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Brussels, 4-5 December 2008

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Foreword

‘ ... defining risk is an expression of power. Whoever controls the definition of risk controls the outcome of the risk management process.’

This sentence extracted from the present report of the Goverscience Seminar on Inclusive Risk Governance may indeed capture the essence of the difficulties facing our society in dealing with the progress of science and technologies. What is a risk and who should decide if society as a whole should take it? By the way, who represent society in that case?

Everybody agrees for example that there are risks associated with certain chemicals, such as dioxin, and that it should not be released in the atmosphere, or only in limited quantities. But what about, for example, new nanoparticles whose effect on health is not really known? What about the uncertainties related to the territorial effects of climate change?

It is only common sense to say that we would not favour behaviour contravening our moral values. Would we accept to see part of the population evolving as ‘post-humans’ with extended brain capacities or enhanced physical features? Would we accept to have our body modified without our informed consent? Would we like our wellbeing built at the expense of part of the population, the developing world, animals or the biosphere as a whole and the generations to come?

We would not favour either behaviour endangering our fundamental rights. The Commission signed in 2007, along with the Council and the European Parliament, the Charter of Fundamental Rights of the European Union, strengthening ‘the protection of fundamental rights in the light of changes in society, social progress and scientific and technological developments by making those rights more visible in a Charter’⁽¹⁾.

Are there such risks associated with scientific and technological progress? And how do we articulate the governance of these risks with the Article 13 of the Charter of fundamental rights on ‘Freedom of the arts and sciences’ stating that ‘the arts and scientific research shall be free of constraint’?

Last but not least of these questions: If we add to the four freedoms regarding the free movement of goods, person, services and capital in the European Union a fifth one for the movement of knowledge, should not we make sure that we have in Europe a common basic understanding of what is a risk and how we should deal with it?

The present report will not fully answer all these questions but it will shed new light from past and ongoing projects relating to risk governance supported by the Commission and help us to go forward in a safer and more ethical way on the innovation path.

Jean-Michel Baer
Director ‘Science, Economy and Society’ Directorate,
Directorate-General for Research

⁽¹⁾ Preamble of the Charter.

I – Setting the scene

‘Risk governance’ is a ‘moving target’ in the European research area. Indeed, as risks and their governance are constantly evolving through scientific discoveries and technological innovation, governance practices evolve too through natural learning processes and social science research. This is why it is time to revisit the notion of ‘Risk Governance’ in the light of recent studies and projects supported by the European Commission.

The first objective of the seminar was to take stock of previously-funded Community projects on risk governance in FP6, in particular the last three funded projects on an integrative approach to risk governance (CARGO, MIDIR and Riskbridge). Results and observations from other projects more broadly related to governance shed a new light on these results.

Beyond the usual participants in research programmes at EU level most of the projects funded under FP6-SiS have broadened the scope of stakeholders. Civil society organisations and policymakers notably have been solicited as full partners. It was therefore only natural to have them as well in this Risk Goverscience Seminar.

The quality of risk governance is improved if there is a deliberate ‘opening up’ of the issues (taking a broad scope), and an element of challenging all arguments with the objective to enhance clarity both for the policymakers and the general public. This calls for clarity in the scientific basis and the ethical and value-laden implications of possible choices. Clarity comes before consensus and should be organised avoiding polarization but not necessarily with the objective to create consensus (CARGO). However, a public is an emergent category that evolves with the framing of an issue (issues spark a public into being; and vice versa: publics determine the sustentative closure or ‘opening up’ of

a debate). Consequently, one should be aware in designing inclusive risk governance schemes that the public addressed is itself an exponent of the design (example GMNation, Paganini). Also entitlement and ownership becomes more and more part of discussion about dealing with risks.

Methodologies for risk assessment and management are transferable between risk settings and cultures. Moreover, an indicator system can provide an efficient mapping of activities, performances and results with regard to several aspects of the risk governance process (MIDIR). Expertise comes in layers, and is defined contextually: the legitimacy of knowledge claims and public action are constituted locally. Therefore transferability is possible to the extent that they acknowledge, and pick up on the context-related character of risk perceptions and the effectiveness of management strategies (Paganini).

A thorough – and preferably joint – analysis and a shared sense of urgency thereof, are absolute prerequisites of any process of change (including risk governance) by whatever methodology in science and policy. ‘System thinking’, i.e. acknowledging the complex, dynamic and permeable relations between social and natural (biophysical) systems, is an absolute must in (risk)governance in order to avoid fragmented sub-optimal and hence unsustainable solutions. Adaptive governance, of which surprises and uncertain risks (resilience thinking: expect the unexpected!) are important aspects, should include the methodologies developed in private enterprises (Riskbridge). However, a joint analysis is not imperative; communication between experts, policymakers and civil society indeed needs to be stepped up but does not per se involve deliberation: organising (extra-parliamentary) oversight through smart transparency techniques, notably in view of private enterprise regulation could be an alternative (Paganini).

II – First breakout session on status quo

Group A1 on inclusiveness in practice

How to identify, contact, involve stakeholders and integrate their concerns into research? How to take care of their commitment?

Stakeholder involvement was identified as one of the most important elements for a successful risk governance process. In this context the main questions are: Who are the relevant stakeholders? What are their interests and expectations? What kind of information is relevant for the stakeholders? What kind of dialogue process is suitable for stakeholder involvement? Who is chairing? Where is it held? Normally, the process is initiated by a person/group officially in charge of managing a certain risk, ideally democratically legitimised. The definition of risk affects risk policy and, therefore, defining risk is an expression of power: Whoever controls the definition of risk controls the outcome of the risk management process. Establishing a stakeholder involvement process might be stimulated either due to internally identified weaknesses of a given management system or stimulated from outside the organisation (e.g. by pressure of stakeholders or the affected public or often the mass media with its influence upon public perception which may influence decision-making).

It is not easy to take individual and public risk perceptions into account because they are driven at least by biases, anecdotal evidence, false assumptions (e.g. about dose-effect relationships) and sensations. Hence a dialogue among experts, stakeholders and decision-makers in order to guarantee a diversity of competing values, opinions and claims is a challenge in the different stages of the risk governance process. The cultural background is also regarded as important for choosing a suitable involvement and communication strategy. Moreover, attention has to be paid not only to the risks, but also to the benefits which might be related to a certain problem.

Identification and involvement of stakeholders and their commitment seems to be easier in case of risks which own a spatial dimension and consequently a group of clearly identifiable stakeholders working or living in a certain spatial area, being interested in taking part of a dialogue about issues which are clearly of relevance to them. Inclusiveness is therefore context-related.

A structured communication and dialogue process is needed to meet the requirements of a competent, knowledge-based, fair, consultative and cost-effective risk governance process. It should facilitate the discussions on different equally valid strategies to resolve uncertainties and ambiguities. Here, an interest analysis comes into play in order to assess concerns in addition to risks first. It provides the possibility for the initiator of a stakeholder process and all other participants to understand the whole system of actors and interests. The intention is to explore interests behind positions, discover courses of action, promote building of trust and encourage the willingness to participate in a dialogue process by means of one-to-one interviews with relevant stakeholders. This creates a sense of urgency and prevents society from being left behind – without making a judgment at this early stage. Based on the expectations of the addressees, the dialogue facilitator uses an interest analysis to provide a customised stakeholder involvement concept.

However, stakeholder involvement has to struggle with some key challenges: In many cases, certain groups are not able to express their concerns in an articulate manner due to specific handicaps (lack of knowledge/expertise, weak language skills etc.). Here, choosing the right representative for these groups through advocacy is clearly helpful in order to incorporate their concerns. In a number of cases it is challenging to consider the interests of stakeholders not represented at all – such as future generations.

Group B1 on multilevel governance

What has been the role of the European Commission in risk governance up to now? Would the construction of the European research area benefit from this reflection? How does the EU compare with other regions of the world? How to interact from local to global levels?

In relation to international risks the EU is uniquely suited to facilitate local to global interaction because of its own transnational character.

