GM Vine

How to design a participatory process for a research institute on a controversial issue?

Section D: Discussion
No. 10: The GM Vine Experience

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1. Historical notice

Science becomes politics: the French controversy on GMO

From the late 1990's on, INRA was faced with field destructions. Court trials of activists charged with the destructions of field trials were used by NGOs to promote their arguments against GMOs, against public research orientations, and the current trajectory of agricultural developments. Some of these trials involved José Bové, the charismatic trade unionist from the Confédération paysanne; and one of the trials involved a public sector institute (CIRAD) which normally interacts closely with INRA. Local mayors who had issued bans of GMOs in their territories were also taken to court by the national government and requested to repeal their bans. On the other hand, as a response to the massive destruction of field trials, the government announced that a "big debate" would be held. No further authorisations for field tests were to be issued in the meantime. The so-called "four wise men's debate" included hearings at which all stakeholders - including the Director of INRA - expressed themselves (February 2002). This led to a report containing a number of recommendations restricting the conditions under which field trials of GM crops could be conducted.[1] The (left wing) government, which initiated this debate, did not respond. A new (right wing) government elected in May 2002 did not respond either, but some non-vine field experiments were authorized in July, thereby ending the temporary moratorium on new authorisations for field trials and provoking criticism within INRA.

These changing public debate lead the director of INRA to speak out and take public positions in the "four wise men debate" and in a paper in Libération entitled "Yes to GM field trials" published in September 2002. This was considered by some NGOs as a declaration of war. A consortium of NGOs responded by publishing an "Open letter to the INRA directorate" entitled "OGM: Opinion Grossièrement Manipulée" (GMOs: grossly manipulated opinion). This criticized not only INRA's position on field tests, but also the way in which it favoured collaborations with the private sector and refused any dialogue with anti-GM NGOs.

2. What for, the iTA-vines?

The call for openness and debate resulted in a participative exercise, based upon the methodology of interactive Technology Assessment (iTA).[2] The basic assumption underlying the iTA-vines experience was the necessity of taking into account the different worldviews involved in a complex and weakly structured problem, prior to the research of a solution. The experience consisted on setting in an independent Working Group (create an hybrid forum) and request their advise about whether or not INRA should pursue field trials of genetically modified (GM) vines potentially resistant to a specific disease-causing virus, the Grapevine Fanleaf Virus, the virus of "court-noué".

However, the group should search for a shared problem definition before. For example, if there should be a previous reflection about the ensemble of methods against vine diseases (not

[1] Annexe-M 11, but how do we make it available? Is there a refernce on the INRA website?
[2] See for more information the CIPAST Poster on iTA.

only transgenic ones) or about why to focus on this specific disease-causing virus and not on other diseases.

Actually, the various participants in the experience widely differed in how they envisioned the exercise. Generally speaking, one can identify 3 principal sets of motives being translated into the microcosmic experience.

a) iTA-vines might contribute, directly or indirectly, to solve several problems in the vine sector (although actors disagree in defining what the problems and the respective solutions are): ameliorate resistance to several diseases, reducing the use of chemical agents (namely what actually used, which will be banned by EU the following year?), increasing variety or improving commercialisation.

b) iTA-vines might foster some "necessary" institutional changes. For instance, in regard with the role of the State in agriculture and socio-economical development; to face the legitimacy crisis of the administration bodies and deal with media and public opinion in the GMOs controversy; concerning INRA's place, as a public research institution, vis-à-vis the state and civil society; to enhance internal readjustment and gain relevance of INRA-Colmar through a federative project.

c) iTA-vines may be understood as a scientific experience to test mechanisms, instruments and methods, or theories (both of social and natural sciences)

Therefore, the iTA-vines exercise was designed as a "real experiment". It was both:

- "real" in the sense that INRA had a real problem to solve and was committed to taking into account the output of the exercise in its decision making.
- and it was an "experiment", i.e. a newly designed set-up, tried out also to increase our knowledge on public participation and co-construction.

The iTA-vines was mainly devoted to enlighten the Directorate of INRA in order to improve the social robustness of the decision to be taken (and robustness of the knowledge upon which it is taken). In so doing, INRA responded to the real world debate on GMOs through an alternative way (a strategic move).

