MIDIR PROJECT

Contract n° 036708

WP 1:
Development of a comprehensive risk governance concept

Del. 1.2:
Scalable resilience and risk governance concept including guidelines on stakeholder involvement

Reference code: MIDIR – Del. 1.2

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Project Acronym: MIDIR

Title: Multidimensional Integrated Risk Governance

Title of report: Del. 1.2: Scalable resilience and risk governance concept including guidelines on stakeholder involvement

Reference code: MIDIR – Del. 1.2

Short Description:

Deliverable 2.1 presents a scalable multidimensional and integrative resilience and risk governance concept including procedural and methodological requirements. It includes the description of a tool (stakeholder interest analysis) for the preparation of a stakeholder involvement process, as their contribution to real decision making processes was identified as one of the main aspects for successful risk governance.

The report is divided in two main parts:

- Methodological concept bringing together the state-of-art in risk governance with methodological and procedural needs (indicator system based on the method and tools of MIDIR partner Gaiasoft) for their on-going monitoring and development, identified by those who are close to the daily practice in risk communication (e.g. MIDIR partner iku);
- Practical guidelines for stakeholder involvement by means of an interest analysis.

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Partners owning: UNIDO, IKU

Partner contributed: UNIDO, IKU

Made available to: All project members or representatives and European Commission

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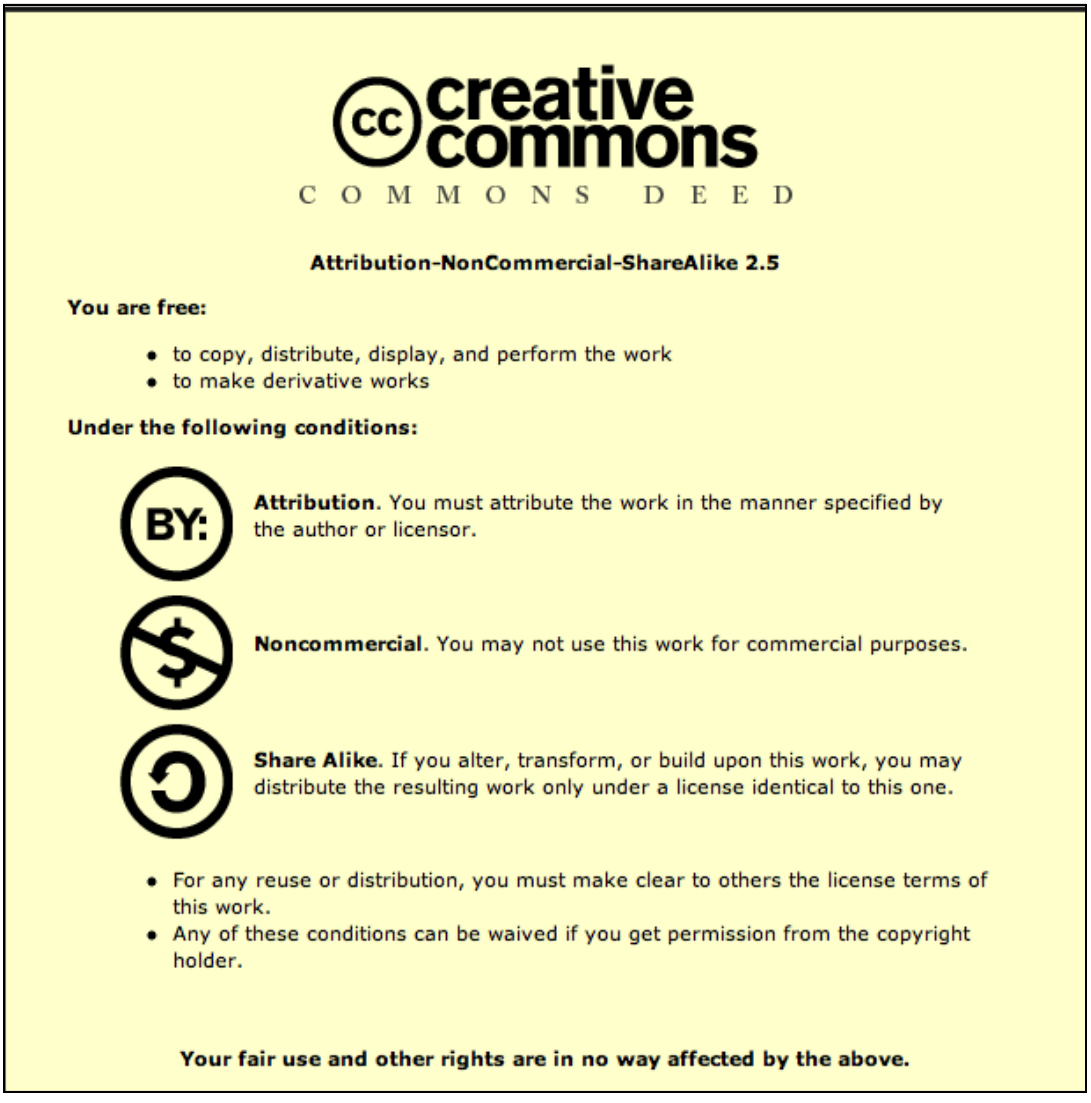

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1 General Introduction

Risk communication belongs to the core elements of a risk governance approach. This is especially valid in the context of new emerging risks where complexity, uncertainty and ambiguity are determining risk management efforts. Scientific rationality defined as consensus among risk researchers and technical experts is necessary but often not sufficient to make commonly accepted and wise decisions. Including the view and expectations of stakeholders is a core element of a risk governance approach in different risk settings. This was one result the analysis of case studies presented in Deliverable 1.1.

Therefore, Deliverable 1.2 focuses on:

- an “indicator system” as a methodological concept that brings together the state-of-art in risk governance concepts with methodological and procedural needs, identified by those who are close to the daily practice in risk communication, as well as
- an “interest analysis” being a practical method for preparing stakeholder involvement processes.

2 Methodological concept

Work package 1 of the MIDIR Project had the task to develop a scalable resilience and "multidimensional integrative risk governance concept", taking into account existing discursive approaches (see Wanczura et al. 2007). The accentuated aspects in Deliverable 1.1 lead to the development of 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 has to be supported by a tool that is able to monitor the performance of a risk governance process. The following concept, elaborated by the MIDIR project, covers these aspects. It will be tested in real decision-making settings and cultures by the example of two (new) emerging risk which have a high degree of uncertainty and ambiguity (a plurality of different interests, priorities, understandings, values and visions):

- Risks related to criminals under hospital treatment order (forensic psychiatry) and
- Risks related to health due to e-commerce.

The elaborated concept (especially the indicator system) is composed of two parts:

- **Part A:** Procedural and methodological aspects, applicable for every risk setting.
- **Part B:** Context related aspects, to be defined individually for every risk setting. For this phase it is necessary to develop additional indicators by the responsible authorities according to their needs, circumstances, priority risks, populations, target groups etc.

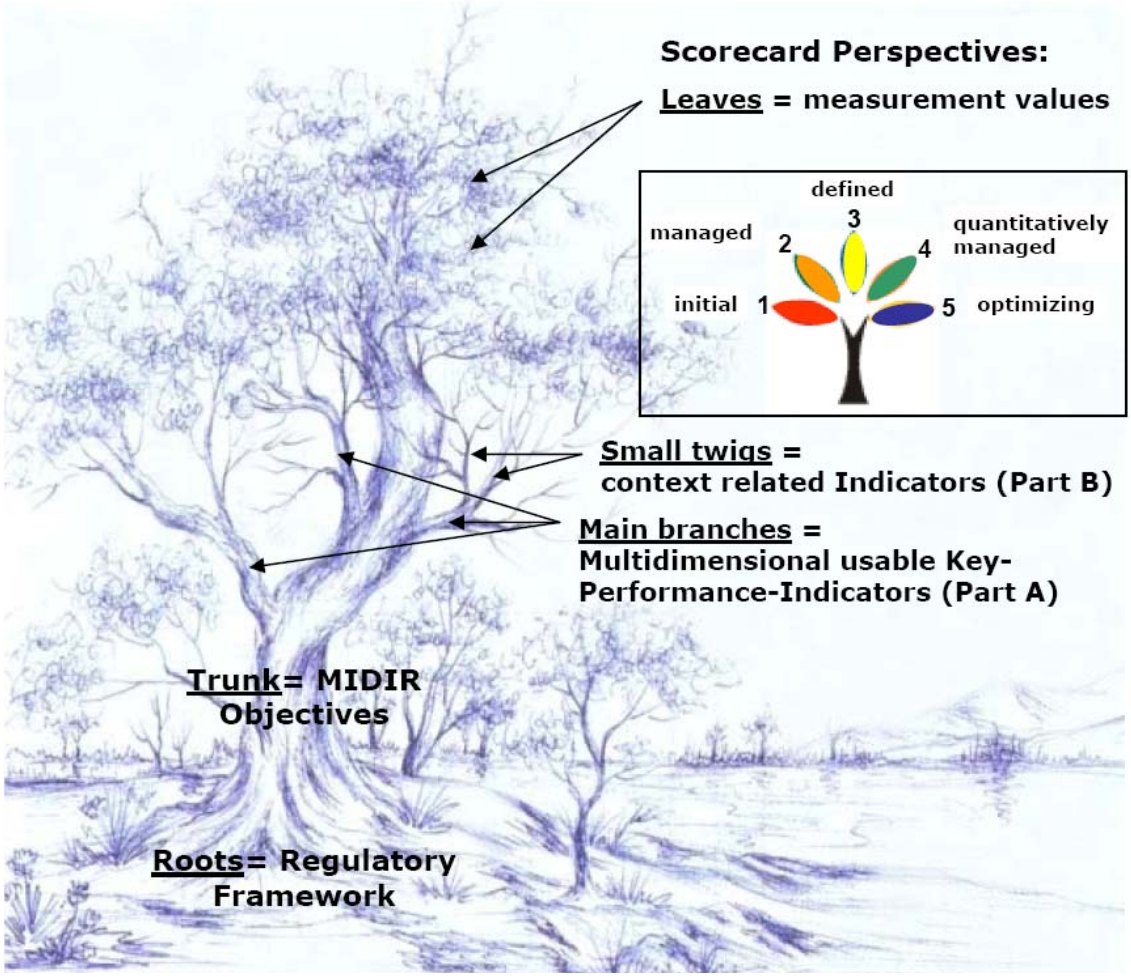
The first phase of the MIDIR project concentrated on procedural and methodological aspects in a risk governance process, which are applicable for every risk setting (Part A). It made use of commonly accepted dynamic indicators (see Wanczura 2007) which allowed an adaptation depending on the needs of the responsible institution of a specific risk governance process. Furthermore it can be used as a basis for the elaboration or generation of Part B (see below) since basic features of Part A as e.g. stakeholder involvement have to be considered as well when defining context related indicators in Part B. Consequently both parts are interdependent and implemented simultaneously and strictly connected to each other. The practical application of the process will be the focus of a later stage (Work package 2) in the project.