Self-governing networks such as the Global Research Alliance (GRA)⁽²⁾ of some of the world's leading knowledge-intensive technology organisations, or the International Organization for Standardization (ISO)⁽³⁾ as a non-governmental organisation that forms a bridge between the public and private sectors, have emerged as a critical institution for risk governance when they have appropriate checks and balances through broad participation. They have problems defining their relation to existing governments and need proper resources in terms of funds and personnel. Therefore, it is of great interest to understand much better the preconditions of the emergence of cross-scale networks and how to develop holistic system responsive, context specific networks of risk governance.

Evaluating risks under conditions of high uncertainty makes science politically influenced and so risk is not a neutral term. This must be acknowledged in the funding and management of the research agendas. In addition, seed money for more diverse network and new ways to evaluate impacts is lacking.

Any further research should focus on the implementation of what the European research community has learned in inclusive

risk governance and also refer to non-EU risk cultures and the rich experience Europe can benefit from.

Group C1 on typology and transferability

Is there a trend towards a unified risk typology? Are methodologies transferable across risk settings?

Risk typologies

Typologies have normally one or two dimensions which are relevant for those who are responsible for a given process. These persons/groups normally have a specific interest in mind, because any typology is designed for a specific environment. A typical example would be a typology, designed by a geoscientist, aiming to assess the different mass movements on a common scale to which a certain area is prone. In this way, a typology depends on the disciplinary background of its designers as well as the purposes for which the typology is designed.

Risk issues are multidimensional according to the following criteria: issue characteristics as natural/technical/consumer risk, cultural patterns to deal with the issue, maturity of the risk field, degree of controversy, availability of agreement upon rules for regulation.

As such, one can discern a tension between an increased awareness of the complex and multifaceted character of risk issues and the ambition to work out typologies, which is inspired by the need to arrive at manageable and efficient approaches, through a necessary simplification of the issues towards a limited number of core characteristics. The ongoing discussion about the ISO 31 000 standard on risk management⁽⁴⁾ shows that there is indeed somehow a trend towards unification. The controversies linked with this process

⁽²⁾ <http://www.research-alliance.net>

⁽³⁾ <http://www.iso.org/iso/about.htm>

⁽⁴⁾ See committee draft No 2 of ISO-IEC 'Guide 73 – Risk management' (Doc. ISO/TMB/RMWG N 66 rev).

illustrate the difficulties of a unification which aims at considering the whole multidimensionality of risk. While the search for such simplification is a valuable goal, it preferably should be embedded in a reflective practice for dealing with complexity. This should not be jeopardised by too strong a focus on 'following' uncritically a typology that focuses only on two or three risk issue dimensions.

Transferable practices

Often, the transfer of good practices is inspired by a desire to repeat the quality of the outcome/results. Reasons of efficiency are also a justification to strive for transferable practices: similar issues could/should be dealt with in similar ways. A less direct goal is to think and discuss openly transferability of governance approaches to stimulate the capacity of judgment when confronted to a risk issue. Discussing transferability will then increase awareness about the numerous choices that have to be made as well as entail making these choices in a more conscious way, through comparisons with other cases and how these have been handled. Transfer of practices can take place in the context of a comparative analysis, reflecting upon various alternatives. This is quite important, since every area/community is affected by a couple of different risks. Consequently, mainly those authorities are interested in unified typologies which are in charge of dealing with different risk issues for a certain spatial area and/or community.

If not sufficiently deliberated in the open, the transfer of a governance process imposes a particular frame on the problem. As such, it is important to be careful with the implicit assumptions that are made when transferring practices. Some of the following assumptions could better be considered openly.

- Understanding of terminology: often people implicitly presuppose that the relevant terms (e.g. risk, vulnerability, damage etc.) are understood in the same way within the different risk settings which have to be unified by a typology. This is in fact not the case. There is no unified, commonly accepted glossary of terms available yet.
- Distribution of agency: are the organisational and institutional arrangements comparable? (see e.g. the differences among Member States from centralised and federal states with or without a strong regional level).
- Compatibility with cultural context: risk management is not only influenced by differences in individual perception of risks, but also by the attitudes of a society as a whole which clearly differ among Europe. Both risk appraisals and behavior in risk situations are influenced by cultural belief systems, value systems contained in these and social roles.

Crucial for a unified typology and for transferring practice are abstraction and re-contextualisation of elements. As each risk issue is unique, working on transferable approaches is a work of abstraction. As such, this abstraction creates 'externalities': aspects and dimensions that are not explicitly accounted for in the transferable approach. When deploying such a generic approach in a new context, it should be questioned if and how to adapt and complement it to take into account particularities of the new context: some elements could be opened up for discussion, while others could remain closed, resulting in non-negotiable conditions and constraints.

III – Second breakout session on evolution

Group A2 on spreading good practices

How to introduce the concept of 'inclusive risk governance' to a wider community?

The concept of inclusive risk governance should be introduced in the first instance to communities dealing with urgent issues which are of great importance to Europe's societies and where traditional risk management approaches are still dominant. Here, complex risk management structures, but also a long history of knowledge building and well established techniques create an environment where resistance to change may prevent improvement. The focus is put exclusively on objective dimensions of risk, neglecting more subjective dimensions. Experts have a responsibility in changing this traditional view where the role of the affected public is neglected.

The management of risks has become increasingly politicised and contentious. Risk controversies may not be about science versus misguided public perceptions of science, where the public needs to be educated about 'real' risks. Emotional response by stakeholders to issues of risk is truly influenced by distrust in public risk assessment and management. Looking at today's risk management practices makes clear that more inclusiveness is often needed in order to increase effectiveness and efficiency of actions, but also for a reduction of societal conflicts and vulnerability. Here, risk governance can be seen as an interdisciplinarity, procedural approach that defines a reasonable path towards the material goal of creating resilient and proactive communities.

The limitation of research, which is fragmented and isolated i.e. between natural sciences and engineering disciplines on the one hand and societal sciences on the other, the importance and difficulty of maintaining trust, and the complex, socio-political

nature of risk call for more comprehensive approaches. Such concepts have been developed i.e. by MIDIR and Riskbridge in close cooperation with different scientific disciplines and by involving stakeholders right from the start (see annex).

The tremendous increase in annual losses, caused by extreme events, indicates the urgency of inclusiveness. The insurability of economic assets becomes more and more questionable, if the so called 'probable maximum loss' (PML) insurance industry is able to deal with is exceeded due to global change.

These criteria are primarily relevant for climate change and those natural hazards which are triggered by meteorological conditions such as floods, droughts, forest fires, mass movements, but also creeping change processes like the loss of biodiversity.

Decisions in the area of so called 'traditional' risks like flooding, taken mainly on the basis of engineering expertise, are normally based on probabilities because they are past-oriented and informed by statistics. Climate change related effects on temperature and precipitation, however, will certainly lead to new uncertainties, because past events might not be representative anymore. Here, the perspective changes from probabilities to just possibilities. With public decision-making not having any precise information at hand, restrictions for private property rights are probably not legally justifiable anymore. Here, justification of actions and consensus about thresholds and response actions becomes more important, which calls naturally for inclusiveness.

The field of climate change in general, but particularly as a triggering factor for many natural hazards, is of special importance for Europe with its dominant existing settlement structures, cultural landscapes and

infrastructures which have been developed over centuries. Prevention actions, carried out by spatial planning, are under these circumstances less effective than in countries which are still growing rapidly in terms of population and the built environment. Here, disaster prone areas can be kept free from further development whereas most of these areas are in Europe already built-up. However, this calls for authorities with risk awareness and means to mitigate this problem.

Moreover, measures, based on mandatory decisions of public administration as well as measures which are in the responsibility of private owners need to be accepted widely for their implementation. This is clearly visible when looking at evacuation orders, building protection measures to be taken by private households, risk awareness etc. Having these facts in mind, the 'active involvement', propagated e.g. by the flood management directive, has to be seen as crucial for the success of the Directive's main objective: the reduction of flood risks.

The main actors targeted by attempts to spread inclusiveness are local and regional networks, dealing with climate change, i.e. adaptation issues, because of the territorial character of risk (coordinating role of regional and local authorities), but also the European research agenda.