3. Main participants [3]

3.1 The Commissioner

INRA is the French National Institute for Agronomic Research. It depends both from the Ministry of Research and the Ministry of Agriculture. The INRA research activities concerning GMOs are also constrained by the dispositions of a National Advisory Committee (CGB). Marion Guillou, the INRA's Director, arrived to her position in year 2000, as well as Fabrice Marty, the secretary of the Directors board. The INRA management team overseeing the process included also Guy Riba, the Scientific Director

[3] See graphic representing interrelation in 4.2

for the Plant Science Division (PPV), and the project leaders. As far as the future implantation is concerned, besides other "professionals" consulted by the Executive Directorate on the issue, an important role was also played by the President of the INRA research centre in Colmar.

3.2 The Project Team

Two Project Leaders plus one assistant from INRA, and a professional facilitator constituted the project team. The assistant, who also acted as secretary, played the role of a go-between: lived with the group, managed interactions, became almost a *confidante*. At the same time, she informed researchers and evaluators.

3.3 The Steering and Evaluation Committee

There were six independent social scientists with experience in pTA. Its role was to advise on the process (not of the content of the results), and derive methodological conclusions at the end. They were also TA agents, and legitimators of the project, for example when they had to write a final report. Before that, they had to be visible (through its Chair) at the press lunch (20 January 2003) at which the INRA decision was presented.

3.4 The Working Group (WG)

The WG was made out of four researchers, six professionals, and four citizens. They were chosen as individuals (instead of as representatives), in order to privilege a reflexive and dialogic attitude. Care was taken to ensure a diversity of worldviews.

3.5 Some Stakeholders [4]

- *Confédération Paysanne*, leadered by José Bové and promoting alternative models of agriculture
- Federations of wine growers like *"Terre et Vins du Monde"*, well-known producers of wine with a leaning towards organic or biodynamic systems and virulently against the use of GMOs in wine production. Other mainstream professional institutions, especially in "Appellations d'Origine Contrôlée" (AOC) territories, like "Vin d'Alsace" and Alsacian winegrowers, also reject formally the use of GMOs.
- The Mayor of Colmar resists to the pressure of *Confédération Paysanne* and the local association for organic agriculture, while various cities and towns declared their territories as "GMO free"
- Other institutional and/or professional spokespersons

[4] For a more complete account see GM Vine Working Material, paragraph 2 and *Document à l'attention du comité de pilotage (reunion du 8 octobre 2001)*

4. Research Phases

4.1 Design

The WG was prepared by a sociological mapping of the world of vines and wine, and the variety of worldviews in relation to GM vines and related risks. A social cartography of the issue was first realised by means of interviews with more than 40 people deeply involved in the vine universe (meta-experts: professionals, activists, researchers).

This cartography offered a start of the art of the issue as well as the different worldviews at stake and the actors who mobilised them.[5] Various dimensions were identified:

- The place in vine and wine world: research, production, commercialisation, consumption…
- What puts the vine culture in danger: specific diseases and wine quality, unsustainable development…
- Transgenic discourse: progress, fears, breakdown…
- Science discourse: sound science model, social activity

More interviews were also conducted with prospective members of the WG, and analysed on these dimensions (71 in total, of which 28 were fully transcribed, including some second-round interviews). The WG members were chosen according to their worldviews and socio-professional criteria; the choice was to foster collective learning through deliberation (in order to obtain robust results, even at the price of a lower legitimacy). The 14 persons invited to participate in the Working Group corresponded to different positions in the axes defined by these dimensions. A strong representative commitment or a clear scepticism against deliberative procedures were, however, criteria for exclusion. A meeting and in-depth interviews with the selected participants (see below) allowed to better know their positions face to transgenic vines, the kind of problems and opportunities they perceived, the ways how they consider the conditions of realisation, namely the problem of the development of significant knowledge. They let room also for take into consideration the positions and questionings about the experience itself, to clarify objectives, procedures and their role, as well as to collect their information demands.

