Wadden Sea Forum Secretariat

Sustainable Development Strategy for the Wadden Sea Region

Final

March 2004

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Report no.	P/58666/pdoc
Issue no.	4
Date of issue	9 March, 2004
Prepared	COA, PGM, AR
Checked	MSJ
Approved	AR

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Summary

Background

The Wadden Sea Forum (WSF) is an independent platform of stakeholder groups in the trilateral Wadden Sea area (The Netherlands, Germany and Denmark). The Forum was established pursuant to a decision at the 9th Governmental Wadden Sea Conference in Esbjerg 2001. The Forum was asked to develop a Sustainable Development Strategy for the Wadden Sea Region for the 10th Governmental Wadden Sea Conference in 2005.

Purpose

With regard to this, the Forum has launched the present study with the overall aim of:

- **Presenting background information and suggestions which will contribute to the process of elaborating a sustainability strategy for the Wadden Sea region.**

More specifically, the report:

- analyses the concept of sustainability and how it has evolved over time;
- presents three theoretical sustainability "schools";
- compares the German, Danish and Dutch sustainable strategies;
- analyses the impact sustainability has had on public decision-making and the business sector; and
- provides a review of various sustainability methods.

Based hereon, the report presents main elements of the Wadden Sea Region Sustainability Strategy.

The Concept of Sustainability

The concept of sustainability entered into political parlance when the Brundtland Report was launched in 1987. It defined sustainability as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The content of the concept has changed over the last decade parallel to attempts by many organisations and countries to operationalise and implement the concept. It used to be associated with environmental protection but, nowadays, represents an attempt to balance and integrate economic, social, and environmental concerns. It was primarily a substantial concept which stated a desired destination (something achieved) but is increasingly seen as a procedural concept: a learning process and rules for how we make decisions.

The table below presents what can be called a "modern" understanding of sustainability.

A "modern" understanding of sustainability: Substantial and procedural elements

Substantial **elements of sustainability**	**Procedural** **elements of sustainability**
Defined as encompassing **three dimensions** and the relative weight attached to these	**Decision-making basis**: All three dimensions should be analysed and incorporated into decision-making
Social dimension: unemployment, local/regional development, health, social cohesion, distributional aspects, etc.	**Trade-offs** between the three dimensions should be made explicit to actors and the public
Economic dimension: macro economic development, competitiveness, economic growth, innovation and industrial development, etc	**Alternative** solutions should be considered
Environment: Biodiversity, landscape integrity & wildlife, water quality, air quality, soil quality, climate change, etc.	Public **participation** and consultation should be encouraged
Inter-generational fairness	Impact **assessment** tools should be applied in decision-making

Theories of Sustainability

There are a number of theoretical "schools" advocating different definitions of sustainability and how to achieve a sustainable development. *Environmental economics* is a "liberal" approach to sustainability. It defines sustainability as constant or increasing capital stocks. The capital forms are, to a large degree, substitutable but critical natural capital needs to be preserved. Market-based solutions, some command-and-control regulations, plus focus on the total capital stocks of societies are key elements in a strategy for sustainability. *Ecological economics* argues for a stronger version of sustainability where broader segments of natural capital are labelled as "critical". According to *political ecology*, a systematic greening of capitalistic economies will be met with resistance from powerful private interests. Long-term sustainability therefore necessitates a radical new political and economic order.

National Sustainability Strategies

It will be easier to implement the Wadden Sea Region Sustainability Strategy if the three countries perceive sustainability similarly. The comparison of the countries' national sustainability strategies shows that there is a quite high degree of consensus across the countries at the overall level. Examples of common objectives are energy efficiency, high level of environmental protection, health, innovation and modernisation, population issues, and participation. There are other similar features in the approach to sustainability, cf. the following table.

	Perspectives for Germany	The Action Plan The Netherlands	A balanced future Denmark
Definition of sustainability	Reference to Brundtland Defined as three dimensions	Reference to Brundtland Defined as three dimensions	Reference to Brundtland Defined as three dimensions. The plan is most elaborated on the environmental dimension
Trade-offs between three dimensions	It is acknowledged that conflicts over goals are inevitable No mechanism is proposed to weigh the three dimensions against each other	No mechanism is proposed to weigh the three dimensions against each other	No mechanism is propose to weigh the three dimensions against each other
Use of indicators	A set of 21 indicators is presented as an important component of the strategy	36 preliminary indicators. A set of indicators is under preparation	14 key indicators plus sectoral and horizontal indicators

The impact of sustainability

Sustainability is more than a "nice concept" that everybody can embrace. It has had a significant impact on public decision-making, therein that sustainability is becoming an overriding national objective; new decision-making practices are introduced (such as EUs Impact Assessment methodology); it has addressed the need for better coordination between sector bureaucracies, and sustainability has sparked an interest in new ways of measuring societal development (via sustainability indicators). It is more difficult to assess the impact on the private sector but it is likely that the concept has stimulated a new perception of the role of environmental, social and other ethical concern for business.

Sustainability Assessment

As mentioned, sustainability has motivated the introduction of new procedures to integrate policies and to reveal the broader impacts of a given policy. In the EU system, the Impact Assessment has recently been developed as a decision-aiding tool, which aims to provide transparency to the decision-makers and the public. It is conducted in two stages: a preliminary assessment and, if necessary, an extended impact assessment. In the UK, local and regional sustainability assessments have seen their first light.

Towards a sustainability strategy

The main elements of the Sustainability Strategy for the Wadden Sea region are outlined. It is suggested that the strategy focuses on five elements:

- **Framework**. The strategy must be *realistic*. Understanding and describing the framework conditions should be an integrated part of the strategy.
- **Principles**. The strategy must be *forward-looking*. It is necessary to set forth principles that can guide the path towards sustainability.
- **Themes**. The strategy must be *focused*. It is therefore necessary to select relevant themes to focus on; themes that the key stakeholders in the Region can relate to and perceive as meaningful.

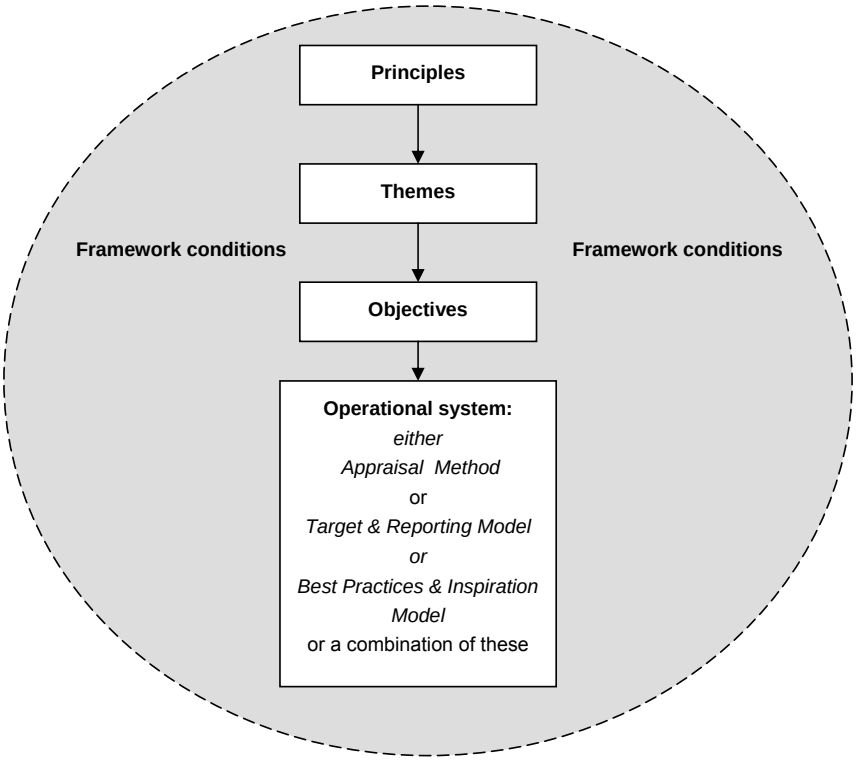
- **Objectives**. The strategy should put some *obligations* on the key stakeholders (in a political sense, as a minimum). Specific and measurable objectives shall be developed.
- **Operational system(s)**. The strategy must be *implementable*. It is therefore imperative that the Wadden Sea Forum determines a proper operational system for implementing the strategy.

Regional based strategy

The strategy is to be developed from the "inside"; for that reason the strategy is to be based on a genuine stakeholder approach. It is the regional stakeholders' opportunity and responsibility to develop and define the strategy, which can be based on the suggested main elements.

From framework and principles to an operational system

The process for the Wadden Sea Forum of determining the main elements of the strategy is iterative and several "loops" will most likely be necessary before the Forum eventually can submit its recommendation to the Wadden Sea Governmental Conference in 2005. The process of going back and forth between the main elements is constructive and necessary to reach a proper strategy. It is therefore, primarily for the sake of clarity, that we have presented the main elements as progressing in one direction: from principles to operational system. The relations between these main elements are illustrated in the figure below.



Framework conditions

The strategy must be realistic. It shall not only maintain the relevant principles and objectives but also provide advice on how the objectives can be achieved. It is therefore important to critically consider the framework conditions cf. the table below.

Contextual factors
Presumable low enforcement capacity because the realisation of the strategy will involve three countries and several public administrations
The key actors in the region may disagree as to the content of the strategy
Are the actors in the region willing to accept that the sustainability strategy may restrict their room of manoeuvre? (problem of collective action)
Who are demanding the strategy? There is a potential lack of ownership and commitment

It is recommended:

- that the Wadden Sea Forum, prior to completing the strategy, thoroughly discusses (and therefore "tests") the willingness of authorities and actors in the region to attach importance to a Wadden Sea region sustainability strategy;
- that the strategy is drafted with a clear focus on its implementation;
- that the strategy therefore presents the institutional set-up needed to implement the strategy and identifies the key actors.

Principles

The strategy must be forward-looking. Based upon the existing framework conditions and the challenges for setting up a useful sustainability strategy, the overarching principles for the Region should be defined. A "Shared Vision" of trilateral co-operation is laid down in the Wadden Sea Plan from the Stade Declaration of 1997. It contains five principles (healthy environment, sustainable use, maintenance of values, integrated management and involvement of the community). Based at the discussion at the latest meeting of the Wadden Sea Forum (in Oldenburg, Germany, October 2003) it is suggested that the existing five principles are supplemented with two additional principles, namely:

- "Balanced and equitable economic development decoupled from the environmental pressure"
- "High levels of employment, social cohesion and inclusiveness"

Themes

The strategy must be focused. It is therefore necessary that it covers the issues that are of particular relevance for the Region.

It is suggested to include the five themes already covered by the so-called Thematic Groups under the Forum, together with the themes Tourism and recreation, Costal Defence, Infrastructure, Spatial planning and Shipping safety as identified by the Forum as priority themes.

It is also recommended to consider the additional themes that were suggested at the latest meeting of the Wadden Sea Forum (in Oldenburg, Germany, October 2003). It is therefore recommended that the final selection of themes should be based on the following gross list of themes:

- Policy and Management
- Industry and Harbour
- Energy
- Agriculture
- Fisheries
- Rural development (education, demography)
- Protection of Wadden Sea, landscape integrity, and biodiversity
- Regional identity
- Tourism and recreation
- Costal protection
- Infrastructure
- Spatial Planning
- Shipping safety.

Objectives

The strategy should put some obligations on the key stakeholders (in a political sense, as a minimum). Hence, specific objectives, for each of the themes, shall be determined. It is recommended that determination of objectives will be a subject for discussion at the next Wadden Sea Forum meeting (April 2004).

Operational systems

The strategy must be implementable. It is of utmost importance that the Wadden Sea Forum focuses on the practical implementation of the strategy. In order to facilitate this discussion, three operational systems have been developed - ranging from a very ambitious to a less ambitious model, cf. the table below.

Dimension	An Appraisal system	A Targets & Reporting system	The Inspiration & good practices system
General characteristics	A model which "forces" political and administrative decision-making to consider regional impacts in a systematic way - via a Wadden Sea region Impact Assessment	A model which set forth a number of substantial objectives and which systematically monitors the development in relation to these but otherwise rely on a voluntary approach	A model which stimulates innovation via the systematic articulation of good practices of sustainability in the region
Are institutional changes necessary?	To a big extent	To some extent	Only minor changes
Main actors	New strong Wadden Sea Region coordinator Municipalities and counties	New Wadden Sea Region coordinator Governments, municipalities and counties	Municipalities and counties as well as other stakeholders
Prerequisite for success	A high degree of a common "Wadden Sea region" identity	That local and regional decision-makers will not "forget" the objectives set forth	That there is willingness to learn and willingness to share information on a voluntary basis

It is recommended that the model called "Targets & reporting" is used as the point of departure for developing the Wadden Sea region sustainability strategy as it combines feasibility with momentum.

1 Introduction

The concept of sustainability

The concept of sustainability has been discussed widely during the past two decades - and it has, to some extent, changed its meaning along the way.

During the same period, the concept has been made more and more operational in the form of assessment methods, systems of indicators, and sustainability policy plans. This report can be seen as a part of this overall attempt to outline practical procedures deriving from an explicit application of the sustainability concept.

The Wadden Sea Forum and sustainability

The Wadden Sea Forum (WSF), which is an independent platform of stakeholder groups in the trilateral Wadden Sea area (The Netherlands, Germany and Denmark), launched the study.

The Forum was established pursuant to a decision at the 9th Governmental Wadden Sea Conference in Esbjerg 2001. It was asked to develop a Sustainable Development Strategy for the Wadden Sea Region to the 10th Governmental Wadden Sea Conference in 2005. The overall aim of this report is therefore:

- **Presenting background information and suggestions which will contribute to the process of elaborating a sustainability strategy for the Wadden Sea region**

Content of the study

More specifically, the report presents the following issues:

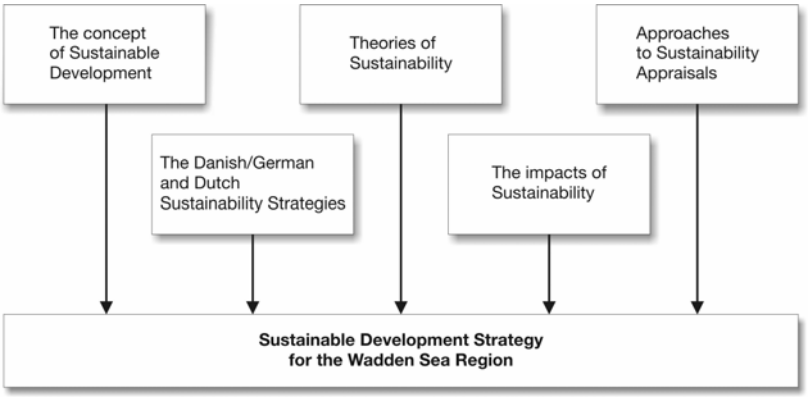
- A brief review of the international discussion on sustainable development and how it has evolved (Chapter 2)
- An overview of theories of sustainable development (Chapter 3
- A review and comparison of the German, Danish and Dutch sustainable development strategies (Chapter 4)
- A brief review of the impacts of sustainability on public decision-making and the business sector (Chapter 5);
- A review of various sustainability assessment methods (Chapter 6);

Based hereon, the report presents the five main element of the Wadden Sea Region Sustainability Strategy (Chapter 7).

Approach

Some of the issues covered by the study are general and abstract; others are specific and delineated. In spite of that, it has been the ambition to contextualise the study findings, cf. the figure below. This means that all chapters contain a summary which highlights the relevance of the findings in relation to the specific task of developing a sustainability strategy for the Wadden Sea Region.

Figure 1.1 Relating study findings to the Wadden Sea Region



Preparation of the report

This report has been prepared by COWI with guidance from the Wadden Sea Forum Secretariat. A draft version of some of the main elements of the report was presented orally at the third Wadden Sea Forum meeting 30 and 31 October 2003 in Oldenburg.

The study is based primarily upon relevant literature and a documentary review. Several data sources have also been consulted such as the homepages of ministries, research institutes, and international organisations. Throughout the text, references are made to the main sources of information. A more comprehensive list of relevant literature is found in Annex 1.

2 The Concept of Sustainability

Purpose of chapter

This chapter presents the history of the concept and shows how it has changed during the recent decades. It appears that there is no generally accepted definition. However, one recurrent theme in the "modern" understanding of the concept is to define sustainability as encompassing three dimensions - the economic, social and environmental. However, there are certainly many viewpoints on how to weigh these against each other and how to make trade-offs between them.

2.1 The development of the concept

World Conservation Union

The concept of sustainable development first appeared in the first World Conservation Strategy published by the World Conservation Union (IUCN) in 1980. The strategy argued from a largely environmental standpoint and emphasised the need to invent and apply patterns of development which conserved those resources essential for human survival and well being. The definition of sustainability proposed was:

"Sustainable development – maintenance of essential ecological processes and life support systems the preservation of genetic diversity and the sustainable utilization of species and ecosystems" (IUCN, 1980)

It thus emphasised the need to maintain critical natural capital as well as biological diversity and made little or no reference to the economic and social dimensions of sustainability.