The following section concentrates on the results of the development of Part A, based on the findings of Del. 1.1. The elaborated common elements (see below), the scientific literature research, practical experiences in risk management as well as the above paragraphs built the framework for the whole MIDIR project. These aspects allowed the formulation of concrete results for Part A (indicator system, measuring values) that are able to be transferred into the further work on the case studies in Work package 2.

The results of Part A (focus of this Deliverable) – and especially the Key Performance Indicators – are subjects of a dynamic process. Indicators as

well as the measuring values are not static and unchangeable, but have to be adapted periodically depending on the expectations and necessities of the responsible body/institution as well as to the existing and possibly changing circumstances. Furthermore they are the basis for the elaboration of context related aspects of a risk governance process of Part B (see Figure 1 below).

Figure 1: Risk Governance Tree



Approach source: Gaiasoft

Image Source: Based on Website Kunstnet, available at: http://www.kunstnet.de/Kunstwerk-48039.html

This interdependence of Part A and B can be visualized by the example of a tree. The main objectives of the MIDIR project could be understood as the roots of the tree: Current risk management is often characterised by distrust in public decision-making. More public participation in risk assessments and decision-making is needed in order to make the decision process more democratic, improve the relevance and quality of technical analysis and increase the legitimacy and public acceptance of political decisions. Using the Integral approach of MIDIR, the level of trust, the taking of appropriate steps and the risk governance outcomes are all simultaneously measured as a basis for management decisions and action. Here, a tool is needed which is able to continuously monitor the Integral

performance (beliefs, behaviours, culture, structure and results) in order to identify the relevant next steps.

For that purpose, Key-Performance-Indicators were identified using Gaiasoft's approach of indicators based on maturity models with associated knowledge for each level of maturity of each indicator (Gaiasoft [2006] Technical Paper on Indicator Definition and Knowledge Management which is based on Gaiasoft's international pending patents) These indicators are usable for every risk setting as proved by the analysis which was described by Del. 1.1 (Wanczura et al. 2007). This provides the foundation for systemic and system-wide evolutionary risk governance. Implementation depends uses Gaiasoft's products which have been procured and configured for use of the MIDIR project.

It is important to note that these indicators provide a comprehensive oversight of risk governance, based on the accumulated knowledge of this analysis. However, these indicators are not envisaged as static. They are intended to be continuously improved both in terms of the overall definition of the framework and the individual maturity model definitions of each measure. The MIDIR approach provides an evolutionary approach to systemic risk governance. Since the approach can be applied at multiple levels within a system (EU/National/Regional/Local) and in multiple risk settings (Pandemic, Natural Hazards, etc) the approach is suitable for systemic risk governance across large complex systems.

The Gaiasoft Integral Scorecard system allows for both hierarchical and networked monitoring, benchmarking and performance management. The intention of an evolutionary risk governance model for use across a complex system is achieved by means of a shared knowledge base of performance indicator definitions, which can be continuously improved and adapted across the system being governed. This is technically achieved using the Gaiasoft DNA Library which is a repository of maturity models which can be upgraded with version management and re-used in different levels of system and in different risk settings.

The result is a fractal (networked, hierarchical) risk governance system, suitable for risk governance at multiple levels, in multiple contexts and across the system as a whole. With the performance indicators learning and improvement can be identified in any part of the system, implemented into the DNA Library and distributed across the whole system.

In addition, indicators will later be supported by further knowledge and expertise (in the form of Issues, Solutions, Case Studies) which will be stored in Gaiasoft DNA Library.

These indicators are visualised as main branches of the tree. However, in order to gain specific knowledge about a certain risk setting, more detailed information is needed (Part B). Having in mind the picture of a tree, Part B is shown by the small twigs. They have to be identified on the basis of the main risk governance principles which are measured by the Part A indicators or branches of the tree. This guarantees their proper identification. In this context, the interest analysis, described in chapter 3, plays an important role by preparing a stakeholder involvement processes.

Finally, measuring values have to be identified showing the current performance of a certain indicator. They are shown as leaves of the tree. This is the scorecard perspective, included in MIDIR by an electronic

monitoring tool. It visualises the performance of the risk governance process. A scorecard offers a set of appropriate measurement values which assist responsible bodies to monitor and assess progress towards the achievement of strategic goals over time.

2.1 Indicator system

Before starting with the development of the indicators and respectively the indicator system it is necessary to explain briefly the theoretical background of indicators and indicator systems in general: the quality criteria for indicator development; the understanding of the relationship between indicators, goals and data; and the different phases of indicator development (see Birkmann 2006).

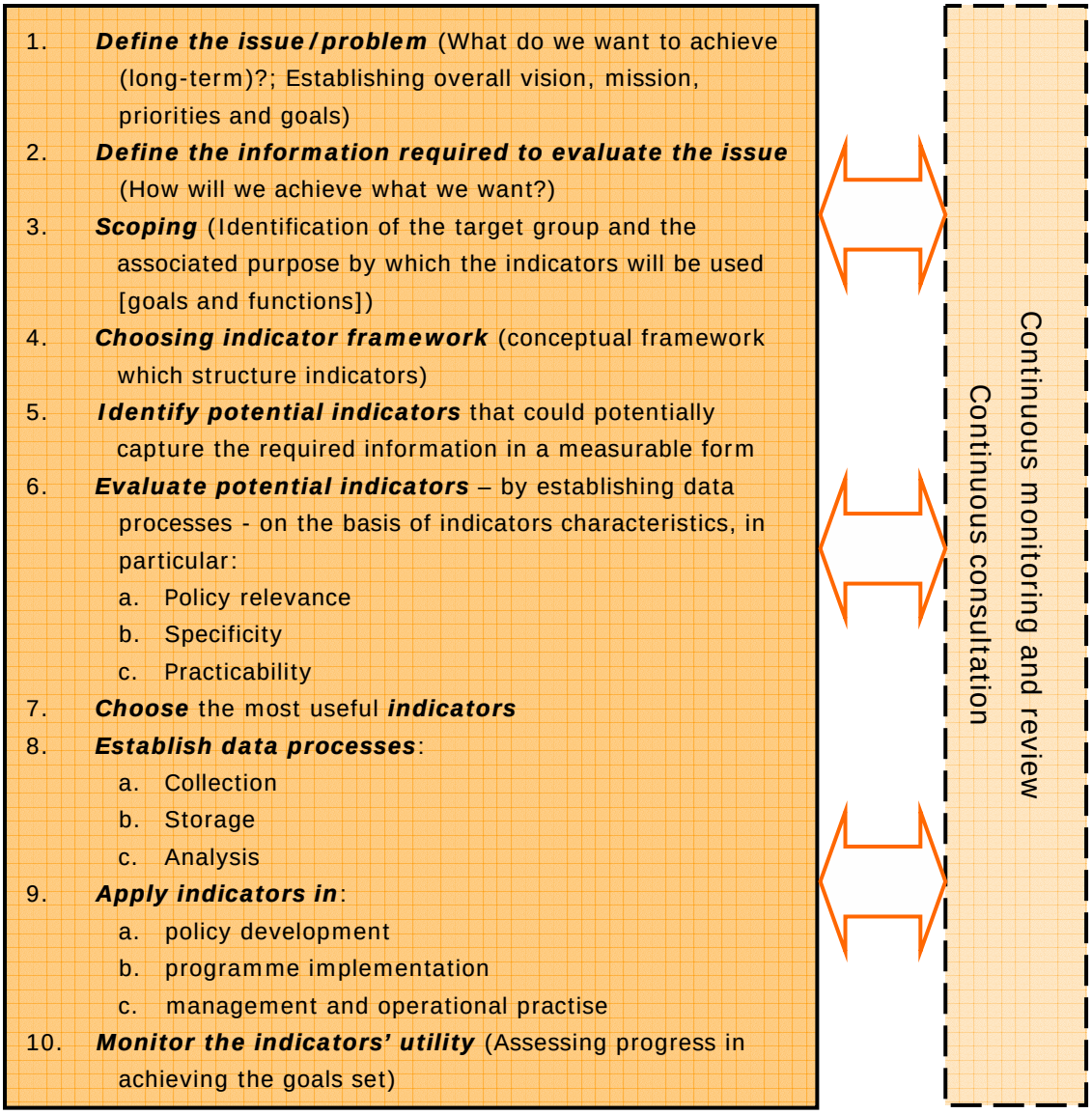
This provides a common understanding and knowledge base and meets the scientific application and background of the elaborated system.

2.1.1 Theoretical background

The Guide Note on Indicators for Assessing Progress on Disaster Risk Reduction (UN 2007) defines indicators as "*An explicit measure used to determine progress; a signal that reveals progress towards objectives; a means of measuring what actually happens against what has been planned in terms of quality, quantity and timeliness.*" (International Development Research Centre quoted in UN, 2007). Thus indicators or 'Performance Indicators' aim at the measurement how far/well a programme or a concept is achieving its given objectives. They define how performance will be measured along a scale or dimension.

According to Birkmann the process (consisting of ten steps) for selecting and applying indicators can be described as shown by the following figure. For the risk governance system to be evolutionary and hence able to adapt to changing risk climate (as in the MIDIR approach) there are necessarily feedback loops in the linear process depicted.

Figure 2: Process for selecting and applying indicators



Source: own elaboration according to UN (2007); Birkmann (2006)

It should also be noted that these steps can be carried out in parallel, rather than in a rigid sequence. In practical terms, it may be preferable to start monitoring (Step 10) with an initial sub-set of indicators, rather than delaying until a comprehensive set can be identified. It is possible to shorten or widen the procedural steps with reference to the needs of the responsible institution but some requirements have to be met, e.g. every indicator-development process has to be related to goals or a vision which serves as a basis for defining the *indicandum* (state or characteristic of interest) (Birkmann 2006). An overall vision, mission, priorities and goals are preconditions and a starting point for indicators and the indicator system. Further it is important – as stated by the UN (2007[1]) – to include

[1] Although the UN (2007) concentrates in its Guide Note on Indicators for Assessing Progress on Disaster Risk Reduction on disaster risk reduction, the elaboration could also be transferred into the present topic and objectives of MIDIR.

the specific risk type addressed in a risk governance process whenever possible in the process of indicator development.

The focus of this Deliverable is on the first eight classes of Figure 2 as these steps characterise the process for selecting indicators. In a next step these indicators will be applied in real conditions. This will be "realised" during the further work of the MIDIR-Project in Work package 2 *"Integration of concept in real risk management settings in various cultures"*.

There are some other requirements offered in the literature concerning general characteristics of indicators to ensure they will be useful as well as effective. The Audit Commission (2000) proposed a detailed description of these characteristics:

- **Relevance**: the performance indicators should meet the strategic goals and objectives of the 'organisation';
- **Clear definitions**: necessary in order to ensure consistent collection and fair comparison;
- **Easy to understand and use**: the indicators should be understandable even if the definition itself has to use of technical terminology;
- **Comparable**: Indicators should ideally be comparable on a consistent basis both between organisations and over time (of great relevance for Part A of the approach);
- **Verifiability**: the indicator should allow aggregation and desegregation of data;
- **Cost effective**: cost-value ratio concerning the information search has to be well-balanced and justifiable;
- **Unambiguous**: it should be clear whether an increase in an indicator value represents an improvement or deterioration in service;
- **Attributable**: responsible authorities should be able to influence the performance measured by the indicator;
- **Responsive**: an indicator should be responsive to change;
- **Avoid adverse incentives**: it should be considered what behaviour an indicator aims to encourage;
- **Allow innovation:** the definition of an indicator ought not to deter organisations from developing innovative processes or coming up with alternative methods, systems or procedures to improve service delivery;
- **Statistically valid:** performance indicators based on a small number of cases are likely to show substantial annual fluctuations. In these occurrence, it should be considered whether a performance indicator is the right method to gauge the performance development or whether a larger sample size is possible;
- **Timely**: indicators should be based on data which is available within a reasonable time-scale;
- **Assessing the importance of the criteria** (Audit Commission 2000).