Sample extract of WG members' questionnaire	
What makes a good wine?	Le bon vin, c'est celui que la majorité des consommateurs aiment – mais il doit être typique d'une région. Le bon vin, ce n'est pas « le vin du grand-père » (tel que dans le discours officiel). X se dit cependant très favorable au système AOC (…)
The problem of wine is…	Difficultés financières pour les exploitants / le négoce est très influent, il va dominer et affamer les viticulteurs. (…) → les

[5] see *Rapport d'Étape à l'attention du Comité d'Évaluation pour discussion en comité d'évaluation le 26/11/01,* **Annexe-E 2***

	viticulteurs se transforment en coopératives au profit des négociants (…) L'ATVB a été créée parce que des viticulteurs ont vu qu'il y avait des maladies et que personne ne faisait rien.
The importance of diseases, and of the specific disease-causing virus	Les maladies importantes : l'esca, et « tout ce qui vient par la terre » ; les viroses ; la cicadelle. Le court-noué : c'est épisodique. De manière générale, grande inquiétude sur la dégénérescence du vignoble, avec de grandes attentes du côté d'une solution transgénique.
How to deal with them ?	À l'époque de la crise de phylloxéra, s'il y avait eu des solutions transgéniques ils [les vignerons d'antan] auraient tous sauté dessus. Le bio : moi je ne désherbe pas, j'ai toujours labouré ; je traite très peu ma vigne. Les associations bio voudraient que je les rejoigne, mais je ne veux pas (~ je ne veux pas me lier, de plus ils sont sectaires). Et puis les viticulteurs bio utilisent du cuivre, quelle hérésie.
Transgenics is…	C'est probablement une solution pour l'avenir (cf. ci-dessus : à l'époque de la crise de phylloxéra…), que l'on ne peut pas se fermer, même si elle comporte peut-être certains risques. (…) Insérer des gènes de vigne dans vigne : oui ; des gènes d'un autre végétal dans vigne, pourquoi pas ? ; des gènes animaux : je n'ai rien contre a priori, mais ce sera plus difficile, il faudra voir pendant longtemps ce que ça donne. Mais surtout, bien conserver la typicité des vins. Levures transgéniques : pourquoi pas, quand on ne peut pas faire autrement. Mais il ne faut pas aller à tout va. [La transgénèse,] c'est comme pour les maladies : si demain j'ai un cancer, on me parle d'une pilule miracle, je la prends quelle qu'elle soit. On dit qu'on est pollué de tous les côtés, mais on vit de plus en plus longtemps. L'opinion, on peut la retourner comme on veut (…)Les gens qui ne veulent pas de la transgénèse, c'est comme ceux qui ne veulent pas la machine à vendanger, ou qui rejettent l'informatique, c'est aussi comme ceux qui ne voulaient pas du nucléaire. Risques liés à la transgénèse ? Dans l'état actuel, je n'en vois pas ; en tout cas, pas plus qu'avec toutes les nouvelles molécules qu'on sort pour traiter la vigne. Éventuellement, il pourrait y avoir un problème de dégénérescence par consanguinité. Le danger pourrait être dans la création de monstres si on va trop loin. L'inconnu fait peur, c'est normal ; mais on ne peut pas reculer sans arrêt, il faut prendre parfois quelques risques (…)
The INRA is…	(peu de chose sur l'INRA dans les notes) - X fournit du matériel à l'INRA via l'ATVB. - Ce que faisait Bernard Walter, c'était bien.

The position vis-à-vis the project	On ne peut pas laisser de côté les recherches ; on ne peut pas rester en rade. On a des problèmes, il faudra bien qu'on trouve un jour une solution. L'intérêt du projet ITA-Vignes est de jauger l'intérêt pour la base de continuer ou non les essais de transgénèse. C'est aussi [plus tard dans l'entretien] d'entendre chacun défendre sa position et de faire avancer les choses – que la recherche puisse continuer – car dans d'autres pays ils continueront sûrement. C'est encore : apprendre. On apprend d'un grand, mais on apprend aussi d'un petit.

Based upon these interviews, and the previous results on the social cartography, the project team wrote down a synthesis that summarise the different positions regarding both the definition of the problem and the correspondent solutions. This document presents convergences and divergences in relation with the ways how the different worldviews explain them.

Out of this work, enriched by the interactions between (and within) the Project Team with the Assessment Committee, the first contractual document that launched the experience (down here) will get refined and précised.

A Project Definition. The original co-construction text (the contract).

Entitled *The Co-construction of a Research Programme. A Pilot Experience about Transgenic Vines*, the contractual text appeared in INRA's webpage at the end of June (a second version on July the 25th: http://www.inra.fr/internet/Directions/SED/science-gouvernance, that is reported here). The document starts with a statement from INRA's Directorate, signed by the Director Marion Guillou, explaining within the context of GMOs controversy the decision of setting a participatory exercise for the research programme on transgenic vines, the baselines and objectives:

"The goal is to define a generic method of participative assessment for innovative projects. Therefore, special care will be put in the procedures definition, the traceability and the evaluation of the operation, as necessary conditions to capitalise the experience (…) It is a veritable stake for INRA as far as it is a question of inventing a new model for public action that enable a collective construction of both policy objectives and the knowledge necessary for steering a process of innovation."