Our Common Future

The term sustainable development entered the vocabulary of policy planners and decision-makers following the publication of Our Common Future, the report of the World Commission on Environment and Development (commonly known as the Brundtland Report after the Commission's chairwoman) in 1987 (United Nations, 1987). The Commission described sustainability as:

"(D)evelopment that meets the needs of the present without compromising the ability of future generations to meet their own needs".

This characterization implies that future generations should enjoy the same opportunities for consumption as the present generation does. The definition has a strong human need-centred ethical stance, concentrating on the satisfaction of human needs rather than the protection of the environment as is

the case in the above mentioned strategy from the World Conservation Union. It is noticeable that the definition of sustainability is not a very strict one. This was a deliberate policy of the Commission.

The Brundtland Report's understanding of sustainable development contained two key concepts. First, the concept of *needs*, in particular the essential needs of the world's poor, to which overriding priority must be given. Second, the concept of *limitations* on the environment's ability to meet present and future needs.

More significantly, the Brundtland report appears to depart from the earlier conflict between development and conservation. Indeed, the Brundtland Report argued that the concept of sustainable development provides a framework for the integration of environmental policies and development strategies thus breaking the perception that environmental protection can only be achieved at the expense of economic development.

OECD

The OECD has been one of the main international agenda-setters as it has published a number of reports on the issue on sustainable development. In the period 1999-2001, the OECD had a three-year project on the issue, and it has continued its involvement. The OECD applies a broad understanding to the issue of sustainability. This is illustrated by the fact that the OECD's homepage on sustainable development is introduced as follows:

"Sustainable development implies a broad view of human welfare, a long term perspective about the consequences of today's activities, and global co-operation to reach viable solutions." (OECD, 2003).

The Earth Summit

The 1992 Earth Summit in Rio ensured that Sustainable Development became a goal for Governments around the world on signing the Agenda for the 21st century. The Summit is also notable for the agreements on global environmental issues such as Climate Change and Biodiversity. The summit went beyond international governments and included many Non-Governmental Organisations, reflecting the growing spirit of cooperation that had sprung up in tackling environmental issues and the increasing focus in the sustainability discourse on "participation". Its aim was to achieve consensus on ways to balance economic development processes with global ecological conservation.

Three dimensions

By the late 1990s, two other noticeable shifts could be observed in the definition of sustainable development. The first was the increased focus on social issues; a tendency that was also reflected in the EU approach to sustainability (see Section 2.2). The other important change was the demand for the simultaneous achievement of economic, social and environmental objectives. A win-win-win (WWW) approach was increasingly advocated in which all three dimensions are comprehensively integrated and trade-offs are avoided to the extent possible.

A prominent example of this new change materialised in the guidance document prepared by the United Nations on how to prepare a national sustainability strategy. This guidance document states clearly in the

introduction that sustainability has three principal dimensions: economic growth, social equity and protection of the environment (United Nations, 2001). It is interesting that the language of "three dimensions" is used by the same organisation - the United Nations - that launched the so-called Brundtland Report.

UN Johannesburg Summit 2002 – The World Summit on sustainability

Although the concept of sustainability was re-affirmed as a central principle on the international agenda at the Johannesburg Summit, most observers found that the emphasis had shifted from resolving global environmental issues, such as climate change and biodiversity, to poverty reduction. No new significant agreements emerged, although proposals were established for actions on existing agreements.

Economic approach to sustainability

In parallel with the elaboration of the sustainability concept as a broad concept in political circles, sustainability has also been the subject of immense scholarly interest; in particular within economic theory. From an environmental economic perspective, sustainability is thus often interpreted on the assumption that the environment and the natural resources it comprises can be regarded as a stock of natural capital. The natural capital is viewed as a kind of a bank account that assures an annual interest - sustainability occurs when the annual interests are consumed, while the deposit on the bank account is kept constant. A fuller presentation of theories of sustainability is given in Chapter 3.

2.2 EU and sustainability

The EU made its official commitment to sustainable development in 1992 as part of the Maastricht Treaty. Similar to the above international development, the European Communities approach to sustainable development has also evolved.

The Third Environmental Action Programme, 1983

The third Environmental Action Programme (EAP), adopted by the Council of Ministers in 1983 marked a turning point in the European Community, with a move towards prevention of environmental problems. It accepted that environmental resources could constitute limits to economic and social development.

The Maastricht Treaty, 1992

The Treaty had significant implications for the development of sustainable development within the Union. It was out of this Treaty that the EU first officially committed to sustainable development. The Treaty stated that environmental principles were to be applied to policy areas, and adopted "*sustainable and non-inflationary growth respecting the environmen*t" as a key component of the EU. Emphasis was placed upon the integration of ecological considerations within economic policy areas. Social considerations had not yet become a prominent component of the sustainability concept in the EU.

The fifth Environmental Action Programme, 1993

The fifth EAP was entitled "Towards Sustainability: the European Community Programme of Policy and Action in relation to the Environment and Sustainable Development". This programme focused on longer-term objectives than the previous programmes and set out the European environmental agenda

for the next 10 years. It targeted five sectors – Industry, Energy, Transport, Agriculture and Tourism, as well as identifying key themes and targets, specific risk management areas and policy instruments. With full environmental integration within major policy areas and shared multi-player responsibility between governments, public and industry, it signified a move away from "command and control" to a more consensual and inclusive approach. It shifted the emphasis from reactive responses to anticipatory and strategic reactions in addressing environmental issues.

The Amsterdam Treaty, 1997

The Amsterdam treaty has made sustainable development a core objective for the EU by promoting:

" economic and social progress and a high level of employment … to achieve balanced and sustainable development, in particular through … the strengthening of economic and social cohesion" (Article 2).

Article 6 of the Amsterdam Treaty states that:

"Environmental protection requirements must be integrated into the definition and implementation of community policies and activities referred to in article 3 in particular with a view to promoting sustainable development."

It also advocates requirements how to protect the environment that must be incorporated into definitions and implementation of EU policies. Yet there has been a noticeable shift in the implicit interpretation of sustainability because social and economic considerations have become much more prominent. Sustainability was not any longer seen as primarily an environmental concept.

Cardiff Process, 1998

At the Cardiff European Council meeting in 1998 it was decided to intensify the integration of the environment and sustainable development into the policy sectors of transport, energy, agriculture, industry, internal market, development, fisheries and general affairs. Transport, energy and agriculture were chosen as the most relevant policy areas with which to start this process. It considered integration of environmental concerns into Commission decision-making as a key instrument of sustainability in Europe.

Lisbon Process, 2000

The Lisbon European Council meeting in 2000 continued the process set forth in Cardiff. The working title of the Lisbon Process is "Employment, Economic Reforms and Social Cohesion: Towards a Europe Based on Information and Knowledge". At Lisbon, the EU embarked on its strategy to make Europe:

".. the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion" (European Council, 2000).

Following the Lisbon meeting, clear strategies were developed for economic and social policy development and social inclusion, but the environmental strategy was to come later.

Gothenburg Council, 2001

At the European Council meeting in Gothenburg 2001, the EU was finally ready, at the highest level of political commitment, to present an elaborated understanding of sustainability. It was here that Europe's Sustainability Strategy was agreed, based upon proposals made in the Commission Communication "A Sustainable Europe for a Better World" (2001). It became the third area of policy coordination by finally adding an environmental dimension to the Lisbon Process on Economic reform. It was decided that:

"the economic, social and environmental effects of all policies should be examined in a co-ordinated way and taken into account in decision-making" (European Council, 2001).

The definition of sustainable development within the EU's Sustainability Strategy had strong social criteria, with a vision of "society that is more prosperous and more just, and which promises a cleaner, safer, healthier environment - a society which delivers a better quality of life …" The reference to the environment did not clearly espouse principles of ecological constraints; it remained quite vague, stating instead aims of "a healthier environment" and "respecting the environment".

Communication on Impact Assessment COM 2002 (276)

In 2002, the Commission launched a Communication on Impact Assessment as an answer to the request from the Gothenburg Council to examine the social, environmental, and economic effects of all policies. It explains how a new integrated method of impact assessment will be implemented in the Commission (from 2003). The new impact assessment method will be used to integrate all sectoral analyses including for instance the environment, employment and trade to increase transparency, communication and information on the Commission's proposals. See Chapter 6 in which the impact assessment is described in more detail.

2.3 Towards a new definition?

We have seen that the concept has changed over the years. It appears reasonable to say that sustainable development has de-facto been redefined. Table 2.1 captures the main elements of the "old" and "new" understanding of sustainability.

Table 2.1 Overview of development of the sustainability concept

Sustainability was (primarily)	Sustainability is (primarily)
scientific	political
focus on environment	focus on all three dimensions
taking account of economic and environmental issues	"balancing" and "integrating" the three dimensions
expert led	an opportunity for broad participation
the responsibility of Government	a matter that requires everyone's contribution including the private sector.
a substantial concept	a procedural concept

The distinction between "was" and "is" is somewhat artificial as many of the characteristics that used to dominate the sustainability discourse certainly still are there but less prominent. As we will see in Chapter 4, for instance, the national strategies contain both substantial and procedural aspects of sustainability. Still, the table gives a correct overview of the main tendencies.

Relevance to Wadden Sea

We will highlight two changes of particular importance in relation to the Wadden Sea region sustainability strategy development.

- *From environmental science to general policy*. Over the past two decades a shift has been observed from environment-led definitions of sustainable development based on scientific notions of 'capacity' to politically-led definitions based on improving people's quality of life.

- *From output to the inclusion of process.* Many of the definitions given in the two previous sections characterise sustainable development as primarily an endpoint at which the economic, social and environmental dimensions are more or less reconciled. But sustainable development has in recent years also been increasingly defined as a process of learning, consultation and participation which seeks to identify the appropriate path that society should pursue. This change in emphasis is important since the *process* which determines what constitutes "sustainable" in any given context becomes of paramount importance. Furthermore, in evaluating the sustainability of policies the focus should not only be on the policy output in substantial terms but how the policy was formulated (e.g. who was involved and how the process was organised).

Implications

How can a concept which is so diffuse become effectively operationalised and used to guide actual decisions on the ground? If sustainable development is perceived as an end point then this becomes possible through the establishment of objectives and concrete targets which effectively define what will be achieved in the name of sustainable development - for instance in relation to the Wadden Sea region.

If sustainable development is perceived less as an ultimate outcome and more as a pathway to change, the emphasis shifts away from substantial targets and indicators towards factors that influence decision-making such as organisational culture, information availability, the rationality of decision-making, the application of impact assessment and who was involved in the decision-making process.

Advantages and disadvantages

The confusion surrounding precisely what constitutes sustainable development has advantages and disadvantages. On the one hand, sustainable development's multi-faceted nature has allowed a wide range of governmental, commercial and voluntary organisations to embrace it and to support its use in guiding future policy. One the other hand, some argue that its ambiguity severely diminishes its usefulness. Despite the difficulties in defining and implementing sustainable development, the discursive power of an idea that, in two decades, has permeated policy agendas should be highlighted.

Where are we now?

After having presented the concept "as it was" and argued that over time the concept someway has changed, it is now time to positively capture what is the current mainstream understanding of sustainability. This is shown in Table 2.2. The main distinction is between the substantial and procedural aspects of sustainability.

Table 2.2 Current mainstream understanding of sustainability

Substantial elements of sustainability	**Procedural elements of sustainability**
Defined as encompassing **three dimensions** and the relative weight attached to these	**Decision-making basis**: All three dimensions should be analysed and incorporated into decision-making
• **Social** dimension: unemployment, local/regional development, health, social cohesion, distributional aspects, etc.	**Trade-offs** between the three dimensions should be made explicit to actors and the public
• **Economic** dimension: macro economic development, competitiveness, economic growth, innovation and industrial development, etc	**Alternative** solutions should be considered
• **Environment**: Biodiversity, landscape integrity & wildlife, water quality, air quality, soil quality, climate change, etc.	Public **participation** and consultation should be encouraged
Inter-generational fairness	**Impact assessment** tools should be applied in decision-making

It should finally be noted that while Table 2.2 summarises a mainstream understanding of sustainability, there are many scholars who argued for the necessity to define sustainability less broadly and in a way which allows a clear interpretation and measurement of (un)sustainability.

2.4 Summary

Lessons learned

The central lessons learned on the concept of sustainability are:

- There is not a single authoritative definition. As a consequence, many organisations have developed their own interpretation(s). In spite of that, there are some clear trends in the way the concept has evolved over the years.

- Initially, sustainability referred primarily to the ecological and environmental dimension. Over the years, the economic and social dimensions have become an integrated part of the sustainability argument. This may lead to the question of whether environmental concerns are traded-off too much against these other objectives.

- Sustainability started with a focus on the substantial elements of economic, social and environmental dimensions, but there has been a shift towards the inclusion of processes and procedural aspects. This tendency is clearly seen in the national sustainability strategies, cf. Chapter 4.

Implications for the Wadden Sea region sustainability strategy

Several relevant themes of relevance for the sustainability strategy can be extracted from this overview:

- It is not sufficient in the Wadden Sea region sustainability strategy to refer to "sustainability". This is only a vague frame for policy-making which may only cause confusion unless it is further defined. If sustainability is to become a guiding principle for regional development it has to be defined in a way which is easily understood by the actors.

- It must likewise be clearly defined if sustainability in the context of the Wadden Sea region is about substance (e.g. a target on pollution or employment level) or process (e.g. a rule for policy-making) - or if it should encompass both aspects.

- As participation has become an element in the "modern" understanding of sustainability, the Wadden Sea region sustainability strategy should also be explicit on its approach to participation. The strategy should not necessarily promote participation - it may be argued that participation is best achieved within existing national structures - but the strategy should be explicit on this matter.

- Finally, there will most likely be a trade-off between clarity and consensus. The more precise targets are included in the strategy, the greater is the risk that some of the actors will be reluctant to embrace and support the strategy.

3 Theories of Sustainability

Various "schools"

Since the popularisation of the sustainability concept, it has often been asked how to implement an idea as broad as sustainability. It has also been questioned if sustainability is commensurable at all with liberal democracy and a capitalistic economic system. The purpose of this chapter is to present three "schools" in the sustainability debate; all of which primarily relate to the environmental dimension of sustainability.

3.1 Neoclassical economics

Neoclassical economics is the dominant school within economic theory. It has historically been focused on explaining short run patterns such as how prices are determined rather than growth patterns and change over time. Natural resources were absent in the standard production function as a potentially limiting factor of production; and market prices were assumed to achieve an efficient allocation over time of all resources.

Natural capital

The focus on sustainable development has, however, led to attempts by several economists to broaden the concepts of neoclassical economics. Most important is the definition of capital resources which has been extended from man-made capital (e.g. infrastructure and machinery) to also to include natural capital (e.g. mineral resources, biodiversity, clean air and water) and human capital (e.g. education, skills, knowledge and culture). Other forms of capital include financial capital and social capital.

To refer to nature as natural capital might disturb non-economists. For the economist, however, it is normal to perceive natural resources as goods which over time will provide society with services that contribute to human welfare. The management of nature is therefore central. Natural capital is reduced or deteriorated when non-renewable resources such as oil or coal are consumed, when species become extinct, or when the air is polluted. On the other hand, investments in natural capital can, for example, consist of afforestation or building up of fish stocks. The valuation of the natural capital is, however, not straightforward. Nature consists of many heterogeneous components, which often are interrelated and there is often not a market price for these components. Even when this is the case, the market price will often differ from the socio-economic price.

Even with a good measure of natural capital, the balance and weighting of it against the other types of capital in the extended neoclassical model can give rise to different conclusions on the existence of a sustainable development i.e. between "weak" and "strong" sustainability.

Weak sustainability

Weak sustainability builds on an indifference regarding the composition of the aggregate capital bequeathed to future generations – i.e. the relative proportions of human, man-made, natural and other forms of capital. At the extreme it only requires that the total stock passed on is no less than that of the present day. In the pursuit of weak sustainability, the environment does not therefore command any particular importance and is simply another form of capital (and is thus open to trade-off). In other words, it is acceptable to consume non-renewable resources as long as it is compensated by building up of other capital goods - with the same potential for generation of human welfare, e.g. it is acceptable to use North Sea oil if the revenue is transformed into energy-saving capital.

Strong sustainability

Strong sustainability is by contract based on the assumption that all forms of capital are not fully substitutable. Environmentalists point, for example, to the limited capacity for substitution between man-made and natural capital. This strong requirement might lead to consequences that are unacceptable to many - since non-renewable resources actually need to be consumed to generate human welfare.

Critical natural capital

Some (but not all) natural assets might be considered critical natural capital since they provide services that human action could not plausibly replace. There is thus also a middle position which is linked to the concept of critical natural capital. Protection of habitats, species and natural resources of particular importance are widely regarded as critical - and substitutions of these with human-made capital are thus not generally seen as desirable. This version of sustainability requires that development does not lead to a decline over time of the stock of critical natural capital (Andersen, 2003).