Group B2 on decision-making

How to make legally-based risk management procedures and instruments on the European, but also the national and regional level more inclusive?

It is true that different spatial levels need different decision-making tools and ways to integrate stakeholders, but on the local level, it is easier to experiment. The reason is that the commitment of stakeholders or affected citizens is normally better per-

formed when a direct relation to their daily life conditions is easily visible. In the end, a referendum on a mechanism for decision-making might be useful.

Decision-making has to be seen as a dynamic process. The design of this process has to be inclusive. The more complex the process is, the more stakes are relevant, the more important inclusiveness is. In addition, the more ambiguity and uncertainty, the more inclusiveness is needed.

For those who are in charge of the decision-making process, the first important question is: what regulatory framework should be used? What is applicable? Does a system already exist or are we talking about a new emergent issue? The next step concerns the framing of the risk assessment. Here, different conclusions might be possible because of different questions raised. Therefore, raising the right questions is important. Moreover, it must be decided which experts to involve, what quality of evidence is acceptable and what standard has to be achieved. Risk management can be understood as a process of weighing the outcome of the risk assessment with political and socio-economic factors. This requires a lot of knowledge about the local conditions and this cannot be generated without inclusiveness. There should be a feedback loop from management back to assessment (i.e. in order to address economic questions which become obvious through the process: is a community willing or able to pay for the level of safety it is looking for?).

The idea of a risk escalator is recommended, i.e. by IRGC, to guide the decision-making process: The design of the process depends on the spatial scale but also on the dominant characteristic of the knowledge about the risk as the basis for deciding on the appropriate level of stakeholder involvement in the process. Whilst simple risks

may require little consultation with the stakeholders on how they assess and evaluate the risk, highly complex and uncertain risks may benefit from wider dialogue amongst, respectively, a broader base of people with expert knowledge or all directly affected stakeholders. For risks with high levels of ambiguity a wider stakeholder consultation is recommended.

Group C2 on prospecting future challenges

How to make use of inclusiveness for prospecting future challenges? Would this reflection have an impact on the future challenges such as 'nano' and converging technologies, biotechnologies or security technologies?

Apart from particularly challenging topics or risk issues (e.g. nanotechnologies), the methodologies for handling risks (e.g. how to organise and improve the science-policy interface) are similarly important.

Furthermore, also the question as to 'how to organise risk governance' is an intrinsic part of the debate on 'future challenges'. There is clearly a need for 'common risk governance architecture' and a common vision between different authorities in order to be able to manage complexity. Better learning capacities in the science-policy interface are crucial in order to avoid fragmented solutions, to take hold of and build on earlier experiences and not to reinvent the wheel. Moreover, multi-disciplinary experts and approaches are needed in order to help solve complex societal questions, depict and analyse and solve risk governance deficits, make use of knowledge and experiences in private enterprises. All in all, risk governance should be regarded as a continuous process with permeable system boundaries and room for experiments.

Main drivers of the challenges mentioned above are the ongoing global change (in terms to demography, climate and economy), but also the rapid technological innovation processes. There is a tendency to 'neutralise' the challenges, whereas the choice of the challenges is not neutral.

The quintessence is whether existing methodologies are suitable for dealing with known risks, and for dealing with 'new' risks. In view of these questions, some participants remarked that we have not learned enough yet from experiences in the past. This leads to different questions, raised by participants.

- Can existing risk governance methodologies be applied to new fields? We suspect that some are not suitable for some new risk fields (e.g. nanotechnologies, endocrine disruptors, micro-doses effects).
- Are new methodologies needed to deal with some conventional risks? Probably yes (as conventional methodologies have not enabled us to learn enough to adequately manage conventional risks).
- Are new methodologies needed to deal with new risks? Some participants agreed, because we conceptualise risks only when they are close to our 'real' world, and this is a deficit.

What are the mandate and the role of the Commission (DG-RTD-L3)? Who decides which risk issue will be on the research agenda? What is leading in 'risk governance'? 'Risk' or 'governance'? In other words, is the challenge that the unit aims to deal with on 'risk issues' or on 'governance methodologies'? The way we categorise and describe the challenges is a political process. Choosing to state that nanotechnology is a potential risk and working on improving its risk governance is not neutral. There is a political component in presenting what the most critical challenges are for the future.

Better use should be made of non-governmental early warning and risk management structures in society, such as set up by consumer and environmental organisations (e.g. Friends of the Earth International) which organise debate and fact-finding procedures on a global level, that may prove very valuable sources of information and thus make the risk governance system put up by EU and Member States more robust. This is an example of inclusion without taking part in deliberations/decision-making per se: inclusion does not necessarily entail decision-making.

IV – Analysis

Characterisation of inclusiveness

Inclusiveness is nowadays regarded as important not only for risk governance, but for any advanced management approach – independently from its relationship to risks, in particular those visible from the project’s analysis (see annex). In addition, there are a lot of cross-cutting issues and lessons to be considered, i.e. from the advanced involvement of the public in context of the water framework directive⁽⁵⁾ (see Art. 14 §1: ‘Member States shall encourage the active involvement of all interested parties in the implementation of this directive, in particular in the production, review and updating of the river basin management plans’) or the flood risk management directive⁽⁶⁾ which came into force on 26/11/2007 (see Art. 10 §2: ‘Member States shall encourage active involvement of interested parties in the production, review and updating of the flood risk management plans’). Here, several good practices have been established in different river basins. However, inclusiveness does not guarantee that all interests are properly identified and considered, i.e. those who are not represented by a certain stakeholder, which is able to bring them in (question of justice, see A 1).

Core principles of risk governance are obviously commonly accepted and transferable (see MIDIR), when acknowledged, and picked up on the situational character of risk perceptions and the effectiveness of management strategies (see rationale, but also B 1). Transfer of a successful application of such principles, to be seen as good practices, is inspired by a desire to repeat the quality of the outcome/results. However, crucial for transferring practice are abstraction and re-contextualisation of elements (C 1).

Inclusiveness is more a procedural concept than a material goal, but any definition of inclusiveness is needed as a continuous variable, since communities are changing as well as methodologies and techniques have been and will be continuously improved. Inclusive risk governance does not end in itself, but can be understood as a suitable procedural path towards material goals like resiliency. Resilience can be defined as the capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. Resilient communities are hardly achievable without being inclusive in assessing and managing risks when looking at the important role, private bodies and individuals obviously play in context of, e.g. building protection and risk awareness, which cannot be influenced by mandatory decision-making only.

Evaluating risks under conditions of high uncertainty makes science more prone to be politically influenced (B 1). This must be acknowledged in the funding and management of any further research agenda. However, most ‘risks’ are both physical facts and social constructs. Risks (and in particular their perceptions) are always constructed by relating a fact to a norm⁽⁷⁾, and not only the ‘facts’ change (as a result of scientific progress) but also the ‘norms’ (depending on societal, political debate). Defining risk affects risk policy and is an expression of power. Risks never present themselves as givens, but are socially constructed on the basis of scientific information through political judgment (A 1, B 1).

Moreover, decision-framing has to be separated from decision-making, because decisions have to be taken by those who

⁽⁵⁾ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy.

⁽⁶⁾ Directive 2007/60/EC of the European Parliament and of the Council on the assessment and management of flood risks.

⁽⁷⁾ See e.g. committee draft No 2 of ISO-IEC ‘Guide 73 – Risk management’ (Doc. ISO/TMB/RMWG N 66 rev).

are legally responsible and not by scientists who are entitled to guide decision-making processes by advice.

Spreading inclusiveness

Nonetheless, today's risk management practice is often not inclusive at all, i.e. in the context of traditional risks where natural as well as technological hazards are causing factors. Here, it belongs to the duties of social sciences to develop proper ways for applying inclusiveness in risk management practices where the role of the affected public is wholly neglected (see A 2) but where benefits can be expected from their inclusion in the risk governance process.