It follows a brief history of transgenic vines research at INRA, made by the Scientific Director for the Plant Science Division (PPV). Finally, the leaders present the main lines of the project:

1. The proposal

It is not up to INRA to define a project for society but, inverting the classical way of doing, to determine, based upon a large discussion with the parties engaged, which kind of research is desirable. Objectives and conditions of realisation are build up in the making.

In this original perspective, participation and deliberation contribute to the structuring of the research programme.

2. The problem

The project is not reduced to choose among the realisation or not of field tests; it aims to explore the problems and the solutions linked to transgenic vines taking into account the point of view of the different parties involved. The convenience of field tests with genetically modified rootstocks resistant to fanleaf virus will be certainly at the core of the debate, since focussing on a precise issue is necessary. But participants will be free of discussing about the suitableness of vines research as well as about transgenics or other aspects they will consider of pertinence. Instead of stay prisoner of the yes/no alternative to GMOs in general, the project should create a device that will encourage the actors to participate in updating the plurality of options and thus foster collective learning and the exploration of multiple, successive and interdependent choices.

3. Organisation

The following aspects are defined:

- who institutes the commission and how
- the financing bodies
- who is in charge of the realisation
- the composition of the steering committee,
- the setting up of an assessment committee
- the guidelines to constitute the working group and the facilitator
- the measures to ensure the procedures traceability (namely the posting of documents in the webpage, respecting confidentiality of participants)
- the taking into account of the work results by INRA's Directorate after a previous meeting
- and the publicity of all the reports (that of the working group, that of the Directorate response justifying the final decision accordingly)

It is made clear that the Directorate does not delegate its responsibility to the group and that it is not obliged to act according to the group recommendations even if it is engaged to make explicit, in a written report, the analysis they will release of the WG report: their vision of the contexts, their decisions; the orientations and the actions related to the concerned programmes as well as the non-confined experiments of transgenic vines.

4. The methodology

Adapted from the Interactive Technology Assessment procedure, the methodology stresses the collective constructions resulting from making explicit the participant's various worldviews, when combined with cycles of deliberation in which common points and disagreements are identified. The following phases were previewed:

Step 1. Definition of the project

The commissioner and the project leaders define the main objectives of the procedure and the limits of the topic, as well as the respective roles of the parties involved and the planning (this text, in fact)

Step 2. State of the art

Preliminary framing of the problem from a technical and socio-economical perspective accompanied by a social cartography

Step 3. Constitution of a working group

The working group is constituted on the basis of the previous cartography. The main criteria are as follow:
- limited number of participants (10-15)
- to choose participants according to their competences and their implication in the topic
- to assure the diversity of worldviews and to take into account the question of representation
- to assure that they are able to offer a creative and innovative contribution and open to others'

Aiming to construct robust solutions, there is no point to look for stakeholders' representatives but to incorporate instead a wide diversity of the different positions at play in the issue and the various associated worldviews.

Step 4. Construction of a first common vision of the problem

Interviews with the working group members will be used in order to elicit their positions on the subject. These interviews allow also to collect the positions and questionings of the participants vis-à-vis the project itself and to clarify it. They help to identify as well the needs of training or information, and therefore to provide an answer to these requests. Based upon these interviews, a synthesis of the different positions concerning the problem definition and the envisioned solutions is made by the project leaders. It is transmitted to the participants and accessible in the webpage.

Step 5. Organisation of discussions

Starting from the previous synthesis (collective discussion, amendment and validation), 4-6 discussion sessions were organised, animated by a facilitator. The analysis of disagreements may led the working group to a systematic exploration of certain questions, demanding occasionally experts auditions or the realisation of micro-studies about specific subjects. The discussion will be also organised around the construction of prospective scenarios.

Step 6. Preparation of a final report

The project leaders will do the main work of writing. Participants will discuss it and can change it before adoption, even including minority advices. It is made public and posted in the webpage.

The document ends with a time schedule and a short bibliography.