Policies to pursue sustainable development

As mentioned in the beginning, neoclassical economics builds on the assumption that prices are the effective mechanism that ensures an efficient allocation of all resources over time. It also acknowledges that the market prices for natural capital often will differ from the socioeconomic prices. Therefore, public regulation should focus on "getting-the-prices-right" via different market-based solutions. This can, for example, be done via green taxation, quota systems, or through the removal of distorting subsidies. Where prices by nature do not exist or where there is not sufficient insight to set prices the alternative can be the use of rationing - e.g. the establishment of bird sanctuaries.

Finally, it should be noted that environmental economics do not focus on the distribution of power in society and the functioning of administrative and political systems. It is therefore not a primary point of interest whether the political systems in liberal democracies are able to implement the policy recommendation of getting-the-prices right. The political implications of sustainability are a more prominent feature in other theories on sustainability.

3.2 Ecological economics

Ecosystem and economic systems

Since the 1970s, researchers from various economic, social and natural science domains have sought to formulate new approaches to questions of economic development in response to sustainable development. This new perspective has become known, since the creation of the International Society for Ecological Economics (ISEE) in 1987, under the name Ecological Economics. It addresses the relationships between ecosystems and economic systems in the broadest sense. Ecological economics advocates for the economic discipline to look closer to physics and biology in order to achieve more ecologically informed models of sustainability. The major distinction of ecological economics relative to environmental economics is thus the incorporation of ecological principles.

Ecological Economics thus envisages the use of analytical tools and concepts derived from many different disciplines and fields of experience. Among these, the results and techniques of neoclassical economics can be appropriate if their conditions of applicability and limits are made clear and they are placed in a wider framework of interpretation. At the same time ecological economics insists that economic science needs to open out the insights and analytical techniques that may be offered from other fields such as the humanities and technology assessment.

The role of economy

The economy is seen as subjugated to the physical and biological world. The economy is open to the entry of energy and materials, and it produces residues, such as carbon dioxide, heavy metals, and radioactive waste. The economy is also embedded in the social institutions e.g. the distribution of property rights and territorial conflicts.

Critical on monetary valuation

Third, ecological economists find it, in line with environmental economists, often useful to give monetary values to environmental resources in actual or fictitious markets. Ecological economy, however, does not rely only on such ecologically corrected prices and questions whether all valuations are reducible to a single one-dimension standard (money). Ecological economics emphasises the uncertainties which make it difficult to measures externalities in physical, let alone in economic terms. Ecological economics studies the compatibility of the human economy and ecological systems in the long run, but neither the existing system of prices nor the use of extended or factitious markets can guarantee this compatibility (Martinez-Alier, 1999).

Policy instruments

Ecological economics sympathises with green taxation (like environmental economics) but it particularly advocates tradable environmental quotas when this is feasible. The quotas can ideally be set so they represent ecological limits with a greater precision than taxes. Quotas therefore, in the perspective of ecological economics, represent a sort of macro-ecological planning within a capitalistic economy.

Size of economy

Ecological economics is founded upon different assumptions (micro and macro) which lead to distinct conclusions and policy implications. For example, humans are viewed as having evolved in a variety of ecosystems posing unique constraints on economic behaviour and resulting in unique

cultural norms. As such, humans are subject to diverse motives not conducive to simple assessments of utility maximization via consumption of goods and services. Another key feature is that the economy is viewed as a subset of the ecosystem and subject to limits imposed by the laws of thermodynamics and principles of ecology. Ecological economists therefore focus on the size of an economy relative to the ecosystem. Efficient allocation of resources is also a concern but not the primary concern as it is in neoclassical economics.

Other key issues

Table 3.1 presents some of the broad areas and particular questions of ongoing research and discussion of ecological economists (International Society of Ecological Economics, 2003)

Table 3.1 Questions of interest to Ecological Economics

Modelling	How can we better integrate economic and ecological models to address management of local biodiversity, an ocean fishery, or the climate services of the global atmosphere?
Equity	How does equity between individual people, nations, and over generations relate to sustainability?
Indicators	Can we redirect development by augmenting traditional indicators such as GDP (gross domestic product) with biophysical indicators such as ecological footprint and social indicators such as the education of women?
Limits	What properties of ecological and social systems act as "limits" to development and to what extent can human-produced capital substitute for natural capital?
Trade & Development	How do current policies to promote development through capital mobility affect the control of natural resources, the ability of nations to manage environmental systems, and the distribution of well-being?
Policy Instruments	How should systems of tradable environmental permits and obligations, combined with environmental tax reform, be implemented?
Valuation	To what extent can we measure the value of non-market services provided by ecosystems and how can we promote public discourse on environmental and social values that significantly enriches economic measures?

3.3 Political ecology

Focus on capitalism

The proponents of political ecology - which sometimes are called green neo-Marxists - argue that sustainability cannot be realised without radical changes in the political and economic-capitalistic system.

"Although capitalism on a world scale may be viable for some time yet to come, the prices to be paid in terms of both human conflicts and lost human, cultural and ecological riches will be very great" (O'Connor, 1994:2).

Political ecology points, in short, to nature as the ultimate basis for wealth. It argues further that capitalism exploits nature via a systematic production of

externalities and short-run profits, and it finally sees the political systems as influenced by private interests to an extent that the public authorities do not have the autonomy to install the necessary regulation.

Regulatory system is "captured"

The market is not seen as capable of allocating resources smoothly over time and this defect cannot be corrected simply by correcting the prices (as argued by environmental economists) because regulation does not take place in a vacuum. On the contrary, the authorities responsible for regulation are often "captured" by powerful vested interests that also exercise significant impact on the political process itself and the political decision-makers. It means that market-failure regulation does not come easy. The private interests will typically argue that strict environmental regulation is counterproductive to economic growth. It means that:

"the capitalist market "imprisons" both liberal democracies and the administrative state by ruling out any significant actions that would hinder business profitability" (Dryzek, 1994:183).

Whereas environmental economics talk about market failures, political ecology will see this phenomenon as "a cost-shifting success" - where some actors in a given society via a privileged societal position have been able to shift some of their costs to other actors - spatially (other parts of the world) as well as temporally (future generations).

Long-time regulation?

The prospect for effective regulation in a liberal democracy is therefore bleak. The benefits of, say, a tough regulation of carbon dioxide emissions are dispersed on the general public and the coming generations. The costs on the other hand will be concentrated on much fever persons, organisations, and companies. Those groups that are faced with concentrated costs have strong incentives to organise themselves and fight such regulation while there is not a similar concentration of interests which enjoys the benefits of regulation and which thus will promote the regulation (e.g. because the beneficiaries are future generations). It reduces the likelihood that a far-reaching regulation will be adopted.

The resulting situation is that in many cases there will be few actors which have a narrow self-interest in advocating redistribution:

- from the present generations to the future generations
- from the wealthy regions of the world to the poorer regions.

How to achieve sustainability?

There is not one single strategy within political ecology for achievement of sustainability. The typical elements advocated by this school are "soft" bottom-up initiatives such as:

- Activities to spark critical reflection on capitalism and sustainability (often termed discursive designs)
- Participatory democracy
- A deliberate development of specific small-scale alternatives (green activism)

- The development of a stronger civil society.

Proponents of political ecology would be among the first to argue that such initiatives are not in themselves blueprints for an alternative political-economic system. What they do offer is a challenge to dominant institutional forms, which might contribute to a reconsideration of the way collective life is organised (Dryzek, 1994).

3.4 Summary

Different perspectives

This chapter has presented three different theories of sustainability. All of them focus on the relations between the environmental and economic dimensions of sustainability and all of them offer different perspectives on how to achieve sustainability. Below we summarise the main conclusions and relate them briefly to the Wadden Sea region.

Wadden Sea as natural capital

Environmental economics sees sustainability as constant or increasing capital stocks. The capital forms are to a high degree substitutable but critical natural capital needs to be preserved. Market-based solutions, some command-and-control regulation plus focus on total capital stocks of societies are key elements in a strategy for sustainability.

The Wadden Sea is in itself a fairly well-delimited piece of natural capital which provides inputs - such as fish, mussels, etc. - to the economic system - i.e. for further production or direct consumption. The nature does furthermore directly affect human welfare - via the access to the natural resources, but also via improvements to health conditions.

Wadden Sea as critical natural capital

Ecological economics argues for a stronger version of sustainability where broader segments of natural capital are labelled as "critical". It finds that the complexities of ecosystems should to a higher degree be reflected in mainstream economic theories on sustainability.

It is likely that ecological economists would argue that the Wadden Sea is critical natural capital. Neither for economic nor ethical reasons should it be subject to a further economic exploitation. The fact that some parts of the Wadden Sea already are protected and that the Wadden Sea is a potential UNESCO word heritage site clearly indicate that the Wadden Sea is perceived by many as a piece of critical natural capital.

The commercial interests in the Wadden Sea region

According to **political ecology**, the policy recommendations given by mainstream environmental economics are not political feasible because a systematic greening of the capitalistic economy will be met with resistance from powerful private interests. Long-term sustainability necessitates a radical new political and economic order.

What probably can be learned from political ecology in relation to the Wadden Sea context is that it will be difficult to have far-reaching measures implemented without a broad public support of the aims of a regional

sustainability strategy. As liberal democracies, like the Wadden Sea countries, normally are quite attentive to the interest of the private sector it will also be difficult to have the strategy implemented if it runs against the interests of the private sector.

4 National Sustainability Strategies

Purpose of chapter

The Agenda 21 policy document (United Nations, 1992) promotes national sustainability strategies as a mechanism for translating a country's goal and aspiration of sustainable development into concrete policies and actions.

All of the Wadden Sea countries have drafted such strategies. The purpose of this chapter is to describe and compare the national sustainability strategies of Germany, the Netherlands, and Denmark, i.e. those countries that are part of the trilateral Wadden Sea cooperation. It is important to see if the countries define and operationalise the concept in a similar way as it will be easier then to develop a Wadden Sea region sustainability strategy.

4.1 Perspectives for Germany

Introduction

The German sustainability strategy, Perspectives for Germany, is a 220 pages document adopted 17 April 2002 by the German Federal Cabinet as a contribution for the World Summit for Sustainable Development in Johannesburg. The strategy was prepared by the State Secretaries' Committee for Sustainable Development.[1]

Committee of vice-ministers

The State Secretaries' (vice-ministers') Committee is a permanent body with the task to ensure that the aims of the strategy are connected to the executive bodies of the government. Although the Committee is, in theory, very important for the implementation of the strategy, it is in practice not important for everyday decision-making of each ministry represented in it.

Sustainable Development Council

For this task the State Secretaries' Committee was supported by the Sustainable Development Council, appointed by Chancellor Gerhard Schröder. The Council contributes decisively to the national strategy with proposals. It advises the Federal Government and creates a forum of dialogue for the numerous activities and ideas in society. Its members represent the following sectors on personal mandate: environment, trade and industry, transport, unions, Länder

[1] The Committee represents the State Secretaries (vice-ministers) of the following Ministries: the Foreign Office, Finance, Economics, Consumer Protection and Agriculture, Labour, Interior, Transport, Environment, Education and Research, Health, Economic Cooperation, and Family, Senior Citizens, Women and Youth. It assumed responsibility for inter-departmental management of the strategy within the Federal Government and reports regularly to the Federal Cabinet.

and municipalities, consumer protection/food/agriculture, churches, international affairs/development and science.

While the State Secretaries Committee is the internal representation of the strategy in the government, the Council is the public interface of the strategy. As the strategy is based on dialogue and used by the government to reflect and explain the rational behind its policies, the Council has a central communicative role. First of all it is a consultative stakeholder forum. The members are nominated on personal mandate reflecting their constituency. In its own capacity the Council helped considerably to improve the strategy. The Council members have important links to civil society. The Council thus helps to communicate the strategy in the different sectors of society and also to the general public through different media.

Not a regional perspective

The national plan does not contain major references or descriptions as to the Wadden Sea Region and to coastal zone management in general. It is more likely that these references are found in regional strategies of the concerned Länder. The strategy is thus a federal strategy and does not define sustainability in its regional context.[2]

It should be noted that it is difficult to get an overview of how sustainability is dealt with at the levels of the Länder as there is not a forum or platform that provides such an overview. The same goes with the vast number of Agenda 21 processes. According to an expert assessment, the Federal German Strategy is currently the best example of a strategy with good participative and communication mechanisms.

Overview of the content of the strategy

The strategy contains seven parts. For an overview please see Table 4.1.

[2] According to the German interpretation of subsidiarity it would not be appropriate for a federal strategy to contain requirements and suggestions on how to realise sustainability in a regional context.

Table 4.1 The content in German national sustainability strategy

Parts	Brief description of content
A. From idea to strategy	A brief history from Brundtland to the German strategy
B. The "ideal" sustainable development	The following policy issues are discussed: • Generational equity • Quality of life; • Social cohesion • International responsibility • Management rules of sustainability
C. Strategy as a social process	Shaping sustainability jointly; Developing partnership
D. Indicators and objectives	The indicators for the targeted policy issues (the same as in part B) are explained and presented
E. Key Focus Points for a Strategy for Sustainable Development	Use energy efficiently – protect the climate effectively Guaranteeing mobility – protecting the environment Producing healthily – eating healthily Shaping demographic change Changing old structures – developing new ideas Innovative enterprises – successful economy Reducing land use -Encouraging sustainable; residential development
F. Taking Global Responsibility	Fighting poverty, promoting development; Deepening cooperation between the state and the economy; Progressing the protection of the environment and Resources worldwide; Promoting sustainable use of resources; Increasing and improving financial support for development; Taking advantage of the chances at the World Summit on Sustainable Development
G. Measuring Results and Further Developing the Strategy	The management concept of sustainability; Implementation of targets and measures; Measuring results and monitoring; Further development of the strategy

4.1.1 Definition of sustainability

Reference to Brundtland

The definition of sustainability in the document refers to the Brundtland definition. There is also a related so-called basic rule in the management rules:

"Each generation must solve its own problems and not burden the next generations with them. It must also make provisions for foreseeable future problems. This applies to the conservation of the natural foundations of life, to economic development, as well as to social cohesion and demographic change" (p. 50).

The concept is thus not primarily environmental but includes social and economic perspectives as well.

Trade-offs between the three dimensions

As mentioned in Chapter 2 there is an issue about how to weigh the three dimensions against each other and to establish trade-off rules. We also noted

that there has not been much focus hitherto on developing operational rules on this. In the German policy document, the problem of trade-offs is covered explicitly although only in general terms:

"Conflicts over goals are inevitable. Indeed, were it not for them, we would have no need for a strategy. The sustainability strategy is specifically concerned with balancing out the goals and bringing them into harmony with one another as far as possible". (p. 90)

The strategy stresses the need for consensus processes and partnership as outlined in chapter B. However, there is no prescription on how to reach decisions, if there are trade-offs and how to weight different dimensions. Also, the national strategy does not prescribe the use of new ways of reaching decisions at project, plan or policy level, e.g. in the form of appraisal methods (such as various forms of impact assessment) or any other methods.

A contract between generations

The first part of the strategy deals with intergeneration equity. This is done via a so-called new intergeneration contract. The intergenerational contract is a metaphor like the French *contract social*. With this metaphor the government explains the implications of the so-called basic-rule of sustainability that was quoted above namely that each generation must solve its own problems and not burden the next generations with them. The strategy relates intergeneration equity to three areas:

- Conserving natural foundations of life
- Managing a quantum leap - increasing efficiency
- Running sustainable economies.

4.1.2 Objectives and principles

Hierarchy of objectives

There is a hierarchy in the strategy that needs to be acknowledged in order to understand the objectives and principles:

The strategy outlines (in Part A) in rather general terms the *Leitbild*[3] of sustainable development from which the objectives and indicators are derived. This leads to the definition of key focal points which primarily relate to sectoral objectives (such as energy, mobility, public health, aging society, education, enterprise policy, and land use).

Due to its broadness and differentiated rationale, a small number of central objectives like in the Danish strategy (see Section 4.3) cannot be identified. The objectives are either:

- very general (such as generational equity; quality of life; social cohesion; and international responsibility) or

- operationalized in relation to the key focal points (these are: use energy efficiently – protect the climate effectively; guaranteeing mobility – protecting the environment; producing healthily – eating healthily; shaping

[3] There is no equivalent for "Leitbild" in the English language. Literally it means "guiding picture/vision".

demographic change; changing old structures – developing new ideas; innovative enterprises – successful economy; reducing land use - encouraging sustainable residential development) or

- related to the 21 indicators (see section 4.4.3 page 50).

Sustainability management rules

In addition the strategy contains so-called management rules. These management rules consist of a basic rule (see definition above) and ten rules concerning the participants and the areas of action.

Ten management rules of sustainability

Basic rule

Each generation must solve its own problems and not burden the next generations with them. It must also make provisions for foreseeable future problems. This applies to the conservation of the natural foundations of life, to economic development, as well as to social cohesion and demographic change.

Participants

1 Together with the state, citizens, manufacturers and consumers, trade and industry and trades unions, science, churches and associations are all important participants in sustainable development. They should take part in public discussion on the model of sustainable development and be responsible in orienting their decisions and actions towards these aims.

