

PROJECT PLAN

The Development of Ethical Bio-Technology Assessment Tools for Agriculture and Food Production

Ethical Bio-TA Tools

QLG6-CT-2002-02594

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OBJECTIVES AND EXPECTED ACHIEVEMENTS

The objective of this project is to develop and improve tools for the ethical assessment of new technologies in agriculture and food production in general and modern biotechnologies in particular. The project thus responds to the plurality of consumer concerns that increasingly inform the European public debate on agriculture and food production.

The developed tools need to be designed for various purposes and contexts. They should facilitate ethical (bio)technology assessment by:

- governmental and non-governmental regulators;
- citizens/consumers and their organisations; and
- economic actors in the food chain.

All these actors need to address the ethical aspects of the introduction and application of new (bio)technologies in agriculture and food production. Their need for ethical advice, however, diverges with their respective roles and responsibilities. The developed tools should also facilitate ethical opinion-formation and/or decision-making by the aforementioned actors in agriculture and food production.

This project addresses the various needs of the different actors by combining ethical (bio)technology assessment tools with the most pressing needs for ethical advice in agriculture and food production. The project thus identifies three sub-objectives in the development of ethical (bio)technology assessment tools. The developed tools should facilitate:

- ethical decision-making by governmental regulators;
- ethical opinion-formation by the general public; and
- ethical decision-making by economic actors in the food chain.

The project has selected three tools that are deemed useful for addressing the aforementioned various needs. The tools that the project shall consider and study with regard to the three sub-objectives are:

- 1 ethical decision-making frameworks;
- 2 consensus conferences; and
- 3 benchmarking.

These tools have been selected for further development in the three substantial workpackages that constitute the main body of the project.

It is not sufficient to study and analyse three such tools separately. The point is that they together constitute the main policy tools for getting a grip on the ethical aspects of agriculture and food production. It is therefore necessary to see these tools in combination, and discuss their respective pros and cons. The project thus includes comparative analysis and discussion as a fourth sub-objective:

4 the establishment of a network for comparative discussions about ethical (bio)technology assessment tools for agriculture and food production.

The fourth integrative workpackage serves the realization of this final sub-objective in the project

The primary achievement of this project will be the availability of three ethical (bio)technology assessment tools to facilitate opinion-formation and decision-making by governmental and non-governmental regulators, citizens/consumers and their organisations, and economic actors in agriculture and food production. Whereas the project develops and discusses these tools for the ethical assessment of modern biotechnologies in animal and plant breeding, they will also stand as a valuable basis for the ethical assessment of other new technologies in agriculture and food production. Thus, the focus of the project is on the development of ethical tools and not on specific applications of these tools on, e.g., some narrowly defined interpretation of modern biotechnologies. Although the development trajectory of the ethical tools will include testing in empirical cases of genetic modification, the tools should ultimately facilitate ethical opinion-formation and decision-making about the application of new technologies in agriculture and food production in general. This project intends to publish scientific papers and reports about the developed ethical (bio)technology assessment tools, and to provide actors in European agriculture and food production with practical guidelines and instructions for the application of these tools. The project, finally, will be of support for the further development of already existing European networks in agricultural and food ethics.

2.1 Introduction

Since the project's main objective of developing ethical (bio)technology assessment tools for agriculture and food production is divided into one procedural and three substantial sub-objectives, work in this project has also been divided into four workpackages:

- WP1 – Ethical Decision-Making Frameworks;
- WP2 – Consensus Conferences;
- WP3 – Benchmarking; and
- WP4 – Integration.

The three substantial workpackages WP1, WP2 and WP3 are in turn sub-divided into four progressive tasks:

A Description;
B Evaluation;
C Development; and
D Application.

The integrative workpackage WP4, on the other hand, is sub-divided in three progressive tasks:

A Introduction;
B Comparison; and
C Conclusion.

Coherence is generated by the structure of the workplan. The whole project starts with the introductory task A from the integrative workpackage WP4. This task involves the further exploration of current practices of ethical (bio)technology assessment in agriculture and food production in (member states of) the European Union and of the need for methodical input from ethical experts. This explorative phase in the project includes two meetings of the whole consortium. The resulting overview of current European practices of ethical (bio)technology assessment will be used to finalise the workplan of the three substantial workpackages in the project and will serve as a basis for the introductory chapter of the final report.

Then follow the four progressive tasks in the substantial workpackages WP1, WP2 and WP3. First, the respective tools “ethical decision-making frameworks”, “consensus conferences” and “benchmarking” will be extensively described (task A). Second, the pros and cons of these tools will be evaluated (task B). Together these first two tasks offer an assessment of the existing ethical (bio)technology assessment tools. Third, this assessment will be used to develop and/or improve the existing tools (task C). Fourth, the developed/improved tools will be applied or tested in case studies (task D). Together these second two tasks constitute the innovative part of the project.

The first three tasks A, B and C in the substantial workpackages WP1, WP2 and WP3 will result in chapters for interim reports that will be discussed in the interim comparative task B from the integrative workpackage WP4. These comparative analyses and discussions of previous experiences in the substantial workpackages include a meeting of the whole consortium between each subsequent task in the substantial workpackages, and considerable work will be put in the preparations of these meetings.

Finally, the experiences from the case studies in task D of the substantial workpackages WP1, WP2 and WP3 will be the last input for the concluding task from the integrative workpackage WP4. This task C concludes the entire project, and results in the composition of the final report and the practical guidelines and instructions for the application of the developed ethical (bio)technology assessment tools by actors in agriculture and food production. It includes one meeting of the whole consortium and the organisation of a multi-stakeholder workshop to discuss the results of the project with governmental and non-governmental regulators, citizens/consumers and their organisations and economic actors in the food chain.

2.2 Description of the workpackages

2.2.1 WP1 – Ethical decision-making frameworks

Start date:	4		
Completion date:	33		
Partners responsible:		2	5
Person months per partner:		18.5 ¹	25
Total person months:	58		

Introduction

The development and application of principle-based ethical decision-making frameworks aims to assist policy-makers map stakeholder concerns and take account of the wider ethical issues raised by the application of food and agricultural biotechnologies in the regulatory process. These tools aim to fulfil two purposes. First, to articulate scientific and ethical dimensions of the issues raised by these technologies. Second, to facilitate reasoned, consistent and transparent decision-making.

A limited number of ethical frameworks have been developed and proposed. However, these have not been comprehensively characterised or assessed to determine their value in the biotechnology assessment decision-making process. WP1 will categorise the development and use of these frameworks. It will focus on the development of a framework known as the ethical matrix as a case study, as well as examining the application of related methodologies such as the use of multi-criteria mapping. This workpackage will examine whether such frameworks could provide a harmonised approach to dialogue and decision-making at the community and international levels, while also being sufficiently sensitive to cultural factors in order to adequately reflect national and regional needs.

¹ Person-months for AC-partners do not include permanent staff.

The process will aim to deliver improved or new conceptual frameworks that are capable of capturing stakeholder concerns and provide a sound basis for ethical decision-making on issues raised by modern biotechnologies. It should, however, be made clear at the outset that the notion of tool in this context is not intended to convey the idea that ethical issues can or should be handled in a mechanical manner. Nor should ethics become instrumentalised for other purposes. Also (decision-)tools require judgement, contextualisation and flexibility. However, in order to highlight ethical issues and in order to capture public concern about them, one needs a systematic approach to elucidate underlying conflicts and disagreements in the public realm. A systematic approach or framework to study and elucidate these value conflicts is what we here coin a tool. A basic assumption of the work is that decision-makers at present lack the kind of theoretical insight that is needed to judge the possible strengths and weaknesses of the existing tools, and that the uses of them are largely guided by ad hoc decisions.

Objectives

The objective of WP1 is to develop a practical decision-making framework to assist public and private decision-makers map and consider the ethical dimensions of animal and plant biotechnologies. This approach draws on the notion of ethical pluralism and the application of ethical principles, prominent in various approaches to ethics, coupled with a process of stakeholder engagement that allows different parties to interpret and use these principles accordingly. A principle-based approach is a promising middle way between applying abstract ethical theories and an intuitive, non-reflective ethics. Even though there is a great deal of consensus about certain basic ethical principles, the framework does not necessarily aim to achieve consensus among stakeholders but rather to elucidate the underlying values and ethical arguments of the various stakeholders. It is assumed that conflicting interests among different stakeholders can often be real and based on rational insights.

The aim of this approach is to achieve a comprehensive and rational elucidation of principled ethical arguments, rather than the purely emotive appeal to ethics that tends to be prominent in the news media, in order to enrich democratic processes by identifying well-informed and considered ethical judgements. This implies a basic respect for moral sensitivity and ‘gut reactions’, but stresses that public decision-makers must judge and justify these moral emotions in reasoned ethical views and attitudes. Reflections about relations between emotions and rationality can be done by reference to commonly acknowledged, popular principles, e.g. principles of justice, welfare or dignity. These principles, which have an academic tradition of scholarly analysis, are at the same time concepts ordinary people employ when asked to express or justify their ethical concerns. The principles promise therefore an appropriate starting point for systematic evaluations in a dialogical process.

WP1 will build on earlier, only partially successful, work that focused on the development of a framework known as the “ethical matrix”. This approach will be critically analysed and compared with other emerging methods, such as those based on multi-criteria mapping.

The planned tool should provide a truly participatory means to improve practical ethics on the following dimensions:

- Make the evaluations systematic;
- Make the evaluations transparent;
- Ascertain that the different stakeholder values are represented;
- Make trade-offs visible;
- Provide a framework for justifying trade-offs and prioritisations;
- Respect democracy and value pluralism;
- Respect what is valuable in traditional ethics (rationality); and
- Develop a tool that functions as a practical method for finding a common starting point for value discussions and for making concrete judgements.

The innovative objective of workpackage 1 is primarily directed to public decision-makers, typically from within governmental authorities, but may also to some extent apply to private decision-makers of a size that imply a larger societal responsibility. Public decision-makers may include national biotechnology advisory councils or ministries/directorates of food production, agriculture, fisheries or biotechnology. Also international bodies, like the European Commission and regulatory transnational authorities or advisory boards to the Commission, may be counted among the intended users. The planned tool may also be modified for use in other areas than present biotechnology.

WP1 shall make use of input from selected practitioners with experience from decision-making in governmental and/or transnational authorities throughout the project period.

Task A – Description

It is increasingly recognised that in order to enhance public trust and commercial confidence in regulatory processes relating to food and agricultural biotechnologies, a broader examination is required of the ethical dimensions of the development and application of these technologies than has been attained hitherto. As a result, there is growing interest in improving the methods for identifying, assessing and managing ethical issues, at both public and private levels. A number of ethical frameworks are currently being developed to:

- assist the identification of social and ethical dimensions of RTD programmes;
- improve stakeholder dialogue; and
- ensure inclusive and transparent approaches to public policy decision-making.