For spreading inclusiveness to a certain community, the procedural approach of risk governance has to be linked with a material goal stakeholders are in line with. Here, resilience and therefore proactivity come into play, because resiliency is determined by the degree to which the social system is capable of organising itself to increase its capacity for learning from past events for better future protection and to improve proactively risk reduction measures. The EU's Solidarity Fund can be seen as an example for the reactivity of today's disaster risk management approaches (see A 2).

Inclusiveness is important for the implementability of any response action and may raise therefore the effectiveness and efficiency of response actions (see A 2), i.e. in context of those future challenges enormous financial funds are related with such as climate change. However, it is not only a question of funds, but also the amount and quality of available information which can be enriched due to a proper involvement of the public. Moreover, inclusiveness makes actions potentially more legitimate through enhancing the possibility of a fruitful handling of societal conflicts, as illustrated by examples like the mediation process

in context of the expansion of the Frankfurt International Airport or the ongoing 'NanoDialogue' on the use of nanotechnologies in Germany. Nonetheless, such new way of handling conflicts needs time and makes procedures probably time-consuming.

Inclusiveness is particularly important and urgent in Europe due to the dominance of existing physical structures (to be seen as damage potentials), developed over several centuries. These structures cannot be improved without the inclusion of the mostly private owners – at least in Europe which is governed according to law (i.e. private property laws). This makes prevention actions, to be taken by public administration (i.e. spatial planning) less effective (see A 2).

Inclusiveness is relevant for traditional risks due to the changing environments where a purely post-oriented risk assessment is not adequate any more. At the same time it is difficult to implement because of the resistance of existing management structures, i.e. legal and administrative frameworks, as well as detailed technical norms (see A 2). Here, more transdisciplinary cooperation is needed for considering complex relations between social and natural systems.

How to organise risk governance

Apart from particularly challenging topics or risk issues, methodologies for handling risks (e.g. how to organise and improve the science-policy interface) or 'how to organise risk governance' is as important as 'which are the main risks that we should better deal with'. Inclusiveness gains in importance the more complex a risk setting is, the more it is characterised by uncertainty and ambiguity and the more stakes have to be balanced/weighed up (IRGC risk escalator, see B 2). Different actors targeted have different attitudes/interests which are relevant when spreading inclusiveness:

Other scientists (i.e. geoscientists, engineers), politicians, mass media, the public and affected individuals (see B 2). There is also a question how to communicate inclusiveness to a wider community. Social networking through ICT/WEB technologies and modern visualisation tools (i.e. Geo Information Systems, GIS) are quite helpful for target-group oriented communication. Any pedagogy of inclusive risk governance should be designed for different target-groups (such as e.g. pupils) and calls for an adequate language to achieve a mutual understanding. As engineering disciplines play a crucial role for assessment, but also management of most risks, a more integrative curriculum of BA and MA programmes in engineering and natural sciences is needed, so that young scientists can be trained in communication skills (see A 2).

In this context, establishing learning capacities in the science/society interface becomes more and more important. Moreover, new methodologies for newly defined risks are to be developed in close cooperation with stakeholders which will trigger assessment from different perspectives. For decision-making, dynamic models seem to be adequate in order to face the given complexity of changing environments (see B 2).

Embedding inclusiveness in European research programmes

In relation to international risks the EU is uniquely suited to facilitating local and global interaction because of its own transnational character. Therefore, any further research should focus on the implementation of what the European research community has learned in inclusive risk governance, but not neglect non-EU risk cultures and their rich experiences, from which Europe can benefit. Self-governing

networks, when they have appropriate checks and balances through broad participation, have emerged as a critical institution for risk governance (B 1).

Interreg projects (part of the structural funds) are normally inclusive, but they are often lacking in scientific expertise. An Interact project on risk governance, which focuses on the collection of good practices and communication of key findings to a wider community of regional and local authorities might be useful in order to enrich both programmes – Interreg as well as the Community research framework programme. The Interact programme promotes and supports good governance of European territorial cooperation programmes, targets the institutions and bodies responsible for the management and delivery of these programmes and focuses on management techniques, issues related to strategic orientation, and to institutional and thematic networks. It considers inclusiveness as relevant, since it operates by constantly seeking out the users' point of view and involving them as much as possible in the delivery of the programme. It creates and strengthens a cycle of exchange – learning from each other and together to strengthen territorial cooperation.

Moreover, a new ERA-NET+ activity on inclusive risk governance is desirable for supporting and developing an extensive coordination and integration of regional, national, and European research programmes and policies in this field of action.

Also the European Spatial Planning Observation Network (ESPON) is certainly helpful in spreading inclusiveness by using an existing, inclusive platform which is clearly implementation-oriented and suitable for addressing the territorial dimension of risk. Moreover, several governance oriented projects were already funded by this network.

However, also other existing networks of regions and cities are relevant for any target-group-oriented communication. Here, the Committee of the Regions (CoR) – as a political assembly that provides local and regional authorities with a voice at the heart of the European Union – plays an important role. It was established mainly because

there were concerns that the public was being left behind as the EU steamed ahead. Involving the elected level of government closest to the citizens is one way of closing this gap. Therefore, the CoR should be involved in any further research activity on inclusive risk governance and its implementation.

V – Conclusion

Mutual understanding of inclusiveness

The seminar clearly showed that the participating risk governance community reached a consensus with regard to key aspects of inclusiveness. To the understanding of all participants – who are of course deeply involved in the concept of inclusiveness – risks are socially constructed on the basis of scientific information through political judgment. Hence, it is necessary at least to consider ‘inclusiveness’ of stakeholders other than scientists in the process of assessing and managing risks. Main elements of inclusiveness which can be introduced to other communities are in the first instance good practices and transferable principles. Commonly accepted risk principles are, among others, the following.

- Clarity in the scientific basis and the ethical and value-laden implications of possible choices.
- Trust: Between all relevant stakeholders and decision-makers exists an atmosphere of mutual respect. Distrust in public decision-making makes institutional settings vulnerable and may lead to tremendous losses (see e.g. the lessons learned from the hurricane Katrina).
- Justification: Awareness of the need to justify any action, which could lead to harm for people or assets.
- Role of experts: If experts are involved, their role within the decision-making process has to be clarified. They are not legitimised to take normative decisions about tolerating or altering risks, but to advise those who are democratically legitimised.
- Participation: How far are all relevant social groups (respectively their representatives) and their expectations known and integrated into the process?

This agreement, but also the considerable knowledge base which has been developed, justifies more efforts in spreading these commonly accepted elements to a wider community. In many disciplines risk is still being understood as a mathematical term (function of frequency and magnitude of an event and its consequences). This is particularly important for natural hazards, enormous damage potentials, but also social vulnerabilities are related with. It is recommended to widen the focus of a potential follow-up Risk Governance Seminar to this field of action. Moreover, it might be useful to address inclusiveness by every risk-related call within the research framework programme.

Remaining questions

However, other elements of risk governance remain controversial within the risk governance community itself, due to the fact that inclusiveness is context-related and the participants represent totally different risk settings as well as cultural background among European countries. For example the question remained open when a societal discussion should happen: prior to a technology assessment or not. Moreover, some participants argued that existing risk governance methodologies are not applicable to some new risks (e.g. nanotechnologies, endocrine disruptors, micro-doses effects). Here, better learning capacities in the science-policy interface are crucial in order to avoid fragmented solutions, to capture and to build on earlier experiences.

Moreover, the territorial character, several risks are characterised by, has to be considered more carefully. Here, a better integration of inclusiveness within the structural funds is desirable. All in all, risk governance should be regarded as a continuous process with permeable system boundaries and room for experiments.

As such, one can discern still a tension between an increased awareness of the complex and multi faceted character of risk issues and the ambition to work out typologies. There is still no risk typology available which is characterised by an optimal balance between complexity and simplification.