Indicators should also be necessary (not too many) and sufficient (allowing full oversight). They should, where possible, include predictive indicators to allow for preventive risk governance, rather than depending on reactive crisis management.

After the elaboration of indicators the next – and very important step – is the selection and decision on measuring values for them. This could be

quite problematic due to the different types of indicators: qualitative indicators (nominal; expressed as numbers or as the presence/absence of an element), a rank variable (ordinal) and/or a quantitative variable (refer to the way in which an activity is moving forward or backwards and might be measured against targets or standards) (Gallopin 1997; UN 2007). Especially the qualitative indicators are quite problematic to be measured contrary to the quantitative ones. The problem is the reference base. One example: the qualitative indicator "trust" cannot be measured in clear numbers. When talking about the concrete indicator system for Part A in one chapter 2.1.3, this problem will be analysed and solutions presented.

An appropriate performance measurement system is the prerequisite for a successful indicator system. Otherwise – as the Accounts Commission for Scotland (1998) states – the system can have "*major adverse consequences for any organisation and for those to whom it provides services"*.

The requirements mentioned before are important, but a lot of problems exist, having crucial effects on the realisation of such an indicator system. In the following the most important challenges are listed:

- Selecting appropriate and useful indicators "*is a fairly straightforward process, but requires careful thought, iterative refining, collaboration, and consensus-building*" (USAID Centre for Development Information and Evaluation 1996). Especially collaboration and consensus-building in order to create commonly acceptable decisions is quite problematic in times where different aims and priorities exist and risk management is often of secondary importance in relation to problems as e.g. unemployment, population loss, infrastructure shortages, etc. (Greiving et al. 2006). Consequently the selection of appropriate indicators could be very problematic and lead on the one hand to difficult discussions and on the other hand to a failure of the system.
- Another challenge is the formal selection of suitable indicators. Shavelson et *al.* (1991) underlined that "*No indicator system could accommodate all of the potentially important indicators identified by such a comprehensive process and still remain manageable. The second step, then, is to develop a valid, useful, and parsimonious set of indicators. The purposes the indicator system serves (e.g. description of trends, information for accountability purposes) constitute one criterion for reducing the initial pool of potential indicators. System designers need to consult potential users to determine what those purposes should be, because the purposes will dictate the type of information that must be collected and the level to which it should be disaggregated.*" Again, our goal is to find necessary and sufficient indicators to allow for preventive risk governance.
- Additionally Shavelson et *al.* (1991) annotate that some difficulties exist regarding the application of the characteristic criteria mentioned above. The most important aspect is that some highly desirable indicators "*may have to be eliminated because they cannot be measured reliably."* That means that not sufficiently developed indicators to be included into an indicator system should be part of a developmental research agenda. One example is the vulnerability of the environment which often cannot be measured at all. They can be incorporated into the given indicator system once the indicators meet the criteria of the responsible body.

- The next task is linked with requirements: *"Many data collection efforts and analyses will fall short of indicator requirements. Some of the most important potential indicators may not be measured at all, and well-known difficulties with existing datasets are likely to constrain the analyses that indicators require. In many cases, sample sizes or designs will not be adequate for disaggregating data by groups of interest; some will not permit relational analyses among various components of the system. It is important to identify the shortcomings in existing data and analyses, and where these gaps and inconsistencies exist, to specify what work is needed to obtain reliable, valid, and useful indicators."* (Shavelson et *al.* 1991)

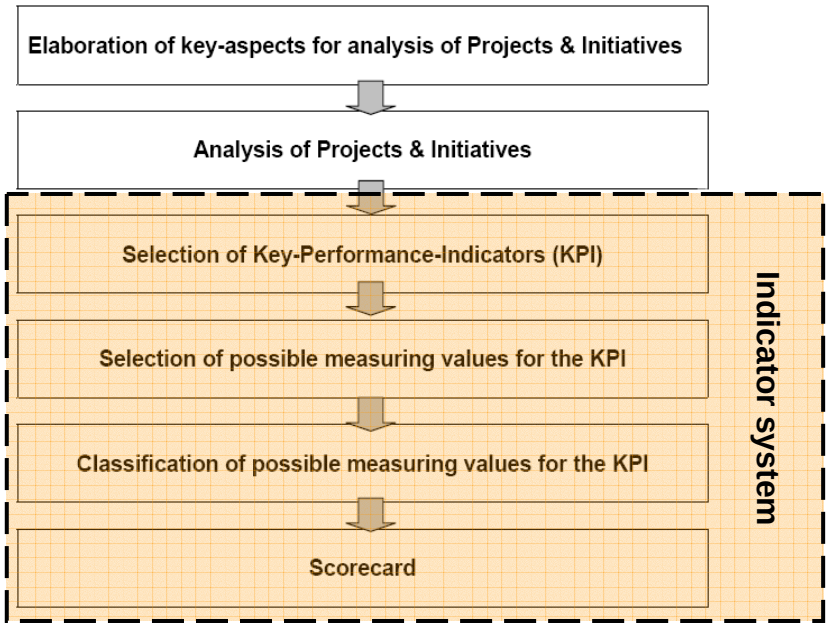
In particular, if the framework of risk governance is insufficient, there will be gaps in the indicators chosen. This is a key strength of the MIDIR approach in that the indicator set has been developed for broad scope and where the scope may be found insufficient, the evolutionary approach means that it can be extended in the future.

All these mentioned challenges should be considered in the elaboration process as well as the application of the indicator system. However challenging it may be to develop an appropriate indicator system a partial set of indicators that covers a majority of issues is better than none at all, so long as there is a process in place for strengthening the indicators and hence the quality of risk governance.

2.1.2 Analysis of Case-Studies as preparatory work for the indicator system

The following subsection is a summary of the outcomes presented in Deliverable 1.1 (Wanczura et al. 2007). The aim is to show the project-orientated way of the elaboration and selection of indicators according to the procedure presented in Figure 2.

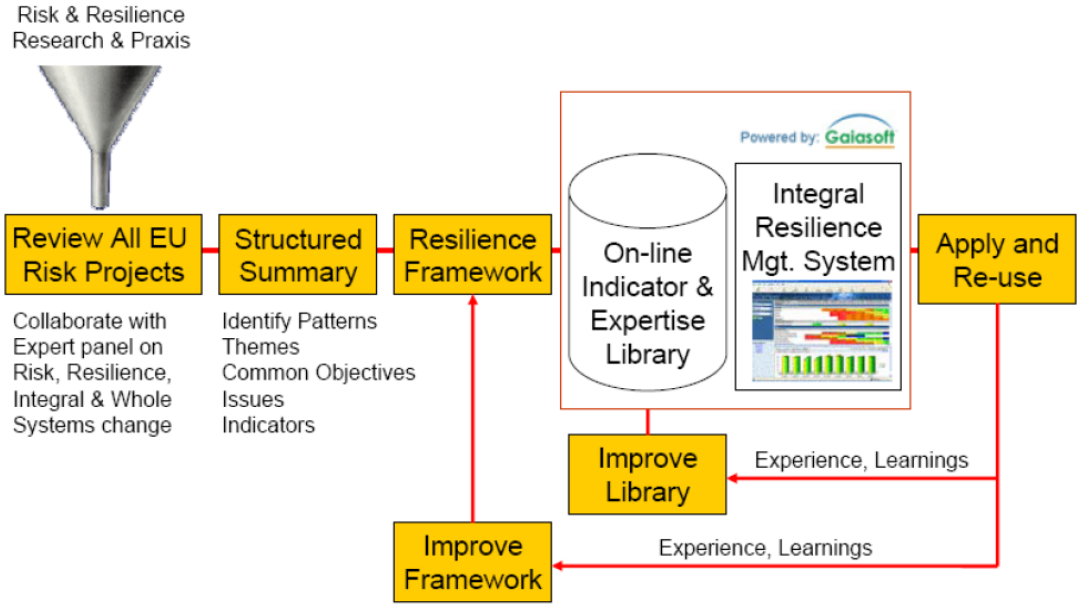
Figure 3: Methodological steps of the first stage of MIDIR



Source: own elaboration

As shown in the methodological steps of Figure 3, originally 35 risk governance principles, derived from a first literature screening, had been used for the project's analysis (see Wanczura et al. 2007). In the next step, a core set of the 12 mostly accepted indicators were chosen as Key Performance Indicators (see chapter 2.1.3 for a more detailed explanation), representing the resilience framework. This selection process was part of the step "structured summary" of the following Figure 4.

Figure 4: Process of Work package 1



Source: own elaboration

Figure 4 shows the development of Work package 1 (*"Development of a comprehensive risk governance concept"*). The process is characterized by the following aspects:

- **Research:** review and summarise outputs of EU and other risk and resilience projects to identify patterns, themes, objectives, issues and indicators;
- **Integral Framework**[2]: develop an over-arching integral framework for indicators and expertise in resilience capacity building & management;
- **Expertise Library:** implement a collaborative on-line Resilience Expertise Library of indicators and maturity models;
- **Resilience Management System:** set-up a re-usable, scalable, software, monitoring, performance management and capacity building system;
- **Resilience Expertise Network:** develop an on-line network of resilience and integral experts and practitioners cross-linked to the Expertise Library and Management System;

[2] The integral framework is a comprehensive map for an extensive cross-cultural comparison of human capacities for any given area and incorporates in particular two major aspects that are referred to as "quadrants and levels". The integral approach refers to All Quadrants and All Levels, and is therefore as well known as "AQAL model". See: Ken Wilber (2000) A Theory Of Everything, Shambala

- **Resilience Portal:** deploy a management system as web portal for government, business and societal systems to benchmark, learn and collaborate for resilience;
- **Continuous Improvement:** put a process in place for continuous review and improvement of Framework, Expertise Library and Resilience Management System based on experience.

The number and range of the analysed projects and initiatives was satisfactory because all important elements of risk governance as shown by Table 1 (see page 17) were covered. Furthermore, the multitude of analysed projects was characterised by a diversity of addressed risks which was of great relevance for the project in order to guarantee the transferability to various risk settings.

The analysis of projects/initiatives was based on two parts:

1. Overall information like e.g. description of the risk governance approach; characterisation of the risk governance approach and conclusions;
2. Detailed table where 35 aspects/indicators were checked if they were covered in the analysed approaches (see Figure 5). These aspects were grouped under five scorecard perspectives: Basic/Content, Procedure, Stakeholder, Resources and Expertise. It allowed a better general observation if important aspects were considered appropriately. Additionally each of the indicators had clarifying questions to reach a better understanding of the indicator and its aim.