The objective of WP1 is to categorise, assess and improve the currently used ethical frameworks in order to help decision-makers map and consider the ethical dimensions of biotechnology. This workpackage will focus on a small number of frameworks that are being developed to facilitate ethical reflection and dialogue between key stakeholder groups and map their ethical concerns and aspirations. WP1 will characterise the types of frameworks that are being applied across Europe, while focusing on a number of specific regions (United Kingdom, Norway and Italy). It will include frameworks used both by advisory committees and regulatory government and public decision-makers. The extent to which current methods are being applied and the impacts of regional policies and cultural framing on their application, will also be explored. This work will yield an inventory of available methods as a starting point for identifying desired elements of the tools to be developed. The inventory of available tools for ethical decision-making will basically be European in scope and

will be based on information by national or regional bodies with advisory functions to governmental authorities.

This task will mainly consist of collating information, principally but not exclusively from the European Union, on existing ethical frameworks that are explicitly designed to facilitate ethical decision-making and stakeholder consultation. It will involve extensive desktop research, including literature and Internet searches. It will also involve consultation with professionals active in the field, who will be contacted via an e-mail survey and follow-up approach. The research team will review the development and use of ethical frameworks across the European Union from the emergence of biotechnological applications in the late 1980s through to the present day. The frameworks will be classified and detailed, according to their conceptual basis and regional setting. The stage of development and the extent to which the frameworks have been applied and appraised will also be identified. This task will be co-ordinated with the findings of the other workpackages (WP2 and WP3). Task 1A, therefore, involves consideration of the socio-political and cultural factors that may be crucial for the successful application of these tools. For instance, it is claimed that several countries of Northern Europe apparently embrace consensus as a realistic goal of participatory processes, whereas other countries (e.g. The Netherlands, United Kingdom and Germany) to a large extent focus on process rather than outcome. Thus, when describing the various approaches, it is essential to take account of the socio-political and cultural contexts. Only when these factors are explicitly articulated, when characterising the decision-making frameworks in question, can one hope to achieve a methodology that can be intelligently used across the European Union. At present there is a lack of this kind of contextuality in the existing literature.

Task B – Evaluation

This task will involve conducting a critical analysis of the various frameworks being developed and applied to deal with ethical dimensions of biotechnology use in a multi-stakeholder participatory process. The analysis will characterise their effectiveness in providing a rational, comprehensive and transparent basis for decision-making. The different salient features of these frameworks will provide stepping-stones for developing flexible and adaptive regulatory frameworks. While political qualities like transparency, openness and robustness of results will play an important role in this analysis, other qualities will also be examined such as soundness of argument, linkage to overarching and widely held ethical principles (as defined in current ethical theory and casuistry) and the sorting of ethically relevant differences. Part of this analysis will thus look at stakeholder expectations and compare these to documented outcomes, while another part will explicitly rest on a more theoretical discussion. The theoretical approaches referred to are both from normative ethics (as from philosophy and theology) and from descriptive value and norm theory (as more typical in the social sciences). Possible conceptions of a purely instrumental role of ethics shall be critically discussed. Insights from the field of medical ethics will be explored, since the system of medical ethical review boards has over many years gathered valuable experiences and developed simplified decision-making procedures. This task will involve consultations and correspondence with key actors. Building on the findings of the descriptive work, a series of semi-structured interviews will be conducted to assess users' expectations as well as to document the practical, contribution of the defined frameworks. This task will also examine the role of the various frameworks in public or private policy-making (e.g. governmental bodies,

advisory groups, industry) and the differences in the perceived regulatory need for these tools across various regions.

Task C – Development

Leading on from the previous task, this stage will entail concentrated deliberation and reflection on the existing methodologies and exploration of new approaches. The application of a framework known as “the ethical matrix!” will be examined as a case study. The main purpose of this stage is to utilise the insights from stages 1A and 1B in order to develop a more robust and better-articulated decision-making framework. The extent to which this will result in merely improving existing tools like the ethical matrix (rather than an altogether novel approach) cannot be predicted at this stage, but it is expected that the analysis will give rise to some changes both in its basic dimensions and in the mode of application. The ethical matrix, which is based on principles enunciated by medical ethicists, relates ethical theory to concrete issues. This approach has entailed consideration of impacts of food and agricultural applications on different interest groups in terms of prima facie duties to respect well-being, autonomy and justice (corresponding to three major strands of contemporary ethical theory, i.e. utilitarianism, rights-theory and Rawlsian principles of justice as fairness). These ethical principles are translated into appropriate, user-friendly terms for the relevant interest groups. Clarifying both the role of stakeholders and the role of ethical principles will be at centre of the theoretical evaluation of these kinds of tools.

The ethical matrix has attracted a significant degree of interest and recently, it has been employed by a number of research groups as part of engagement strategies. For example, it has been applied by:

- the Norwegian Fisherman’s Association in a project “Norwegian fisheries towards 2020”;
- in the UK, to map stakeholder issues raised by the use of bioremediation technologies; and
- the Europäische Akademie to study the implications of the use of functional foods.

The principal partners of this WP to review the current frameworks will conduct a number of parallel focus groups. Modified frameworks will be proposed in the light of criticisms made, and will be tested in workshops to which people with a range of expertise will be invited. This approach will in particular be contrasted to methods such as participatory multi-criteria mapping, which will also be explored in the appropriate focus groups. This process will require exchanges of ideas at meetings with a wide range of stakeholder interests. These will be conducted in an iterative manner in order to facilitate a learning process among project partners. The participating stakeholders will be consulted both about the issue they discuss and also on a meta-level regarding the engagement process and the framework structure itself. Equally important is the inclusion of practitioners and end users from an early stage on of this development process.

The use of participatory processes in this workpackage may give important synergy effects with workpackage 2 and there will be extensive interaction between these workpackages.

Task D – Application

The final task will involve a process of engagement with selected policy and regulatory decision-makers in the countries of the involved partners. The methods and

results of the workshops and focus groups will be evaluated with these selected decision-makers. It will be the task of the decision-makers to explore the institutional demands or socio-economic pre-conditions that will allow these frameworks to be widely applicable in their respective fields. Seminars and workshops will be conducted in order to improve the novel approach and to adjust it to the constraints of the legal and institutional frameworks under which these decision-makers typically operate. The methodological details required by these key actors in the final report will also be explored to allow them to adequately apply the proposed ethical framework.

Empirical justification of the elements of the method and a sober assessment of possible range of the proposed tool must be provided. The method(s) must be assessed on their performance on the dimensions outlined above.

Deliverables

The main deliverables will be contributions to the final project report. These include practical guidelines and methodological manuals to facilitate the use of the tools. Minor deliverables will be draft chapters for the interim reports and presentations for the project consortium and advisory board. All deliverables will be placed on the project website:

- Task A of WP1 will result in a systematic overview of existing principle-based ethical decision-making frameworks, including a review of their use or potential application in modern biotechnology. This task will include a presentation of their cultural, institutional and socio-political contexts;
- Task B of WP1 will result in a critical evaluation of these frameworks from the point of view of both practical application and ethical theory;
- Task C of WP1 will result in the preliminary description of a novel approach to ethical decision-making, combined with reports from the various focus groups and workshops; and
- Task D of WP1 will result in the preparation of a definitive manual describing the revised framework and specific reports on the input from the consulted decision-makers.

2.2.2 WP2 – Consensus conferences

Start date:	4		
Completion date:	33		
Partners responsible:		3	6
Person months per partner:		26.8	6.4
Total person months:	33.2		

Objectives

Participatory arrangements have in the recent decades attracted attention as ways to handle existing or potential conflicts in the techno-scientific domain. The basic idea of these arrangements is to involve the public in the political processes, eventually hoping that this may assure the development of new technologies (or basic sciences) in a publicly accountable way – and hence the avoidance of conflicts. As such, participatory arrangements lie well within the model of deliberative democracy where legitimacy and rationality of decision-making is based on processes of collective

deliberation. Participatory arrangements can be understood as specific tools developed and applied serving this purpose. The ideas of deliberative democracy have however been met with a basic criticism of the replacement of a market-inspired view of the public sphere with the view that political questions are of a moral nature and hence cannot be decided on rationally. Furthermore, participatory arrangements have been questioned regarding their ability to be representative and not controlled by powerful actors pursuing their own interests.

On this background the overall purpose of this study is to assess existing participatory arrangements used in the handling of potentially controversial technologies, and to suggest improvements to such arrangements. The project will thus address methods ensuring the inclusion of the public as an actor in the policy process. More specifically, the project will examine and compare experiences with consensus conferences (or consensus conference-like arrangements) in different European countries. Consensus conferences are thus analysed as a tool of political counselling, eventually qualifying the decision-making process in relation to public policies regarding the new biotechnologies in agriculture and food production.

The actual reception and handling of the new biotechnologies in different countries depends largely on deeply rooted societal, material and cultural differences. Such differences are often expressed as differences in the political culture – stressing that there are national varieties in the structures new agricultural biotechnologies are developed and introduced within. It is an underlying hypothesis, that these national differences are important aspects with regard to an understanding of the success or failure of the application of participatory arrangements.

To study how these different national conditions affect the implementation of participatory arrangements, the project has two different purposes. The first is to establish an understanding of the possibilities and limitations of public participation in the implementation and regulation of biotechnology in selected European countries. This will provide an understanding of actors as well as structures that are important to the arena within which participatory arrangements are developed and applied. The second purpose is to perform a case study examining experiences with consensus conferences, as one example of participatory arrangements, in selected countries. This will provide material and knowledge to assess under which circumstances consensus conferences can successfully be used.

National differences may be expressed through different practical ways of organising consensus conferences or other participatory arrangements, reflecting differences partly in political culture, e.g. the tradition for openness of the policy process, and partly in the purpose and motivation behind the conference. There are basically two different rationales behind the decision to carry out a consensus conference (or any other participatory Technology Assessment arrangement for that matter). First, the purpose can be to feed more or less directly into the political decision-making process by opening a discursive space, where laypersons are allowed to set the agenda and to decide what questions are relevant. As such the consensus conference can be seen as a sort of lay parliament, offering the formal political decision-makers a lay view on the issue addressed, thus potentially qualifying the decision-making process. In this respect consensus conferences add a qualitatively new dimension where judgements ideally are morally founded; compared to more traditional methods where public opinion is collected by means of, e.g., opinion polls. Second, the aim can be to qualify the public debate over a controversial

(technological) issue. Ideally the public debate can be considered part of the policy processes, and this can of course be seen as an indirect way of qualifying the decision-making process. In this way participatory Technology Assessment arrangements like consensus conferences stimulate the debate both in the sense that they focus the attention of national experts (and political decision-makers) on lay aspects of the issue, and in the sense that the media attention may influence the broader public discussions. The outset of this study is to analyse participatory Technology Assessment, and consensus conferences in particular, paying due respect to this double aim.

In summary the study has three more specific sub-aims:

- to contribute to the understanding of the role and limitations of participatory approaches in the handling of controversial technologies in different national contexts;
- to contribute to the understanding of whether, when and on which conditions consensus conferences are a useful method for including ethics in decision-making and/or public debate; and
- to suggest improvements of consensus conferences paying respect to different contexts and different purposes.