2 Companies are responsible for their production and products. This includes providing consumer information on health-related and environment-related properties of the products as well as on sustainable methods of production. The consumer is responsible for choosing products and using them in a socially and ecologically sustainable manner.

Areas of action

3 Renewable natural goods (e.g. wood or fish populations) should only be used in long term within the bounds of their ability to regenerate. Non-renewable natural goods (e.g. minerals or fossil energy sources) should only be used in the long term within the context of how their functions can be replaced by other materials or energy sources. The release of materials or energy should not exceed in the long term the adaptability of the eco-system – e.g. the climate, forests and oceans.

4 Dangers and unjustifiable risks to human health should be avoided.

5 Structural change triggered by technical developments and international competition should be shaped in a way that is economically successful as well as ecologically and socially sustainable. For this purpose, political fields should be integrated so that economic growth, high employment, social cohesion and environmental protection go hand in hand.

6 The association of consumption of energy and resources and transport services with economic growth needs to be broken. At the same time, we should aim for growth-related increases in demand for energy, resources and transport to be more than offset by efficiency gains.

7	Public authorities are also obliged to take into account intergeneration equity. Government, Länder and municipalities should present balanced budgets as soon as possible and then take the further step of continually reducing their debt position.
8	Sustainable agriculture needs to be compatible with nature and environment and take into account the demands of keeping animals in a way that is fair to the animals and providing consumer protection, particularly concerning health matters.
9	In order to strengthen social cohesion, - poverty and social exclusion should be prevented as far as possible,- opportunities for participating in economic development should be open to all sections of society- everyone should take part in social and political life.
10	General international conditions should be shaped in a manner, which ensures that people in all countries can lead a life worthy of a human being and according to their ideas and take part in economic developments. Environment and development form a unit. An integrated approach should link the fight against poverty with- regard for human rights, economic development, environmental protection, and responsible action by governments.

Part B is on the sustainability strategy as a social process, but there are no process-oriented objectives in part C describing objectives and indicators.

It should finally be noted that the Leitbild definition is diffuse and qualitative; from there the strategy derives specific and quantitative objectives, indicators and eventually key focal points.

4.1.3 Implementation and follow-up

Indicators are important

Part E is the implementation strategy. It covers the key focal points (presented above). The strategy describes 21 indicators in part E. In future the Federal Government aims to use these key indicators for sustainable development to monitor progress at regular intervals. The indicators are thus a fundamental component of a management concept for the implementation and continuous refinement of the sustainability strategy. The number of key indicators was deliberately kept low, in order to project a comprehensive rather than a detailed picture of sustainability. For further description of indicators please see Section 4.4.

Monitoring report in 2004

Part G is dedicated to measuring results and how the strategy will be further developed. The main instrument for measuring progress will be the 21 key indicators for sustainability. The Federal Government will every two years (first time spring 2004) present a report on the implementation of the national strategy. In this report it will set out principally:

- what contributions the Federal Government itself and other players (e.g. Länder, municipalities and business) have made towards achieving the targets set out in the strategy,

- what changes are indicated by the 21 key indicators and
- what conclusions can be drawn regarding the further development of the strategy?

The revision of the strategy takes place in dialogue with society similar to the procedures in the preparation of the strategy. The Sustainable Development Council which represents different stakeholders is supposed to "draw attention to non-sustainable trends in a kind of early warning function". The Council has different options to do this: first of all it can communicate directly with the Secretaries of State's Committee which is administered by the Chancellor's office. This allows direct access to the head government and to the vice-ministers (secretaries of state). It can also go public through the usual public communication channels (conferences, press, internet etc.). The authority of the high-profile personalities of Council can exert considerable pressure.

4.1.4 Actors involved in the realisation of sustainability

Whole population involved

Part B of the strategy stresses the importance of involving the whole society. The strategy intends to address the German population as a whole and there is no definition of "main actors". The strategy, however, mentions different contributions that have been made by various actors. Explicitly mentioned are among others: science, churches, development aid organisations, environmental citizens organisations, industrial and trade unions, consumer protection organisations, agricultural associations, municipalities, children and youth.

Public participation

Public participation is described as an important cornerstone of the management rules for the strategy. There has been a broad participatory process in two phases while preparing the strategy. This included conferences, internet presentations and chats. In addition, the Council for Sustainability was created.

The document is well-known among concerned experts and citizens, but it cannot be said that it is well-known among the general public.

4.1.5 Assessment

Consistent document

The strategy appears to reflect the state of the art on sustainability planning as it contains objectives, indicators, public participation, stakeholder involvement and follow-up schemes. In conclusion, the document in itself is consistent and reflects the current sustainability discourse. Nevertheless, the objectives seem to be somewhat artificial. The economic goals (e.g. reduction of state debt, reform of the pension system) reflect mainstream thinking of the German government. Some of the ecological goals do not seem to be realistic. Other relevant parties, such as the municipalities, would also have to be involved in the ambitious and rather complex multi-level implementation plan involving federal, Länder and municipal authorities.

Involvement of other authorities

The reason for that is mainly the size and complexity of the Federal Republic of Germany. Germany is a confederation of 16 Länder. North Rhine-Westphalia, for example, has 18 million inhabitants, which is more than the population of

Denmark or the Netherlands. Implementing a successful sustainability strategy in Germany will require multi-level governance aiming at a horizontal and vertical policy integration.

Impact?

The strategy is only one-and-half years old. This does not allow for a good assessment of its effects. A revision of the strategy is planned for 2004. On the basis of this assessment it will be possible to say whether the strategy has had an impact. Nevertheless, the implementation will need further differentiation e.g. by sector plans and policy integration strategies.

Federal public authorities certainly pay attention to the strategy, but it is not yet conceivable how much they will be influenced by the strategy.

4.2 National Action Plan - The Netherlands

Two key documents to consider

Whereas Germany and Denmark have national sustainability strategies *per se*, there are more documents to consider for The Netherlands. Rather than designing a comprehensive strategy from scratch, the Dutch strategy can be described as the sum of what had already been decided on the issues of sustainable development.

The first key document is the "*National Strategy for Sustainable Development; Review of Government Policy*", 2002 (henceforth called the "Review Document") which the Netherlands prepared to the Johannesburg Summit on Sustainable Development, 2002. The document contains the following explanation:

"The Netherlands has been working on sustainable development since 1990, many policies have been adopted in numerous official plans, there are countless initiatives in municipalities, provinces, companies and citizens that bring sustainable development closer. The present Dutch Strategy for Sustainable Development consists of this plethora of decisions, plans, and initiatives" (Ministry of Housing, Spatial Planning and the Environment, 2002).

The document proceeds to describe how the government is working around five themes on sustainable development and presents the challenges ahead. As the ministry behind it concedes, it is more a review of what is happening than a strategy per se.[4]

The other major document is *"Action Plan"* (for sustainable development), 2003, which is the most recent Government document on Sustainable Development and the most prominent on the website for the Dutch National Strategy for Sustainable Development.

Experts consulted have said that it was believed that an Action Plan was more relevant than another document of a style like the Review Document, and also that the Action Plan now should be seen as the most relevant document on a

[4] A Dutch government official stated in an informal communication with the consultant that the name "National strategy" is indeed confusing and has arisen from historical reasons.

Dutch strategy. The description in the following therefore focuses on the Action Plan (104 pages) which was published July 2003 but as the Review Document gives more insight into objectives references will also be made to this document. The Action Plan has been proposed by the Government; at the time of writing it still awaits discussion and approval by the parliament (January 2004).

Two other documents

The *fourth National Environmental Plan* (2001) also focuses on sustainable development, and is frequently referred to in the Action Plan. It should also be mentioned, in this context, that the *Third National Planning Decree Wadden Sea* which outlines the governments' policy for the Wadden Sea area the next 10 years also focuses on sustainability. The plan it not yet in effect, but deviates only slightly from its predecessor which expires at the end of 2003.

4.2.1 Definition of sustainability

The Brundtland definition is mentioned and taken as a starting point in the Action Plan. The Action Plan furthermore uses a broad interpretation of sustainable development, including the three dimensions:

- Social-cultural ("people")
- Ecological ("planet")
- Economical ("profit")

In the definition, there is no dominance of one aspect over the other. Rather it is said that these aspects must be managed not only for the present ("here and now"), but also considering international issues, with special attention to the needs of developing countries, ("there") and finally also for future generations ("later"). This terminology is used throughout the plan and it is suggested to use a matrix as the one below to help ensure that attention be devoted to all the important aspects of sustainable development.

	People	**Planet**	**Profit**
Here and now			
There			
Later			

The Review Document devotes little effort to define sustainable development as compared to the Action Plan but uses the same matrix above consistently.

The process is most important

The Action Plan goes on to state that sustainable development should be seen as a process (an approach, a development-path, a learning process) rather than a destination (something to be achieved). It is a learning process where sustainable development is a value, and awareness of the aspects mentioned in the definition should eventually result in integrating sustainable development in decision and action. It is thus a profound example of a case where much emphasis is being placed on the procedural aspects of sustainability.

Dealing with trade-offs

Neither the Review document nor the Action Plan proposes guidelines on how to deal with tradeoffs and conflicts between the three dimensions of sustainable development. Rather, it is suggested that focus and creativity should be directed towards avoiding those dilemmas and finding win-win situations.

4.2.2 Objectives and principles

The Action Plan

The central long-term purpose of the Action Plan is to make sustainable development more and more accepted in every action of the (state) authorities. Furthermore, it aims at starting a "process of development and learning", such that "it will gradually be more and more obvious when there are dilemma's and when there are synergies, how undesired trade-offs can be prevented, and how the lessons can most appropriately be applied in policy and communication". The emphasis is thus on process-oriented objectives with no measurable, quantitative objectives.

There is also a section devoted to some other long-term objectives ("ambitions") which are related to a particular theme (see below) of sustainable development. The below list is what comes closest to sectoral objectives:

- Fighting poverty
- Efficient Global "management"
- Good global finance and trade structures
- Good water management and access to good quality drinking water
- Sustainable energy (clean, reliable, affordable)
- Health and security
- Sustainable agriculture
- Biodiversity
- Population (ageing population, migration, participation, gender issues)
- Sustainable mobility (transport)
- Sustainable production and consumption
- Knowledge (adding sustainability to the "knowledge economy")

For each theme relating to the national plan, most of the text is devoted to explaining plans/objectives previously made either in Johannesburg, in the EU or some other national policy documents. The objectives are, indeed contrary to what one would expect, not clearly spelled out in the sections devoted to each theme. Nevertheless the themes give some insight into the priority areas.

Table 4.2 gives an overview of the content of the Action Plan.

Table 4.2 Overview of content in Dutch Action Plan

Chapters	Brief description of content
1. introduction	Objectives (long and short term), Why an action programme?; structure of the document
2. Sustainable development	Definitions of sustainable development. Themes of relevance (energy, agriculture. Etc.)

Chapters	Brief description of content
3.The role of the public authorities	How the government will work for sustainable development. How the government sees its own role in sustainable development
4. Instruments	An overview of (mostly existing) instruments/projects that stimulate sustainable development. The point is to show what kind of instruments could be used in the future.
5 Illustration programmes and projects	Lists and describes a number of programmes that can serve to show the public how the authorities are working towards sustainability. They are also intended as tools for learning, and to illustrate long-term strategies.
6 Agenda for sustainable dynamics	Looks at the political agenda. Focuses on areas where policy until now has been inadequate
7. Concluding remarks	Implementation, responsibilities.
Appendixes	

The Review Document

The Review Document is structured differently as it is centred on five themes:

- Population, mostly focused on issues such as job market participation, problems of the ageing population, and social cohesion
- Climate, with focus on CO2
- Water, with a focus on water management in the Netherlands
- Biodiversity
- Knowledge, the knowledge economy, having a competitive and highly educated population.

The document spells out some objectives relevant for each of the five themes. While the scope is more limited, it is clearer on the objectives. First a very general qualitative objective is defined, such as “The Netherlands strives towards a water policy that keeps the Netherlands safe and habitable with as low as possible risks”. After that, two or three preliminary indicators are named along with a measurable target for each, such as “less than 300.000 ha of dried-out protected areas”.

With only a few exceptions, the measurable objectives have been taken over from other policy documents. As the name indicates, the Review Document is a review of existing objectives (and policy in general) rather than setting new ones. This is also the case for the Action Plan, although the specific objectives in this document are very unclear. On the other hand, the objectives in the Review Document are limited to the five themes, and an overall objective is not defined, as the Action Plan does.

An overview of the Review Document is given in *Table 4.3*.

Table 4.3 Overview of content in Dutch Review Document

Chapters	Description
1 Introduction	About the strategy, what is sustainable development? Themes of sustainable development.
2 Population	Relation to sustainable development Current policy European context Intended future policy Objectives The continuing policy process
3 Climate	Relation to sustainable development Current policy European context Intended future policy Objectives The continuing policy process
4 Water	Relation to sustainable development Current policy European context Intended future policy Objectives The continuing policy process
5 Biodiversity	Relation to sustainable development Current policy European context Intended future policy Objectives The continuing policy process
6 Knowledge	Relation to sustainable development Current policy European context Intended future policy Objectives The continuing policy process
7 Towards a strategy	Principles, international cooperation, making policy coherent, co-operation with other actors
8 Short term agenda	Actions by the government.
Appendix 1	Overview of policy documents relevant to Sustainable Development, main lines of the EU strategy
Appendix 2	Proposed indicators for sustainable development

4.2.3 Implementation and follow-up

Few specific initiatives

The Review Document and the Action Plan can both be summarised as a summary of what is going on rather than a blueprint for action. This combined with the lack of new objectives makes it difficult to talk about implementation. In the Action Plan, the overall principle appears to be to "mobilise, illustrate, learn". The range of existing instruments, projects, and programmes, must serve as illustration for how sustainable development can be realised in

practise. This illustration should then inspire other actors to do their best. There is thus a high degree of reliance on voluntary actions. The main cornerstone of learning appears to be an annual progress report and a public debate (see below).

There are, however, a number of concrete actions, projects and instruments in the plan, but these are mostly already existing projects (rather than new ones). For each of them, there is a department which is responsible that these actions will indeed be carried out.

In other words, there is a heavy reliance on other agencies for implementation of sustainable development in general and the objectives of this programme in particular. Much of it is supposed to happen within the framework of the National Environmental Plan, the EU system, the individual departments and other branches of the public administration involved in specific projects.

Sustainability indicators

In the Review Document, a number of preliminary indicators were listed. They were intended to be a move toward developing a more complete set of indicators. These indicators were not re-used in the Action Programme, but the Environmental Protection Agency of the Netherlands is expected to publish a set of indicators in February 2004.

Indicators of sustainable development in the Netherlands

The Review Document lists 36 indicators that might be used for monitoring the path towards sustainable development. They are planned to be updated every year (but now almost 2 years overdue).

The indicators are classified according to the economic/social/ecology and here/there/now/later matrix system. Apparently the indicators are evenly distributed on those criteria

For each indicator, there is a short explanation, followed by a figure showing the historical developments in the indicator, and later a comparison with the performance of other countries, and comparison with the objectives.

Monitoring

Monitoring receives sporadic mentioning in the Action Plan in the form of the following:

- Every year the government will organise a public debate about the progress of sustainable development. This shall be co-ordinated by the State Secretary for Development Co-operation and State Secretary for sustainable development.
- Every year the government will report to the parliament on the progress of the action programme

- In reporting, the government must include: concrete results and steps taken relevant to all actions and other agreements in the action programme; the extent to which new actions or an increase in effort should be undertaken; the results of the public debate mentioned earlier; and the lessons learned from the work with sustainable development.

Once a year, the involved ministers will, under the chairmanship of the prime minister, discuss the progress based on previous report. Follow-up activities should not be expected before spring or summer 2004.

4.2.4 Actors involved in the realisation of sustainability

Broad range of actors

The Action Plan has its emphasis on the role of the state authorities, but business, civil society, regional authorities, knowledge institutions, citizens, consumers, the EU, the UN and other international agencies should likewise play a role. It is stressed that the co-operation of all of the above mentioned actors is essential. The role of the state authority is said to be:

- To mobilise and initiate. To approach actors, organise networks, etc.
- To show the direction. To develop guidelines (such as the present action programme). To develop instruments that will make sustainable development more attractive to individual actors
- To support and facilitate. Focus here is to make it possible for others to contribute to sustainable development.

Public participation

Some attention is devoted to (public) participation. The plan often mentions the "fourth p" (after People, Planet, and Profit) which encompasses participation, process, or a general need for interaction and communication.

It appears that the national strategy for sustainable development in general and the National Action Plan in particular are only (well) known among people who have been directly involved in sustainable development efforts in some way or another. Perhaps people who are generally well-informed know about it, but hardly the general public. There appears to have been very little media coverage.

The Review Document is less explicit on actors than the Action Programme, but shares the basic idea that sustainable development is a task to be shared with society in general.

4.2.5 Related documents

The other documents which should be briefly mentioned are the Third Wadden Sea National Planning Decree and the Fourth National Environmental Plan.

Third Note Waddenzee

This document is a national planning decree that relates directly to the Wadden Sea. It's predecessor, which is very similar, expires at the end of 2003. The third decree has not yet been approved.