Each set of perspectives provides a lens which emphasises a world-view or approach to risk governance. The lens used affects the insights gained, decisions made and actions taken. It should be noted that the MIDIR approach is multidimensional and allows for multiple sets of perspectives or lenses to be used in Risk Governance. Lenses provided by the demonstration system include:

The five perspectives mentioned above as well as the integral perspectives (four quadrant model) and others. Sets of perspectives may be added for particular organisations or risk contexts. Allowing for multiple sets of perspectives or lenses is a way to create understanding between different world-views and to help different stakeholder groups to understand one another’s viewpoints and to get ‘on the same page’.

Table 1: Analysed Indicators and Key-Questions

Basic/ Content	*Purpose*	Why are we doing Risk Management?
	Principles	What are the governing principles? (E.g. Requirements concerning democratic procedure)
	Values	What are the values by which we make decisions: is the importance of addressing values expressed by the project?
	Motivation	How far have we understood and engaged the motivation of stakeholders?
	Trust	How far is attention paid to the relevance of an atmosphere of mutual respect and trust?
	Behaviours	How far are appropriate (individual) behaviours defined?
	Objectives	How far are areas of objectives for protection groups defined?
	Mindset (meme)	How far is mindset (meme) and focus (quadrant) of decision makers and stakeholders mapped and understood?
	Tolerable	How far are the tolerable levels of risk for various protection groups defined?
	Values based decision	How far are decisions to be made based on values identified?
	Role of Science	How far is scientific basis for our decision making defined?
Procedure	*Senior*	How far is there a Senior Responsible Owner for the process?
	Administration	How far are the boundaries for normative decision making by the administration clearly defined and justified
	Accountability principle	How far is accountability defined at each level (process, each risk)?
	Justification	How far is the activity justified?
	Contexts	How far have contexts been evaluated for relevance, process documented and decisions recorded?
	Priority	How far are risks prioritised? (e.g. Pareto principle or 80/20 rule says that most of the risk is from a subset of sources) – recommend here 80% for likely risks and 20% extreme events
	Process	How far is there a risk governance process – e.g. objective/indicator - measurement - review - analysis - action plan - learn - repeat – improve
	Strategy Integration	How far is Risk Governance integrated into the strategy, objectives, governance and management of the organisation?
Stakeholder	*Identification*	How far are stakeholders identified (through a proper process - including prioritisation)?
	Representation	How far are all relevant social groups and their expectations known?
	Engagement	How far are all relevant social groups motivated to engagement?
	Access to Information	How far is information accessible?
	Interest	How far are the stakeholders interested in having information, in the outcome?
	Trust	How far do the stakeholders trust the decision makers, institutions and information available?
	Acceptance - Process/Outcome	How far do the stakeholders accept the process and the outcome?
	Dialogue	How far is the dialogue constructive? (listening and mutual understanding)
Resources	*Financial*	How far do the available financial resources meet the needs of the governance process defined?
	Personnel	How far do the personnel resources available in expertise and capacity meet the needs of the governance process defined?
	Time	How far is there calendar time to meet the governance process defined?
	Equipment	How far do the equipment resources available meet the needs of the governance process defined?
Expertise	*Identification*	How far has the need for expertise been evaluated and met through an appropriate process (that needs to be defined in the standard)?
	Role	How far has the role of experts been defined?
	Involvement	How far has the accountability and involvement of experts been defined?

Source: own elaboration

The elaboration of the key aspects of Table 1 was enabled by means of a literature research, a set of interviews and a scientific colloquium. The aim was to list all significant indicators for a risk governance process in order to enable a detailed description as well as a comparison between them. In addition it allowed the development of a balanced set of indicators (Step 5 and 6: Identify and evaluate potential indicators; see Figure 2). It was not feasible to consider all indicators which were available due to the difficulty of handling such a variety and quantity. Accordingly, the chosen indicators are only an extract and concentrate on those indicators which are of greatest relevance for the analysis, the indicator system, the concept and the further work in the project.

The next step of the analysis was the characterisation of the aspects and indicators respectively their application concerning the analysed project. This was a prerequisite for the analysis and the qualitative and quantitative evaluation of the project.

Therefore, indicators were divided into three respectively four categories, dependent on the kind of integration in the analysed project:

- **completely** = this indicator was completely integrated and elaborated,
- **partly** = this indicator was partly integrated and elaborated,
- **non** = this indicator was not integrated and elaborated,
- **no information** = there is no information about this indicator[3].

An aggregation of all assessed projects/initiatives as well as their implementation of indicators can be seen in Table 2. It shows the similarities and differences of the analysed projects/initiatives according to the common consideration of some indicators.

The strongest similarities concerning the implementation of indicators in the assessed projects can be seen in the following indicators/aspects:

- Basic/Content (Purpose; Principles; Role of science),
- Procedure (Justification),
- Stakeholder (Identification; Representation; Involvement; Access to information; Acceptance Process & Outcome).

There are hardly any similarities according the indicators listed in the topics ‘resources’ and ‘expertise’. However, it should be stressed that although several indicators were not integrated into the analysed case studies (especially concerning ‘resources’), it does not mean that these indicators (respectively, financial, personnel, time and equipment) are not important. Quite the contrary: the indicators listed under the topic ‘resources’ are of great relevance: if there are no/not enough resources available, there is no possibility to realise the risk governance concept even if the concept is auspicious. The reason for the lack of implementation of these indicators is the lack of information. It is supposed that such information is existent, but not listed in the different project papers. For that reason it would be a mistake to underestimate this kind of indicators.

[3] A lack of implementation of a single indicator does not mean that it is not seen as important, but only that it was not considered in the project.

Table 2: Results of Project-Analysis

		UK Home Office	Italian Project on Risk at Work	Italian Project on Industrial Risk	Italian Project on Food Risk	Nano-technology Risk Governance	Disaster Risk Reduction in for sustainable development	Community-based disaster risk management	STARC	Risk Communi-cation Manual NL	Trustnet 2	Trustnet	RISKGOV	APUG	Risk Governance - IRGC
Basic/Content	Purpose	Partly	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely
	Principles	Partly	Partly	Completely	Completely	Completely	Completely	Completely	Completely	Partly	Partly	Completely	Completely	Completely	Completely
	Values	No	Completely	Completely	Completely	Completely	Completely	Completely	Partly	Partly	Completely	Completely	Completely	Completely	Completely
	Motivation	No	Completely	Completely	Partly	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely
	Trust	No	No Information	No Information	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely
	Behaviours	No	Partly	Completely	Partly	Completely	Completely	Partly	Completely	Completely	Completely	Partly	Partly	Completely	Partly
	Objectives	Completely	Completely	Completely	Completely	Non	Completely	Partly	Partly	Partly	Completely	Non/Partly	Partly	Completely	Completely
	Mindset (meme)	No	Partly	Completely	Partly	Partly	Partly	Partly	Completely	Completely	Completely	Partly	Partly	Non	Completely
	Tolerable	Completely	Non	Non	Non	Non	Non	Non	No information	Partly	Partly/Non	Non	Non	Completely	Partly
	Values based decision	Partly	Non	Non	Non	Non	Completely	Non	Partly	Completely	Completely	Partly	Partly	Completely	Completely
	Role of Science	No information	Completely	Partly	Partly	Completely	Completely	Completely	Completely	Partly	Completely	Completely	Completely	Completely	Completely
Procedure	Senior	Completely	No information	No information	No information	No information	No information	No information	Partly	Non/Partly	Non	Non	Non	Completely	Non
	Administration	Completely	Partly	Completely	Partly	Non	Partly	Partly	Partly/No	Partly	Partly	Non	Non	Completely	Partly
	Accountability principle	Completely	Partly	Completely	Non/Partly	Non	Partly	Non	Non	Partly	Partly	Non	Non	Partly	Completely
	Justification	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Partly	Completely	Completely	Completely
	Contexts	Completely	No information	No information	Non	Non	Completely	No information	Partly	Completely	Partly	Partly	Partly	Partly	Completely
	Priority	Completely	Non	Non	Non	Non	Non	Non	No	Partly	Partly	Completely	Non	No	Completely
	Process	Completely	Partly	Partly	Partly	Completely	Partly	Partly	Partly	Partly/Non	Partly	Completely	Partly	Completely	Completely
	Strategy Integration	Completely	Non	Non	Non	Non	Party	Non	Completely	Partly/Non	No information	Partly	Non	Non	Completely
Stakeholder	Identification	Completely	Completely	Partly	Completely	Partly	Completely	Partly	Completely	Completely	Partly	Completely	Partly	Completely	Completely
	Representation	Partly	Partly	Completely	Completely	Completely	Partly	Completely	Partly	Completely	Partly	Completely	Completely	Completely	Completely
	Engagement	Partly	No information	Completely	Partly	Completely	Partly	Completely	Completely	Completely	Completely	Partly	Completely	Completely	Completely
	Access to Information	No information	Completely	No information	Completely	No information	Completely	Completely	Completely	Completely	Completely	Partly	Completely	Completely	Completely
	Interest	Partly	Completely	Completely	Non	Completely	No information	Completely	No information	Completely	Completely	Partly	Completely	Completely	Completely
	Acceptance Process	No information	No information	Completely	No information	Completely	Completely	Completely	Completely	"Partly"	Completely	Completely	Completely	Completely	Completely
	Acceptance Outcome	No information	No information	Completely	No information	No information	Completely	Completely	Completely	"Partly"	Completely	Completely	Completely	Completely	Completely
	Dialogue	No information	Completely	Non	Completely	Partly	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely	Completely
Resources	Financial	No	No information	No information	Completely	No information	No information	No information	Partly	Completely	No information	No information	No information	No information	Completely
	Personnel	No information	No information	No information	No information	No information	No information	No information	Partly	Completely	No information	No information	No information	Completely	No information
	Time	No information	Non	Non	Completely	Non	Non	Non	Partly	Completely	No information	Non	Non	No information	No information
	Equipment	No information	No information	No information	No information	No information	No information	No information	Partly	No information	No information	No information	No information	No information	No information
Expertise	Identification	No information	Partly	Partly	Partly	Non	Partly	Non	Partly	Partly	Partly	Partly	Partly	Completely	No information
	Role	No	Partly	Partly	Partly	Non	Completely	Partly	Partly	Completely	Completely	Partly	Completely	Completely	Partly
	Involvement	Partly	Partly	Partly	Partly	Non	Partly	Non	Partly	Completely	Completely	Partly	Partly	Completely	Completely

Source: own elaboration

2.1.3 MIDIR Indicator System and Scorecard

The project analysis was the basis for the design and development of so-called Key Performance Indicators (KPIs). They are the basis for the further work in the MIDIR project: the '(Balanced) Scorecard' and the formulation of the multidimensional and integrative risk governance concept. Key Performance Indicators could be described as quantifiable measurements (qualitative as well as quantitative) to reflect strategic performance of a process or an organisation. According to the definition of the Office of the Auditor General for Western Australia (1999) "*A key performance indicator is one which relates to the primary purpose of the output and/or outcome and/or agency. Key performance indicators should be high level indicators, giving an overview of the performance achieved. They should therefore relate to ends (performance with respect to the outputs and outcomes), not means (performance of the operational activities associated with the outputs and outcomes).*"

Key Performance Indicators were selected from the list of 35 aspects of Table 2. They are characterised by strong similarities in their implementation and their high relevance (see Table 1 above). Although all indicators are important the amount had to be reduced in order to guarantee the operability in the praxis. The Accounts Commission for Scotland (1998) states that without a limitation the "paralysis through analysis" problem is apparent. So, especially the number of indicators concerning stakeholder communication should be low. The scientific literature (e.g. Accounts Commission for Scotland 1998; Weiland 1999) recommends only a few (approximately 20) aggregated and comprehensible indicators.