Departing from the existing knowledge about participatory arrangements the work will be divided into four consecutive tasks:

- A Description of participatory arrangements as ethical tools in science and technology policy, and establishment of the analytical frame;
- B Evaluation of consensus conferences as an ethical tool;
- C Development of guidelines and recommendations for future application of consensus conferences; and
- D Application and dissemination of results.

Task A – Description and analytical frame

The aim of this part is to set up the analytical framework for the following tasks. A main aspect of this is to identify the criteria for the evaluation of consensus conferences in task B. This will partly be based on existing research in political philosophy and political science. A review of democratic models in Europe will be produced, emphasizing the role of political cultures and democratic models for engagement in and interpretation of participatory arrangements. The task will include a meta-level study of the role of participatory strategies in techno-scientific governance, with a particular focus on policies related to agricultural biotechnology and GM foods. An important aspect of Task A is generally to place consensus conferences in the landscape of participatory arrangements, and as a part of this elaborate on what is covered by the concept “consensus conferences”.

The analytical framework will include the following subtasks:

- review of recent research in the area of participatory arrangements and their role in the policy processes/the democratic processes;
- review of democratic models prevailing in Europe;
- identification of key focal points in the analysis of consensus conferences and participatory arrangements in the following main tasks; and
- identification of the countries that will be the target of the evaluation in task B.

The selection of countries for analysis will take into consideration that they should:

- represent different political traditions and cultures in particular with respect to their openness towards participatory arrangements and other procedures related to ideas of deliberative democracy; and
- both represent countries where ethics have played a particular role in GM food and agricultural biotechnology policy-making, and countries where this has not been the case.

The nomination will partly be based on the outcomes of the meta-level study of techno-scientific governance that includes the following subtasks:

- description of democratic cultures in the selected countries, with particular focus on the role of and inclination/ openness towards participatory arrangements;
- an analysis of the extent to which participatory arrangements have been used and institutionalised in relation to agricultural and food biotechnology; and
- specifically place consensus conferences in these national landscapes of political cultures and participatory arrangements.

The timeframe for this policy review is 10-15 years, depending on the national context, but with a focus on events after the revival of the biotechnology controversy in mid-1990s. Potential overlap and/or synergy with WP1 will be addressed in the early phases of task A. The methods for task A are a combination of literature studies and interviews with key informants in the case countries.

Task B – Evaluation of consensus conferences as an ethical tool

Task B is a case study of one type of participatory arrangements: the consensus conference. This case study will be performed in the selected countries and address the use of consensus conferences or consensus conference-like arrangements. Furthermore, smaller case studies will be performed in countries where participatory arrangements have played an insignificant role in science and technology politics

and/or where consensus conferences have not been conducted. A main aim of task B is to analyse how different national interpretations, contexts, political cultures and/or other structures shape the course and outcome of consensus conferences in the different nations. The focal points of these analyses and the evaluation will be based on the work performed in task A on the analytical framework and, hence, partly be based on criteria developed on the basis of the review of democratic models and partly on the basis of (different normative) interpretations of participatory arrangements as they are presented by practitioners.

The following subtasks are included in task B:

- further development of the methodological framework, adjusting it to the analyses of consensus conferences;
- decide on the number of sub cases in each country (i.e. consensus conferences) and identify criteria for the selection of consensus conferences (e.g. comparability, timing, political importance); and
- national case studies of consensus conferences.

The content of the national analyses will of course depend on the adjusted analytical framework, but it may include internal aspects, i.e. aspects related to the consensus conference itself addressing questions like:

- How was the conference organised?
- How and by whom were the themes framed (risk/ethics/economics/culture)?
- Was there an ethical assessment?
- How was the lay panel recruited?
- On which criteria were the experts selected?
- What was the role of the lay panel, respectively the experts?
- What was the underlying understanding of the laypersons and their role/competencies?
- What was the outcome?

On the other hand the analysis may include external aspects, i.e. issues related to the context surrounding the consensus conference and how (if at all) the consensus conference affected the political processes. This could address questions of the following nature:

- What was the political relevance of the conference?
- How was it financed?
- Who was responsible?
- Was there any observable political impact?
- What was the discursive impact?
- What was the main aim (qualify debate or decision-making)?

The method applied in Task B is primarily interviews with key informants involved in the accomplishment of consensus conferences in the various countries as well as outside observers of the processes. To this will be added analyses of relevant documents describing the conferences and their outcome – including existing evaluations and an overview of the media coverage where feasible.

Task C – Development of guidelines and recommendations for future application of consensus conferences

The aim of this task is, on the basis of task B, to point at issues that need to be addressed when applying consensus conferences, and thus to suggest how consensus conferences may be improved as a tool. These recommendations will reflect the main aims of consensus conferences, paying respect to whether the principal aim of the conference in question is to directly feed the political decision-making or to promote public opinion-formation, and address factors that are co-responsible for the success or failure of consensus conferences in the selected countries.

Apart from drawing on the results of the previous tasks, the method for achieving this will be confrontation of key informants addressed in task B with the results of the study; either through new interviews or in one or more workshops.

Task D – Application – dissemination of results

Since it is not within the temporal and financial limits of this workpackage to perform the planning and actual accomplishment of a consensus conference, the application of the results is limited to any outcome of discussions with planners of future consensus conferences. These discussions will be facilitated through one or more workshops, in particular addressing potential users in countries where the application of participatory arrangements such as consensus conferences is at an early stage, notably candidate countries to the European Union.

In addition to these workshops, the results will be disseminated by the means of articles in scientific journals as well as in newsletters and magazines aimed at a broader audience.

Deliverables

Main deliverables will be contributions to the final report and the practical guidelines and instructions for interested actors in agriculture and food production. Minor deliverables will be draft chapters for the interim reports, including methods sections:

- Task A of WP2 will result in a description of consensus conferences and other participatory arrangements;
- Task B of WP2 will result in an evaluation of consensus conferences;
- Task C of WP2 will result in a development of consensus conferences; and
- Task D of WP2 will result in suggestions for improvement of consensus conferences.

2.2.3 WP3 – *Ethical benchmarking: from protocols to questions*

Start date:	4		
Completion date:	33		
Partners responsible:	4	1	
Person months per partner:	14.5	15	
Total person months:	29.5		

The Problem

During the last decades the governmental policy in the field of agriculture and food in Western countries aimed at providing enough and safe food. That development is now reaching a point where a conflict appears between striving for bigger quantities of food on the one hand, and satisfying the concerns for food quality and sustainable agriculture on the other hand. Besides this, the growing physical and mental distance between food production and consumption causes problems for the identity building aspect of food consumption. Thus, there is a divergence between the functional and the symbolic function of food. Finally, due to developments in the field of genomics and functional food, the relation between food and health becomes problematic.

Due to these developments, the relation between the food sector and society has become problematic. A mental gap has risen. In order to bridge this gap it seems necessary that the food sector opens up; the food sector acknowledges this and transparency and traceability are keywords in the food sector. However, being transparent implies being able of justifying what you are doing. Therefore, it is important that ethics enters into the agro-food sector. Ethical considerations are needed in order to make the responsibilities of all parts of the food chain explicit. The distribution of responsibilities should not be limited to everyone's minimal responsibility; there should also be discussion about further responsibilities and ideals.

The tools

In this project we would like to develop a set of tools for bringing ethics into the food chain. We start with the process of taking responsibilities. This process consists of three steps:

- making one's own responsibilities explicit;
- taking the specific actions that are judged to be necessary; and
- communicating about and sharing of those responsibilities within the food chain.

An instrument for systematic reflection might be helpful for organisations that would like to take those steps. The aim of WP3 is to offer such an instrument that helps the parties to take their own responsibilities. The instrument will not be a checklist,

because one cannot take one's responsibilities by following a checklist. The instrument will consist of a list of interconnected questions plus a systematic description of possible answers that enable the organisations to formulate their own answers. It provides points for attention in thinking about one's responsibilities. Thus, implicit ideas about the responsibilities of organisations will be made explicit. And then, instruments are given for scrutinising those explicit ideas, in order to adjust them if necessary.

Stepping-stones

In order to develop such a set of tools, several existing practices from diverse fields might serve as stepping-stones for the endeavour to bring ethics into the food chain. In our investigation of existing practices that might serve as stepping-stones we will depart from benchmarking. Benchmarking, however, is not a term from the field of ethics, but from the field of industry and food chain management. It is all about setting standards within a food chain, mostly initiated by the party further up in the production process. Complex ideas about the minimum quality of the final product are translated into standards for, for instance, the raw material. How a final product ought to be is partly determined by the consumers. In setting standards, producers have to take into account consumers' preferences. This holds as well for moral and ethical consumer concerns. Those, however, cannot easily be translated into standards. The existing knowledge about benchmarking might serve as a stepping-stone for the development of tools that facilitate the translation of moral consumer concerns into more or less specific standards. It is clear to us that the technical tool of benchmarking cannot easily be transformed for the use in ethical matters. For that reason, other existing practices that might inspire the development of benchmarking will be studied as well. By using the existing practices in a variety of fields as stepping-stones, new tools for the translation of moral consumer concerns into specific standards will be developed.

Food chain management and ethics: a new connection

The development of ethical benchmarking builds on the reconceptualisation of the agricultural sector as a network of food chains during the final decades of the 20th century. This reconceptualisation of agriculture and food production initiated the development of a new field of research and design in the life sciences, i.e. food chain management. This novel branch of the life sciences developed primarily as a set of tools for logistic improvements in the food chain. So far, the flows of products, information and money between farmers and retailers received most attention in food chain management. ~~—until recently—~~The upheaval of consumer concerns about agricultural and food production, however, informed an inversion of the food chain. Notions like traceability and transparency became popular in attempts to facilitate the development of improved relations among food producers and between these producers and consumers. Simultaneously, consumer concerns became a topic of study and debate in the equally novel sub-discipline of agricultural and food ethics. Here, notions like trust and responsibility were developed for conceptual analysis and evaluation of these consumer concerns about agriculture and food production.

The use of cases

In developing our set of tools we will connect hitherto independent developments in food chain management and agricultural and food ethics by exploring and developing the possibilities of ethical benchmarking to facilitate decision-making by economic

actors in the food chain. In order to connect our theoretical insights with practice, we will use two organisations for our case studies. We will find out which issues are relevant for those organisations and how they deal with them. We will look at what is happening with regard to the distribution of responsibilities. Those problems will serve as an important input for the development of the tool. At a later stage the case studies serve for the application and testing of our insights, e.g. the tool we developed. We do this in order to be sure that our conceptual framework and our tools are in line with the discussions and needs within practice. The role of these cases is therefore not to validate or to invent ideas, but to help us, translating theoretical ideas into a practical use. Each case serves as a laboratory for practical questions we cannot come up with behind our desks.