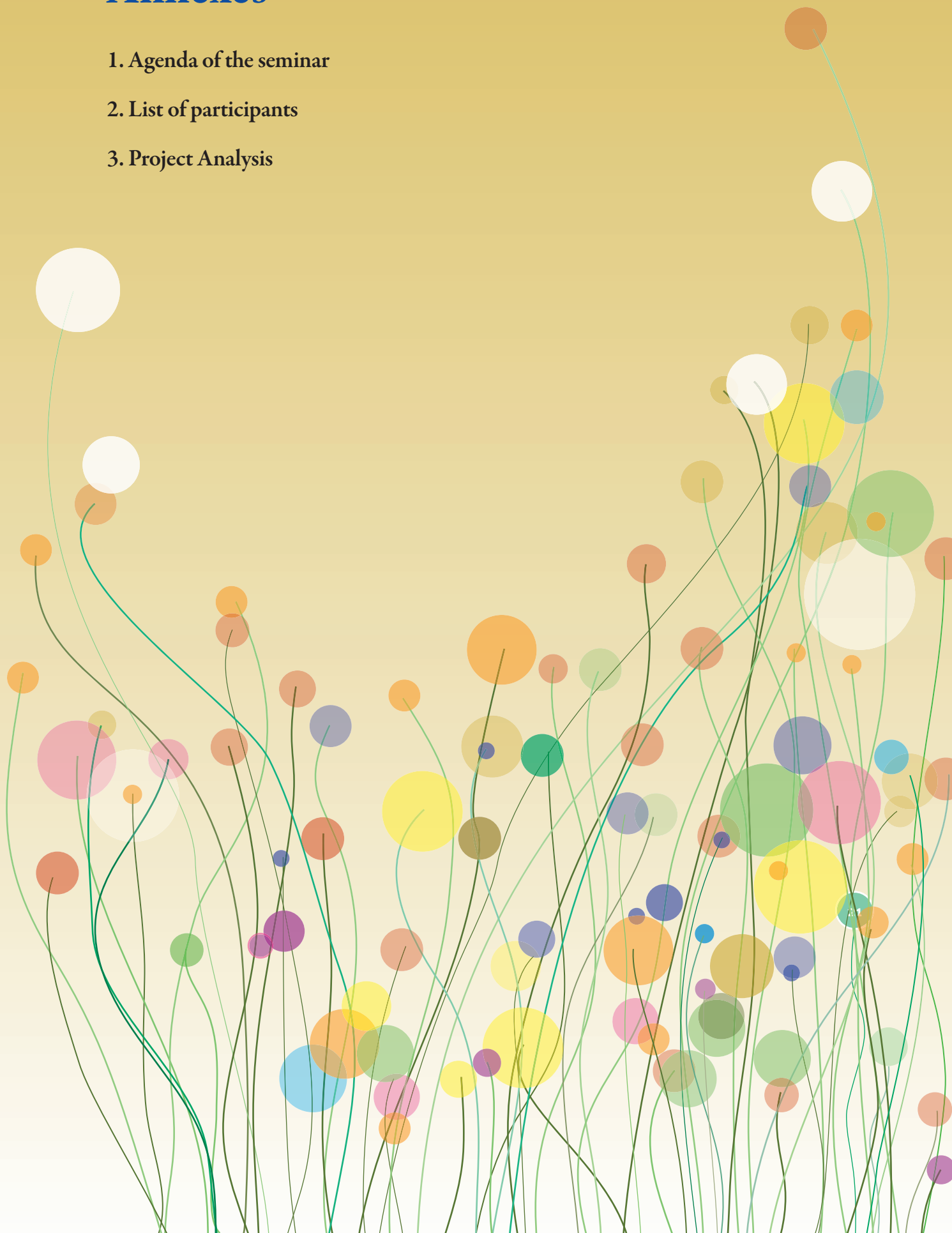
Mandate of the European Commission

With regard to **mandate and the role of the DG-RTD-L3** a coordinating role within the commission seems to be important when aiming at integrating inclusiveness into any risk related research activity under

the research framework programme. Making use of existing policy documents (such as the territorial agenda or the cohesion reports) seems to be useful as an argumentative basis for the necessary dialogue with other DGs. In the end, inclusiveness should ideally be seen as mandatory for every risk-related research project, to be funded by the Commission. The whole issue of inclusiveness could be stimulated through a Commission communication on inclusive risk governance. Other possibilities to coordinate this field of action within the Commission would be a new inter-service group or a non permanent task force with representatives also from outside the commission.

Annexes

1. Agenda of the seminar
2. List of participants
3. Project Analysis



1. AGENDA OF THE SEMINAR

Thursday, 4 December 2008

08.30–09.00 *Administrative requirements*

09.00–09.45 *Opening session*

- **Mr Jean-Michel Baer**, Director of ‘Science, Economy and Society’ Directorate (RTD L), DG Research, European Commission
- **Mr Pēteris Zilgalvis**, Head of ‘Governance and Ethics’ Unit (RTD L3)
- **Mr Philippe Galiay**, Administrator, ‘Governance and Ethics’ Unit (RTD L3)
- **Mr Stefan Greiving**, University of Dortmund (DE), Rapporteur

09.45–10.30 *Statements*

- **Mr Kjell Andersson**, Karita Research (SW), ‘Putting assumptions to the test through opening up processes’
- **Mr Fernando Ferri**, CNR-IRPPS (IT), ‘Transferability of methodologies across risk settings’
- **Mr Jaap Van der Vlies**, TNO (NL), ‘Urgency: An absolute prerequisite for a process of change’

10.30–11.00 *Comments from discussants and Q & A*

- **Ms Anne Loeber**, University of Amsterdam (NL)
- **Mr Maurizio Cotta**, Centre for the study of Political Change (IT)

11.00–11.15 *Coffee break*

11.15–12.30 *First breakout session (three parallel sessions A 1, B 1 and C 1) on status quo*

12.15–14.00 *Lunch*

14.00–16.30 *First breakout session (three parallel sessions A 1, B 1 and C 1) on status quo (continued)*

16.30–16.45 *Coffee break*

16.45–17.15 *Sharing conclusions*

17.15–17.30 *Recommendations for the second day*

Friday, 5 December 2008

- 08.30–09.00 *Administrative requirements*
- 09.30–10.45 *Second breakout session (three parallel sessions A 2, B 2 and C 2) on future perspectives*
- 10.45–11.00 *Coffee break*
- 11.00–12.00 *Second breakout session (three parallel sessions A 2, B 2 and C 2) on future perspectives (continued)*
- 12.00–12.30 *Sharing conclusions*
- 12.30–14.00 *Lunch*
- 14.00–15.00 *Analysis and first synthesis by the rapporteur*
- 15.00–15.30 *Comments, Q & A*
- 15.30 *End of the seminar*

Parallel Sessions

Status quo:

A 1 Inclusiveness in practices

B 1 Multilevel governance

C 1 Typology

Evolution:

A 2 Spreading good practices

B 2 Decision-making

C 2 Prospecting future challenges

2. LIST OF PARTICIPANTS

Mr Kjell Andersson	Karita Research (SW)	CARGO, Argona
Mr Matteo Bassoli	Bocconi University (IT)	Newgov
Mr Jos Brils	TNO (NL)	Riskbridge
Mr Maurizio Cotta	Centre for the Study of Political Change (IT)	Intune
Mr Silvano De Iesu	Regione Lazio (IT)	MIDIR
Mr Fernando Ferri	Istituto di ricerche sulla Popolazione e le Politiche Sociali (IRPPS) (IT)	MIDIR
Ms Katja Firus	Partner and Project Manager Environment (IT)	MIDIR
Ms Marie-Valentine Florin	International Risk Governance Council (CH)	MIDIR
Mr Stefan Greiving	University of Dortmund (DE)	MIDIR
Ms Monika Kosinska	EPHA – European Public Health Alliance (BE)	N.A.
Ms Anne Loeber	University of Amsterdam (NL)	Paganini
Ms Ermelinde Malcotte	VivAgora (FR)	N.A.
Mr Elvio Mantovani	Nanotec IT (IT)	Framingnano
Mr Luigi Pellizzoni	Istituto di Sociologia Internazionale di Gorizia (ISIG) (IT)	Riskbridge
Ms Tamsin Rose	Tech to the People (BE)	N.A.
Mr Armin Spoek	Inter-University Research Centre for Technology, Work and Culture (AT)	FAAN
Mr Jaap Van der Vlies	TNO (NL)	Riskbridge
Mr Doug Wilson	Innovative Fisheries Management (DK)	Safmams