The main objective is to protect the Wadden Sea and to preserve the unique open landscape. The focus is thus on the ecological aspects of sustainability, and the social and economic dimensions appear to be considered through developing the plan in co-operation with local authorities and interest groups. The plan is quite specific. Unlike the national Action Plan, there is a clear plan and role designation as to monitoring, reporting and enforcement.

The main objectives of the decree are categorized as follows. The policy is directed towards sustainable protection/management with regard to:

- water movements and the associated geomorphological and soil/sediment processes
- the quality of water, ground, and air (pollution should only have a negligible effect on flora and fauna)
- preservation of the quality of the landscape, particularly focusing on maintaining a peaceful and quiet landscape with open horizons

Being a planning document, it is further very specific in nature, all the way down to specifying the maximum speed of boats in the protected area. It requests the provinces and municipalities to take the policy into account when they formulate their own spatial planning policies. For implementation of the policy, an integral Wadden Sea Management Plan is developed as well as an Implementation programme and an Enforcement programme. Responsibility for these plans lies with the (unspecified) authorities competent on each specific subject.

National Environmental policy plan

The national environmental policy plan is entitled “One world, one will. Working on sustainability. National environmental policy plan 4”. It is a very comprehensive document (220 pages) where sustainability is defined as balancing the three dimensions (ecological, social, economic). In the document, much more attention is devoted to what could broadly be termed environmental issues, rather than social or economic.

The objectives are of the plan are broadly to secure that the Dutch environmental policy contributes towards i) a healthy and safe life, ii) attractive surroundings to live in, including a vital nature, and iii) preserving global biodiversity and natural resources.

The plan was designed by the previous government in 2001 and has (being older) no relation to the Action Plan except for being frequently referred to in the Action Plan. In contrast to the Action Plan, the National Environmental Policy Plan 4 is being widely quoted and referred to.

4.2.6 Assessment

Not one strategy

There is not one clear strategy for sustainable development in the Netherlands but a number of initiatives each bringing a contribution. The Review Document as well as the Action Plan are thus not blueprints. Instead they try to connect the threads from previous initiatives. They represent a framework for future

policy decisions but stress their own "first step on a long path" nature. Both documents, but particularly the Action Plan, lack the concreteness of other initiatives such as the fourth National Environment Plan.

The Action Plan has so far had very little impact. Since its publication in July 2003, it has hardly been quoted or mentioned. Even the Dutch Environmental Protection Agency only has a brief reference to the strategy on its website. This contrasts with the National environmental policy plan which is very frequently quoted or referred to. The Review Document was succeeded by a number of documents commenting on its content, but any effect on new policy is difficult to discern.

Indirect impact?

The main objective of "starting a process of learning" is highly flexible. It can be said to be met no matter how small a change is achieved. The question is therefore how far in that process we are likely to come with the present effort. It does not appear to be proven that the level of commitment and enthusiasm displayed in the Action Plan and Review Document is sufficient to bring many substantial changes. That would have to depend more on the commitment and enthusiasm of other actors than the framework provided in present documents.

Much attention is devoted to showing existing projects. The lack of new formulated objectives and a strong implementation and monitoring regime makes it unlikely that the Review Document or the Action Plan should lead directly to any changes in policy. However, indirectly, they may help raising awareness and stimulate to consider sustainable development issues in decision-making, but if so it will happen rather through inspiration than commitment or obligation.

4.3 A Shared Future - Denmark

Introduction

The Danish sustainability strategy, titled *A Shared Future - Balanced Development* (88 pages), was launched August 2002 by the governing liberal-conservative government. Prime Minister Anders Fogh Rasmussen wrote the foreword. Almost all of the ministries contributed to the report; hence it was carefully coordinated within the government. The Danish Environmental Protection Agency coordinated the preparatory work.

The strategy describes the objectives and activities required to achieve sustainable development. It focuses on the work to integrate environmental considerations into seven selected sectors and it also deals with a number of horizontal issues such as climate changes, efficient resource consumption and the protection of biodiversity. The strategy covers a period of twenty years.

Structure and content

The structure and content of the strategy is briefly presented below.

Table 4.4 Overview of content of Danish national sustainability strategy

Chapters	Brief description of content
Chapters 1-3 *Introduction*	Visions and objectives; results and challenges
Chapters 4-8 *Cross-cutting activities*	Climate change, biodiversity, environment and health (chemicals, environmental quality, food, health and safety, physical indoor conditions), resources and resource efficiency, and Denmark's international activities
Chapters 9-14 *Sectors*	Food production, food safety, agriculture and fisheries, forestry, industry, transport, energy, urban and housing development
Chapters 15-17 *Measures and implementation*	Measures and knowledge base, public participation and Local Agenda 21, Implementation, monitoring of progress and follow-up
Annex	List of indicators

The second strategy

This is the second national sustainability strategy; the former was developed by the earlier government. When the new strategy was launched some critics argued that it watered down a number of objectives, e.g. for the transport sector, while many others found that the new strategy overall is in line with the previous one.

4.3.1 Definition of sustainability

The Brundtland definition

The national strategy refers to the Brundtland-definition in defining sustainable development: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Apart from that there is no definition of sustainability or attempts to define it in a Danish context.

Main characteristics of sustainability

There is, however, a description of the main elements of sustainable development. This description thus functions as a sort of link between the general Brundtland-definition and the subsequent operationalisation of sustainability via the indicator system. The strategy points to four main elements:

First; sustainable development incorporates *three interdependent dimension*s:

- The economic dimension (economic resources, development and growth)
- The environmental dimension (natural resources, protecting and exploiting nature sustainably, and preventing and combating pollution)
- The social dimension (social resources, solidarity, and combating poverty

Second, sustainable development is seen as an *ongoing process* that involves improving the integration of environmental, economic and social considerations. Therefore the strategy has a 20-year time frame in which objectives and visions are presented for each area of activity.

Third, sustainability goes hand in hand with *other values* like openness, democracy and respect for human rights. As an affluent country, Denmark has a special responsibility to assume a leadership role in developing a global, sustainable community.

Fourth, sustainable development implies a *balance between generations*. Future generations should be offered at least as favourable opportunities for a good life as we have at present.

Not an environmental concept

In sum, sustainability is presented as a broad welfare, life-quality, and development oriented concept. At first glance (particular evident in the first three chapters) the strategy does give high priority to the green aspects of sustainability. However, the Danish vision of sustainability is based on eight principles (see Section 4.3.2 below for a presentation of these) and many of these are related to the environment. The whole set of indicators that is included as an annex to the national strategy, and which appears to be the most important tool by which to secure a proper implementation of the strategy, is very much a set of environmental indicators. So the definition of sustainability is broad but as the concept is being operationalised throughout the strategy it tends to become a "greener" concept.

4.3.2 Objectives and principles

Overall vision

The strategy contains many policy statements which all together accumulate to a vision of sustainable development in Denmark. Overall, it is said that Denmark is to be a society where economic progress can go hand in hand with an improved environment; where the population should enjoy a good framework for employment, living conditions, social conditions, and quality of life; where future generations should have at least as favourable opportunities for a good life as we have at present; and where the development must provide for greater individual freedom of action, display respect for the limits of nature and the environment, and have no negative impact on people's health.

Eight objectives

More specifically, the strategy presents eight objectives, which are:

- The welfare society must be developed and economic growth must be decoupled from environmental impacts.
- There must be a safe and healthy environment for everyone, and we must maintain a high level of protection.
- We must secure a high degree of bio-diversity and protect ecosystems.
- Resources must be used more efficiently.
- We must take action at an international level.
- Environmental considerations must be taken into account in all sectors.
- The market must support sustainable development.

- Sustainability is a shared responsibility. We must measure progress.

These are the core objectives. In addition, the sector objectives are likewise presented. There is thus a distinction between core objectives of a horizontal nature and sectoral objectives. Most of the sectoral objectives are not new but have been introduced earlier.

How can the objectives be characterized?

It is difficult to give an unambiguous description of the objectives. Many of the objectives are rather diffuse and have the character of declarations of intent rather then being precise objectives. But the strategy also contains many clear-cut quantitative and measurable objectives. An example of a far-reaching objective is the long-term target of limiting resource consumption to about 25% of the current level.

No references to regional development

Finally, it should be mentioned that the strategy does not contain guidelines on how to make the concept operational in a regional setting like the Wadden Sea region. It should also be noted that the strategy does not relates itself to the Wadden Sea Region or to coastal zone management in general.

4.3.3 Implementation and follow-up

Implementation strategy

The concluding chapter of the strategy is devoted to implementation and follow-up issues. It contains overall ideas and direction for implementation but it can hardly be called a comprehensive implementation strategy. It is mentioned that the objectives of the strategy will be followed by action plans and concrete initiatives such as an action plan on the aquatic environment, action plan on biodiversity, and a report on green market economy.

A system of indicators

One of the most concrete elements in relation to the implementation strategy is the introduction of indicators. The Government will monitor and report on the progress made in implementing the Strategy and achieving results. This will present an opportunity to take further initiatives, if required, and make adjustments to counteract any negative developments. Indicators will be the basis for reporting on progress towards sustainable development. In connection with the Strategy, a set of indicators has thus been developed. It comprises a small number of overall key indicators and a set of indicators for each of the targets of the Strategy.

Against the background of reports on the results achieved in implementing the Strategy, the Government will take steps to assess and adjust the National Strategy for Sustainable Development. The strategy will be adjusted on a regular basis, and the need for new targets will be assessed.

Indicators of sustainable development in Denmark

A comprehensive system of indicators is presented in an annex to the strategy and further detailed in a corresponding indicator report. This set of indicators has also been in public consultation in May 2002. There are three types of indicators, all of which will be up-dated every year:

- 14 key indicators to describe overall development with relation to the 8 objectives. They will be up-dated every year.
- Indicators for the horizontal issues, such a climate change and biodiversity
- Indicators for all sectors that are part of the strategy such as forestry and food production

The indicators are based on specialist knowledge with documented preconditions and methods applying to all indicators. The data basis of the indicators is also available. The data will be corrected in accordance with recognised practices. The indicators will be continuously developed in the light of international work on indicators for sustainable development. The indicators will be presented every year on a special website for sustainable development.

Genuine Savings

The Strategy introduces the concept "Genuine Savings" as a key measurement of whether we are on track in delivering future generations a solid basis for prosperity. It is an economic indicator of the development in the total wealth of society. This concept is used to determine the value of economic, social and environmental resources. The "Genuine Savings" concept will be supplemented by analyses of critical impacts on health, the environment and nature. Combined with the other indicators, "Genuine Savings" can provide a picture of whether or not developments can be described as sustainable. The first analysis from 1998 seems to indicate that "Genuine Savings" are positive in Denmark.

What the strategy does not contain

A strategy obviously cannot embrace all aspects that relate to the implementation of sustainable development. Still it is relevant to consider what the strategy does not contain. There are at least two areas that are often debated in a sustainability context but which nevertheless are absent in the Strategy.

First, the strategy does not contain guidelines or views on how to make trade-offs between the three dimensions (environment, social, economic) or which of them should enjoy prominence in various situations; instead it broadly states that sustainable development is a process that "involves improving the integration of environmental, economic and social considerations".

Second, the strategy refers several times to the aspiration to see Denmark progressing in economic terms simultaneously with improving the environment (de-coupling). The strategy does not discuss if such progressing is likely to occur for all environmental parameters or if there will be trade-offs to be made.

4.3.4 Actors involved in the realisation of sustainability

Many relevant players

According to the strategy, sustainable development is only achievable if all parties make a contribution and assume responsibility for integrating and promoting considerations for the environment and sustainable development in their decisions. Consumers and producers, employees, society's institutions, children and young people are thus all key players in the achievement of sustainable development. They must be involved and share the responsibility. Information, education and teaching can disseminate knowledge about sustainable development and thereby change attitudes and behaviour. Public participation in decisions on and the implementation of the sustainable development strategy is essential. Therefore it is important that there is broad public support and confidence in the policy for sustainable development pursued.

The Strategy makes several references to the so-called Aarhus Convention on people's right to participate in environmental policy-making. It is now implemented in Denmark, like in most other European countries. But the Strategy does not make any statement as to the particular roles that the above-mentioned groups should fulfil nor does it set forth a hierarchy of importance of actors.

Not a well-known document

It is therefore fair to say that the issue of participation is not given a high priority neither in the Strategy nor in the process of developing the Strategy. It should therefore come as no surprise that the Strategy is not a document which is well-known among the general public.

4.3.5 Assessment

Focus in indicators

The Strategy is comprehensive and covers horizontal as well as sectoral issues. In the operational part of the Strategy, most focus is directed towards environmental aspects whereas the introductory chapters emphasize that sustainability is a broad concept with three dimensions.

The monitoring aspect is probably one of the strengths of the Strategy as the indicator system is comprehensive and will be the main instrument by which to monitor the overall societal development and to take corresponding actions if the development turns out to be unfavourable. It is not possible to judge if the plan already has had an impact and to what extent the main public authorities use this plan in their policy-planning. It is our assessment that much depend on the commitment that government(s) will show in the future when up-dating the indicators, and ultimately what actions they will propose if the indicators show that the country is not moving towards but away from sustainable development.

The report contains substantial targets - some even very radical - but new "middle-range" objectives are not introduced.

A potential weak element is the lack of a clear role assignment. It is not clear from the strategy who is *really* responsible for securing that the country is on the path towards sustainability.

4.4 Comparing the strategies

The three national strategies will be compared in this section starting with a general comparison of the key elements of the strategies. This is followed with a more detailed comparison of the objectives and the indicators used.

4.4.1 Overall comparison

Table 4.5 provides a general comparison of the strategies along five aspects: the definition of sustainability, how the strategies describes trade-offs between the three dimensions, the type of objectives, use of indicators, and an indication of how the future follow-up of the strategies.

Table 4.5 Comparison of the three countries' strategies

	Perspectives for Germany	The Action Plan The Netherlands	A balanced future Denmark
Definition of sustainability	Reference to Brundtland. Defined as three dimensions	Reference to Brundtland Defined as three dimensions	Reference to Brundtland Defined as three dimensions. The plan is most elaborated on environmental dimensions
Trade-offs between three dimensions	It is acknowledged that conflicts over goals are inevitable. No mechanism is propose to weigh the three dimensions against each other	No mechanism is proposed to weigh the three dimensions against each. Win-win solutions are advocated	No mechanism is propose to weigh the three dimensions against each other
Type of objectives	There are overall objectives as well as specific and quantitative objectives, also at sector level	Overall process-oriented objectives with a strong emphasis on learning (as well as specific and quantitative objectives in the Review Document)	Sustainability is seen as an on-going process. The strategy also contains eight general principles and specific and sector-based objectives
Use of indicators	A set of 21 indicators is presented as a fundamental component of the strategy	36 preliminary indicators. A complete set of indicators is currently being prepared	14 key indicators plus 45 sectoral and 46 horizontal indicators.
Follow-up	The Federal Government will every two year present a status report	The Government will every year report to the parliament on progress and organise a public debate. A “sustainability balance” with sustainability indicators expected in 2004	The development will be measured every year via the indicators and the results presented at a special website

Main observations

The main observations deriving from the comparison are the following:

- All strategies refer to the Brundtland definition and go on to see sustainability as encompassing the three dimensions. As such, none of the countries see sustainability as solely an environmental concept. It is also a common feature that none of the countries specify mechanisms by which to make trade-offs between the dimensions if this is inevitable.

- Indicators are a cornerstone in the implementation strategy in Germany and Denmark. There is a comprehensive set of preliminary indicators in The Netherlands (see further in section 4.4.3).

- None of the strategies relate themselves directly to the Wadden Sea / coastal zone management. However, The Netherlands has a Wadden Sea policy document which is framed with reference to sustainability, and the Dutch sustainability strategy contains specific Wadden Sea indicators.

4.4.2 Comparing objectives

The national objectives are described in a different manner and the countries use different concepts to denote the aspirations of the strategy such as ambitions (the Netherlands), key focus points and management rules (Germany) and principles (Denmark). It is therefore not possible to make a fully stringent comparison of the objectives. Table 4.6, however, attempts to summarise the overall objectives.

Table 4.6 Comparison of the three countries' objectives

Perspectives for Germany	The Action Plan The Netherlands	A balanced future Denmark
The "ideal" sustainable development is described. It indicates overall aspirations. The strategy also contains ten management rules of sustainability which are formulated as policy principles. The strategy more specifically refers to key focus points of sustainability in a German context which are the following: Use energy efficiently – protect the climate effectively Guaranteeing mobility – protecting the environment Producing healthily – eating healthily	The overall objective is to make sustainable behaviour more and more natural in every action. Long-term sectoral objectives are: Fighting poverty Efficient Global "management" Good global finance and trade structures Good water management and access to good quality drinking water Sustainable energy (clean, reliable, affordable) Health and security	The strategy initially describes four key features of sustainability. This is followed with eight overall objectives which are: The welfare society must be developed and economic growth must be decoupled from environmental impacts There must be a safe and healthy environment for everyone, and we must maintain a high level of protection We must secure a high degree of bio-diversity and protect ecosystems
Shaping demographic change	Sustainable agriculture Biodiversity	Resources must be used more efficiently

Perspectives for Germany	The Action Plan The Netherlands	A balanced future Denmark
Changing old structures – developing new ideas Innovative enterprises – successful economy Reducing land use - encouraging sustainable residential development	Population (ageing population, migration, participation, gender issues) Sustainable mobility (transport) Sustainable production and consumption Knowledge (adding sustainability to the "knowledge economy")	We must take action at an international level Environmental considerations must be taken into account in all sectors The market must support sustainable development Sustainability is a shared responsibility. We must measure progress

Main observation

It is a main observation that there is a quite high degree of consensus across the countries at the level of overall objectives as they point to a number of similar issues. Examples hereof are the following: energy efficiency, high level of environmental protection, health, innovation and modernisation, population issues, and participation.