We will seek the confrontation with the cases on three moments in the process. In the phase of description we will have in-depth interviews with persons from the organisations. We will find out in what way they are interested in ethics, how they are confronting ethical issues right now and what they expect from a set of tools we are going to develop. In the phase of evaluation we will confront our systematised overview of the stepping-stones (as a first draft of the set of tools) with the cases. From the discussions at the work floor we hope to learn about the strengths and weaknesses from the different stepping-stones. This will be used in the innovative phase for the improvement of the tool. Finally, we will confront the set of tools (and especially the user's manual) with the cases in the phase of application. We hope that representatives of the case-study organisations will be able to participate in the final workshop in Brussels.

Objectives

The objective of WP3 is to link food chain management to ethics in order to enable the stakeholders to deal adequately with ethical issues in the food chain. For that purpose we will develop a set of tools that can serve as an instrument for critical reflection. This instrument will consist of a list of interconnected questions and a systematic description of possible answers. With this instrument the stakeholders will be able to formulate their own answers to the relevant questions and thus to determine their own responsibility and policy for dealing with ethical issues.

Task A – Description

We start the development of our set of tools with the description of existing ways of standardisation of non-quantifiable elements in production. The aim of this phase is:

- to describe some relevant experiences with existing protocols for standardisation in different areas; and
- to explore the content and context for the set of tools.

We will have two in-depth interviews with people from both cases. We expect to be able to draw a more complete inventory of diverse processes of standardisation of non-quantifiable elements in production, explicit reflection on strength and weaknesses of standardisation and an overview of ethical standards already in use. Besides these existing experiences, we take theories and practices in the field of chain identity into account. From these stepping-stones we expect insight in the (symbolic) representations in and of the chain and in the relevance of these (symbolic) representations for the development and application of tools. Of course we will also describe ethical concepts – such as care, responsibility and trust – that might be

relevant for our purpose. From these stepping-stones we expect insight in why, where and how ethics can be brought into the food chain. Finally, we will also describe the context of the food chain that has to be taken into account when developing a tool. The food chain has to operate in societal and economic contexts in which responsibilities are assigned in different ways. In conclusion, we describe all relevant stepping-stones for developing tools.

Task B – Evaluation

The aim of this task is to evaluate the existing methods for benchmarking, taking into account the relevant contexts of the food chain, the ideas about chain identity and the relevant ethical concepts. Furthermore, we will collect information from the two stakeholder companies in which we will conduct our case studies. Thus, the evaluation takes into account the issues and problems that are actually relevant. We will thus get into contact with an Italian/French retailer with a project to enhance trust(worthiness) by focussing on transparency/traceability and a case about a product line of genetically modified soy.

Task C – Innovation

The aim of this task is to point at issues that need to be addressed when applying ethical benchmarking, and thus at suggestions about how ethical benchmarking may be improved as a set of tools. Which questions should a party in the food chain ask itself and others and which elements and processes are relevant for getting answers to these questions.

Task D – Application

This final task will complete the set of tools. The resulting ethical tools of benchmarking give practical guidelines for ethical communication and decision-making by economic actors in the food chain. It includes discussions about the operationalisation of trustworthiness in a workshop with actors from the case studies.

Deliverables

Main deliverables will be contributions to the final report and the practical guidelines and instructions for interested actors in agriculture and food production. Minor deliverables will be draft chapters for the interim reports to be discussed by the consortium and the advisory board:

- *Description* will result in a description of stepping-stones for the development of a set of ethical tools;
- *Evaluation* will result in an overview of the strengths and weakness of the different stepping-stones based upon confrontation with two cases and critical reflection upon the content of these stepping-stones;
- *Innovation* will result in an improved set of tools building on the stepping-stones that can be used to bring ethics into the food chain; and
- *Application* will result in a tested set of tools to bring ethics into the food chain and a user's manual for those who work in the food chain.

2.2.4 WP4 - Integration

Start date:	1						
Completion date:	36						
Partners responsible:		1	2	3	4	5	6
Person months per partner:		14 ²	2	2	2	2	2
Total person months:	24						

Objectives

The objective of WP4 is to establish a network for comparative analyses and discussions about progress in the development of ethical (bio)technology assessment tools for agriculture and food production. These comparative discussions include ongoing reflection on:

- the notions of “tools” and “toolboxes”;
- the interest-leaden (political) contexts of application for the developed tools; and
- the relation between emotions and rationality.

The conclusions from these discussions will be included in the introductory chapter of the final report. The establishment of this network serves the integration and coherence of the whole project. Moreover, the development of the three ethical (bio)technology assessment tools for animal and plant breeding in the substantial workpackages WP1, WP2 and WP3 profits from the establishment of such a network for comparative analysis and discussion. Finally, the establishment of this network also supports the further development of already existing European networks in agricultural and food ethics.

Methodology and study materials

WP4 includes three tasks and applies several methods in performing these tasks:

Task 4A – Introduction

- Literature and internet research
- Two meetings consortium

Task 4B – Comparison

- Comparative analyses and discussions
- Three meetings of consortium

Task 4C – Conclusion

- Composition draft final report and practical guidelines and instructions
- Meeting consortium
- Multi-stakeholder workshop
- Composition final report and practical guidelines and instructions

Consortium meetings will typically be organized on 1.5 – 2 weekdays and include interaction with local stakeholders.

² This includes 7 person-months for scientific co-ordination.

Deliverables

Main deliverables will be the final report and the practical guidelines and instructions for interested actors in agriculture and food production. Minor deliverables will be the interim reports to be discussed by the consortium and the advisory board. The interim reports present an overview of progress in the successive tasks of the substantial workpackages. They thus primarily serve as an information source within the consortium but will also be made available for a wider audience through the project's website:

- Task A of WP4 will result in “Overview of Ethical (Bio)Technology Assessment”, including a justification of the selection of schools of thought and tools, and “Final Workplan for WP1, WP2 and WP3”;
- Task B of WP4 will result in Interim Reports “Description”, “Evaluation” and “Development”; and
- Task C of WP4 will result in “Final Report”, “Practical Guidelines and Instructions” and “Multi-Stakeholder Workshop”.

Milestones

WP4 finalises all milestones of the project:

1. Task A of WP4 will result in an overview of current European practices of ethical (bio)technology assessment, including a justification of the selection of schools of thought and tools, in month 3;
2. Task A of WP4 will result in a finalised workplan for WP1, WP2 and WP3 in month 3;
3. Task B of WP4 will result in a description of the three ethical (bio)technology assessment tools in the substantial workpackages in month 11;
4. Task B of WP4 will result in an evaluation of the three ethical (bio)technology assessment tools in the substantial workpackages in month 19;
5. Task B of WP4 will result in a development of the three ethical (bio)technology assessment tools in the substantial workpackages in month 27;
6. Task C of WP4 collates this overview and this description, evaluation and development of three ethical (bio)technology assessment tools with experiences from the case studies in task D from the substantial workpackages to compose the draft final report in month 34;
7. Task C of WP4 will result in draft brochures with practical guidelines and instructions for the application of the three developed ethical (bio)technology assessment tools in month 34;
8. Task C of WP4 will discuss the results of the whole project in a multi-stakeholder workshop in month 35; and
9. Task C of WP4 will result in a final report and brochures with practical guidelines and instructions in month 36.

2.3 Project structure, planning and timetable

List of coordinators of the participating institutes

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Table 1 – Workpackage list

Work- package No	Workpackage Title	Respon- sible Partici- pants No	Per- son- months	Start Month	End Month	Deli- ve- rable No
WP 1	Ethical Decision-Making Frameworks	2, 5	40.5	4	33	3, 7, 11, 15
WP 2	Consensus Conferences	3, 6	33.2	4	33	4, 8, 12, 16
WP 3	Benchmarking	4, 1	29.5	4	33	5, 9, 13, 17
WP 4	Integration	1, 2, 3, 4, 5, 6	24	1	36	1, 2, 6, 10, 14, 18, 19, 20, 21
TOTAL			127.2			

Table 2 – List of Milestones

Milestone No	Title	Delivery Date	Participants	Description
1	Overview	3	1, 2, 3, 4, 5, 6	Overview of current European practices of ethical (bio)technology assessment
2	Workplan	3	1, 2, 3, 4, 5, 6	Finalised workplan for WP1, WP2 and WP3
3	Description	11	1, 2, 3, 4, 5, 6	Description of the three ethical (bio)technology assessment tools
4	Evaluation	19	1, 2, 3, 4, 5, 6	Evaluation of the three ethical (bio)technology assessment tools
5	Development	27	1, 2, 3, 4, 5, 6	Development of the three ethical (bio)technology assessment tools
6	Draft Report	34	1, 2, 3, 4, 5, 6	Draft Final report
7	Draft Guidelines	34	1, 2, 3, 4, 5, 6	Draft Practical guidelines and instructions for the application of the three developed ethical (bio)technology assessment tools
8	Workshop	35	1, 2, 3, 4, 5, 6	Multi-stakeholder workshop
9	Report & Guidelines	36	1, 2, 3, 4, 5, 6	Final report and practical guidelines and instructions for the application of the three developed ethical (bio)technology assessment tools

Table 3 – List of Deliverables

Deliverable No	Title	Delivery date	Nature	Dissemination level	Dissemination target
D1	Overview of Ethical (Bio)Technology Assessment	3	R	PU	Governmental and non-governmental regulators, citizens/consumers and their organisations, economic actors in the food chain, agricultural and food ethicists and scientists
D2	Final Workplan for WP1, WP2 and WP3	3	O	PU	Consortium, EC services, advisory board
D3	Description of Ethical Decision-Making Frameworks	9	R	RE	Consortium, EC services, advisory board
D4	Description of Consensus Conferences	9	R	RE	Consortium, EC services, advisory board
D5	Description of Benchmarking	9	R	RE	Consortium, EC services, advisory board
D6	Interim Report – Description	11	R	PU	Governmental and non-governmental regulators, citizens/consumers and their organisations, economic actors in the food chain, agricultural and food ethicists and scientists
D7	Evaluation of Ethical Decision-Making Frameworks	17	R	RE	Consortium, EC services, advisory board

Table 3 - List of Deliverables (continued)

D8	Evaluation of Consensus Conferences	17	R	RE	Consortium, EC services, advisory board
D9	Evaluation of Benchmarking	17	R	RE	Consortium, EC services, advisory board
D10	Interim Report – Evaluation	19	R	PU	Governmental and non-governmental regulators, citizens/consumers and their organisations, economic actors in the food chain, agricultural and food ethicists and scientists
D11	Development of Ethical Decision-Making Frameworks	25	R	RE	Consortium, EC services, advisory board
D12	Development of Consensus Conferences	25	R	RE	Consortium, EC services, advisory board
D13	Development of Benchmarking	25	R	RE	Consortium, EC services, advisory board
D14	Interim Report – Development	27	R	PU	Governmental and non-governmental regulators, citizens/consumers and their organisations, economic actors in the food chain, agricultural and food ethicists and scientists
D15	Application of Ethical Decision-Making Frameworks	33	R	RE	Consortium, EC services, advisory board
D16	Application of Consensus Conferences	33	R	RE	Consortium, EC services, advisory board