Commission services

Mr Jean-Michel Baer	EC, DG RTD-L
Mr Paraskevas Caracostas	EC, DG RTD-L
Mr Matthieu Craye	EC, DG JRC-ISPRA
Mr Philippe Galiay	EC, DG RTD-L3
Mr François Hirsch	EC, DG RTD-L3
Mr Mihail Kritikos	EC, DG RTD-L3
Ms Verónica Pérez Blanco	EC, DG RTD-L3
Ms Katerina Ptackova	EC, DG RTD-J.2
Mr René Von Schomberg	EC, DG RTD-L3
Ms Maria Weimer	EC, SJ-J
Ms Viviane Willis-Mazzichi	EC, DG RTD-L3
Mr Pēteris Zilgalvis	EC, DG RTD-L3

3. PROJECT ANALYSIS

Argona: Arenas for risk governance *

I. Description of the approach

The point of departure for the Argona project is that participation and transparency are key elements of effective risk governance. The project investigates how approaches of transparency and deliberation relate to each other and also how they relate to the political system in which decisions, e.g. on the final disposal of nuclear waste, are ultimately taken. The project then turns to study the role played by mediators, who facilitate public engagement with nuclear waste management issues, and the conduct of the conduct of public consultations. By the latter is meant the communication of models used for deliberation and transparency.

Furthermore, the project investigates how good risk communication can be organised taking cultural aspects and different arenas into account. In a central part of the project major efforts are made to test and apply approaches to transparency and participation by making explicit what it would mean to use the Riscom model and other approaches within different cultural and organisational settings. Finally, the Argona partners develop guidelines for the application of novel approaches that will enhance real progress in nuclear waste management programmes.

The point of departure for the Argona project is that participation and transparency are key elements of effective risk governance.

II. Characterisation of the risk governance approach

The project is credibility-oriented. In a central part of the project major efforts are made to test and apply approaches to transparency and participation.

Communication is the key point in this project. This is especially seen in WP 3 (see before).

The approach is integrative and takes into account: policymaking structures that exist within the EU and in the participating countries as well as national nuclear safety and environmental legislation; the arenas of transparency, deliberation, and representative democracy; different case studies; public participation in SEA and EIA as part of legal procedures in the Czech Republic, Sweden, UK and Finland.

The approach is also multi-dimensional. Although it concentrates only on final disposal of nuclear waste, it takes into account e.g. the different perspectives (e.g. concerning perception [layperson/expert]), stakeholders, environments and levels of decision-making.

III. Conclusion

The project concentrates on risk governance concerning final disposal of nuclear waste, but the elaborated concept can be transferred to other risk settings. Especially the outcome of WP 3 (Mediators of issues and mediators of process) can be used for risk governance issues.

CARGO: Comparison of approaches to risk governance*

I. Description of the approach

The aim of the project is to compare three approaches to risk governance by using a number of example areas; explore how risk governance can be made transparent to decision-makers and the general public; make recommendations for a comprehensive risk governance strategy and communicate the results with students and risk governance advisors at a summer school and with higher-level policymakers at shorter meetings.

The aspects of 'risk informed decision making', 'precaution and risk reduction' and 'risk deliberation' represent three approaches to risk governance. Risk-informed decision-making is more based on quantitative assessments than the other two. The precaution and risk reduction approaches involve both qualitative (value-laden and ethical) principles and more traditional risk assessment. The deliberative approach means that more of the risk governance is given to lay people taking their concerns and values into account.

II. Characterisation of the risk governance approach

The approach aims at cooperation and credibility. WP 1 aims amongst others to create interactive communicative services where stakeholders themselves can analyse, compare and communicate risks and benefits of the 'energy risks monitor'. Further, communication and interaction with the 'end user' of the project is the focus of WP 5. Representatives from science and technology advisory offices, authorities, NGOs and politicians will be invited to meetings. The aim is to discuss different perspectives of risk governance in Europe, with special emphasis on its relations to the policy making structures, how policy-makers can get the best possible insight into the issues to reach high quality decisions, how the stakeholders and the general public can get the same level of democratic insight, how transparency can be achieved, and what is the role of participation and deliberation.

The approach is integrative, well structured and traceable. The aim of the project is to make risk governance transparent to decision-makers and the general public as well as communicate the results with students and risk governance advisors at a summer school and also with higher-level policymakers. The approach is also multi-dimensional, since different perspectives/environments (scientific, political and public), example areas and risk types (GMO, mobile telephone risk assessment and remediation of chemically contaminated sites) are involved in the concept.

III. Conclusion

The CARGO project focuses on risk governance. In terms of principles of the project such as transparency, integrity, interdisciplinarity and in terms of methods such as integral participation, monitoring, etc., CARGO represents an inclusive risk governance approach.

* CARGO project (<http://www.cargoproject.eu>); 6th Framework Programme.

Connex: Connecting excellence on European governance*

I. Description of the risk governance approach

Members of the network of excellence have a willingness to reduce risks to achieve efficient and democratic multilevel European governance. The network consists of 42 partner institutions from 23 European countries and more than 170 scholars aimed at analysing 'efficient and democratic multilevel governance in Europe'. It worked to initiate and integrate high quality research on governance in the multilevel system of the European Union.

According to the working frame of Connex, multilevel governance stands for the high interdependence of political responsibilities executed at regional, national and European levels. Efficiency and democratic accountability are key concepts for the foundation of legitimate governance.

Connex intended to mobilise outstanding scholars all over Europe to deepen common knowledge of the existing situation, future development of European multilevel governance, and its assets as well as deficiencies in terms of problem-solving capacity and democratic legitimacy.

It also aimed at building a Europe-wide research community which stands for scientific excellence and for providing added value for prospective users. Hence, efficient and democratic multilevel European governance can survive in the future with the support of scientific excellence, modern ways of thinking, and communication.

II. Characterisation of the risk governance approach

Since the theme of Connex is network building, its process focussed on communication, cooperation, feedbacks and periodical analysis and assessment for further development. The communication among stakeholders was managed via academic studies, links, conference and workshops. In addition to these methods, the coordination body of Connex participated in the process of information flow. Since the goal of the project is building efficient multilevel governance in EU via academic institutions, the project fulfilled its goal in a network structure. Hence, Connex has an original integral structure.

Despite the fact that Connex aimed at serving multilevel governance in Europe, its approach focussed on scientific excellence and concepts to guide European institutions in their ways of thinking at national, regional, and EU levels. Although the research groups of Connex were formed on the basis of interdisciplinarity and intercultural communication, the project itself can only touch on the conceptual base of multilevel governance.

The approach is transparent and open to be developed by new participants.

III. Conclusion

The Connex project did not originally focus on risk governance. However, the method used in the project has a tendency to be related with risk governance. For instance, Connex aimed at building efficient multilevel governance in Europe, all research and efforts focussed on risk assessment and mitigation. The more basic features of the project such as transparency, integrity, interdisciplinarity satisfy risk governance criteria. The Connex project can be an interesting example in terms of risk assessment and risk mitigation rather than risk governance.

FAAN: Alternative agro-food network*

I. Description of the approach

FAAN is a project, which engages academics and civil society organisations (CSOs) in a 'cooperative research' (CR) activity and in future research agenda-setting on 'Alternative agro-food networks' (AAFNs).

The FAAN project has a specific focus on alternative agro-food networks (AAFNs). These alternative networks take various forms: consumers as producers (e.g. community gardens), direct sales (e.g. farmers' markets, regular box schemes), public procurement (or canteens), markets linking food with agri-eco-tourism, etc. Such alternative networks are characterised by economic relations which go beyond (or differ from) market relations.

There is no explicit focus on risks. However, alternative agro-food networks aim among others at producers' economic independence from the agri-industrial system, as a basis for production methods which may be more benign in the social, economic and/or environmental sense and may reduce food related health risks.