The selection of the KPIs considered the already mentioned five scorecard perspectives: Basic/Content, Procedure, Stakeholder, Resources and Expertise. It is important that every of these perspectives is covered by at least one indicator to fulfil the multidimensional and integrated approach of the MIDIR project. For that purpose the following keywords were chosen:

- Principles; Trust; Objectives (Basic/Content),
- Accountability principle; Justification (Procedure),
- Representation; Access to information; Tolerance process & outcome; Dialogue (Stakeholder),
- Financial Resources; Personnel/stuff Resources,
- Role (Expertise).

Table 3 gives an overview about the selected Keywords, the explanatory key-question for every keyword, objectives of the keywords and finally the concrete KPIs.

Table 3: Definition of indicators for MIDIR approach

Keyword	Key-Question	Objective	Key-Performance-Indicator
Principles	What are the guiding principles?	Definition of guiding principles and a consistent "target system".	Degree of operationalisation of the guiding principles.
Trust	How far is attention paid to relevance of an atmosphere of mutual respect and trust?	Between all relevant stakeholders and decision makers an atmosphere of mutual respect and trust exists.	Reflection of trust concerning people/institutions.
Objectives	What are the concrete protection goals for subjects of the protection?	Definition of a comprehensive and obligatory understanding of the damage-protection-relation.	Degree of obligation concerning the protection goals for the subjects of the protection.
Accountability principle	How far is accountability defined at each level (process, each risk)?	Each actor knows his responsibilities and acts accordingly.	Definition of the responsibility.
Justification	How far is the activity concerning the management of existing risks justified?	Justification of action in the area of risk management.	Definition and agreement on a justification concerning the exposure to risk.
Representation	How far are all relevant social groups (and their representatives, stakeholder respectively) and their expectations known?	Identification of all relevant social groups and their expectations.	Degree of high profile of all social groups and their expectations.
Access to information	How far is information for all stakeholders accessible?	Access for all stakeholders to the relevant information.	Degree of the availability and understandability of the relevant information for stakeholders.
Tolerance process & outcome	How far do the stakeholders tolerate/accept the risk governance process and its outcomes?	All involved stakeholder tolerate/accept the risk governance process and its outcomes.	Degree of the tolerance/acceptance on the part of involved stakeholder.
Dialogue	To what extent is a constructive dialogue with the relevant stakeholders available or conducted?	Establishment of custom discourse-processes concerning risk topics.	Quality of discourse-processes with relevant stakeholders (i.e. public or private representatives).
Financial Resources	To what extent do the available financial resources meet the requirements of the defined Risk Governance Process?	Allocation of sufficient financial resources for a successful risk governance process.	Degree of realisation of a financial concept.
Stuff Resources	To what extent do the staff resources (technical qualification and number of people) meet the requirements of the defined Risk Governance Process?	Allocation of adequate staff resources.	Realisation of a staff assignment concept.
Role	How far has the role of experts been defined?	If experts are involved, their role within the decision-making process have to be defined.	Degree of definition and agreement concerning the role of experts.

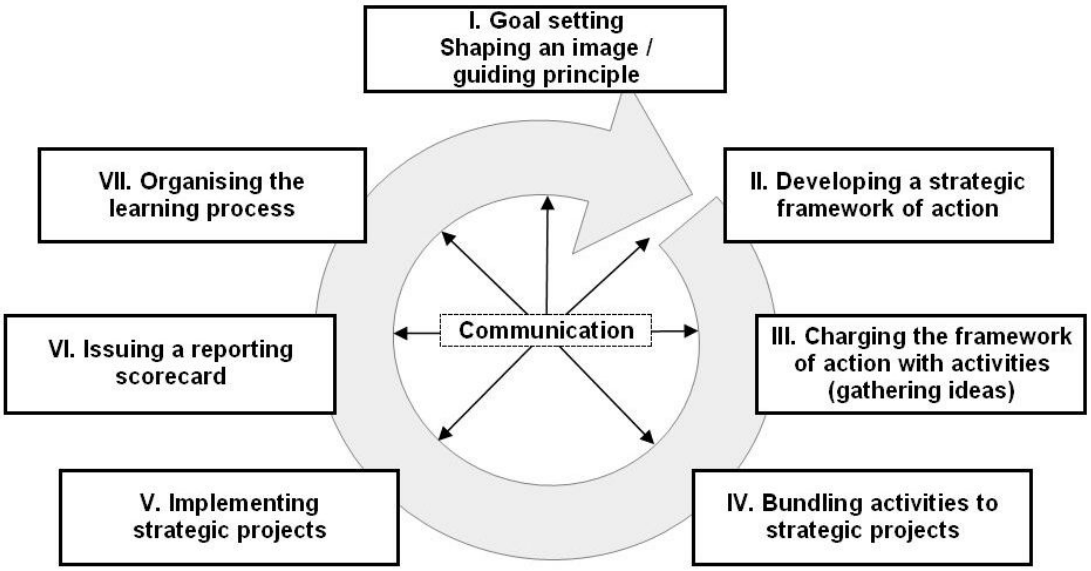
Source: own elaboration

Indicators alone cannot meet the demands of an integrative and multidimensional risk governance concept. A prerequisite for an assessment are clear measuring values for each of these Key Performance Indicators. The measurement values used can be described in a quantitative as well as qualitative way (see before) Not all indicators can be used in a quantitative way, some indicators (e.g. 'trust') need a particular approach for effective measurement. The MIDIR approach benefits from Gaiasoft's various experiments and research into 'Values Management' the measuring and managing of values. Several approaches have been considered and trialled. The approach chosen is based on multi-person rating system developed by Gaiasoft and built into the Integral Scorecard system to measure values, for example the degree of Trust. For example, ratings in response to the question: To what degree is this a trusting culture? A respondent then chooses a level based on a short description and the results are averaged.

- Not present
- Aspiring
- Developing
- Performing
- Flowing

By combining financial and non-financial (quantitative and qualitative) measures, the 'Scorecard' (see Figure 5) provides the responsible authority with more relevant information about activities they are managing.

Figure 5: Steps of a Scorecard



Source: Website Scorecard

According to the Accounts Commission for Scotland (1998) a Scorecard "*…is an agreed set of measures that provide managers with a comprehensive, but timely, view of an organisation's performance. The overall purpose of the scorecard approach is to enable managers to develop a robust set of performance measures that provides a comprehensive view of the overall performance of the organisation but that is also visibly linked to the key*

strategies and priorities of the organisation."[4] It is necessary to monitor the scorecard over time and to adapt the classification of the indicator to the measured results (e.g. the measurement value makes a shift from orange to yellow necessary, if the situation/indicator progressed). The Accounts Commission for Scotland (1998) states that there is a potential for incorporating agreed standards, or targets, into these measurement values and for developing specific initiatives for achieving such standards or targets.

Once the measurement values are elaborated, it is necessary to chose appropriate levels for their classification. This classification allows the assessment of the performance for a given process. In accordance with the scorecard methodology, the following five levels were chosen:

- Red = Initial
  - with no formal process;
- Orange = Managed
  - processes are planned and controlled;
- Yellow = Defined
  - processes described in standards, tools and methods;
- Green = Quantitatively Managed
  - sub-processes are controlled using data analysis;
- Blue = Optimizing
  - data are used to continuously improve processes (Website Balanced Scorecard).

It should be underlined, that the used measurement values as well as the classification have an exemplary function. It is necessary to define them according to the requirements of the responsible institution/body and situation/circumstances. In MIDIR this will be done by the two test cases in close cooperation with the stakeholders. The following tables show the suggested indicator system of a risk governance concept with common elements applicable for every risk setting (Part A):

[4] For further information see Accounts Commission for Scotland, 1998.

Table 4a: Scorecard (1 / 2)

	Red *Not started*	**Orange** *Beginning*	**Yellow** *Developing*	**Green** *Performing*	**Blue** *Improving*
Principles	no guiding principles	discussion process about guiding principles started	all guiding principles are defined	discussion concerning the „target system" started	principles through a consistent system of objectives – which are continuously reviewed and, if applicable, adjusted – are operationalised
Objectives	subjects of the protection and protection goals are not defined	process of discussion concerning the subjects of the protection and protection goals is initiated	subjects of the protection and protection goals are defined	obligation for protection goals is regulated	protection goals are continuously reviewed and, if applicable, adjusted
Trust	not to broach the issue of trust		trust is discussed on a case-by-case basis		trust is systematically reflected and, if applicable, trust-building measurements are made
Accountability Principle	responsibilities are not defined	process of discussion concerning the definition of responsibilities started	responsibilities are defined	responsibilities are implemented	responsibilities are continuously reviewed and if applicable adjusted
Justification	no justification	discussion about the justification started	justification exists	justification as a part of obligatory arrangements	existing justification is continuously reviewed and, if applicable, adjusted
Representation	neither social groups nor their expectations are known	process of the identification of stakeholders started (e.g. through an Interest-Analysis)	social groups are known	stakeholders´ expectations are known (Interest-Analysis is finished)	continuous monitoring of the expectations is implemented
Access to information	risk information is not available/accessible	discussion about the intermediation of the risk information started	guidelines for information-policy are available (incl. determination of access rights)	guidelines for information-policy are applied	continuous quality control (understandability and availability of information)

Table 4b: Scorecard (2/2)

	Red *Not started*	**Orange** *Beginning*	**Yellow** *Developing*	**Green** *Performing*	**Blue** *Improving*
Tolerance process & outcome	tolerance/acceptance of the process & outcome are ignored	discussion about the creation of tolerance/acceptance started	criteria concerning the measurement of tolerance/acceptance defined	measurement of tolerance/acceptance is part of the process	deficiency of tolerance/acceptance leads to a checkup of the process and/or its results
Dialogue	no discourse available	discussion about the initiation and elaboration of discourse processes started	interests and expectations concerning the discourse processes are known	dialogue concepts are accepted by the participants (i.e. agreement on objectives, competences, duties and responsibilities)	discourse processes are an integral part of the risk governance process and consequently reviewed
Financial resources	costs and benefits of the risk governance process are not monetized	calculation of costs and benefits is initiated	relationship of costs and benefits is transparent	financing is possible	sufficient funds are available, the requirements are continuously reviewed and if applicable adjusted
Stuff resources	no consideration about staff assignment	conception of required staff assignment is initiated	quantity and competences are defined (staff appointment scheme)	selection procedure is working	adequate staff resources are available, continuously reviewed and if applicable adjusted
Role	experts´ role not defined	definition of the problems/questions and requirements concerning (external) expertise, e.g. science advisor, communication consultant, evaluator...	possible experts known by name	agreement of the process participants to experts´ role and persons named	expertise is integrated into ongoing processes, including performance review

Source: own elaboration

Regarding the definition and quality of a particular performance measure the **SMART** test could be used. It should follow the subsequent characteristics:

- **Specific:** should be clear and focused to avoid misinterpretation;
- **Measurable:** can be quantified and compared to other data;
- **Attainable:** must be achievable, reasonable, and credible under conditions expected;
- **Realistic:** fits into the organization's constraints and is cost effective;
- **Timely:** must be doable within the time frame given. (McNeeney, without date).