Table 3 – List of Deliverables (continued)

D17	Application of Benchmarking	33	R	RE	Consortium, EC services, advisory board
D18	Draft Final Report	34	R	RE	Consortium, EC services, advisory board
D19	Draft Brochures with Practical Guidelines and Instructions	34	O	RE	Consortium, EC services, advisory board
D20	Multi-Stakeholder Workshop	35	O	RE	Consortium, EC services, advisory board and invited stakeholders
D21	Final Report and Brochures with Practical Guidelines and Instructions	36	R	PU	Governmental and non-governmental regulators, citizens/consumers and their organisations, economic actors in the food chain, agricultural and food ethicists and scientists

Ethical Bio-TA Tools

WP4 - Integration
Task A - Introduction
Workpackage Leader: 1
Partners: 2, 3, 4, 5, 6

WP1
Ethical Decision-
Making Frameworks
Workpackage
Leader: 2
Partner: 5

WP2
Consensus Conferences
Workpackage
Leader: 3
Partner: 6

WP3
Benchmarking
Workpackage
Leader: 4
Partner: 1

WP4 - Integration
Task B - Comparison
Workpackage
Leader: 1
Partners: 2, 3, 4, 5, 6

WP4 - Integration
Task C - Conclusion
Workpackage Leader: 1
Partners: 2, 3, 4, 5, 6

3 ROLE OF PARTICIPANTS

3.1 LEI

Coordinator

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Scientific Team

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Dr. Cor VAN DER WEELE

Objectives

LEI is the coordinator of the whole project, first responsible partner for WP4 and second responsible partner for WP3. It thus contributes to the overall objective of developing and improving ethical (bio)technology assessment tools for agriculture and food production, and specifically to the sub-objectives of establishing a network for comparative discussions about ethical (bio)technology assessment tools for agriculture and food production and developing and improving ethical benchmarking to facilitate decision-making by economic actors in the food chain.

Workplan

LEI contributes to the deliverables 5, 9, 13 and 17 of WP3. It undertakes extensive literature search and discourse analysis of media coverage (5), two case studies and interviews with stakeholders in food chains (9), conceptual reflection (13) and workshops with actors from the case studies (17) for these deliverables. Together this requires 15 person-months.

LEI also contributes to the deliverables 1, 6, 10, 14, 18, 19 and 21 of WP4. It undertakes literature and Internet research (1), comparative analyses (6/10/14) and co-ordinates composition of interim reports, final report and practical guidelines and instructions (18/19/21) for these deliverables. Together this requires 7 person-months.

LEI, finally, contributes to the co-ordination deliverables 2 and 20, included in WP4. It undertakes the finalization of the workplans for WP1, WP2 and WP3 (2) as well as the organization of the multi-stakeholder workshop (20). Together this requires 7 person-months.

Sub-contractors

LEI involves the Productschap MVO – a Dutch food chain organization – for one of the case studies in WP3, but this involvement does not entail any budgetary implications.

3.2 NENT

Coordinator

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Objectives

NENT is first responsible partner for WP1 and like all other partners involved in WP4. It thus contributes to the overall objective of developing and improving ethical (bio)technology assessment tools for agriculture and food production, and specifically to the sub-objective of developing and improving ethical decision-making frameworks to facilitate regulatory decision-making about modern biotechnologies.

Workplan

NENT contributes to the deliverables 3, 7, 11 and 15 of WP1. It undertakes literature and Internet searches and consultations with professionals through an e-mail survey and follow-up approach (3), consultations and correspondence with key actors and semi-structured interviews (7), focus groups and workshops with stakeholders (11), and seminars and workshops with selected regulatory decision-makers (15) for these deliverables. Together this requires 18.5 person-months.

NENT also contributes to the deliverables 1, 6, 10, 14, 18, 19 and 21 of WP4. It undertakes literature and Internet research (1), comparative analyses (6/10/14) and contributes to the composition of final report and practical guidelines and instructions (18/19/21) for these deliverables. Together this requires 2 person-months.

Sub-contractors

NENT involves Dr. Bruna DE-MARCHI – an Italian sociologist from the Institute of International Sociology of Gorizia – as sub-contractor for social scientific consultancy in WP1.

3.3 KVL

Coordinator

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Objectives

KVL is first responsible partner for WP2 and like all other partners involved in WP4. It thus contributes to the overall objective of developing and improving ethical (bio)technology assessment tools for agriculture and food production, and specifically to the sub-objective of developing and improving consensus conferences to facilitate public opinion-formation and regulatory decision-making about ethical aspects of modern biotechnologies.

Workplan

KVL contributes to the deliverables 4, 8, 12 and 16 of WP2. It undertakes interviews with key actors engaged in participatory tools and studies of written material about participatory arrangements (4), detailed document analyses of publications about consensus conferences and interviews with key informants engaged in consensus conferences (8), interviews and workshops with key actors (12), and workshops with persons engaged in consensus conferences (16) for these deliverables. Together this requires 26.8 person-months.

KVL also contributes to the deliverables 1, 6, 10, 14, 18, 19 and 21 of WP4. It undertakes literature and Internet research (1), comparative analyses (6/10/14) and contributes to the composition of final report and practical guidelines and instructions (18/19/21) for these deliverables. Together this requires 2 person-months.

3.4 CBG

Coordinator

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Scientific Team

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Objectives

CBG is first responsible partner for WP3 and like all other partners involved in WP4. It thus contributes to the overall objective of developing and improving ethical (bio)technology assessment tools for agriculture and food production, and specifically to the sub-objective of developing and improving ethical benchmarking to facilitate decision-making by economic actors in the food chain.

Workplan

CBG contributes to the deliverables 5, 9, 13 and 17 of WP3. It undertakes extensive literature search and discourse analysis of media coverage (5), two case studies and interviews with stakeholders in food chains (9), conceptual reflection (13) and workshops with actors from the case studies (17) for these deliverables. Together this requires 14.5 person-months.

CBG also contributes to the deliverables 1, 6, 10, 14, 18, 19 and 21 of WP4. It undertakes literature and Internet research (1), comparative analyses (6/10/14) and contributes to the composition of final report and practical guidelines and instructions (18/19/21) for these deliverables. Together this requires 2 person-months.

Sub-contractors

CBG involves Prof. Claudio PERI – an Italian food scientist from the Department of Food Science and Technology at the University of Milan – as sub-contractor for food scientific consultancy in WP3. CBG also involves Groupe Rinascente – an Italian retailer – for one of the case studies in WP3, but this involvement does not entail any budgetary implications.

3.5 UNOTT

Coordinator

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Scientific Team

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Sandy TOMKINS

Objectives

UNOTT is second responsible partner for WP1 and like all other partners involved in WP4. It thus contributes to the overall objective of developing and improving ethical (bio)technology assessment tools for agriculture and food production, and specifically to the sub-objective of developing and improving ethical decision-making frameworks to facilitate regulatory decision-making about modern biotechnologies.

Workplan

UNOTT contributes to the deliverables 3, 7, 11 and 15 of WP1. It undertakes literature and Internet searches and consultations with professionals through an e-mail survey and follow-up approach (3), consultations and correspondence with key actors and semi-structured interviews (7), focus groups and workshops with stakeholders (11), and seminars and workshops with selected regulatory decision-makers (15) for these deliverables. Together this requires 22 person-months.

UNOTT also contributes to the deliverables 1, 6, 10, 14, 18, 19 and 21 of WP4. It undertakes literature and Internet research (1), comparative analyses (6/10/14) and contributes to the composition of final report and practical guidelines and instructions (18/19/21) for these deliverables. Together this requires 2 person-months.

3.6 UBASEL

Coordinator

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Objectives

UBASEL is second responsible partner for WP2 and like all other partners involved in WP4. It thus contributes to the overall objective of developing and improving ethical (bio)technology assessment tools for agriculture and food production, and specifically to the sub-objective of developing and improving consensus conferences to facilitate public opinion-formation and regulatory decision-making about ethical aspects of modern biotechnologies.

Workplan

UBASEL contributes to the deliverables 4, 8, 12 and 16 of WP2. It undertakes interviews with key actors engaged in participatory tools and studies of written material about participatory arrangements (4), detailed document analyses of publications about consensus conferences and interviews with key informants engaged in consensus conferences (8), interviews and workshops with key actors (12), and workshops with persons engaged in consensus conferences (16) for these deliverables. Together this requires 6.4 person-months.

UBASEL also contributes to the deliverables 1, 6, 10, 14, 18, 19 and 21 of WP4. It undertakes literature and Internet research (1), comparative analyses (6/10/14) and contributes to the composition of final report and practical guidelines and instructions (18/19/21) for these deliverables. Together this requires 2 person-months.

PROJECT MANAGEMENT AND CO-ORDINATION

The co-ordinator of the project is responsible for the management of the whole project. He is also the first responsible partner for the integrative workpackage WP4 in which all partners of the consortium participate in comparative analyses and discussions about the developed ethical (bio)technology assessment tools. The first responsible partners of the substantial workpackages WP1, WP2 and WP3 are responsible for the management of these workpackages and for the communication with the co-ordinator of the project. Although all procedural and substantial decisions about the project will be extensively discussed in the meetings of the consortium, the co-ordinator of the project has final responsibility for these decisions. He communicates about these decisions with the first responsible partners of the workpackages, who in turn are responsible for the communication about these decisions with the other partner(s) and sub-contractors in their respective workpackages. The following table shows these collaborative links in the project.

Structure of collaborative links in the project

Partner⇒ WP ↓	1	2	3	4	5	6
1		F			O	
2			F			O
3	O			F		
4	F	O	O	O	O	O
Co- ordination	C					

C = Co-ordinator

F = First Responsible Partner

O = Other Partner(s)

Since the four progressive tasks in the substantial workpackages WP1, WP2 and WP3 are performed parallel in time and concluded by a meeting of the consortium in which the workpackages need to present and discuss the results of these tasks, the structure of the project operates as an assurance for quality and facilitates monitoring progress in the substantial workpackages. Moreover, the consortium and the Commission Services will together invite a selection of stakeholders in agriculture and food production to participate in an advisory board of the project. Their involvement in discussions about the interim reports and the final report provides another assurance for the quality – and practicality – of the results from the substantial workpackages in the project. This advisory board will consist of a qualitative selection of stakeholders from (non-)governmental regulatory bodies, consumer and social organisations,

companies and research institutes from the fields of agriculture and food production. The role of this advisory board will be two-fold. First, its members will be invited to attend the consortium meetings in month 10 and 18 and the multi-stakeholder workshop in month 35. At the consortium meetings in month 10 and 18 they will be invited to comment on interim results of the project as presented in the draft chapters for the interim reports in months 9 and 17. At the consortium meeting in month 18 they will play a key role in the establishment of a broader dissemination list. Second, they will be asked to distribute the interim reports within their networks, if relevant.

The following tables present schedules and agendas for the meetings of the consortium of the project. Most partners in the consortium are responsible for the organisation of one meeting, whereas the co-ordinator of the project is also responsible for the organisation of the multi-stakeholder workshop at the end of the project.