4.4.3 Comparing the indicators

Indicators grouped in relation to the three dimensions

We have seen that Denmark and Germany have developed a system of sustainability indicators and that it is an important element in the monitoring of the success of these strategies. In the Netherlands, a preliminary set of indicators has been established and is included in Table 4.7. This section compares the key indicators. We have grouped the indicators as either oriented towards the social, the economic, or the environmental dimension of sustainability.

Table 4.7 Comparison of the three countries system of indicators

	Perspectives for Germany	**The Netherlands (preliminary)**	**A balanced future - Denmark[5]**
Social indicators	Educational outcomes for 25-year-olds and number of new students Satisfaction with health Number of Burglaries Relationship between male and female gross annual earnings Women and men aged between 35 and 39 (West German Länder) Labour force participation rate Full-time care facilities Number of foreign school-leavers not completing secondary School Exp. development collaboration	Income distribution Life expectancy Labour force participation (%) of women Volunteer work (participation) Victims of crime "life situation" (complicated aggregated index based on health, housing, sport activity and others) % of working age population unfit for work % of school drop-outs (who don't finish basic education) Labour force participation (%) of immigrants Water level of the North Sea % of GDP for development aid Number of immigrants requesting asylum	Average life expectancy
Economic indicators	Balance of public sector financing Imports from developing countries Capital-outlay ratio Private and public sector expenditure on research and development Gross domestic product Imports from developing countries	GDP per capita Unemployment Costs of traffic jams Inflation % of old people on the job market National debt	GDP per capita Genuine savings Employment analysed by age group Assistance funds as percentage of GDP
Environm ental	Productivity of energy and raw materials	Quality of the Wadden Sea (composed of:	Decoupling illustrated by environmental

[5] Please note that the Danish key indicators are in the strategy grouped with reference to the eight principles of sustainability and not with reference to the three dimensions of sustainability.

	Perspectives for Germany	**The Netherlands (preliminary)**	**A balanced future - Denmark[5]**
indicators	Emissions of the 6 Kyoto Agreement greenhouse gases Share of renewable energy sources in energy consumption Increase in land use for housing and transport Development of the stocks of specified animal species Transport intensity, share of the railways in goods transport Proportion of ecological agriculture and statement on nitrogen surplus Air pollution	PCB, population (number) of seals, Nitrogen, and oystercatchers (a bird species) Area of nature areas (area of forest and 'nature' in general) Index "nature-value" (biodiversity) Eutrophication: N and P Dry areas (areas with too low groundwater level) Pollution with acidifying substances: NOx, SO2, and NH3 Renewable energy (% of energy consumption) Emissions of greenhouse gases (6 gases) Energy consumption per Dutchman "area-consumption" per Dutchman (comparable to the "ecological footprint") Energy intensity (GJ per 1000 Euro GDP)	impacts for four key factors Gross emission in mill. tonnes CO2 equivalents Number of chemicals which have been classified Area of natural habitats Resource flows for three factors (energy, drinking water, and waste) Each year, a number of sectors are singled out and their environmental profiles are illustrated Number of EMAS and ISO registered enterprises Number of eco-labelled products

General features

The comparison shows, overall, that there is a group of indicators which are used in all countries and a number of indicators that are country-specific thereby reflecting national priorities. More specifically:

- that Germany and The Netherlands have many social indicators in common such as indicators for crime/thefts, position of the sexes on the labour market, and education;
- that all countries use GDP as one economic indicator but supplemented with 3-5 other indicators;
- that Genuine Savings is only used in Denmark as an economic indicator for sustainable development;

- that all countries have indicators for greenhouse gases, various air emissions, and resource efficiency.

4.5 Summary

Different kind of strategies

The presentation of the sustainability strategies of the three countries has revealed a number of differences and similarities. It should be stressed that the strategies appear to be of a slightly different nature. The Dutch strategy is less tangible (consisting of more documents none of which are *the* strategy), while the German and Danish strategies are more specific and share many similar features.

Implications for the Wadden Sea region sustainability strategy

The overall observation is that there are many similarities in the way the three countries approach and define sustainability; this certainly form a good basis for elaborating the Wadden Sea region sustainability strategy. There is thus a common understanding of sustainability as an overarching objective in all countries. All countries also acknowledge that sustainability is about balancing the three dimensions. It is, for obvious reasons, difficult to see how the countries de-facto weigh the three dimensions against each other and at what basis they make trade-offs.

The countries are also familiar with the distinction between the procedural and the substantial elements of sustainability, which means that Wadden Sea region strategy likewise may contain both aspects.

It should be noted that the lack of a clearer role assignment in relation to sustainability probably is a weak point in the national strategies. This appears to be a useful lesson in relation to developing a strategy for the Wadden Sea region. Due to the international setting, it is exactly to be expected that role assignment and the establishment of a sense of ownership vis-à-vis the Wadden Sea region sustainability strategy will be a key factor for success.

Recommendation

Having described the national strategies, an emerging question is: are there elements that can be used for the Wadden Sea regional approach? The answer is yes - the three strategies provide a broad range of opportunities of which, the Region can be inspired. In particular, the main elements of principles, themes and indicators give a good platform. This is further elaborated in Chapter 7.

5 The impact of sustainability

Purpose of chapter

So much has been said about sustainable development but what has been the impact of this massive interest in the concept? Are governments, for instance, making different decisions because of the sustainability concept? Are major enterprises doing business today in a different manner because they have come to know of the concept and its implications? Is poverty reduction being achieved and is the global environment improving?

These are questions of a huge magnitude and no-one can give clear-cut answer to them due to methodological difficulties and lack of data. It is, for instance, not possible to isolate the effect of sustainability on the societal development from other sources of influence. However, it is possible to describe in broader terms the influence that the sustainability concept and related policies has had on decision-making patterns within the public and private sector.

Institutional impact

In the context of developing a Wadden Sea sustainable strategy it is first and foremost relevant to learn of the institutional changes that have occurred in the public and private sectors i.e. whether new "rules of the game" have been introduced and whether new values have come to play a role. We thus focus on the institutional impact of sustainability. It means that in this chapter we will identify changes in decision-making patterns and changes in values within selected areas of the public and private sector. The changes shown can reasonably be traced to the introduction of the sustainability concept.

5.1 Impact on governments

Three impacts on governments are described in this section: i) new policy objectives, ii) new decision-making structures, and iii) new ways of monitoring societal development.

5.1.1 Policy objectives

National governments

National governments all over the world have responded to sustainable development. Through the adoption of Agenda 21 (global programme of action for sustainable development into the 21st century) at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, they have committed themselves to adopt a national strategy for sustainable development. It should build upon and harmonize the various sectoral

economic, social and environmental policies and plans that are operating in the country. Via the national strategies, sustainability has (at least formally) become an overriding objective of many governments.

However, there are not yet comparative analyses available about the institutional impact on governments. But one of the likely impacts would be that sustainability has fostered an increased level of policy coordination across ministries. The national action plans are thus typically prepared by several ministries, like was the case for Germany, The Netherlands and Denmark, cf. Chapter 4.

Regional and local authorities

There are two examples that illustrate how the sustainability discourse is affecting regional and local authorities.

The first example is the Local Agenda 21 initiative (LA 21) which was part of the Agenda 21 document adopted at the 1992's Rio earth summit. For a further description see section 5.3 below.

Another example is the new EU Strategic Environmental Assessment (SEA) directive which requires a systematic review of e.g. municipality plans in order to facilitate environmental protection and the principle of policy integration. The directive has to be implemented in national law no later than 2006. It could, of course, be questioned if this is an impact of sustainability; cf. the fact that sustainability is about the three dimensions and not only environment. But we find it reasonable to include it as an impact because the general sustainability discourse has sparked an interest in impact assessment and the SEA directive is certainly a clear example of this.

The European Union

The fifth EU environmental action plan, titled "Towards Sustainability" (1992-2000) brought the term sustainable development into EU parlance. Ever since has the EU underlined - in word if not always in deed - that sustainability should be a guiding principle. Today, the main EU institutions - the Council, the Commission and the European Parliament - are often acting as driven forces behind the implementation of sustainability practices within the member states and internationally. There are thus numerous indications of the EU commitment in this field such as council meeting decisions, the mentioning of sustainability in the Amsterdam Treaty, not to forget the recent introduction of impact assessment procedures (see Chapter 6). We further refer to section 2.2 for an overview of the adoption of sustainability within EU.

The impact on EU policy objectives seems thus to be similar to those identified for the national governments. The impact that probably deserves the most attention is the on-going attempt to turn the whole policy-making machinery within the EU towards sustainability via the new impact assessment procedures which certainly is an interesting institutional novelty (EU Commission, COM 2002, 276 Final).

International organizations

International organisations have also adopted the new language of sustainability. It is not possible in this study to provide any assessment because this would go beyond the scope of this study but it can, as an example, be

mentioned that the World Bank has developed a strategy for mainstreaming environment into Poverty Reduction Strategies as well as into their Country Assistance Strategies. And the OECD reported to the Johannesburg Summit on behalf of the member states. The OECD has also decided to develop indicators that measure progress across all three dimensions of sustainability with a view to incorporating these into OECDs peer review processes.

5.1.2 Decision-making structures

In regard to decision-making structures, three novelties can be traced to the sustainability concept namely i) the introduction of new assessment methods, ii) the renewed focus on coordination of policies, and iii) cooperation between sector bureaucracies.

New impact assessments

Impact Assessment is the process of systematically analysing the likely impacts of an intervention by public authorities. The development of impact assessments is illustrative of how the concept has changed from being a green concept towards a broader three-dimensional concept.

- The first generation of impact assessments was the environmental impact assessments (EIA) at project level. It is obviously difficult to assess if the popularisation of the EIAs was due to the sustainability discourse or merely a reflection of the general environmental agenda.

- This was followed by the Strategic Environmental Assessment (SEA) which prescribes a systematic process for identifying, predicting, reporting and mitigating environmental impacts of proposed policies, plans or programmes. The relevant EU directive was adopted on 27 June 2001. Member states are required to implement the directive into their own legislation.

- Impact Assessment (also called extended impact assessment or sustainability impact assessment) of policy proposals is the newest generation of assessment tools, focusing on higher-level policy-making. It is being promoted by the European Commission to become one of the basic tools by which unintended negative side effects and synergies may be identified, thus avoiding the need for future expenditure to put things right.

The assessment tools are further presented in Chapter 6.

Policy integration

Because of the multi-dimensional nature of sustainable development it was stressed in the Agenda 21 document that governments are required to improve the processes of decision-making in order to achieve the progressive integration of economic, social and environmental issues in the pursuit of development.

Prior to the Johannesburg Summit in 2002, the United Nations' Division for Sustainable Development analysed how governments have reacted to the request for policy integration. It was concluded that:

"Governments have made significant changes in the institutional structures of government in order to enable more systematic considerations of the environment when decisions are made" (United Nations, 2002: 228).

It is thus plausible to say that the sustainability concept has directed attention to the internal coherence of public policies. It is increasingly seen as a sign of low regulatory quality if policies, plans, and projects have not been assessed from the three perspectives: the social, the economic, and the environmental.

Cooperation between sector bureaucracies and ministries

It is not easy to ensure policy integration at policy level if sector bureaucracies in their everyday administration do not cooperate smoothly. Cooperation at all levels of bureaucracies is thus the other side of the coin when talking about policy integration. Many governments have promoted cooperation and coordination across ministries in the name of sustainability. This is counteracting the "natural law" of bureaucracies to develop there own procedures and world views which eventually may lead to sub-optimal prioritisation and use of public resources.

It is likely that sustainability has been among the key drivers in promoting better communication between ministries of finance and environment. It is illustrative that when the environmental and finance ministers met for the first time in an OECD context, in May 2001, they recognized sustainable development as an overarching goal of OECD governments and endorsed a three-year organization-wide project for sustainable development (OECD, 2002).

The real impact?

There are not yet published comprehensive overview studies that evaluate at an aggregate, cross-national level to what extent the level of cooperation between sector bureaucracies and ministries has changed. It can thus only tentatively be concluded that sustainability has brought this issue to the attention of policy planners and decision-makers.

5.1.3 Measuring and monitoring

There has for long time been an interest in measuring and monitoring the development of a society; the gross national product being the most well-known example of a common societal yardstick. Following the sustainability concept, supplementary measures are being developed.

Genuine Savings

One such example is the "Genuine Savings" concept. It is an economic indicator for developments in the total wealth of society. This concept is used to determine the value of economic, social and environmental resources. Combined with other indicators, "Genuine Savings" can provide a picture of whether or not developments can be described as sustainable. Genuine savings is, for instance, being developed for Denmark.

Sustainability indicators

Another example is the very widespread interest in sustainability indicators. There has been massive research undertaken - with the participation of countries, research organisations, the international organisations, etc. - with the

aim of developing sustainability indicators that in an elegant and consistent manner can inform whether societies are heading towards sustainability.

The EU Commission has started to use indicators in the so-called "Spring-reporting" by which the Lisbon strategy of economic, social and environmental renewal is monitored. The spring reports 2002 and 2003 contain indicators in relation to general economic background (11 indicators), employment (21 indicators), innovation (16 indicators), economic reform (23 indicators), social cohesion (21 indicators), and environment (15 indicators) (see European Commission, 2003a). It has recently been decided to considerably shorten the list so as to increase its political visibility and clarity. The list now contains 14 indicators (2 or 3 in each area).

Why indicators?

Indicators accommodate the need for reliable and relevant information. Authorities and political parties need focused and targeted information before establishing priorities. Businesses need to know about the consequences of the current activities before deciding about new initiatives. Citizens and NGOs wish to be kept informed about societal developments. Indicators constitute an important element in strategy activities for sustainable development as they are useful tools for:

- Keeping people informed of whether or not society is moving towards sustainability
- Monitoring the implementation of specific targets and measures that emerge from the strategies
- Enabling international comparisons (benchmarking).

In order to meet these aims they should be relevant, easy to understand, reliable, and have accessible data.

Examples of systems of indicators

We have screened the indicator systems developed by Eurostat (2003), United Nations (2003), OECD (2003) and UK (2003) to get an overview of the typical indicators. The summary of the screening is presented in Table 5.1.

Table 5.1 Examples of sustainability indicators

Social indicators	Economic indicators	Environmental indicators
• Health expenditures per capita • Education expenditures per capita • Education level at the age of 30 years old • Crime rate • Demography and population growth • Accidents at work • Unemployment rate	• GDP per capita • Inflation rate • Business investment in R&D • Industrial production growth • Net state aid to the region • New patents registered • Migration and immigration	• Open space hectare per capita • Forest area per capita • Habitat areas hectare per capita • Threatened species • Volume of transport relative to capita • Share of renewable energy • Total waste • Share of recyclable waste

In some cases, indicators are also given for institutional arrangements that facilitate sustainability. This can, for instance, include the application of impact assessment as an instrument by local and regional authorities, and the number of local 21-Agenda strategies developed by local and regional authorities.

The screening of indicators gives rise to three comments. The first is that many of the indicators found are quite similar to those in the national strategies. It indicates that there is some convergence in the international community as to the overall type of indicators. The other comment is that in spite of the many similarities in the way indicators are being defined, each set of indicators should have its own character (reflecting geographical area, administrative structure, or a set of political objectives). This leads to the final comment with regard to the Wadden Sea region sustainability strategy. If it is decided to include indicators in the strategy, a good deal of inspiration can be found by consulting international experience but indicators cannot be copied; they have to be developed with a view to the particularities of the region in order to be meaningful.

STAR database

Another example of monitoring the effort to achieve sustainability is the European Environment Agency's STAR Database (European Environment Agency, homepage, 2004). "STAR'" stands for Sustainability Targets And Reference value. The STAR database is an inventory of current environmental policy targets and sustainability reference values which apply in the EU, in a range of countries in the European Free Trade Association (EFTA), in Central and Eastern Europe (CEE), and in the Newly Independent States (NIS).

Environmental Sustainability Index for countries

Finally, it should be noted that some research organisations have launched initiatives to monitor the overall sustainability performance of countries and to benchmark them against each other. One such example is the Environmental Sustainability Index (ESI). It is a measure of overall progress towards environmental sustainability, developed for 142 countries. The ESI scores are based upon a set of 20 core indicators and several underlying variables. The

ESI permits cross-national comparisons of environmental progress in a systematic and quantitative fashion.[6]

In sum, there are many indices that the concept of sustainability has sparked a huge interest in new monitoring and measuring systems.