4.2 The experience

Starting from the original request of INRA's Directorate, the WG should search for a shared problem definition (see the result of metaplan exercise down here). They were assisted by a facilitator, who leaves the group free to decide how it wants to proceed. Thus, the problem framing is up to them and reflects the variety of worldviews instead of how INRA frames the problem. This creates commitment in the WG, and the conviction that they are not being steered or biased by INRA. It also implies that they are also free to commit errors of omission. (they neglected, for instance, risk issues, which were only addressed at a late stage, during the final meeting).

METAPLAN EXERCISE

Production System and research orientations

Which types of risks we are speaking about?
Is the problem philosophical or ethical?

Which types of consequences are involved?
Which types of risks are identified in general?
What puts the vineyard in danger according to professionals'?

Do we know the medical risks related to the wine ingestion resulting from vines (yeasts?) GMOs?
Are GMOs compatible with reasonable (thoughtful) agriculture?
Which wine research for reasonable (thoughtful) agriculture?

Why high-class wines are produced with techniques which are opposed to transgenics (traditional or biological?)
Or
Should we see the things in a binary way?
Why high-class wines from infected vines are well sold?

Should we stop researches for philosophical reasons?
Do we have to take the risk to go to seek the answers abroad?
Or
What is the relevance of the concept "delay of research" compared to other countries?
Which place occupies INRA in the expertise on GMOs?
Do we know what is done in the other countries?

Can we evaluate the scientific importance of a disease in terms of models?

Confined/non-confined. Why? How?

Why is it necessary to make GMOs field tests in the vineyard?
If tests are made in field, under which conditions?
If tests are made in field, over how much years?
Who controls what, based upon which criteria?
How to ensure the respect of the conditions over the LT (*long term?*)?
Colmar tests: can be estimated beforehand the effects on the medium?

Who controls and on which criteria?
GMOs tests: quid of a schedule of conditions (limits)?
Which current homologation procedures of tests in confined or opened milieu?
Can be improved them?

GMOs, transgenics

Which knowledge about the technique?

The Colmar case?

Genetics: how does it works technically?
Differences between genetic improvement and transgenics?

What precisely is the experiment in the Colmar test (refrigerator) about?
Which mechanisms are at work in the modified plants?
Which molecules will pass from the rootstock to the glass of wine?

Which evolutions of the legislation on GMOs?

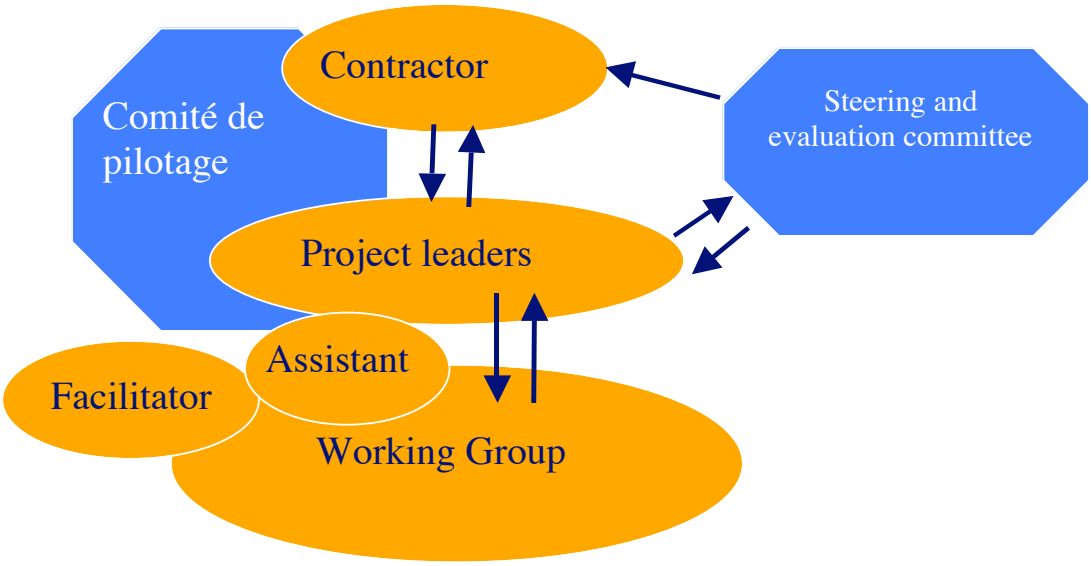
Is there any legislation about GMOs ?
How to be sure of having a transparent legislation (information of consumers?)