Schedule for meetings of the consortium

Meeting	Month	Place	Responsible Partner
1	2 (February 2003)	The Hague	1
2	3 (March 2003)	Toulouse	1
3	10 (October 2003)	Utrecht	4
4	18 (June 2004)	Copenhagen	3
5	26 (February 2005)	Oslo	3
6	34 (October 2005)	Nottingham	5
Multi-Stakeholder Workshop	36 (November 2005)	Brussels	1

Agenda of meetings of the consortium

Meeting	Agenda
1 Introduction	<ul style="list-style-type: none"> • Finalisation research design Ethical Bio-TA Tools (Task 4A) • Discussion methodology design Ethical Bio-TA Tools (Task 4A)
2 Milestone 1 – Overview Milestone 2 – Workplan	<ul style="list-style-type: none"> • Results exploration existing ethical (bio)technology assessment tools in the European Union (Task 4A) • Finalisation workplan for WP1, WP2 and WP3 (Task 4A)
3 Milestone 3 – Description	<ul style="list-style-type: none"> • Results description ethical decision-making frameworks, consensus conferences and benchmarking (Tasks 1A, 2A, 3A) • Comparative analyses and discussion (Task 4B) • Interaction with Dutch stakeholders
4 Milestone 4 – Evaluation	<ul style="list-style-type: none"> • Results evaluation ethical decision-making frameworks, consensus conferences and benchmarking (Tasks 1B, 2B, 3B) • Comparative analyses and discussion (Task 4B) • Interaction with Danish stakeholders • Interaction with Advisory Board
5 Milestone 5 – Development	<ul style="list-style-type: none"> • Results development ethical decision-making frameworks, consensus conferences and benchmarking (Tasks 1C, 2C, 3C) • Comparative analyses and discussion (Task 4B) • Interaction with Norwegian stakeholders
6 Milestone 6 – Report Milestone 7 – Guidelines	<ul style="list-style-type: none"> • Results application ethical decision-making frameworks, consensus conference and benchmarking (Tasks 1D, 2D, 3D) • Comparative analyses and discussion (Task 4C) • Composition final report (Task 4C) • Composition brochures with practical guidelines and instructions (Task 4C) • Interaction with British stakeholders
7 Milestone 8 – Workshop	<ul style="list-style-type: none"> • Presentation and discussion final report and practical guidelines and instructions (Task 4C)

Dissemination

The coordinator shall provide, by contract signature, a publishable summary of the project that can be easily disseminated and distributed to the public. In addition, not later than the first report, the coordinator shall provide the Commission, three publications (leaflet, brochure and poster), summarizing the main objectives of the project. Non-specialists should formulate these publications in layman's language easily readable. In the further course of the project the following products will be delivered:

- An overview of existing ethical (bio)technology assessment tools in the European Union at milestone 1 in month 3;
- An interim report with a description of ethical decision-making frameworks, consensus conferences and benchmarking as ethical (bio)technology assessment tools at milestone 3 in month 11;
- An interim report with an evaluation of the ethical decision-making frameworks, consensus conferences and benchmarking as ethical (bio)technology assessment tools at milestone 4 in month 19;
- An interim report with a development of the ethical decision-making frameworks, consensus conferences and benchmarking as ethical (bio)technology assessment tools at milestone 5 in month 27;
- A draft final report on the developed ethical (bio)technology assessment tools at milestone 6 in month 34;
- Draft brochures with practical guidelines and instructions for the application of the developed ethical (bio)technology assessment tools by actors in agriculture and food production at milestone 7 in month 34; and
- A final report and brochures with practical guidelines and instructions at milestone 9 in month 36.

Drafts for all these products will first be discussed within the consortium of the project, and with an advisory board of selected stakeholders in agriculture and food production and representatives of the European Commission. Consequently, these products will be disseminated to any interested members of the general public. The final report and the practical guidelines and instructions will also be presented and discussed in a multi-stakeholder workshop at the end of the project.

Publication Rules

The project publishes its (interim) results in interim reports, a final report and brochures with practical guidelines and instructions:

- Interim reports are edited by the co-ordinator of the project and the co-ordinators of WP1, WP2 and WP3, and disseminated to a restricted audience after approval from the consortium;
- The final report is edited by the co-ordinator of the project, and published as an official report after approval from the consortium; and
- The practical guidelines and instructions are edited by the co-ordinator of the project and the co-ordinators of WP1, WP2 and WP3, and present the results of the project in a short and easily accessible format for regulatory decision-makers, economic actors in the food chain and the public at large. They are published as official brochures after approval from the consortium.

The project also strives after publication of its final results in an edited volume and/or a special issue of a scientific journal. Since the project warmly welcomes a wider dissemination of its (interim) results, it adopts a fairly liberal policy toward publication of such results by members of the consortium in scientific and other papers for journals or congresses. Publication of material financed by the project's budget by one or more individual members of the consortium is encouraged under the following conditions:

Scientific publications

- The member(s) will provide the co-ordinator of the project and the co-ordinator of the relevant workpackage with the text of the paper intended for publication two weeks before submitting it for publication – the co-ordinator of the project and the co-ordinator of the relevant workpackage should respond within two weeks, otherwise silence gives consent;
- The member(s) will provide the co-ordinator of the project and the co-ordinator of the relevant workpackage with a copy of the paper after publication;
- The publication will include an acknowledgement/disclaimer stating that “this paper presents material from a research project “Ethical Bio-TA Tools” (QLG6-CT-2002-02594) funded by the European Commission but responsibility for its contents rests solely with the author(s)” or similar wordings;
- The co-ordinators of WP1, WP2 and WP3 are responsible for addressing issues of (shared) authorship; and
- The co-ordinator of the project may give dispensation from these publication rules.

Other publications

- The member(s) will provide the co-ordinator of the relevant workpackage with the text of the paper intended for publication two weeks before submitting it for publication – the co-ordinator of the relevant workpackage should respond within two weeks, otherwise silence gives consent;
- The member(s) will provide the co-ordinator of the project and the co-ordinator of the relevant workpackage with a copy of the paper after publication; and
- The co-ordinator of the relevant workpackage may give dispensation from these publication rules.

Preliminary outline and length of final report and brochures

The final report will have the following structure:

	Page
Preface	1
Summary	3
1 Introduction	5
2 Ethical Decision-Making Frameworks	20
2.1 Description	20
2.2 Evaluation	30
2.3 Development	40
2.4 Application	50
3 Consensus Conferences	60
3.1 Description	60
3.2 Evaluation	70
3.3 Development	80
3.4 Application	90
4 Benchmarking	100
4.1 Description	100
4.2 Evaluation	110
4.3 Development	120
4.4 Application	130
5 Conclusions and Recommendations	140
References	150

The brochures will present the results of the project in a short and easily accessible format for stakeholders in agriculture and food production:

1. A toolbox for ethical (bio)technology assessment in agriculture and food production (10 pages);
2. Ethical decision-making frameworks (10 pages);
3. Consensus conferences (10 pages); and
4. Benchmarking (10 pages).

Exploitation

Contractors shall submit at, or before, the end of the Project a technology implementation plan acceptable to the Commission. This plan should indicate all potential foreground rights and exploitation intentions. It shall include a summary of the project, the forecast of the intentions of each contractor and description of achievements regarding use of the knowledge (including timetable). Since all partners in this consortium operate within universities or other public-funded research institutes, the products of the project will become readily available for any interested actors in agriculture and food production or the public at large. No patents or licences for the use of the products of this project are foreseen. The Dutch food chain organisation and the Italian retailer participating in the case studies of WP3 have also agreed to this public availability of the results from this project. Finally, since all partners in the consortium for this project are recruited from the European Society of Agricultural and Food Ethics (EurSafe), it is likely that the results of this project will also be presented as papers at congresses of this society or in the affiliated “Journal of Agricultural and Environmental Ethics”. Moreover, the consortium will use the

EurSafe Newsletter for dissemination purposes. The project thus serves the further development of this European network in agricultural and food ethics.

ETHICAL ASPECTS AND SAFETY PROVISIONS

Ethical aspects

The project consists of desk research, interviews and meetings, of which the execution has no direct or indirect external or ethical risks. This is also shown by the following list of specifications about the ethically troublesome involvement of human and non-human actors in the project:

- Human embryos or foetus NO
- Use of human embryonic or foetal tissue NO
- Use of other human tissue NO
- Research on persons NO
 - If yes, further specify if it involves:
 - Children
 - Persons unable to consent
 - Pregnant women
 - Healthy volunteers
- Use on non-human primates NO
- Use of transgenic animals NO
- Use of other animals NO
- Genetic modification of animals NO
- Genetic modification of plants NO

The coordinator shall implement the research project in full respect of the legal and ethical national requirements and code of practice. Whenever authorizations have to be obtained from national bodies, these authorizations shall be considered as documents relevant to the project under Article 27 of Annex II of the contract. Copies of all relevant authorizations shall be submitted to the Commission prior to commencement of the relevant part of the research project.

Safety provisions

The project consists of desk research, interviews and meetings, of which the execution has no relations with genetically modified organisms or other safety risks. The coordinator declares that the EU Directive 93/98 and national requirements are met.

The coordinator shall take all measures to assure that appropriate environmental safety provisions are fulfilled in the course of the project by all contractors, particularly those related to the deliberate release into the environment of genetically modified organisms. In addition the coordinator shall take all measures to assure for all contractors that, when dealing with biological material, strict safety procedures are in place in compliance with national and EU regulations on biosafety. All work must be carried out in compliance with national and EU regulations on safety.

ONGOING AND PROSPECTIVE EC FUNDED PROJECTS

Two partners in the consortium for this project – i.e. the co-ordinator of the whole project and the first responsible partner for workpackage WP2 – also participate in a thematic network on the natural scientific risk assessment of modern biotechnologies in animal and plant breeding (QLK1-1999-01182 – Entransfood).

During the course of the project the consortium will consider to apply for one or more specific support actions under the Sixth Framework Programme to extend its regions of application towards Southern and/or Eastern European countries.