5.2 Impact on private sector

New role for industry and business

With the Brundtland Report, the environmental debate began to shift from mainly identifying crises and demanding new laws to control polluters (react and cure) to trying to design development itself to be less harmful to the environment (anticipate and prevent.) This brought industry into the environmental debate not just to defend its actions, but also to try to find long-term solutions. Sustainable development has now added new concepts to the businessmen's vocabulary such as triple bottom line, corporate social responsibility, and eco-efficiency.

> "We are used to a fast pace of change in the business world. However, the pace at which sustainable development has entered the boardrooms of multinational companies in the last 10 years has been staggering. A decade ago, environmental concern was merely a matter of legal compliance for most companies. But after the UN Earth Summit in Rio in 1992, sustainable development appeared on the agenda of many multinationals. It first appeared in the guise of "eco-efficiency" - which represented a link between environmental improvement and financial savings. Later, in the 1990s, it became apparent to business that sustainable development had a social dimension as well."
>
> Lise Kingo, Corporate Vice President, NOVO A/S in foreword to a report on business and environment (EEA 2001)

Sustainability pays…

The core thesis that is forwarded by the sustainability-and-business advocates is that sustainability pays - by increasing corporations' competitiveness, by improving their reputation, and by improving internal operational efficiency and reducing operating costs.[7]

Among the new actors advancing this viewpoint, the World Business Council for Sustainable Development (WBCSD) has established a central position. It is a coalition of 165 international companies united by a shared commitment to

[6] The ESI is the result of collaboration among the World Economic Forum's Global Leaders for Tomorrow Environment Task Force, The Yale Center for Environmental Law and Policy, and the Columbia University Center for International Earth Science Information Network; see http://www.ciesin.org/indicators/ESI hosted by Yale Center for Environmental Law & Policy.

[7] It is interesting to note that his viewpoint is almost completed different from the stance of political ecology, cf. Section 3.3, that sustainability and business prosperity are incommensurable. However, it should also be noted that political ecology focuses on the environmental dimension while sustainability in a business context is much broader.

sustainable development via the three pillars of economic growth, ecological balance and social progress. The aim is to participate in policy development in order to create a framework that allows business to contribute effectively to sustainable development.

…as a lip service?

The actions and articulations of businesses to link their activities to sustainability and sustainable development have to be reviewed with care as companies obviously can use statements and strategies for sustainability concern in order to justify their economic interest. The British consultancy firm Hoop Associates has recently (2002) made an evaluation of more than 100 European firms on the businesses linkage to corporate social responsibility (CRS) and sustainable development. All of the firms have stated clear commitment to CRS and sustainability promotion, but the conclusion is that the companies have a "lack of clarity" on level of the implementation.

5.2.1 Triple Bottom Line

Add and destroy

In the business world, the bottom line of a profit and loss statement is a point of familiarity. This familiarity was used to present the triple bottom line concept which now has entered the business lexicon as a convenient way of thinking about how the concept of sustainable development applies to business. The triple bottom line focuses corporations not just on the economic value they add, but also on the environmental and social value they add – and destroy. At its narrowest, the term 'triple bottom line' is used as a framework for measuring and reporting corporate performance against economic, social and environmental parameters.

At its broadest, the term is used to capture the whole set of values, issues and processes that companies must address in order to minimize any harm resulting from their activities and to create economic, social and environmental value. This involves being clear about the company's purpose and taking into consideration the needs of all the company's stakeholders – shareholders, customers, employees, business partners, governments, local communities and the public.[8]

5.2.2 Reporting and indexing

In line with the Triple Bottom Line concept reporting systems are being developed by which companies can report to their investors and stakeholders on sustainability performance.

Environmental reporting

Financial institutions such as banks, insurance companies and pension funds provide much of the financial capital for companies. Many leading companies are now beginning to take responsibility for their environmental impact and are trying to improve and communicate their environmental performance via an environmental report and environmental performance indicators. Environmental

[8] The European Commission Sustainability Strategy invites companies with at least 500 staff to publish a "triple bottom line" (EU Commission, COM, 2001, 264, Final).

indicators need to be constructed so that they can capture whether or not the aims of environmental management are being achieved, i.e. improving environmental performance and moving towards a more sustainable society. Dozens of other organisations have also developed standards or guidelines for environmental reporting.

Sustainability reporting

Reporting on the wider social and ethical dimensions of sustainability is a more recent challenge for the business and the financial sectors. Leading companies are beginning to address not only environmental factors but also social and ethical issues and their interlinkages, often driven by consumer and investor pressure. Reporting guidelines such as the global reporting initiative (GRI)[9] facilitate reporting on the three key dimensions of sustainability.

Indexing

There are now several rating companies that include sustainability indicators to benchmark companies. The most well-known is probably the Dow Jones Sustainability Indexe according to which there is a growing demand for sustainability benchmarks. In the words of this company corporate sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments. Corporate sustainability leaders achieve long-term shareholder value by gearing their strategies and management to harness the market's potential for sustainability products and services while at the same time successfully reducing and avoiding sustainability costs and risks.[10]

The Dow Jones Sustainability Indexes created the first collection of global sustainability indices in September 1999. The index allows for the benchmarking of the performance of investments in sustainability companies and funds.

The Dow Jones Sustainability Index

The criteria by which the sustainability companies are identified and ranked are based on five 'sustainability' principles:

Technology: innovative technology and organisation that uses financial, natural and social resources efficiently, effectively and economically.

[9] The Global Reporting Initiative (GRI) aims to develop and disseminate globally applicable Sustainability Reporting Guidelines. These Guidelines are for voluntary use by organisations for reporting on the economic, environmental, and social dimensions of their activities, products, and services. The GRI incorporates the active participation of representatives from business, accountancy, investment, environmental, human rights, research and labour organisations from around the world. Started in 1997 by the Coalition for Environmentally Responsible Economies (CERES), the GRI became independent in 2002, and is an official collaborating centre of the United Nations Environment Programme (UNEP) and works in cooperation with UN Secretary-General Kofi Annan's Global Compact. There are now app. 300 organisations issuing sustainability reports referencing the GRI Guidelines.

[10] For more information see http://www.sustainability-index.com/htmle/other/faq.html.

Governance: high standards of corporate governance including management responsibility, organisational capability, corporate culture and stakeholder relations.

Shareholders: demands should be met by sound financial return, long-term economic growth, long-term productivity increases, sharpened global competitiveness and contributions to intellectual capital.

Industry: lead an industry shift towards sustainability by demonstrating commitment and publishing superior performance

Society: encourage lasting social well-being by appropriate and timely responses to social change, evolving demographics, migratory flows, shifting cultural patterns and the need for continuing education.

The criteria facilitate a financial quantification of sustainability performance by focusing on a company's pursuit of sustainability opportunities, and reduction and avoidance of sustainability risks and costs. Each company's sustainability performance is given a score, and the companies are ranked according to their score.

5.3 Impact on civil society

The public's influence and action in regard to sustainability can go two ways either as a citizen acting in the political "sphere" or as a consumer acting on the market. Both arenas give good opportunities for the public to state their interests and concerns.

5.3.1 Citizens

Difficult to detect the impact

The chapter has focused on the institutional novelties that were launched in the wave of the introduction and popularisation of the sustainability concept. It means logically that there are few such impacts on civil society as civil society normally is defined as the sphere of society that is left without direct regulation, but rather is being "regulated" by the social norms in a given society. It is thus difficult to detect a direct relationship between sustainability and civil society developments although sustainability exactly is about bringing changes of significance for everyday-living. Here we will only note three developments that can be said to be inspired by the idea of sustainable development: Local agenda 21, the so-called Aarhus Convention, and political consumerism

Local agenda 21

Chapter 28 of Agenda 21 (United Nations, 2002) concern the role of local authorities. It argues that local authorities must play a crucial role in the transition to sustainable development and ask local authorities to produce a local version of Agenda 21 by 1996, in which they interpret the implications of sustainable development for their locality. This is to be done in "a consultative process with their local populations". At the heart of the concept is thus the aspiration to increase public participation and to establish better channels for the articulation of public preferences into the local administrative machinery. The status for the three countries is as follows.

Germany: 1,700 local authorities in Germany have adopted a Local Agenda 21 resolution, which means that 50 per cent of the population is living in 'Agenda' municipalities (source: http://www.epo.de/specials/zke/zke_memo _engl.html).

The Netherlands: Approximately 25% of the Dutch municipalities are working with Local Agenda 21. In a national workshop (1999) in the Netherlands on the future of LA21 it was concluded that the body of ideas behind LA21 was widely supported by the directly involved key-actors on the national level for the implementation of LA21, being the ministry for the Environment (VROM), the Association of Dutch Municipalities (VNG) and the NGO umbrella organisation, the National Committee on International Co-operation and Sustainable Development (NCDO). There is, however, always the risk of LA21 fading away slowly; a tendency that has been observed in recent years (Coenen, 2001).

Denmark has put itself at the global forefront of LA21 implementation backed by the adoption in 2000 of a national law requiring municipalities to issue periodic LA21 reports (ENDS Environmental Daily, 30 June 2003). All Denmark's 14 counties and 70% of the 275 municipalities are working on various projects under the auspices of local Agenda 21. Many municipalities have created an environmental centre or an Agenda 21 centre or employed an Agenda 21 coordinator. The Ministry of Environment and Energy, the National Association of Local Authorities in Denmark and the Association of County Councils in Denmark have been partners since 1994 in a joint campaign on local Agenda 21 (Danish Environmental Protection Agency, 2003).

The Aarhus Convention

While most OECD countries have long-standing traditions of engaging citizens in decision-making, all have taken further steps during the 1990s to bring government closer to the people (OECD, 2002). A prominent example is the UN/ECE Convention on Access to Information, Public participation in decision-making and Access to Justice in environmental matters ("The Aarhus Convention") which aims at strengthening civil involvement in environmental issues. It has been signed by all three Wadden Sea countries but until now only ratified by Denmark (UNECE, 2003).

5.3.2 Consumers

Political consumerism

Political consumerism can be defined as consumer choice of producers and products based on a variety of ethical and political considerations such as organic products and products ensuring better social equity in the production chain in the Developing World. It has increased in recent years although the magnitude is still unclear.

Trends in OECD countries

OECD has recently studied household consumption in the report "Towards Sustainable Household Consumption? Trends and Policy in OECD Countries" (2002). It focuses on the households' consumption of food, travel, tourism, waste, and energy. The Study points to that households have increased their concern for water consumption as well as "sustainability or ecological" tourism. But the consumers have shown little concern in relation to personal travel and waste generation. Since 1970, private car transport has doubled (in road-kilometres). Furthermore, air traffic has increased tremendously within recent decades. In respect to travel, the consumer's trend tends to go towards less environmental awareness with a focus on flexibility, convenience and mobility.

There has been a growing interest on recycling in relation to waste generation but the level of waste generation is still increasing in the OECD countries.

5.4 Impact on sectors

This section illustrates the impact of sustainability on sector policies. This is done via a presentation of some recent key EU documents which, for different sectors, relate the sectoral objectives to the concept of sustainability.[11]

Fishery

The Commission launched the Green Paper on "The Future of the Common Fisheries Policy" (COM (2001) 135 final) in 2001 and a Communication on "Roadmap" (Commission, 2002). The Communication clearly points to sustainability and its three dimensions. The reform must:

" lead to a new CFP (Common Fishery Policy) capable of providing sustainable development in environmental, economic and social terms. This will be achieved through measures aiming at: responsible and sustainable fisheries and aqua-culture activities that contributes to healthy marine ecosystems; an economically viable and competitive fisheries and aqua-culture industry which will benefit the consumer; a fair standard for those who depend on fishing…".

Moreover, it highlights that sustainability refers to both the needs of the present and future generations.

The "Roadmap" Communication addresses focus areas. Nine areas are highlighted and can thus be considered as main focus areas in the present and future EU fishery policy: conservation of resources and management of fisheries; repercussion of the conservation policy on the fishing fleet; access to waters and resources; control and enforcement; international fisheries; aquaculture; the social dimension of the common fisheries policy; economic management of fisheries in the Union; and effective and participatory decision-making

Tourism

The Commission has likewise connected tourism to environment and sustainability. In so doing, policies to develop tourism should include practical measures covering a broad range of aspects needed to reach the destination of sustainability. Measures to be taken concern primarily refuse collection and the integration of tourist infrastructure development and coastal protection programmes into town planning.[12]

Transport

The Commission's White Paper "European Transport Policy for 2010: Time to Decide" (COM (2001) 370) is the first step in formulating a new sustainable transport policy. The paper argues that "the transport system needs to be

[11] Please note that the documents referred to in this section are not included in the report's list of references because they have only been briefly screened.

[12] Two reports from the Commission underlines the approach. They are: "Towards quality rural tourism: Integrated quality management (IQM) of rural destinations" (2000) and " Towards quality coastal tourism: Integrated quality management (IQM) of coastal tourist destinations" (2000).

optimised to meet the demands of sustainable development, as set out in the conclusions of the Gothenburg European Council".

In the White Paper, it is emphasised that the future transport policy should gradually break the link "between transport growth and economic growth". This decoupling is deemed necessary in order to deal with the increased demand on mobility, the expected expansion in transport flows, and the accessibility of outlying and remote areas. Promoting the shift in modes of transport is a major priority to which many of the proposed policy actions are oriented.

Agriculture

The ambitions for the European agriculture policy are best stated in the document "CAP Reform: A long-term perspective for sustainable agriculture" (COM (2003) 23 final). In the context of EU, sustainable agriculture is primarily about realising three main objectives:

- to enhance the competitiveness by setting intervention as a real safety net measure;
- to promote a more market-oriented, sustainable agriculture by completing the shift from product to producer support with the introduction of a decoupled single farm payment, based on historical references and subject to compliance with environmental, food safety and animal welfare requirements. This will improve the efficiency of income payments to farmers;
- to provide a better balance of support and strengthen rural development.

Industry

In various industry related Communications, the EU Commission talks about a sustainable structure of industrial production. This structure relates in particular to environmental protection (e.g. eco-efficiency in resource use, increase in the use of renewable resources, recycling, life cycle approach to integrated product policy, clean technologies, and use of environmental management schemes).

Moreover, the Commission has advocated Corporate Social Responsibility (CRS) in relation to sustainability. The Communication “On Corporate Social Responsibility” (EU Commission, COM(2002) 347 final) seeks thus to promote CSR as a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with stakeholders on a voluntary basis. Also the Communication on “Industrial Policy in an Enlarged Europe” (EU Commission, COM(2002) 714 final) contains an emphasis on CRS.

Energy production

Energy policy can be approached from various dimensions such as securing supply safety, greening energy production and profitable energy production. In regard to the first dimension, the Green Paper “Towards a European Strategy for the Security of Energy Supply” (EU Commission, COM(2000) 769 final) outlines that securing of "supply in the energy field must be geared to ensuring, for the good of the general public and the smooth functioning of the economy, the uninterrupted physical availability on the market of energy products at prices affordable for all consumers (both private and industrial), in the

framework of the objective of sustainable development enshrined in the Amsterdam Treaty". This general statement in the Green Paper has then to be implemented in real policy.

Summary

This brief and non-comprehensive overview of the use of the sustainability concept within EU sector policies shows that the European Commission frames many different sector policies in the name of sustainability and that the sector policies often contain clear references to the concept.

5.5 Summary

It has had an impact!

This overview of the impact of sustainability has come to an end and it is time to summarise. One overall and robust conclusion is that that the consequences are widespread and significant. Sustainability has had an impact. As this chapter has an overview character, we are, however, reluctant to give more precise conclusions. It is of obvious reasons difficult to prove the magnitude of a given impact and to isolate a given development as a consequence of sustainability *per se*.

In Table 5.2 we have summarised what has been the main impacts of sustainability along with a tentative indication of what supposedly will be the future impact.

Table 5.2 Overview of the impact of sustainability

Societal sphere	Impact	Future impact?
Public sector	Sustainability is becoming an overriding national objective	Likely to continue to be an important objective; no sign of the opposite
	New decision-making practices, in particular via the new sustainability impact assessment	The further application of impact assessment will probably be the most significant impact of sustainability on the public sector in the future
	Stronger focus on coordination between sector bureaucracies	Coordination will most likely increase as a consequence of application of impact assessment methods
	New ways of measuring societal development (sustainability indicators)	Sustainability indicators will be further developed. It has be to seen how political decision-makers will react to negative developments (either to change the indicators or to change the development)
Private sector	New perceptions of the role of environmental, social and other ethical concern	It is likely that broader segments of the business world will consider the new concerns as a natural part to business strategy
	Introduction of new concepts such a Triple Bottom Line	Not possible to assess
	New reporting and indexing mechanisms provides link between investors and societal concern	Not possible to assess. It is strongly related to the development in political consumers
Civil society	Stronger focus on participation and better channels of participation	Not possible to assess if (channels of) participation will increase
	Political consumerism	Not possible to asses if political consumerism will increase

Implications for the Wadden Sea region strategy

There are four observations that can be drawn from this impact overview in relation to the Wadden Sea context. They are the following:

- Impact assessments appear to be the novelty that in the long run may have a significant impact on political and administrative decision-making. It should be a matter of consideration whether it is relevant to develop an impact assessment procedure that is targeted to the Wadden Sea region and which should secure that individual decisions made in the region are taken with a view to the broader regional consequences. Such a model is discussed in the Chapter 7 of this report.