II. Characterisation of the risk governance approach

The FAAN programme fosters cooperation between all social groups which are involved in the food sector. FAAN uses semi-structured interviews, focus group discussions and scenario analysis workshops for communication.

III. Conclusion

When looking at projects like FAAN, it becomes obvious how fundamental inclusiveness for every advanced management approach is – independently from its relationship to risks in particular.

Framingnano: An international multi-stakeholder dialogue platform to regulate the development of nanosciences and nanotechnologies (NS&T)*

I. Description of the risk governance approach

The objective of the Framingnano project is to build a deliberative process involving nanotechnology stakeholders aiming to regulate the development of nanotechnology of help to the European Commission, EU policymakers and stakeholders in designing a model assuring that this development takes place responsibly and for the benefit of the individuals and the society.

The project stresses that a completely new multidimensional approach to risk appraisal and management is needed. Cooperation, coordination and communication between all the actors in nanotechnology are vital for promoting a proactive and adaptive process capable of framing nanotechnology development across known and accepted boundaries.

The final outcome of the project will be a proposal for a governance plan highlighting the needs, actions and recommendations necessary to develop safe nanotechnology at EU level and beyond.

The aim of the project will be achieved by establishing an open international multi-stakeholder dialogue amongst the scientific, institutional and industrial communities, and the broader public, in order to foster the development of a shared frame of knowledge, objectives and actions to define constructive and practicable regulatory solutions, facilitating the responsible development of NS & T.

II. Characterisation of the risk governance approach

The project aims at cooperation, coordination and communication between all the actors in nanotechnology.

The communication between all the actors in nanotechnology is one of the key-aspects in this project (see before) and is vital to promote a proactive and adaptive process capable of framing nanotechnology development across known and accepted boundaries.

The approach is integrative and transparent, but not multi-dimensional, because the project aims only at cooperation, coordination and communication between all the actors in nanotechnology, but does not refer to other risk settings.

III. Conclusion

Although the focus lies only on nanotechnology, Framingnano refers directly to risk governance.

Intune: Integrated and united? A quest for citizenship in an ever closer Europe*

I. Description of the risk governance approach

The Intune project is one of the few integrated projects on the theme of citizenship financed by the European Union within the scope of the 6th framework programme. It aims at reducing risks in the development and enlargement processes of the European Union. The major aim of this research is to study the changes in the scope, nature and characteristics of citizenship presently underway as an effect of the process of development and enlargement of the European Union. It will focus on how integration and decentralisation processes, at both the national and European levels, are affecting three major dimensions of citizenship: identity, representation, and practice of good governance.

According to Intune, the European Union is facing an important number of challenges, and given that its legitimacy and democratic capacities are questioned, it is important to address the issue of if and how EU citizenship is emerging. This primary question leads to three further sets of questions that will be the building blocks of this research: How does a particular kind of political structuring shape citizenship? In a complex system, how do different identities coexist? What sense of obligation is EU citizenship developing? How do coexisting identities affect the relationship between elites and mass? What are citizens expecting from the EU as a level of government?

II. Characterisation of the risk governance approach

In addition to the research, training, implementation platforms of Intune, the project has a digital data library section that aims to develop an archive of data as well as data documentation, and to make the empirical studies produced by the project more visible and more accessible both internally and externally on a web-based publication platform. Communication among stakeholders was managed via research studies, projects, a conference, the monitoring group, and the website of Intune. Communication in projects, e.g. between experts and citizens, is also fulfilled by research programmes, training activities, case studies, etc.

Its geographical and disciplinary integrating capacity as well as the joint effort of many scholars and practitioners specialised in different fields (political science, sociology, public policy, media, linguistics and socio-psychology) clearly represent a step forward in the strengthening of the European research area in social sciences and humanities in general. The approach is transparent and open for all participants.

Intune benefits from the joint efforts of people from the domains of political science, sociology, law, economics, media studies, linguistics and psychology. In that sense, it is multi-dimensional with respect to systematic assessment and evaluation procedures, research performance, and training.

III. Conclusion

Despite the fact that Intune did not denote a certain risk, some challenges in terms of development and enlargement of the EU are perceived as risks. Intune has some basic features such as transparency, integrity, interdisciplinarity fit to risk governance principles. Furthermore, it has implemented risk analysis (challenges in future development of the EU), risk mitigation (via projects), monitoring and assessment techniques.

* Intune project (<http://www.intune.it>); 6th Framework Programme.

MIDIR: Multidimensional integrated risk governance*

I. Description of the approach

MIDIR's purpose is to help groups reduce their risks and achieve greater sustainability as well as resilience when faced with challenges. The 'MIDIR Approach' recommends a practical process for governance and the software tools to implement, manage and monitor that process. It enables swifter more effective organisational and multistakeholder performance, even during times of conflicting demands and changing conditions.

The MIDIR approach is a comprehensive risk governance concept which aims at a broad and active involvement of decision-makers at the relevant political and administrative levels and/or of stakeholders. In addition it offers a better understanding and acceptance of research by society and vice versa bringing the legitimate interests of society and single stakeholders into research and decision-making. The concept is supported by a tool that is able to monitor the performance of a risk governance process.

II. Characterisation of the risk governance approach

The project aims at credibility. It offers a better understanding and acceptance of research by society and vice versa bringing the legitimate interests of society and single stakeholders into research and decision-making.

Communication is the key point of the project. Without proper communication, a risk governance process is not possible (see point 'Definition/understanding of risk governance').

The aim of the project is to bring risk governance to policy, decision-making and other societal actors by networking and disseminating the new concept. This shall be achieved by an integrative approach which is more than just an 'additive' consideration of different dimensions. 'Integrative' in general means to combine and coordinate diverse elements into a whole. It is well structured and traceable. There are two ways of such integration: horizontal (e.g. planning authorities at the same level, e.g. local level); vertical (cooperation between different levels, e.g. international, national, regional and local level). Both ways of integration (horizontal and vertical) are implemented in the risk governance process.

The project shortly characterised 'multidimensional' as 'usable for each risk setting characterised by uncertainty and ambiguity'. However, the multitude of dimensions is not only limited to these characteristics, but can also be extended to the following aspects included in the project: a scientific approach and a practical implementation. The aim should be to combine and complement these two points of view. A multidimensional concept, and accordingly a risk governance concept, should address all environments (political, economic and social aspects and levels of decision-making. In this sense a multidimensional risk governance concept can be adapted to various levels of decision-making (local, regional, national, European, international).

III. Conclusion

The MIDIR project focuses directly on risk governance. In terms of principles of the project such as transparency, integrity, interdisciplinarity and in terms of methods such as integral participation, monitoring, etc., MIDIR represents an inclusive risk governance approach.

Newgov: ‘New modes of governance’ project*

I. Description of the risk governance approach

The aim of Newgov was to reduce risks of governance in Europe with respect to future developments. The project examined the transformation of governance in Europe (and beyond) by mapping, evaluating and analysing the emergence, execution, and evolution of what is referred to as ‘New modes of governance’ (NMG).

The scope of the project is to examine the transformation of governance in and beyond Europe by mapping, evaluating and analysing the emergence, execution, and evolution of ‘New modes of governance’. ‘New modes of governance’ means the range of innovation and transformation that has been and continues to occur in the instruments, methods, modes and systems of governance in contemporary polities (modes of government) and economies, and especially within the European Union (EU) and its Member States.

The Newgov consortium contributes to the creation of a European research area in the social sciences and humanities by shaping a new European-level research agenda; by integrating previously dispersed researchers within a coherent, pan-European whole; and by creating novel training activities and networks between researchers and policy practitioners; and providing for outreach to, and participation by, the wider research community.

II. Characterisation of the risk governance approach

Since the terms of reference focussed on scientific research on new modes of governance, sharing of information and cooperation are key concepts of the project.

The communication among stakeholders was managed via academic studies, links, conference and workshops. In addition to these methods, all knowledge and data gathered by clusters are evaluated in the consortium. The approach is transparent and open for all participants.