Which impacts of GMOs on the relationship wine /consumers /markets

Is the wine of the future a wine 0 risks or 100% non-GMOs?
Does a GMO-Riesling remain a Riesling (not)?
Which wine drinkers (%) wouldn't consume any more if they knew that there is GMOs?
And if they knew about the pressure of phytosanitary products on the vine?
How does France can preserve the specificity of its wine?
How do the French citizens see the French vine growing?
What does the wine sector represent in the French economy?
How to develop informed citizens' initiatives but without a priori?
Is the wine consumption worldwide in fall or increasing?

How to popularize the issues of technological progresses?
How to make pass through the results of research to the profession?
How to organize the interface/profession/consumption?
Must transgenic research be limited to certain techniques (for example: vine in vine? …)
How to manage the interference with the media?
Should the question be about transleaf virus or about the whole process of wine elaboration?

The present graphic represents the management structure of the experience:



And the work plan is established as follows:

The WG Meetings	
Friday/Saturday 5-6 April 2002	First meeting: introduction, meeting with Marion Guillou (Director), with Guy Riba. Metaplan to formulate questions about which information is needed, and reformulation of the task.
Tuesday 14 May 2002	Second meeting: discussion of possible future developments (Scenarios), specification of component systems, information needed.
Tuesday 11 June 2002	Third meeting: scenarios formulated in May were elaborated, meetings with researchers, then two sub-groups to outline structure of the final report. Overlaps and differences, no final decision. Lacunae (e.g. economic aspects) were identified, but it was decided not to invest in them because of limitations of time.
Monday evening 8 and Tuesday 9 July 2002	Fourth meeting: discussion of issues within the WG (which had priority), preceded by meetings with additional experts.
Monday/Tuesday 10-11 September	Fifth and final meeting: Create the final report, starting with a debate on the Colmar experiments. The facilitator organizes a round-table about the arguments to say 'yes' and to say 'no'. Two members choose 'no'. During the evening, two sub-groups draw up parts of the final report. The next day, discussion about recommendations, as well as how to present the 'yes' and 'no' positions.
15 October 2002	Meeting of WG with INRA Directorate about final report.
Monday 20 January 2003	INRA Press conference, and aftermath (e-mail correspondence among members of the WG, especially about the critical reactions to their work during the alternative press conference, organized by *Conféderation Paysanne*, after the official press conference.

5. Intervention-research principles. The 'co-construction' of a research agenda

As a mix of action and production of knowledge, it involved for researchers the specific posture of "intervention research". This dual posture was instrumentalised through various means: independent evaluation, traceability (all steps were documented), transparency (availability of reports on a website) and a reflexive further stance. Moreover, the product was made by the group itself, rather than by an independent observer.

iTA-vines consisted in a commissioned hybrid forum and thus a move (a strategic one) in wider diffuse fora. A very important methodological question was how the macro world could be distillated into the micro exercise, how to fill in the microcosm (what depends, in fact, on the purpose, the objectives and strategies, of the designated hybrid forum). Some elements deserved special attention:

- The play rules were clearly established, both with contractor and with all participants. Starting from mutual engagement is a prime move to gain trust. The compromise was to explain, in written reports, the respective positions (those of the working group, the INRA directorate's and the Assessment Committee's). The original question was reformulated in order to satisfy all parties. In the meanwhile, the essays were interrupted. There was also agreement on full transparency concerning the texts describing the procedure, and the reports, with a website set up where all documents could be viewed.
- The procedure was devoted to allow for a rich discussion. The methodological choice of selecting worldviews representatives (qualitative representativity), tough contested, responded to this objective. It assumed that there was no sense in replaying the interactions between stakeholders, which will only reproduce the impasse in the debate. The idea was to introduce variety (capture requisite variety of macrocosm in the setup of microcosm), though avoiding controversial blockade, with instituted representatives maintaining fixed positions
- Sufficient means were provided for a successful experience (materials for the effective interaction and also to gain knowledge for the future).

Among the main co-constructed outputs was the final report.