ANNEX I TOOLS AND STEPPING-STONES
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WP1 – Ethical Decision-Making Frameworks

Survey of available methods

- Main countries: Italy, United Kingdom, Norway
These will be thoroughly investigated
- Secondary countries: the rest of the European Union and new member states
These will be surveyed
- Frameworks used by the European Commission, OECD and other international bodies

Existing tools - examples

- Principle-based practical ethics as used in medical ethics
The locus classico is Beauchamp & Childress (1994)
- The ethical matrix
This refers to the method that was first introduced by Ben Mepham
- Multi-criteria mapping
This approach goes back to work initiated by Andrew Stirling in the UK
- Focus-groups
This is widely used as a qualitative method in social science, but has gained some popularity as a decision tool for decision-making
- Opinion polls
Some countries have used opinion polls as supplementary tools for making recommendations on public policy, e.g. Sweden with regard to xenotransplantation
- Expert-Delphi
A Delphi process is typically designed to reach consensus across existing disagreement and uncertainty. For regulatory purposes, Delphi's among a small group of experts have been suggested in the literature. At present we do not have information about their practical use in the field of ethics within Europe
- Committee process
This is the most common way to deal with ethical concerns of the public. Committees are appointed to formulate these concerns and to issue recommendations for the policy makers
 - Causistry
This is an old method revitalised in the 1990s by Jonsen and Toulmin. It provides solutions to ethical problems justified by coherence to a tradition of similar cases considered satisfactorily solved

Innovation

The above list is a sample of approaches to support and supplement public decision-making and regulatory practice. Certain analytical dimensions will be applied to the methods/tools in order to classify them more systematically, e.g. the division between interest-based versus value-based approaches, consensus-based versus plurality-based processes, expert-based versus lay people-based or mixed participation, outcome

versus process-oriented processes, disagreement-based versus uncertainty-based management problem, open/transparent versus closed process and so on.

Furthermore, it will be asked whether and how knowledge/science ingredients enter the process explicitly, and whether various forms of knowledge are acknowledged. It will be asked whether, in which form and to what degree ethical justificatory rationality is sought to be incorporated, and whether and how scholarly contributions to ethical discourse are brought into the process.

Along the lines of these and other analytic dimensions the existing tools will be classified, and critically discussed. In close co-operation with practitioners, an understanding will be formed what the most relevant dimensions are concerning ethical issues in biotechnology. On this basis the project aims to improve existing tools or devise innovative tools for the purpose of facilitating decision-making. However, it should be emphasised that those decisions need not be based on consensus.

References

Beauchamp, T.L. & J.F. Childress, *Principles of biomedical ethics*, 4th ed. (1st ed. 1979). Oxford University Press, Oxford 1994.

Environmental valuation in Europe (EC funded concerted action), <http://www.landecon.cam.ac.uk/eve/>

Forsberg, E.M. & M. Kaiser, M., *Norske fiskerier mot 2020 – Verdier og strategier. Publikasjon nr.8*. De nasjonale forskningsetiske komiteer, Oslo 2000.

Gibbs, A., *Focus groups*. Department of Sociology, University of Surrey 1997 (<http://www.soc.surrey.ac.uk/sru/SRU19.html>).

Häyry, M., *Liberal utilitarianism and applied ethics*. Routledge, London 1994.

Kaiser, M., “Diskurs oder Konfrontation in Fragen der Gentechnik?“, in: A. Spök & K. Hartmann (eds.), *GENug gestritten? Gentechnik zwischen Risikodiskussion und gesellschaftlicher Herausforderung*. Leykam, Graz 2000.

Kaiser, M. & E.M. Forsberg, ”Assessing fisheries – Using an ethical matrix in a participatory process”, *Journal of Agricultural and Environmental Ethics* (2000) 14, p.191-200.

Kaiser, M. & E.M. Forsberg, “Fisheries, technology and ethics. Challenges for methodological reflection”, in: *Proceedings for concerted action on environmental valuation in Europe*. DG Research European Commission Environment and Climate RTD Programme, Brussels 2000.

Lafollette, H. (ed.), *Ethics in practice – An anthology*. Blackwell Publishers, Oxford 1997.

Mepham, B. (ed.), *Food ethics*. Routledge, London 1996.

Mepham, B., “Ethical impacts of biotechnology in dairying”, in: Phillips, *Progress in dairy sciences*. Cab International 1996.

Mepham, B., “Ethics and novel foods – an analytical framework”, in: *Preprints for the 1st European congress on agricultural and food ethics*. Wageningen University, Wageningen 1999.

Mepham, B., *To assess the value of the ethical matrix: application to two dairy biotechnologies. Report of a Bbsrc workshop* (2000).

Mepham, B. & K. Millar, *Ethical analysis of bovine somatotrophin use in dairying: Application of the ethical matrix. Report of a Bbsrc workshop* (2000).

Ruyter, K.W., *Kasuistikk som saksbasert problemløsning, Doktoravhandling*. Det teologiske fakultet Universitetet i Oslo, Oslo 1995.

Stirling, A. & S. Mayer, *Rethinking risk: a pilot multi-criteria mapping of a genetically modified crop in agricultural systems in the UK*. SPRU, University of Sussex 1999.

Stirling, A. & S. Mayer, "Precautionary approaches to the appraisal of risk: a case study of a genetically modified crop", *International Journal of Occupational and Environmental Health* (1999) 6, p.296-311.

Stirling, A. & S. Mayer, "A novel approach to the appraisal of technological risk: a multi-criteria mapping pilot study of a genetically modified crop in the UK", *Environment and Planning* (in press).

Stirling, A. & S. Mayer, "Finding a precautionary approach to technological developments – lessons for the evaluation of GM crops", *Journal of Agricultural and Environmental Ethics* (in press).

Toulmin, S., "How medicine saved the life of ethics", in: J.P. De Marco & R.M. Fox (eds.), *New directions in ethics*. Routledge/Kegan Paul, London 1996.

Weston, A., *A 21st century ethical toolbox*. Oxford University Press, Oxford 2001.

WP2 – Consensus Conferences

Arrangements for public participation

The following is a brief overview of participatory arrangements that, like consensus conferences, are to be found in the neighbourhood of deliberative democracy. They all to some extent share the basic idea that a main goal for the democratic processes is to facilitate dialogue and interaction between citizens, or citizens and other actors, aiming at the discussion and definition of the common good and assign strategies on how this should be reached. Seen in this context participatory arrangements are ways of organising the deliberation between the citizens and other actors, and as such some are more opinion-oriented in the sense that they in different ways provide the information needed for the dialogue, while others aim at giving powerless actors a voice.

Delimiting participatory arrangements is not an easy task; some (e.g. Rowe & Frewer, 2000) include the application of more traditional sociological methods like qualitative interviews (focus groups) and quantitative studies (surveys) to the extent that they aim at collecting information about public opinions. The procedures described in the following are, however, selected partly on the basis of their relevance for deliberation on issues within science and technology and partly on the basis of their qualities of more actively engaging the public in the dialogue than passive and one-way oriented methods like surveys and interviews.

The consensus conference

Consensus conferences in shape of the so-called Danish model, is a further development of ideas conceived in the United States in the 1970s. The basic idea of a consensus conference is to give lay people a voice in the political processes by selecting a panel of lay people who is given the power to set the agenda in a pending (often techno-scientific) controversy; i.e. to formulate the questions that need to be answered before decisions are made. The direct outcome of the consensus conference is a document containing the consensus reached by the lay panel. The process takes place over a period of up to 4-5 months, where the panel is provided with information

about the selected topic, relevant experts are selected and questions to be answered by the experts are phrased. During the – partly public – conference (typically 2-3 days) the expert panel answers the questions from the lay panel, who on this background retire and discuss until they reach some form of consensus, which is presented on the final day of the conference (for more on consensus conferences see: Joss & Durant, 1995).

PubliForum

Conference format developed in Switzerland similar to the consensus conference. Consensus as a specific aim is, however, scaled down.

The future workshop

A workshop form developed by Jungk & Norbert (1987) to facilitate (local) action. Participants are guided through a structured debate in three phases. In the first phase participants are allowed to criticise anything related to the issue, without being contradicted. In the second phase visions about the issue in question are formulated without paying respect to barriers, and in the third phase strategies to realise the visions are discussed.

Scenario workshop

Like the future workshop, short (two-day) structured discussion, with three phases (critique, vision, realisation). Here, however, participants are presented different scenarios for the issue at stake. Participants are recruited representing various actor groups (stakeholders) and discussions depart in a social issue/ problem.

Citizen forum

Like the consensus conference a meeting format, where lay people are conveyed information about the issue by selected experts. On this basis approximately 25 lay people discuss the issue in plenum as well as in smaller groups aiming at the attainment of an assessment. In case of disagreement, minority expressions are allowed in the assessment report. (e.g. Citizens' Forum on Biotechnology Genetic Engineering in Germany)(Gloede & Hennen, 2002).

Technology Delphi studies/technology foresight

A method where a large number of stakeholder representatives (> 1,000) are invited to, through a survey, give their opinion about the future. Panels with representatives from user groups are appointed and meet at a number of workshops and finally all gather to draw conclusions and formulate recommendations (e.g. Technology Delphi in Austria, 1996-1998)(Grabner *et al.*, 2002).

Stepping stones – previous projects on participatory technology assessment

Due to the increased attention towards participatory arrangements over the recent decades, the European Commission has funded a number of research projects aiming at the creation of an overview of available arrangements and better understand their

role in the techno-scientific policy process. Below is a brief introduction to some larger projects.

ADAPTA – Assessing debate and participatory technology assessment

An FP4 study performed between 1998 and 2000, with participants from Denmark, France, Germany, Portugal, The Netherlands and United Kingdom. The project aims at "*providing a better understanding of the role of structured participatory processes (such as pTA) in the area of biotechnology in Europe* (Joly & Assouline, 2001, p.3). The aim was not to study these arrangements in them selves, but rather to analyse their interaction with the public debate in different contexts. The case studies in Denmark, France, Germany and United Kingdom addressed arrangements that to some extent were participatory, including: Citizen Forum (Germany); Consensus Conference (Denmark); Citizen Conference (France) and Citizen Foresight (United Kingdom). The results of the project are summarised in the final report (Joly & Assouline, 2001) and the national reports can be downloaded from <http://www.inra.fr/Internet/Directions/SED/science-gouvernance/pub/ADAPTA>.

EUROPTA – Participatory methods in technology assessment and technology decision-making

EUROPTA was performed between 1998 and 2000, with participants from Austria, Denmark, Germany, The Netherlands, Switzerland and United Kingdom. The overall objective was "*to advance the understanding of the role of participation in technology assessment, and to consider criteria for the implementation of participatory methods at relevant policymaking and institutional levels.*" (Joss & Bellucci, 2002). Case studies were performed in each of the involved countries addressing two-four participatory arrangements. Included in these arrangements was consensus conferences (or similar arrangements) that was selected as a mutually embedded case. The 16 cases included seven addressing GM related issues: Technology Delphi (Austria); Citizen Forum on Biotechnology (Germany); Discourse on the Implications of Cultivating Herbicide-resistant Plants (Germany); Public Debate on Genetic Modification of Animals (The Netherlands); Dialogue on Genetic Testing (Switzerland); National consensus Conference on Plant Biotechnology (United Kingdom) and Citizen Foresight on the Future of Food and Agriculture (United Kingdom). In the subsequent comparative study, the aim was to "*identify and characterise factors both within participatory arrangements and in their institutional and socio-political settings that co-determine the role of pTA*" (Joss & Bellucci, 2002). As a result of the cross national selection of consensus conference cases, this part of the project included a comparison of consensus conferences in different interpretations and contexts. EUROPTA is reported in Joss & Bellucci (2002) and the full-length case studies are available through the Danish Board of Technology (<http://www.tekno.dk>).