According to the information sheet of the project, Newgov aimed at integrating the wealth of research ongoing in the field of democracy and multilevel governance undertaken by various research communities from different countries, regions and disciplines. The work provided a synthesis of theories of multilevel governance and their relations with theories of democracy as well as improved capacities for comparative analyses for different policy sectors and articulation of responsibilities in their governance. Hence the approach of Newgov tends to integrate various dimensions of governance.

In terms of instruments and modes of governance, Newgov investigated new forms of multi-level partnership, deliberation and networks, as well as innovations in systems of socio-economic governance, producing new knowledge on different policy sectors; ways of implementation and use by taking into consideration both old and new Member States.

III. Conclusion

The project of Newgov did not originally focus on risk governance. It focussed more on risk analysis and model building with a perspective of risk mitigation. Nevertheless in terms of principles of the project such as transparency, integrity, interdisciplinarity and in terms of methods such as integral participation, monitoring, etc., Newgov is not far from being inclusive.

* *Newgov project (www.eu-newgov.org); 6th Framework Programme.*

Paganini: Participatory governance and institutional innovation*

I. Description of the risk governance approach

Paganini investigates how participation contributes to problem solving in a number of highly contentious fields of EU governance. It looks at a dynamic cluster of policy areas concerned with what the project calls 'the politics of life': medicine, health, food, energy and the environment.

'Politics of life' refers to dimensions of life that are only to a limited extent under human control, or where the public suspects that there are serious limitations to socio-political control and steering. These areas are strongly connected to normative, moral and value-based factors, such as a sense of responsibility towards non-human nature, future generations and/or one own's body. In these areas traditional mechanisms of governance can be seen to hamper policymaking and much institutional experimentation has been taking place.

There is no clear definition of risk governance. However, Paganini defines governance as the following: 'Governance refers to the act of governing, i.e., to the series of acts that people undertake to jointly rule and control the public consequences of natural events or human activity, and in so doing, to shape, guide or affect the acts of others.'

An international team of social scientists has looked at a number of different topics ranging from stem cell research, genetic testing, nuclear power dilemmas and nature conservation to genetically modified food and food policy to identify how these areas are governed, how they might be governed in the future, and what role there is for participatory practices in all of this.

II. Characterisation of the risk governance approach

Trust is a key aspect in the project. Building trust through public participation is not only the aim of one of the WPs, but also a guiding point for the whole project.

The project covered several case studies with different risk in different cultures (countries). Paganini looked at a particular dynamic cluster of policy areas concerned with what is called in the project the 'politics of life': medicine, health, food, energy, and the environment.

III. Conclusion

Paganini is characterised by a broad focus on governance of which risk governance is only a small part. Key principles of risk governance, such as trust building and stakeholder involvement, were nevertheless regarded as important by the project. Inclusiveness was therefore an important aspect.

Riskbridge: Building robust, integrative interdisciplinarity, governance models for emerging and existing risks *

A project funded by the European Union in the 6th framework programme of research.

I. Description of the approach

The project aims at developing an integrative risk governance approach connecting risk assessment, risk management and risk communication based on a resilient and discursive approach. The project has an open project architecture rather than using a specific risk governance model. It also takes a policy learning approach as the central mode of operation, allowing for integrating input across different science fields, across different geographical boundaries, and across the science-policy interface and cases related to complex, ambiguous risk fields where the agreement of risk governance approaches is limited, or related to new, emerging risks.

Reduction of risk is not seen as the ultimate goal of risk governance; there is a trend towards a more resilient and discursive approach to risk governance. In this trend complementary goals regarding the balancing of benefits against risks and the inclusion of citizen's viewpoints in decision-making processes as well as their access to knowledge for sound decision-making are introduced.

To live up to these goals, risk governance faces a strong need for integrative models which link the different phases from risk assessment, management to communication from an interdisciplinarity perspective. This requires the following issues:

- different scientific disciplines need to work together on risk issues; risks have an impact on many areas and for complex risks, scientific disciplines need to produce joint assessments;
- communication between experts producing the scientific knowledge and policymakers using scientific knowledge in decision-making needs to be stepped up; it is necessary to build (risk) bridges between scientific communities and practitioners;
- new arrangements for conflict resolution, involving the public, setting up risk dialogues etc, need to be devised or rather be evaluated since there have already been numerous experiments aimed at involving citizens; methods and procedures that have proved useful in one risk field must be tested and refined in new contexts and new places.

Due to their complexity, ambiguity and/or novelty and emergence, the following fields are selected: biotechnology/stem cells, radioactive waste, nanotechnology, climate change, sediments and electromagnetic fields.

II. Characterisation of the risk governance approach

The project aims at cooperation between policymakers and experts. Risk communication is one of the risk governance principles that the Riskbridge project takes into account. Especially during the organised workshops, risk communication was one of the key aspects.

In its focus is the connection of risk assessment, risk management and risk communication based on a resilient and discursive approach. Riskbridge stressed that the following aspects are needed for an integrative approach.

*Riskbridge project (<http://www.riskbridge.eu>); 6th Framework Programme.

- Different scientific disciplines need to work together on risk issues; risks can impact on many areas and for complex risks, scientific disciplines need to produce joint assessments.
- Communication between experts producing the scientific knowledge and policymakers using scientific knowledge in decision-making needs to be stepped up; it is necessary to build (risk) bridges between scientific communities and practitioners.
- New arrangements for conflict resolution, involving the public, setting up risk dialogues etc, need to be devised or rather evaluated since there have already been numerous experiments aimed at involving citizens. Methods and procedures that have proved useful in one risk field must be tested and refined in new contexts and new places.

The approach is multi-dimensional: there is a comparison of different risk governance types and a selection of the best risk governance elements. Moreover, not only one risk is taken into account, and cross-case, cross-disciplinary and cross-geographical interactions are the focus.

III. Conclusion

The information about the different work packages and the results are not available for non-project partners. It is only possible to download a preliminary version of the project with limited information. The analysis above is based on this document.

Safmams: Scientific advice for fisheries management at multiple scales*

I. Description of the risk governance approach

Safmams draws insights from existing research projects and management processes on the most useful forms of scientific advice for marine environmental management and then communicates those insights to scientists and decision-makers.

The project does not focus on a particular risk, but on a combination of scientific and practical knowledge in the field of marine environmental management. However, the idea behind the project is a sustainable exploitation and equitable distribution of a natural resource which is constantly changing in complex ways in response to human influence as well as natural factors. This can be understood here in a broader sense as 'risk governance'.

The project involved three basic tasks.

- It collated information relevant to the forms that scientific advice can and should take from research projects focussed on fisheries management.
- It interacted with nine sets of stakeholders involved in fisheries management decision-making at various scales to help the project sharpen the practical lessons from what the project gathered from the research results.
- It passed on these lessons from fisheries to the broader marine management community, and beyond to people with a general interest in the relationship between science and policy, through specific networking and dissemination activities. This audience included various levels of government, science policy scholars, user groups and conservation NGOs. Lessons are applicable in a broad sense across Europe in Atlantic, Mediterranean and fresh-water fisheries as well as other areas where science and policy converge.

II. Characterisation of the risk governance approach

The project aims at cooperation between policymakers, stakeholders and scientists. The approach is transparent and open for all participants.

The approach is integrative, because the audience of the project included various levels of government.

The project is partly multi-dimensional. Besides various levels of government, the audience of the project included science policy scholars, user groups and conservation NGOs, limited however to the broad field of marine environmental management.

III. Conclusion

When looking at projects like Safmams, it becomes obvious how fundamental inclusiveness is for every advanced management approach – independently from its relationship with risks in particular.

* Safmams project (<http://www.ifm.dk/safmams>); 6th Framework Programme.

European Commission

**EUR 23910 – GOVERSCIENCE SEMINAR ON
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'Risk governance' is a 'moving target' in the European research area. Indeed, as risks and their governance are constantly evolving through scientific discoveries and technological innovation, governance practices evolve too through natural learning processes and social science research. This is why it is time to revisit the notion of 'Risk Governance' in the light of recent studies and projects supported by the European Commission.

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