale et provient pour moitié de Loire-Atlantique. Les fondamentaux démographiques et économiques de cette région laissent présager une poursuite de la croissance du trafic, avec un dépassement des 5 millions de passagers vers 2020 et des 6 millions vers 2025.

Les différents scénarios étudiés se résument, après analyse critique, en un choix entre une modernisation de Nantes Atlantique et un aéroport sur le site de Notre-Dame-des-Landes redimensionné à une seule piste, au lieu des deux prévues.

L'agrandissement et la rénovation des installations actuelles de Nantes Atlantique permettraient d'accompagner la croissance du trafic. Les questions de bruit resteraient très prégnantes.

Le projet de nouvel aéroport de Notre-Dame-des-Landes apparaît surdimensionné. Une redéfinition du projet avec une seule piste de 2 900 m de long et 45 m de large répondrait aux besoins au-delà de 9 millions de passagers, permettant de réduire les coûts et les impacts environnementaux et fonciers.

La mission ne disposait pas de ressources d'ingénierie pour cartographier précisément les zones de bruit, ni définir finement les coûts de ses hypothèses. Elle n'a donc fourni que des ordres de grandeur et suggère d'avoir recours à une tierce expertise pour les préciser, dès que possible.



A convergent move of critiques in the case of shale gas protest

1. Technical critique:

1. Technical Fracking and Water pollution
2. Used Water and difficulties of recycling
3. Earthquakes Risk

2. Procedural Critique:

1. Lack of consultation
2. Denying local institutions and representatives

3. Accusation towards a specific entity:

1. Noise and Pollution (number of trucks)
2. Pressure on water supply

4. Critique of injustice

1. Health Consequences
2. Quality of landscape
3. Tourism Consequences

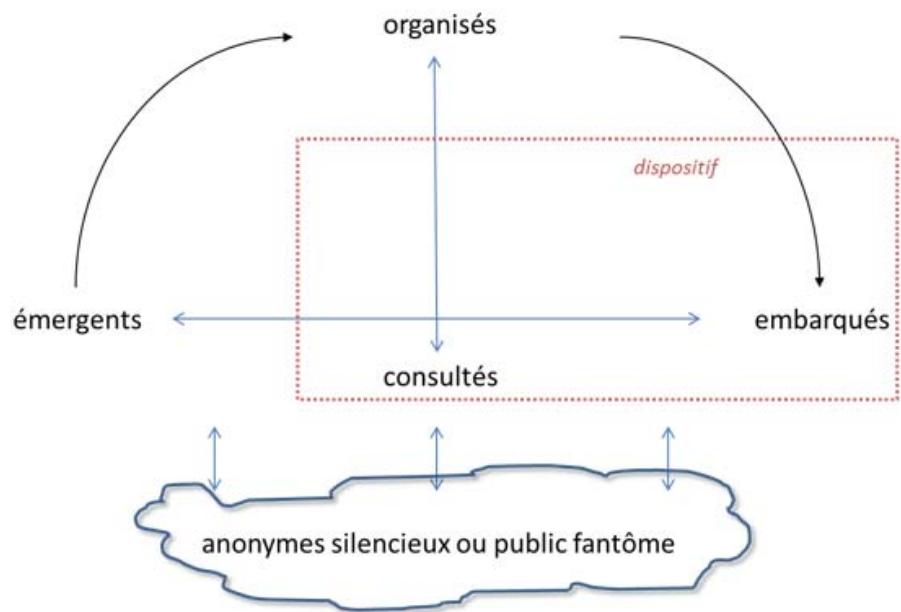
5. Radical criticism against the “system” based on an alternative “system” :

1. US corporations in France
2. No utility for energy
3. Global Warming

6. Radical criticism without alternative vision:

1. Destruction of Earth -> extractivism and capitalocene





Portée de la concertation

Sociologie des effets de la participation du public aux processus décisionnels



Accueil À propos Crédits

Publié le 7 octobre 2013 par francisc

— Précédent Suivant —

De la formation des publics à la rébellion des milieux

FRANCIS CHATEAURAYNAUD (GSPR-EHESS)

C'est un des lieux communs du pragmatisme : dans l'étude des processus collectifs, nous n'avons pas affaire à un public mais à une pluralité de publics. En un sens, il y a autant de publics que de causes ou d'affaires, de conflits ou de débats publics. Comme cela a été formalisé par de nombreux auteurs, une des tensions majeures des démocraties provient précisément de la difficulté d'articulation entre cette multitude et l'unité sociale désignée tour à tour par le peuple, le grand public ou l'opinion publique. Dans la lecture qu'elle propose de la notion de public chez John Dewey, Joëlle Zask insiste sur cette dimension plurielle tout en soulignant la relation étroite, conçue par Dewey lui-même, entre formation du public et logique d'enquête.



Conflit de Notre-Dame-des-Landes /
Troisième aéroport
près de Nantes



Cigéo: les citoyens en faveur d'un report du projet

Le 03 février 2014 par Stéphanie Senet

» Risques & Santé, Politique & Société, Stockage/transport, Cycle Recherche, ONG, Administrations, Entreprises, Politique



Première étape importante pour Cigéo, avant les conclusions du débat public à la mi-février

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CNDP. S'ils ne sont pas experts en matière de déchets, ils sont tout de même intéressés par le projet puisqu'ils habitent la Meuse et les deux départements qui doivent accueillir les installations. Le débat public sera une formation intensive, contradictoire et pluraliste, au cours de laquelle les citoyens se rencontreront avec les acteurs du projet et les experts de l'Andra.