The indicator system can be seen as an important outcome of the project, since monitoring and evaluation of governance processes might be relevant for a learning process towards recreating trust in public decision-making.

The users of this indicator system are persons and/or institutions who are responsible for or who are guiding a risk governance process in the context of a certain risk setting (internal/external) or in general for a certain area. Implementing the new risk governance concept within the two risk settings mentioned above will test its applicability in practice and is expected to lead to new, innovative knowledge about dealing with these risks in Europe. Although this approach is promising it should be stressed that there could be problems or hindrances concerning its realisation (see Chapter 2.1.1).

3 Conceptual framework for stakeholder involvement in practice

Stakeholder involvement was identified as one of the most important elements for a successful risk governance process during the work on Deliverable 1.1. This was confirmed at the Scientific Colloquium. Stakeholder involvement is especially addressed in the indicator system by the key-performance-indicators “Representation”, “Information”, and “Dialogue” (see table 4). 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 / applicable for stakeholder involvement?

Some measurement values for the key-performance-indicators (see Table 3) refer e.g. to the degree of agreement of relevant stakeholders on topics as e.g. guiding principles or tolerance to or outcome of the process.

A multitude of handbooks and guidelines on stakeholder involvement tools can be found in literature, describing various kinds of dialogue concepts applicable to different settings (see e.g. Bischoff, Selle, Sinning 2005; Steyaert, Hervé, Nentwich 2007). However a detailed description of a methodological procedure on how to identify the “relevant” stakeholders and get into contact with them is missing. Therefore this chapter presents appropriate steps for a practical application on how to involve public bodies and interest groups into risk governance processes with a benefit for all? It is a guideline how “stakeholder involvement” can be done practically. The

conceptual considerations describe a practical approach how to make use of the indicator system in real decision-making and operationalise the key-performance-indicators. This can also guide the work in the two test cases.

The MIDIR partner IKU brings professional competence to the project due to their long experience as consultants and dialogue facilitators in mediation and stakeholder involvement processes. After a literature screening on references regarding the method of an interest analysis (see e.g. EPA 2001; NEA, OECD 2004; Bischoff, Selle, Sinning 2005; Steyaert, Hervé, Nentwich 2007), it became apparent, that there seems to be a gap in applicable methods. Therefore the MIDIR-Team decided to summarise experiences of practitioners and extract commonly usable elements. Consequently, this chapter goes beyond the scientific state of the art. The given references highlight single aspects of the method and its application for selected issues.

Stakeholders include public bodies as well as non-governmental organisations, as e.g. consumer associations, industry or trade associations, trade unions, action groups, environmental groups, religious groups, etc. In a risk governance process they could be regarded additionally as “experts”, because they assert the values, opinions and claims of the groups they represent.

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 about dose-effect relationships and sensations (Renn 2004, 7) (see also Del. 1.1). 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..

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.

As mentioned above, a large number of handbooks and guidelines on public participation have been published and practical experiences made with advisory committees, citizen panels, public forums, consensus conferences, formal hearings, etc (see for example Steyaert, Hervé, Nentwich 2007; Bischoff, Selle, Sinning 2005). However, it is not possible to define a standard procedure or model on stakeholder involvement. Choosing stakeholder involvement tools is part of a larger planning process in which methods, context and goals have to be considered. Therefore the selection of an appropriate combination of tools is specific for each case. Part A focuses on procedural and methodological aspects that are applicable for *every* risk setting. Therefore this section illustrates an experienced based instrument for the strategic preparation of consultation or dialogue processes - the interest analysis. It does not develop a set of standard dialogue tools or discuss their pros and contras.

The interest analysis 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. Based on the expectations of the addressees, the dialogue facilitator uses an interest analysis to provide a customized stakeholder involvement concept. This can be seen as a prerequisite for the success of a (multidimensional) integrated risk governance concept.

Some considerations on the application of the interest analysis as a method for stakeholder involvement in risk governance are:

1. Stakeholder involvement in the risk assessing and managing process is regarded as good risk communication practice (see Wanczura et al. 2007). An interest analysis can help to build up relations and new communication structures for existing contacts;
2. Organizing consultation or dialogue processes require careful planning as well as preparation and relies on the willingness of the relevant actors to participate. With regard to content and procedural requirements the results of the interest analysis allow a customized dialogue concept and can help to improve the participants' trust and motivation to get involved in a dialogue;
3. If the issues are complex and discussed emotionally, external dialogue facilitators with professional communication competence could help to prepare ground for a constructive dialogue. It is essential that the external facilitator is officially accepted by all participants. This can be organised by the way of personal agreement by the participants e.g. during a first round table meeting;
4. In "quiet times" stakeholder involvement makes a valuable contribution to risk prevention. During this period the focus is on trust-building and on the development of adequate communication strategies to promote realistic risk reception and, where applicable, recommendations for individual protection behaviour in order to prepare for a crisis situation. In particular multipliers (e.g. the mayor, teacher or initiatives) play a significant role in preventing or coping with hazards;
5. People often over-estimate risks which experts consider to be minimal or under control (e.g. fears related to hazardous incidents in the chemical industry). Another possibility is that people under-estimate risks (e.g. careless individual behaviour with regard to the risks related to ultraviolet radiation) (see e.g. Wiedemann, Schütz 2006). Both cases indicate a need for dialogue oriented activities, in order to put additional value to printed information materials.

The application area and the different phases of an interest analysis are described in the following. The procedure comprises three steps: the choice of interview partners, the conduction of the interviews and the evaluation. The final product of an interest analysis is a written report on the interview results. In addition it contains recommendations on whether and how to continue the contact with the stakeholders.

3.1 Approaching stakeholders by an interest analysis

3.1.1 Why is an interest analysis useful?

With regard to the postulated multidimensional and integrated approach of the risk governance concept the interest analysis is a method to integrate opinions, demands and emotional attitudes of many persons. As a result all participants get a reasonable snapshot about existing opinions and arguments on a complex issue in which they can rediscover their personal perspective. This picture of the system is more comprehensive than the individual view. Therefore, all participants can better understand the background and estimate change options.

The interest analysis has been developed for issues that refer to a complex, sometimes even unknown stakeholder landscape that deals with (possibly latent) conflicts. Generally it refers to specific events and focuses on questions in order to elaborate a variety of different opportunities. An interest analysis can be used to organise an appropriate interaction with stakeholders according to the specific situation or – in the case of "new emerging" issues – to set up structures for initiating a discourse.

At the beginning the initiator for an interest analysis should clarify the opportunities for follow-up activities. Guiding questions are:

- Are the results of the interest analysis needed for improvement of the information policy?
- Should a temporary dialogue lead to answers and agreements on specific questions?
- Should the cooperation with relevant stakeholders be institutionalized?

The way of contacting the stakeholders varies in relation to the initial situation and the objectives of the analysis.

The interest analysis can elaborate procedural and methodological aspects for every risk setting in line with the multidimensional focus of Part A. It is applicable for natural hazards (e.g. flood protection), infrastructure projects with a high risk (e.g. building major biogas plants) or changing processes within organisations (e.g. team work in new constellations). Furthermore, the interest analysis can be used to prepare e.g. risk discourse processes for the launch of new technologies, e.g. concerning nanotechnology or electromagnetic fields.

An important part of the interest analysis is to figure out different viewpoints of the participants on the issue under discussion. In addition it discovers the interests behind positions and arguments. Positions are attitudes or perspectives towards an issue. Interests indicate an underlying advantage or benefit due to the position that the participant wants to achieve for himself or his organisation. The individual interest of one person can be regarded as the sum of personal values, the current state of knowledge, personal benefit and also the authority and possible influence on decision-making (Kessen, Zilleßen 1999; Voßebürger, Claus, 1999). The participating dialogue partners often know the position of the other actors only, rarely the interests behind (see Table 5).

Table 5: Difference between position and interest, illustrated by an example of a planned major recreational project in an economically underdeveloped area

Investor	Proponent	Interested in profit, planning reliability and efficient planning permission procedures
Mayor of the municipality	Proponent	Creation of new jobs and perspectives, particularly for adolescents and women
Environmental association (NGO)	Opponent	Protection of nature and water balance
Residents (partly land-owners)	Divided	Desire to protect nature on the one hand and desire to create jobs and/or earnings from land sale on the other

Source: Based on Voßebürger and Weber 1998, 110

Therefore an interest analysis can be of use for all involved partners.

The initiator can:
- confirm his assumptions on the divergent interests and arguments of the actors regarding a complex issue,
- promote the actors' mutual understanding of differences in positions and interests,
- raise the actors' willingness to get involved in a dialogue process and
- establish the basis for a successful dialogue process.

Stakeholders can:
- gain clarity about their own requirements and interests,
- get an overview about shared and divergent interests of other actors and
- influence changes by bringing in their own interests.

The (external) dialogue facilitator could:
- elaborate the central topics, open questions and the variety of interests of the involved actors and document consensus and dissent (content-related interests),
- gather the expectations of the actors towards the roles of the participants and towards the future handling of the issue (procedural interests),
- collect important information about self-perception of the dialogue partners and the way others look at them, and furthermore about rumours and the addressees' willingness to participate in reaching agreements and
- examine the "power play" of the actors with their relationships and influence-capabilities to each other.

The more the benefit is recognizable to the addressee, the more the willingness to get involved rises. It is crucial that initiators offer follow-up activities and do not raise unrealistic expectations. In addition it is important to keep promises or commitments (see also chapter 3.1.3 "When is an interest analysis reasonably applicable?").

3.1.2 What are the expected results?

The factual results from the interviews with all involved actors are summarized in (normally anonymous) a report. The report is often combined with conceptual recommendations for follow-up activities and can lead to a process that enables transparency, credibility and a goal-oriented dialogue.

It is a trust-building measure to make the report available to all interview partners. With this the actors get an overview on the basic framework. At best, the report about positions and interests provides a positive, opening effect. Particularly under initially conflicting circumstances the interview partners could gain a first understanding on the positions of the opponents. A key goal is to produce consensus about the dissents.

An interest analysis is a good basis for a dialogue process or for the following (individual) contacts. This was confirmed by numerous projects dealing with conflicts and risks from, among others, major infrastructure projects like Zollverein X in Essen (iku 2002), Container-Terminal IV in Bremerhaven (iku 2003) or the project Senne (iku 2006/2007). Experience also shows that the interviewees normally accept the results of an interest analysis. Consequently the probability to achieve support for dialogue concepts based on an interest analysis is higher than a “cold start” – although there is no guarantee. Trust is a crucial factor in this regard.