Final Report Extract

Most of the WG Report was devoted to a broad analysis of the social, cultural, economic and technical dimensions of the wine production sector in France. They agree with respect to conduct further experiments in the laboratory and greenhouse but the concluding chapter about field experiments was ambivalent. In the one hand, there was a positive majority opinion "Yes, if additional measures are taken". The measures included the following conditions:

- Carrying out research on alternative solutions in parallel
- Explaining the objectives and limits of the experiment to civil society
- Setting up a "pluralist and independent" body to evaluate the experiment, with the power to decide whether to continue or suspend it.
- The organisation of further consultations with professionals, researchers, politicians and civil society if and when the development of commercial varieties of GM vines are envisaged.

In the other hand, there was a minority opinion (2 people out of 12) saying "No, even with such measures". Opponents considered that this technical solution (to vine disease) was not socially acceptable, that the consequences for the image of wine will likely be negative, and that INRA could not prevent others from developing commercial GM varieties on the basis of the fundamental research it conducts.

The INRA Directorate's response followed the majority conclusion, and contained the following three points:

(i) the acknowledgement of the need to widen its research activities in order to cope with different "vine/wine worlds", including sustainable viticulture, organic and biodynamic systems. The directorate announced the decision to set up an advisory committee in charge to give a plural expertise on research directions for wine and vine;
(ii) a "yes but" to the field trial solely for research purposes: "we won't push this innovation but will develop knowledge for a variety of options. It will be up to professionals to make the choice."
(iii) the decision to set up a local steering committee in charge to discuss the field trial protocol and to follow it.

6. Methodological insights

A pattern in the outcomes appears to be related to the group composition, their configuration and the structuring of the process, which partly determined the co-construction exercise. The cognitive variety in world visions was overlaid by the positions of members and their relevant experience. This was then linked to a focus on the "*filière*" (the normal, prescribed procedure) as the starting point for a shared problem definition. They referred mainly to the chain of productive activities and transfers of vines and wine. *Ex post*, one can observe that the dynamics of the WG led to the domination of specialized knowledge on the ordinary language and world views of lay citizens. It means that some questions and concerns raised by NGOs and members of the public were not taken into account, because they were considered as irrelevant.

When defining the issues at stake (the shared definition), the WG compartmentalized the categories insiders/citizens-outsiders. They state, for instance, that genetically modified organisms create fear (anxieties) to citizens, which positions the WG as insiders and therefore as not representatives of other lay citizens.

Another compartmentalization was between "research" and "innovation". The majority "Yes" was subordinated to the condition that INRA would guarantee the control of the research prior commercialization. Therefore, the distinction research/innovation was not problematized and risk issues were not addressed in any detail, contrarily to the researchers' expectations. May be because the group tended to reproduce a usual delegation to "experts" rather than actually co-construct the issue.

However, they added a strong claim to diversify research programmes on vines and wine and calls strongly for more integrative, transdisciplinary and problem solving approaches. In this way, they call for decompartmentalization.

There can be informal accountabilities, as when members feel obliged to speak out – which happened most dramatically during the final meeting, when a minority opinion was put on the table. The final report is not the only result; social learning occurs all along the process.

For INRA, the iTA-vines exercise fostered an internal deliberation on the issue and opened the institution to wider audiences (with press and public conferences organized in various INRA Regional Centres, for instance). Indeed, since INRA is not homogeneous, the deliberation process push to establish a balance between researchers, and the directorate. With the positive advice, and their decision to go in that direction, they had to face external debate and thus they spent two months consulting with some "professionals", and checking at the Ministerial level.

The iTA exercise contributed to the elaboration of a new approach about the role of INRA as opener and controller of new options (and not as advocate of specific innovations). It played thus a legitimating role for the institution. However, the iTA exercise did not contribute to the pacification of the battle on field trials and was considered by most anti-GM NGOs as a strategic tool of INRA to foster the acceptability of GM vine.

The analysis of this dual dynamics macro-micro overarching participatory processes thus sheds light on the key role of the context and structures of power within which they take place. Normative issues make difficult to establish a balance between the advantages of the production of improved decisions and the risks related to the weakening of the role of civil society.

For an assessment of the methodology, it is important to note that the actual process will make a difference as to how much trust is invested (and in which actors), and how handling of uncertainties is delegated. Members of the WG agree that the difference between "Yes, but" and "No, even if" is linked to the trust in INRA, as such and in terms of its ability to actually control the commercial application of the knowledge produced in this field experiment. In addition, they recognize that the way how experience was settled (by the method, animation, selection of participants) led to members of the WG- who might not have felt confident in INRA at first - to become confident, because they felt they were being listened to.