Other relevant projects

Apart from these projects analysing participatory arrangements in a narrow sense, a number of European projects approach the new forms of governance emerging in Europe partly responding to the critique of science and technology. The *PubACC* research project under FP5 is running from 2001 until 2003 with research teams in

Portugal, United Kingdom, Germany, Denmark and France, addressing accountability procedures in Europe related to three case studies (GM foods, a major infrastructure project and a waste management project) in each country – hence the scope is broader than participatory arrangements, since all methods to obtain a publicly accountable decision-making are relevant³. The *STAGE* project is a thematic network, aiming at a revised model for science and technology governance in Europe⁴.

References

Benhabib, S., “Democratic legitimacy and public goods”, in: S. Benhabib (ed.), *Democracy and difference. Contesting the boundaries of the political*. Princeton University Press, Princeton 1996, p.67-94.

Gloede, F. & L. Hennen, “Germany: a difference that makes a difference?”, in: S. Joss & S. Bellucci (eds.), *Participatory technology assessment. European Perspectives*. University of Westminster, Gateshead 2002, p.93-107.

Grabner, P., W. Peissl & H. Torgersen, “Austria: Methodological innovations from a latecomer”, in: S. Joss & S. Bellucci (eds.), *Participatory technology assessment. European Perspectives*. University of Westminster, Gateshead 2002. p.61-74.

Jasanoff, S., “Product, process or programme: Three cultures and the regulation of biotechnology”, in: Bauer (ed.), *Resistance to new technology – nuclear power, information technology and biotechnology*. Science Museum & Cambridge University Press 1995. p.311-31.

Joly, P.B. & G. Assouline, *Assessing debate and participatory technology assessment in Europe. Final Report*. Grenoble 2002 (<http://www.inra.fr/Internet/Directions/SED/science-gouvernance/pub/ADAPTA>).

Joss, S. & S. Bellucci, *Participatory technology assessment. European Perspectives*. University of Westminster, Gateshead 2002.

Joss, S. & S. Bellucci, “Participatory technology assessment in Europe: Introducing the EUROPTA research project”, in: S. Joss & S. Bellucci (eds), *Participatory technology assessment. European Perspectives*. University of Westminster, Gateshead 2002, p.3-11.

Joss, S. & J. Durant (eds.), *Public participation in science*. Science Museum, London 1995.

Jungk, R. & N. Müller, *Håndbog i fremtidsværksteder*. Politisk Revy 1987 (originally published in Germany as: *Zukunftswerkstätten, Wege zur Wiederbelebung der Demokratie*, 1981).

Mouffe, C., “Deliberative democracy or agonistic pluralism?”, *Social Research* (1999) 66/3, p.745-58.

Purdue, D., “Contested expertise: Plant biotechnology and social movements”, *Science as Culture* (1996) 4, p.526-45.

³ More information on *PubACC* can be obtained on the Chez partners’ homepage: <http://www.cts.cuni.cz/~pa/documents.html>.

⁴ More information on *STAGE* can be obtained at: <http://www.spsg.org/scisoc/stage/index.html>.

Rowe, G. & L.J. Frewer, "Public participation methods: A framework for evaluation", *Science Technology and Human Values* (2000) 25/1, p.3-29.

Skorupinski, B. & K. Ott, "Technology assessment and ethics - Determining a relationship in theory and practice", *Poiesis & Praxis – International Journal of Technology Assessment and Ethics of Science* (2002) 1, p.95-122.

WP3 – Benchmarking

Protocols

1. Description and analysis of benchmarking (A systematic process for securing continual improvement through comparison with relevant and achievable internal norms or standards). Benchmarking is a management tool already in use in both the public and private sector organisations and it is about change, moving from one position to a better position.
2. Description and analysis of the use of protocols in systematising qualitative processes. We start with the protocols used by family doctors, developed by Dutch National organisation of Family Doctors (Nederlands Huisartsen Genootschap; NHG). The Working Group evaluates these protocols for the Research of Quality (Werkgroep Onderzoek Kwaliteit, WOK) at the University of Nijmegen. Also relevant is the standard setting in the service of medical specialists, performed by the CBO (Centraal Beleidsorgaan Kwaliteit), this organisation explicitly makes use of the concept of benchmarking.
3. Description and analysis of standards and protocols for ethics and values in businesses. Literature on business ethics and corporate social performance in general, with special attention to the development and evaluation of standards and codes, and process-oriented approaches.

From these stepping-stones we expect an inventory of possible processes of standardisation of non-quantifiable elements of production, explicit reflection on strengths and weaknesses of standardisation and an overview of ethical standards already in use.

References

EFQM (European Foundation for Quality Management), *Excellence Model*. EFQM, Brussels 2000.

Melano, H. & M. Burton, *Guidelines for benchmarking performance in the irrigation and drainage sector*. IPTRID, Rome 2001.

Nabitz, U. & W. Schellekens, "Integrating benchmarking and the European Foundation for Quality Management Excellence Model – Examples of Dutch healthcare services. Business Briefing", *Global Healthcare* (2002) 3.

Chain identity

4. Description and analysis of discussions on the use of images and metaphors and their importance for conceptualising and managing ethical issues in food chain and/or business contexts, including images and descriptions of ethically ideal chains. An (arbitrary) example of the use of metaphor in business ethics is the inaugural speech of Nyenrode professor Ronald Jeurissen (October 2002), which sees corporations as world citizens.
5. A brief analysis of theories about identity with special attention for the concept of narrative identity. Based upon this an analysis of application of these theories to the identity of organisations.
6. Description and analysis of marketing theories with regard to the role of an imago in finding and targeting specific (niche) markets.

From these stepping-stones we expect insight in the (symbolic) representation in the chain and of the chain and of the relevance of these (symbolic) representation for the development and application of the tools.

References

- Johnson, M., *Moral Imagination*. University of Chicago Press, Chicago 1993.
Lakoff, G. & M. Johnson, *Philosophy in the Flesh*. Basic Books 1999.
Morgan, G., *Images of Organisation*. Sage 1986.

Ethical concepts

7. Analysis of the concept of care and its role for relations, departing from the discussions within the ethics of care.
8. Analysis of the concept of responsibility, especially of responsibility for the vulnerable entrusted to us and the distinction between minimal and ideal responsibility.
9. Analysis of the concept of trust, especially of the difference between anticipatory and responsive trust and the relation of trust with traceability, transparency and responsibility.
10. Analysis of pragmatist ethics, especially the way it aims at bringing abstract ethical discussions back to reality and the way it focuses at practical context of decision making processes.

From these stepping-stones we expect insight in why, where and how ethics can be brought into the food chain and what the meaning could be of introducing ethics in the food chain.

References

- Caspary, W.R., *Dewey on Democracy*. Cornell University Press 2000.
Dickstein, M., *The revival of pragmatism: new essays on social thought, law and culture*. Duke University Press, Durham 1998.
Jonas, H., *Das Prinzip Verantwortung. Versuch einer Ethik für die technologische Zivilisation*. Suhrkamp, Frankfurt am Main 1984.
Keulartz, J. et al. (eds.), *Pragmatist Ethics for a Technological Culture*. Kluwer Academic Publishers, Dordrecht 2002.
Sztompka, P., *Trust: a sociological theory*. Cambridge University Press, Cambridge 1999.
Tronto, J., *Moral boundaries. A political argument for an ethics of care*. Routledge, New York 1993.

Context

11. Description and analysis of discussions with regard to the concept of practice and of practice-inherent moral norms and values, with a special emphasis on the relations between different practices in a pluralist society.
12. Description and analysis of stakeholder theories with regard to the role of implicit and explicit negotiations with stakeholders and the justifying role agreements with stakeholder can and cannot fulfil.
13. Analysis of political theories and economical theories, especially about the between citizenship of consumers, the relation between the market and civil society and the role of private organisations in establishing and maintaining public goods.

From these stepping-stones we expect insight in the societal and economic contexts the food chain has to operate, in discussions about the way responsibilities are assigned in these contexts and the consequences of these contexts for the application of the tools.

References

- Giddens, A., *Modernity and self-identity. Self and society in the late modern age*. Polity Press, Cambridge 1991.
- Kymlicka, W., *Contemporary political philosophy: an introduction*. Clarendon Press, Oxford 1997.
- MacIntyre, A., *After virtue: a study in moral theory*. University of Notre Dame Press, Notre Dame 1984.
- Walzer, M., *Spheres of justice: a defence of pluralism and equality*. Blackwell, Oxford 1983.
- Wartick, S.L & D.J. Wood, *International Business and Society*. Blackwell 1997.

**ANNEX II
PROJECT SUMMARY**

**The Development of Ethical Bio-Technology Assessment Tools for Agriculture
and Food Production**

Ethical Bio-TA Tools

Contract No:	QLG6-CT-2002-02594	Project type:	Shared cost
Project Cost:	1.097.500 Euro	EC contribution:	813.123 Euro
Project Duration:	36 months	Project start date:	January 1, 2003

EC Scientific officer: Elena SACHEZ

Coordinator

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Title

The Development of Ethical Bio-Technology Assessment Tools for Agriculture and Food Production

Objectives

The general objective of Ethical Bio-TA Tools is to develop and improve tools for the ethical assessment of new technologies in agriculture and food production in general and modern biotechnologies in particular. The project thus responds to the plurality of consumer concerns that increasingly informs the European public debate on agriculture and food production. This general objective is divided in four sub-objectives:

- 1) the development and improvement of ethical decision-making frameworks to facilitate regulatory decision-making about modern biotechnologies;
- 2) the development and improvement of consensus conferences to facilitate public opinion-formation about ethical aspects of modern biotechnologies;
- 3) the development and improvement of ethical benchmarking to facilitate decision-making by economic actors in the food chain; and
- 4) the establishment of a network for comparative discussions about ethical (bio)technology assessment tools for agriculture and food production.

Scientific approach

The Ethical Bio-TA Tools workplan is broken down in three substantial workpackages (WPs):

- WP1 (Ethical decision-making frameworks) aims at the development of a practical decision-making framework to assist public and private decision-makers map and consider the ethical dimensions of animal and plant biotechnologies. It will build on earlier, only partially successful, work that focused on the development of a framework known as the 'ethical matrix'. This approach will be critically analysed and compared with other emerging methods, such as those based on multi-criteria mapping.
- WP2 (Consensus conferences) aims at the development and improvement of consensus conferences to facilitate public opinion-formation and regulatory decision-making about the ethical aspects of modern biotechnologies in animal and plant breeding. It, therefore, includes an assessment of existing participatory arrangements, particularly consensus conferences, in different European countries. A checklist will be developed of what should be done and considered to achieve the established goals of particular consensus conferences.
- WP3 (Benchmarking) aims at the development of ethical benchmarking as a tool to facilitate communication between economic actors in the food chain and consumers in order to gain trustworthiness. It includes conceptual analysis and translation of the ethical notions of trust, responsibility and care from medical and political fields of application to agriculture and food production, and will develop a framework for communication between the respective experts in food chain management and agricultural and food ethics.