3.1.3 When is an interest analysis reasonably applicable?

An interest analysis is usually a more expensive procedure than other methods, e.g. a written survey. It can take several weeks, in rare cases even several months. The intention is to produce a comprehensive picture of the opinion landscape and to understand the whole system including personality issues and local peculiarities (Kühr, Löchtefeld 2004).

It is not reasonable to implement the interest analysis as a stand-alone diagnostic instrument without at least offering potential follow-up activities. If the participants cannot recognize any possibilities to influence the issue under discussion they are hardly motivated to take part in an interest analysis. In this respect it is important not to promise too much, but to raise realistic expectations regarding the procedural options and the time frame of the whole process.

Explaining the purpose of the interest analysis to the participants as well as carefully documenting their statements is important in order to build up trust and credibility. A lack of transparency over “what for” and “with whom” leads to mistrust and incredibility of the initiator (Voßebürger, Claus 1999).

3.2 Phases of an interest analysis

3.2.1 Preparation

Before starting the interest analysis some preparation is necessary.

The first step is to get a general idea on the situation. It starts with an analysis of written sources, e.g. magazines, press-articles, expert certificates, court orders, files, minutes of meetings, publications, letters of protest, possible correspondence with stakeholders etc.

Afterwards informal background discussions with a few central people in the process are carried out. This is a valuable method using a different perspective to get an idea on potential stakeholders, their way of arguing and their relationships. The involved persons act as individuals in different roles, but they are also connected with each other in dependency- or power structures. Some guiding questions are:

- Who are appropriate addressees for background interviews?
- Who knows the structures without (still) being part of it?

There are a number of possible contact persons, e.g. retired staff or former responsible persons in specific positions from the political/administrative area as well as from associations or enterprises. One of the dialogue facilitator's tasks (based on experience) is to make initiators aware of "typical" stakeholders from the political/administrative system (e.g. decision-makers from public agencies or local politicians), in order to balance eventual blind spots or simply raise the initiator's knowledge. There is no need to have a "stakeholder checklists" prepared. The most important question should be: Which interests exist and who represents them? This is a new way of thinking and crucial for the acceptance of decision-making.

Beside valuable internals, background conversations deliver a first list of relevant stakeholders and information about their net of relationships. At the same time the actors are potential interviewees in one of the following steps of the interest analysis.

Knowledge about the stakeholders net of relationships is particularly important in the context of a conflict resolution process because the dialogue facilitator has to take predictable coalitions or existing inter-personal problems into account.

3.2.2 Step 1: Selection of the interview partners

The results of the informal background discussions are usually sufficient to conduct interviews with identified relevant participants.

Those should represent all relevant interests and their corresponding representatives. A discussion on the choice of relevant participants can also be a topic for the first meeting with the initiator.

Sometimes it is advisable to involve critical persons already at the planning stage, e.g. citizen's groups. This can be useful to avoid opposition and create support of critical participants right from the start.

The following questions help to identify potential interview partners:

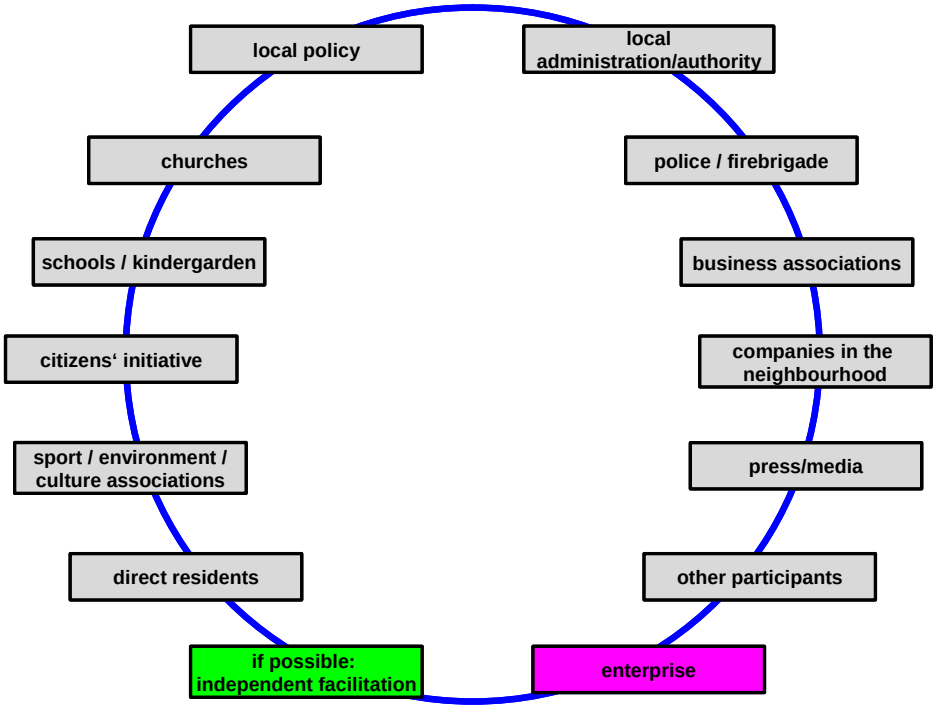
- Who (co)decides? Who is affected?
- Who has expressed his options already?
- Which interests exist and who represents them?
- Who has a stake in the issue?

Other relevant interview partners, multipliers or exemplarily selected (potentially) affected citizens, can be added. In order to expand the list of interview partners the involved actors are asked at the end of the interview:

- With whom should we urgently talk, too?

Depending on the issue, the number and kind of relevant addressees may vary, as the following Figure 7 and Table 6 show:

Figure 6: Potential stakeholders in the neighbourhood of an industrial plant



Source: Schüpphaus, Hammerbacher, Rotter 2004, 9

Table6: Stakeholders' main interests in a quarrel about privatisation and additional development plans of a housing company for a residential area listed as preservation site of historic interest

Interest	Who represents the interest?
	Tenants
We want to use our garden for recreational activity (play, children, silence,..).	• Families with children; elderly people,...
We want to use our garden for our subsistence (cultivating vegetables, fruit,..).	• Elderly people
We want enough open space for our children (Kids + Teenager).	• Families with children
We want to achieve own property in the residential area (actual stock and new development).	• Young couples + Families with children, who are living in the surrounding of the residential area
	Housing Company
We want to use the large gardens for new housing estates for additional earnings.	• "Viterra", a large housing company
	City Council/ Local authority
In particular we want to keep young families as taxpayers in our city.	• City; politicians
We want an efficient utilisation of the existing infrastructure.	• City; politicians
We want to protect the undeveloped areas and Greenfield sites in suburban zones and reduce traffic and commuting needs.	• City
We want to maintain the quality of life for the residents / citizens.	• City; politicians
We want to conserve the appearance of the old coal miners' residential area.	• Monument conservation authority

Source: iku 2002

3.2.3 Step 2: Realization of the interviews

The core element of the interest analysis is the one-to-one interview with the identified stakeholder. Depending on the issue and stakeholder landscape, five to 25 interviews are necessary (Kühr, Löchtefeld 2004), and in some cases even more.

Interviews guidelines have to be developed allowing being responsive to the perspectives of the addressees. Depending on the situation questions can be rephrased, skipped or added during the interviews. The sequence of the various topics is flexible. Answering categories should not be provided.

With this method the relations and the complex pattern of attitudes can be analysed. In addition it allows an assessment of the reasoning behind the answers. The advantage of this kind of interview is the possibility to reduce the psychological distance to the interview partner and to gain deeper information from her/him in comparison to standardised interviews with prepared answer possibilities. Consequently the structured dialogue is an appropriate method for the interest analysis. Disadvantages are very high requirements to and expertise of the interviewer for the moderation and the analysis.

Ideally the interviews are conducted during personal meetings. In exceptional cases a telephone interview can be sufficient. This depends on the financial and economic resources but also on the conflict potential of the subject. The more conflicts are expected, the more important is the personal contact.

The personal dialogue has a particularly important function in the preparation of difficult topics which are characterised by heterogeneous arguments, conflicting values or topics with high uncertainties. The question of the personal interests leads the interview partner to profound self-reflection and a clarification of his own request. Dealing with conflicts needs an appreciative and independent position of the interviewer. It gives the interviewee the security that his statements are fully understood and documented. The more a person receives appreciation for her/his own interests the more appreciative she/he has towards the position of others. (Gläßer, Kirchhoff 2005).

The interviews deal with factual questions as well as procedural aspects. The addressees are asked about their evaluation of the situation and their requirements. Furthermore questions deal with their perception of other actors and which motives for action are assigned to them.

Possible questions for structuring the interviews could be:

- with view on expectations: ”What do you expect from the project / the measures / the acting of…?”
- with view on the arguments: “Which effects do you expect? Which of those do you assess positive / negative?”
- with view on the roles of other actors: “Which role do you assign to your organisation? Which role / responsibility to other actors?”
- with view on possibility of agreement: “What could make the project / the techniques / the planning / the procedure unacceptable for you?”
- with view on follow-up activities: “What determines the further procedure / the information policy / the dialogue for you? Which topics / questions should be handled and how?”

An example of a questionnaire used for interviews on a nature conversation project can be found in the Appendix.

Also sceptical organisations or persons can be motivated to participate by clarifying the relevance of the topic for their goals. They get the opportunity to demonstrate their expectations and requirements and feel that they can influence future developments and changes.

The interviewer is usually paid by the initiator of the interest analysis and consequently under suspicion to act biased. Therefore transparency about contract and process are very important to create trust and credibility (Kühr, Löchtefeld 2004; Voßebürger, Claus 1999).

With regard to the key-performance-indicators “Trust” and “Tolerance to the process and outcome” (see Table 3), the interview partners should be informed about the further use of the interview results, e.g. if they are transferred into a report or if minutes will be produced and who will have access to the individual statements. Confidential information has to be treated confidentially.

It is sometimes helpful (e.g. on request of an interview partner) to ask for a feedback on the minutes in order to ensure that the statements were fully understood. This gives the opportunity for specifications, corrections or qualifications of a statement. Missing this might lead to conflicts and to a loss of trust.

3.2.4 Step 3: Evaluation of the interviews

It is a trust-building activity to summarise the participants’ interests and objectives in an (anonymous) report and to make it available for all interviewees. The report covers also statements of the interview partners about their willingness to participate in follow-up activities and eventual preconditions to do so.

With respect to the key-performance-indicators “information” and “Dialogue” (Table 3) the interviews provide important details on the main topics and expectations. Therefore the results of the interest analysis are the basis for recommendations on adequate procedures and follow-up activities.

Based on the experience from a wide range of many different projects the report on the results of the interest analysis can be structured as follows (see iku 2002, iku 2003, iku 2006/2007 and further examples available at www.iku-gmbh.de):

1. Abstract
2. Reason, objectives and approach
3. Description of the situation
   - Initiators’ objectives
   - Case history
   - Facts related to the topic
4. Results of the interviews
   - Interests and positions
     - What are the interests? Who represents them?
     - Overview (if possible with support of visualisation tools) of perspectives, existing structures of collaboration and experiences of cooperation

- Central topics and argumentation
  - Topic 1 (e. g. scientific data to the topic)
  - Topic 2 (e. g. transparency of planned measures)
  - Topic 3 (e. g. provision of information)
  - Balance of alternative measures
- Open questions

5. Recommendations for further procedures
   - Estimation of chances for agreement
   - Suggestions for further procedures (information-, consultation- and/or dialogue activities)

3.3 Possible follow-up activities

There are numerous options using modern discursive participation models to involve stakeholders, employees or the public as partner with a fair chance to participate in planning or decision making processes (see for example Steyaert, Hervé, Nentwich 2007; Bischoff, Selle, Sinning 2005). In the following some suggestions are briefly outlined.