Après avoir auditionné plusieurs personnalités le 1er février, la CNDP a annoncé que la solution du projet Cigéo ne devait pas être un enfoncement dans le sol. Cela pose en cause le principe d'un enfouissement. Ils jugent que les deux principaux risques de sécurité ne sont pas suffisamment maîtrisés : les risques de sécurité ne sont pas suffisamment maîtrisés et il n'y a pas assez d'expérimentation préalable.

«Nous nous sommes demandés dans quelle mesure nous pouvions apporter une contribution à la recherche et au changement de solution pour les déchets nucléaires et énergétiques», raconte l'une des 17 membres du panel. La conférence de citoyens a été organisée à la CNDP à Paris.

Ce panel a conclu qu'il n'y avait pas d'urgence à faire de la recherche sur la solution d'enfoncement, où «les déchets actuels doivent refroidir pendant 60 ans au moins à une profondeur de 500 mètres». «Cela laisse le temps de mener des études approfondies et de prendre des décisions éclairées, et en particulier de lancer une expérimentation dans la nature.»

mes dossiers | un avis

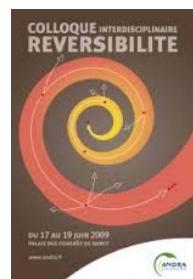
cndp
Commission nationale
du débat public

Débat public CIGEO

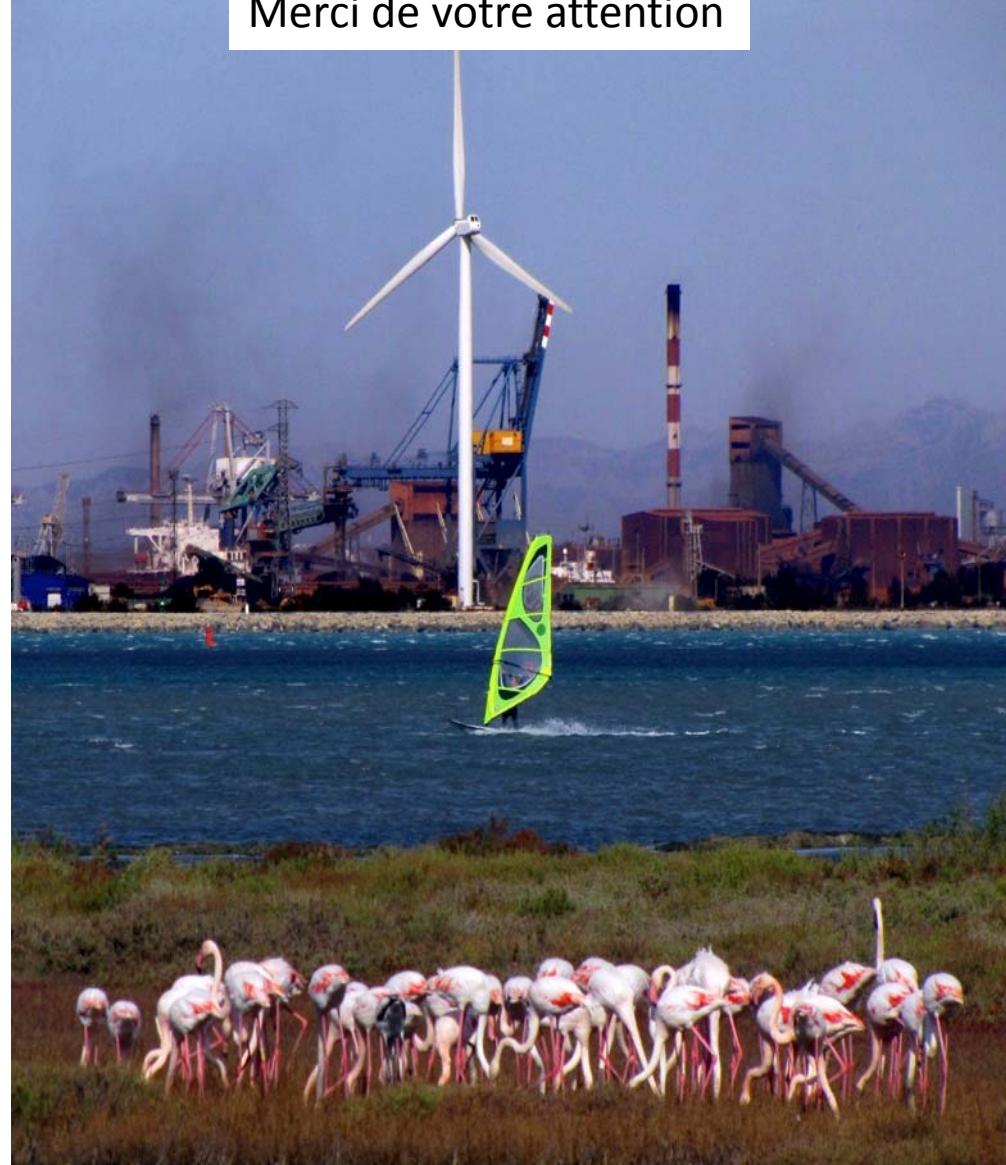
Conférence de citoyens

AVIS DU PANEL DE CITOYENS

3 février 2014



Merci de votre attention



© Frédéric
Marty

Interacting *milieux* or the green economy on the ground...
Etang de Berre (South East of France)