In order to develop a concept for subsequent activities on the basis of an interest analysis the following questions are helpful:

- Which are the topics where stakeholders have an information demand?
- Which topics should be addressed in the dialogue process (demands and willingness to participate)? Which people / organizations should be involved? Which methods would be appropriate?
- What topics or areas do need actions (Standardization and regulation, technological developments, risk analysis, etc.)?
- Which particular tasks and topics did the actors mention?
- Which topics could be reasonably separated or summarized?
- Which conditions (time line, profoundness level, etc.) are adequate?
- How can efficiency and fairness be ensured?

Follow-up activities can have a wide variety. Perhaps the information strategy of the initiator changes as a consequence of the results of an interest analysis. Or a temporary or a institutionalized dialogue will be set-up (see chapter 3.3.1). The choice on adequate work forms, methodological features and the "right" participants depend on the initial situation and the results of the interest analysis.

3.3.1 Scenario 1: A temporary dialogue with stakeholders

When dealing with particular issues concerning planned changes, e.g. new (risk) mitigation facilities, or after specific incidents that raised questions or protest, e.g. an accident with injuries, it is recommend to begin with a temporary dialogue process. At the end of it, it can be decided whether and how the dialogue should be continued or if the contact with the stakeholders can be reduced to informal contacts.

Two participation models are possible when designing a dialogue concept (Bischoff, Selle, Sinning 2005):

- Dialogue facilitation / conflict resolution with representatives (e.g. the round table model)
- Direct participation of affected or interested actors (e.g. citizen-meetings, workshops, information evenings, etc.)

Information about the state of the process and the next steps should be continuously available if they are relevant for the general public. Press releases, newsletters, information boards and, depending on the interest to co-operate, further measures, e.g. a neighbourhood newspaper, could be valuable for this purpose.

The concept "Round Table" illustrates that nobody possesses the decision power alone. The task of a round table could be to agree on further procedures, support the participation process, sum up results, negotiate compromises, formulate recommendations, etc.

Based on the results of the interviews and the requirements to maintain group work, the dialogue concept includes a suggestion for the participants to be invited for the follow-up activities, the objectives and the tasks of the round table.

On the other hand direct participation opportunities can be offered. Citizen meetings or assemblies can be used for preparing the information basis and getting feedback on the recommendations of the round table.

Information meetings dealing with relevant topics are an offer for all interested citizens or (potentially) affected people to participate in the process. Confidential one-to-one talks may lead to a deeper insight in opportunities and limits with regard to certain questions. Smaller groups can work on answers to particular questions or can develop recommendations.

3.3.2 Scenario 2: An institutionalized dialogue with stakeholders

With regard to on-going issues with relevance over time, e.g. security in the neighbourhood of Seveso-II plants or in areas with the risk of natural hazards, it can be useful to institutionalize a dialogue process. There are several possibilities to give a name to this process, e.g. neighbourhood dialogue, a multiplier network, advisory or task force. All names express an institutionalised dialogue process suitable for the continuous “public relations” with stakeholders. The issues are comparable with Scenario 1, however the meetings have a lower frequency in quiet times. In case of a good reason, a special session can interrupt the rhythm that was chosen.

If trust building succeeds a mutual commitment develops between the involved dialogue partners. In continuous dialogues participants particularly appreciate to get immediate feedback on current incidents and answers to inquiries or complaints. Depending on the function of the committee, the degree of participation varies from mere mutual information to a possibly far reaching participation in decision making processes.

Such committees can function for example as an "early-warning-system" for issues that matter to multipliers or the general public. Participants are ambassadors into both directions: they inform the other members of the committee and carry results of the work into their networks. Or the committees are positioned as a platform for critical discussions or function as pioneers for finding compromises, e.g. for preparing decisions. Instruments, design, intensity and the participants can change in the course of time. Type and scope of the offers are aligned with the current needs.

4 General conclusions

Considering the described aspects in the previous chapters it can be summarised that the work on the first part (Part A) of the indicator-system was successful: the elaborated indicator system is appropriate for a successful risk governance process. This was tested and confirmed in a audited theoretical and a practical step.

The theoretical confirmation is given by the analysis of the different national/European/international projects and initiatives. The elaboration of this indicator system is based on the assessment of different studies and was discussed during the Scientific Colloquium in January 2007 in Dortmund, where various experts from different research areas commented on the first part of this indicator system.

A first, preliminary practical verification is given by the application in real risk settings (especially concerning risks related to criminals under hospital treatment order – forensic psychiatry). During the two Project-Group-Meetings in March 2007, initiated by the Federal Ministry of Health of Rhineland-Palatinate in Germany and conducted by authorized representatives of the clinics, the practitioners and participants of the meetings confirmed the theoretical work on the first part (Part A) of the indicator system. Moreover, it will serve as an orientation for the elaboration of the second part (Part B). The second envisaged transferability test (health risk due to e-commerce, Work package 2, Task 3) has not been resulted into a similar prove yet. However, it is supposed that the transferability of the elaborated risk-governance indicator system will also be possible for this case study, looking at the implementation plan and the discussions during the Scientific Colloquium.

As already mentioned above, an effective indicator system or risk governance process has to include three phases: Develop a strategy, Implement and Evaluate/Monitor. These phases have to be regarded during the further work with the indicator system. Even if transferable to other risk settings it is not guaranteed that every measuring value can be used in different circumstances in the described manner. Therefore such an indicator system and concept needs a frequent monitoring tool in order to measure its success and the improvement over time. It is not a closed and static system with an ending, but an ongoing and dynamic process with a feedback loop and a learning process which allows an adjustment on the changing requirements, surroundings and prerequisites.

Nevertheless, common risk governance principles accepted by different projects designed for several risk settings, applied in different risk cultures, have been identified. This is a certain value in its own. Moreover, the final outcome of this analysis, the proposed indicator system, is an important contribution to the postulated multidimensional and integrated risk governance concept and should serve as the basis for the mentioned ongoing monitoring tool. Such a monitoring system facilitates data collection, measurement of progress and, most important, a comparison of the achieved (actual) results with planned ones. This is of great relevance for a governance approach intended to follow democratic principles.

However, the indicator system is only a part of the whole risk governance concept which has not been completed yet, since the application test needs

to be complemented. This test will be finished by the end of 2007. The test-cases offer also opportunities to make use of the practical guidelines for stakeholder involvement as presented by chapter 3.

During the Scientific Colloquium best practice of risk governance were discussed. The need for involving stakeholders was a precondition for this, but the participants confirmed that appropriate instruments as well as indicators are often missing. It can be presumed that they are at least not well documented in (cross-over) studies or reports.

With the interest analysis practitioners get a conceptual framework for stakeholder involvement. It has been developed for issues that refer to a complex, sometimes even unknown stakeholder landscape and deal with (possibly latent) conflicts. Generally, it refers to specific occasions and centres on questions in order to elaborate a variety of opportunities.

The interest analysis can:

- be used to appropriately organize the interaction with stakeholders according to a specific situation,
- help to understand the whole system (with a comprehensive overview on positions and interests of stakeholders) and
- promote trust-building among stakeholders and encourage their willingness to participate in a dialogue process.

On this basis a customized stakeholder involvement concept can be developed. This can be seen as a prerequisite for the practical applicability of a multidimensional integrated risk governance concept.

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6 Appendix

Example of interview guidelines for an analysis of the situation and interests in the major nature conservation project "Senne"

Background

The central goal of the major nature conservation project "Senne" in the German federal state North Rhine-Westphalia was the protection, development and experience of nature on app. 1.800 hectares of mainly private grounds. The project started in 2004 and was carried out by the administration unit of the nature park "Eggegebirge und südlicher Teutoburger Wald".

At the beginning various different actors expressed their interest: nature conservation goals, local (business) development goals, forestry and agricultural use by the land-owners etc. People were aware of both the chances of getting several million Euros funding from the state and the possible negative consequences, e.g. the risk of a decreasing economic basis. Conflicts came (latently) on stage and rumours circulated.

In 2005 an interest-analysis and a following dialogue were implemented. They accompanied the planning process for nature conservation and development measures until 2007 (see iku GmbH 2006/2007). The results are currently being evaluated in order to decide on funding for the realisation phase.

****

Questionnaire

Interview partner and organisation: .....

Location/Date of the interview: .....

Interviewer: .....

Material to have on hands

- 2 maps (zoning of the project and the planned national park)
- Dialogue information leaflet
- Description of activities of interviewer from the offer to the financing body (without costs)

Key-words for introduction

- Short Presentation of the company and the interviewer
- Interview objectives: exploring interests and expectations; identifying important topics and possible scopes of agreement = Basement for a concept that allows transparency, credibility and a goal-oriented dialogue
- Formal issues: explain structure of questionnaire and interview time (ca. 30 – 60 min.), handwritten notes, report of results in an aggregated form (transparency/if necessary confidentiality)
- Products: inform on report of results of the interviews and concept recommendations for the dialogue process (both public)

Questions

1) Background and information level

How familiar are your with the issue (involvement in the project offer phase yes/no)? Are you missing information? Which? From whom?

What is your own role (personally/organisation) in respect to the project?

.....

.....

Which effects do you expect due to the project?

Which of those do you estimate positive/negative?

What could make the project unacceptable for you?

.....

.....

2) Retrospect / conflict history about nature conservation

What influenced the discussion about nature conservation and regional development of the Senne-Region in the past? [e.g. Senne-Vision, landscape planning etc.]

Who were the opinion leaders?

.....

.....

Opposite lines of arguments? Reasons for conflicts?

What has left a scar from previous conflicts?

.....

.....

Issues to be asked indirectly by hidden questions: role and credibility of the initiator and the competent authorities?

.....

.....

3) Status-Quo and development potentials

What are the special strengths and qualities of the region? What is the weight of the project area? [not more than three keywords!!!]

.....

.....

Which economic, ecological and social general conditions will influence the area (in the following 5 to 10 years)? Which actors will influence that?

.....

.....

4) Expectations to information and dialogue

Create a reference to the role definition from the beginning!

Conceptual questions

Who should know what about the project? Important information channels? How can these persons be reached? Own offers for support?

[e.g. Are there information requirements in the neighbourhood? Role of the media?]

.....

.....

What do you think is necessary for the further dialogue? Which objectives would be connected with it, which topics, who should be involved? Extent of scope? Expected conflicts (if possible scenarios on solutions)?

.....

.....

Expectations on collaboration

How would an optimal result look like?

What should not happen in any case?

.....

.....

Give opportunity to specify expectations to the project initiator, the facilitator, the involved authorities or third parties!

.....

.....

Issue to be asked indirectly by hidden question*: other (essential) interview partner?*

.....

.....

Thank you for the interview!

Is there something else what you want us to consider?

.....

.....