- In connection to a forthcoming strategy, it is likewise a matter of consideration for the Wadden Sea Forum if sustainability indicators should be developed in order to assess and judge the progress or digression of the

development in the region. If indicators are introduced, they should be selected so that they are relevant, easy to understand and reliable in the Wadden Sea region context. Furthermore, it is essential that the responsible partners can provide the necessary data to the indicators.

- The argument that social and environmental concern inherently is counterproductive to profit-maximising is apparently being eroded by the fact that (parts of) the business community has embraced sustainability. It increases the likelihood that the business community may actively support the Wadden Sea region sustainability strategy.

6 Sustainability Assessment

Purpose of chapter

The overall purpose of using systematic assessments is to provide information on the implications of a new action or decision, thereby making the consequences of a given decision transparent to decision-makers as well as to the public.

This chapter presents various public policy assessment methods and in particular on how sustainability assessments have been developed in the EU system and United Kingdom. EU's recently developed (Extended) Impact Assessment methodology is the most prominent example of a sustainability assessment method. In the UK, the first sustainability assessments at local and regional level have been undertaken.[13]

6.1 Overview of assessments methods

Decision-makers today can gain information from a wide range of assessments such as Life Cycle Analysis, Risk Assessment, Environmental Impact Assessment, Social Impact Assessment, Cost-Benefits Analysis and Multi-Criteria Analysis. This section gives a brief presentation of these assessment techniques in order to provide a platform for the later presented Impact Assessment.

Cost Benefit Analysis

CBA is based on the principle that a proposal should only be implemented if all of its benefits are equal to or outweigh all of its costs. CBA assigns a value to costs and benefits on the basis of individuals' preferences. The aim of CBA should be to monetise as many of the costs and benefits of a proposal as possible including those aspects for which the market does not provide a satisfactory measure of economic value.

Multi-Criteria Analysis

MCA establishes preferences between options by reference to an explicit set of objectives for which criteria have been developed. A typical goal of MCA is the construction of a performance matrix, which sets out how each of the options under consideration performs against each of the criteria. In a basic form of MCA, the performance matrix may be the final product of the appraisal and the task of processing the information it presents will rest with decision-

[13] Section 6.1 and 6.2 build on Eales & Twigger-Ross (2003), Vorst & Sheate (1999), COWI (2002) and the EU Commission's Impact Assessment publications.

	makers. However, MCA can go considerably further than merely summarising option performance and can seek to prioritise between competing concerns.
Life Cycle Analysis	LCA is used to evaluate the environmental effects of a product, service or activity and its usefulness lies in its capacity to consider impacts occurring upstream and downstream from the product system. The general framework for LCA is outlined in four phases: 1) goal definition and scoping; 2) inventory analysis; 3) impact assessment; and 4) interpretation.
Risk Assessments	Risk Assessment involves the estimation of the probability and severity of hazards to human health, safety and ecosystem functioning or "health". The term "Risk Assessment" is often loosely applied and can be used to describe a whole range of procedures, from a simple statement about possible hazards and risks to formalised, quantitative risk estimates. In general the process of making a risk assessment can be broken down into five key stages: 1) hazard identification; 2) identification of the consequences; 3) estimation of the magnitude of the consequences; 4) estimation of the probability of the consequences; and 5) evaluation of the significance of the risk.
Environmental, Social and Health Impact Assessments	EIA, SIA and HIA are assessments aiming at a systematic identification and evaluation of the potential impacts of options or proposals on respectively the environment, social and health aspects in a given project. They have a single sectoral focus at a project level. Their applications are done iterative during the project-process. As "process" tools they follow essentially similar set of steps: 1) scoping; 2) assessment; 3) mitigation and enhancement; and 4) monitoring.
Strategic Environmental Assessments	Whereas EIA, SIA and HIA are applicable at project level, Strategic Environmental Assessments are strategic in the sense that they provide a framework of implications of options and proposals at programme or policy levels.
Impact Assessment	IA - also often referred to as sustainability impact assessment - is the latest step on the assessment "ladder". Among other things, this method integrates dimensions of sustainability with the aim to provide transparency in policy-making. The Impact Assessment will be further elaborated in the next section.
	Table 6.1 provides an overview of the various assessment methods.

Table 6.1 Focus of the Assessments

	To what kind of initiative e.g. project, programmes, policy is the tool applicable?	Which dimensions are accounted?	What is the Purpose?
Cost benefit Analysis	All kinds	All dimensions	Sums cost and benefits
Multi Criteria Analysis	All kinds	All dimensions	Priority setting based on existing sector assessments
Life Circle Assessment	Project/ product	Environment	Technical information "from cradle to grave"
Risk Assessment	Project and programme	Sector (All dimensions)	Risk based on existing sector assessments
Env. Impact Assessment	Project	Environment	Technical information, transparency and accountability
Social IA and other sector assessments	Project	Social/ sector	Transparency and accountability
Strategic Environmen-tal assessment	Program, policy	Environment	Transparency and accountability
Impact Assessment	All kinds	All dimensions	Transparency and accountability, compare impacts, alternative options/instruments

6.2 EU's (Extended) Impact Assessment

This part outlines the content of the EU's Impact Assessment (IA) based on the Commission's "Communication on Impact Assessment" (COM (2002) 276 final and the "Guidelines on Impact Assessments" (2002).

What is Impact Assessment?

Impact Assessment is defined as:

"(T)he process of systematic analysis of the likely impacts of intervention by public authorities. It is as such an integral part of the process of designing policy proposals and making decision-makers and the public aware of the likely impacts" (Com (2002) 276 final).

Impact Assessment seeks to link separate impact assessments which are undertaken at different stages in the policy, planning and project cycle. It aims to tier the different stages into a coherent process (vertical integration). It also seeks to

bring together different types of impacts; economic, social and environmental into a single overall assessment (horizontal integration).

6.2.1 Ten aspects of IA

In the Communication on Impact Assessment (2002) and the Commission's Guidelines (2003) ten features of the method are highlighted. They are:

- Decision-aiding, not decision-making tool
- Replacement of existing sectoral impact assessments
- Integrate policies
- Think "outside the box" - think of alternative objectives and measures
- Be transparent
- Compare negative and positive impacts - use your judgement
- Get things in proportion
- Use existing knowledge and experience
- Iterative process - from beginning to decision
- Consult interested parties and relevant experts

Decision-aiding tool	Impact Assessment is a tool to aid policy-making; however, it cannot subvert the need for political action.
Sectoral impact assessments replacement	The IA replaces many of the former, more fragmented, assessment methods. It integrates all existing sectoral assessments concerning direct and indirect impacts of a proposed measure on the economy, on society and on the environment into a single instrument in order to aid decision-making, thus enabling informed political judgments and sensible trade-offs.
Policy-integration	Sectoral policy decisions will often have consequences in other sectors. This may induce inconsistency across policies. It is the hope of the EU Commission that an integrated assessment will lead to integrated policies.
Think "outside the box"	Those who shall conduct IAs are required to think "outside the box" as it is formulated; that means to consider other policy areas than those which the persons are familiar with. The "outside of box"- approach also refers to the requirement to look for new and alternative policy options and policy instruments.
Be transparent	Transparency is a key motive behind the IA methodology; hence those that produce impact assessments are required to be transparent too in the framing of the analyses and the results.
Compare negative and positive impacts	An impact assessment shall list and compare both the negative and positive impacts of a policy initiative. In particular, it should stress if any specific social group, economic sector or region (inside or outside the community) will be affected in the short, medium or long term.

Get impacts in proportion	It is costly to undertake an extended impact assessment in terms of man-power. It means that the anticipated impacts shall be quite far-reaching before an extended impact assessment is required.
Use knowledge and experience	It is also mentioned that existing knowledge held by EU civil servants working in other General Directorates should be utilised to the extent possible.
Iterative process	The IA is not a one-off exercise but an assessment that can be undertaken throughout the policy-making process. It is an iterative process that allows appraisal or re-appraisal of a policy objectives, options or instruments at the various stages of its development. A given policy/plan can therefore be subject to more than one impact assessment.
Consult interested parties and relevant experts	Those who undertake the IA shall consult interested parties and relevant experts. They will often hold additional data as well as having an opinion on the subject in question. The consultations should be listed in the IA so that the decision-makers and the public can see who have been consulted.

The status of Extended Impact Assessment (XIA) within the EU

On the occasion of the adoption of its 2003 Work Programme, the Commission identified 43 proposals where an Extended Impact Assessment should be carried out. For the Commission's Work Programme 2004, 41 proposals have been selected for Extended Impact Assessment.

Impact assessment will become fully operational in 2004/2005.

It constitutes an integral part of the Commission's planning cycle. Major cross-cutting proposals should be subject to XIA co-ordinated by interdepartmental groups, while XIA of other major proposals is co-ordinated by the lead DG.

The lead General Directorate (DG) is responsible for the assessment. Responsibilities include ensuring the relevance and quality of the analyses and coordination of other stakeholders as well as appropriate consultations of interested parties. The early coordination vis-à-vis other DGs is expressed in the Guidelines as being essential to ensure a multi-sector approach and to anticipate and resolve potential controversial issues as early as possible.

Guidance for staff being involved with the XIA has been laid down in an internal document. It will be supplemented by an internal website guiding the Commission services in carrying out extended impact assessments, and by training courses. Whilst the number of staff to be working on sustainability within the Secretariat General will be increased, the responsibility for ensuring the conduct of the extended impact assessment lies with the responsible desk officers for a policy or legislative initiative within the sectoral Directorate Generals.

It is not yet clear if and when it will be mandatory for the Member States to introduce XIA into their administrative practices.

6.2.2 Two stages in the impact assessment process

The Impact Assessment operates in two stages depending on the scope of the new initiative. The first step is to make a preliminary assessment. If needed, it can be followed by an extended impact assessment (XIA). The content of the two stages is outlined below.

First step - preliminary assessment

The preliminary assessment intends to make a brief indication of the policy's impacts. The "brief" is emphasised as the assessment should at the maximum contain 2 pages. The preliminary assessment is most typically made by the employee (desk officer) who is responsible for the policy area. The issues and questions to be answered in accordance to the framework are listed in Text Box 6.1.

Text Box 6.1 Issues and questions for investigation in the preliminary assessment

Problem Identification

Describe the problem that the policy/proposal is expected to tackle. Indicate potentially unsustainable (Economically, Socially, Environmentally) trends associated with the problem. Indicate the potential inconsistencies between the three dimensions or with other policies

Objective of the Proposal

What is the overall policy objective in terms of expected impacts?

Policy Options

What is the basic approach suggested to reach the objective? What policy instruments have been considered? In what way do the options identified respect the subsidiarity and proportionality principles? Which options can be excluded at this an early stage?

Impacts - Positive and Negative

On a preliminary basis please indicate the expected positive and negative impacts of the selected options, particularly in terms of economic, social and environmental consequences? Please indicate who is affected and possible severe impacts on a particular social group, economic sector or region (inside or outside the EU), in the short term; in the medium and long term?

Follow-up

What preparatory steps have already been taken (consultations, studies)? Is an extended assessment recommended? (Yes/no) Is a consultation planned? (Yes/no)

Second step - extended impact assessment

The extended impact assessment is conducted if the preliminary assessment detects a need for further assessment. The extended impact assessment is quite similar to the preliminary assessment but it is an extended assessment. For that reason, it is most typically that other public agencies and other stakeholders have been involved to identify policy options and impacts of the proposal.

The questions to be investigated and described are listed in Text Box 6.2.

Text Box 6.2 Issues for investigation in the extended impact assessment

What Issue/Problem is the Policy/Proposal expected to tackle?

What is the issue/problem in a given policy area expressed in economic, social and environmental terms including unsustainable trends? What is (are) the underlying driver(s)? What would happen under a “no policy change” scenario? Who is affected?

What main Objective is the Policy/Proposal supposed to reach?

What is the overall policy objective in terms of expected effects? Has account been taken of any previously established objectives?

What are the main Policy Options available to reach the Objective?

What is the basic approach to reach the objective? Which policy instruments have been considered? Which are the trade-offs associated with the proposed option? What “designs” and “stringency levels” have been considered? Which options have been discarded at an early stage? How is subsidiarity and proportionality taken into account?

What are the Impacts expected from the different Options identified?

What are the selected options’ expected positive and negative impacts? Are there potential conflicts and incoherence between economic, social and environmental impacts that may lead to trade-offs? How large are the additional (‘marginal’) effects that can be attributed to the policy proposal, i.e. those effects over and above the "no policy change" scenario? Are there severe impacts on a particular social group, economic sector or region? Are there external impacts outside the Union? What are the impacts over time? What are the results of any scenario or sensitivity analysis undertaken?

How to monitor the Results and Impacts of the Proposal after Implementation?

How will the policy be implemented? How will the policy be monitored? What are the arrangements for any ex-post evaluation of the policy?

Stakeholder Consultation

Which stakeholders were consulted, when, and for what purpose? What were the results?

Commission Draft Proposal and Justification

What is the final policy choice and why? Why was a more/less ambitious option not chosen? Which are the trade-offs associated to the chosen option? Why is a decision to be taken now rather than be put off until better information is available? Have any accompanying measures to maximize positive and minimize negative impacts been taken?

6.3 Examples of sustainability appraisals

UK at the forefront

The UK has been at the forefront of developing sustainability appraisal techniques which have a local or regional perspective. The UK government has developed a paradigm, which can be applied by the local and regional authorities. Moreover, many municipalities and counties have framed their own appraisal techniques.

This section outlines three examples to appraisal for sustainability against new initiatives. The first example is from the Governmental "Sustainability appraisal of regional planning guidance"; the second is "Sustainability appraisal of the draft London Plan" and third example is "Sustainability Appraisal of Teignbridge Local Plan".

6.3.1 The Governmental Sustainability Appraisal of regional planning guidance

The overall aim of appraisal

The "Good Practice Guide" from the UK Department of the Environment, Transport and the Regions (1999) on sustainability appraisal outlines a technique to undertake an appraisal which is defined as a:

"Systematic and iterative process undertaken during the preparation of a plan or strategy, which identifies and reports on the extent to which the implementation of the plan or strategy would achieve the environmental, economic and social objectives by which sustainable development can be defined, in order that the performance of the strategy and policies is improved".

The practical steps in the appraisal

If the environmental, economic and social objectives (in the UK there are four dimensions as natural resources are separated from the environmental dimension) are not already defined, then the first step is to set out the local/regional objectives. In this approach, the objectives are to be defined by the Regional Planning Bodies in consultation with other regional stakeholders. The next step is to define targets in regard to objectives. These are the basic steps before applying them against more concrete policy formulation.

The aim is to ensure that a plan or strategy in its preparation phase should be in line with the sustainability objectives and targets. In doing so, the objectives and thereby the plan or strategy can be assessed by some targets. As a general rule, the appraisal of new initiatives shall be examined against each of the identified objectives and targets.

Table 6.2 provides examples of how objectives can be related to targets.

Table 6.2 Example of objectives and targets in the Good Practice Guide

Sustainability objectives and sub-objectives	Targets and directions of change
Maintenance of high and stable levels of economic growth	
To encourage and accommodate the maintenance of a steady rate of economic growth	- achieve stable long run average growth (in regional GDP) of x % pa - achieve stable employment growth of y % pa
Social progress which recognises the need of everyone	
To find a balance in the distribution of population, employment and housing	-match housing provision to employment growth at the sub-regional level
Effective protection of the environment	
To maintain and enhance the quality and distinctiveness of the landscape	-reduce the loss of countryside valued for its intrinsic quality -reinstate and increase strategic landscape features -halt the loss or fragmentation of 'tranquil areas

Sustainability objectives and sub-objectives	Targets and directions of change
Prudent use of natural resources	
To use agricultural land more sustainable	-halt loss of following semi-natural habitats to agricultural intensification by 2006 -wetlands -downlands -uplands

6.3.2 Sustainability appraisal of the draft London Plan

Vision

The London Plan is the guiding policy development plan for the Greater London Authority. A sustainability appraisal "Sustainability appraisal of the draft London Plan" (Greater London Authority, 2002) is made of the draft plan in order to assess the correspondence between the overall policy plan and the sustainability vision. The sustainability vision is "to develop London as an exemplary, sustainable world city based on three interwoven themes:

- Strong, diverse, long term economic growth;
- Social inclusivity to give all Londoners the opportunity to share in London's future success; and
- Fundamental improvements in London's environment and use of resources."

Principles

The process of sustainability appraisal starts with the Greater London Authority defining sustainable development principles which are to be discussed in a forum of stakeholders. This forum defines 33 sustainable development objectives.

Strategic questions

The objectives are then connected to the specific initiatives/policies via strategic questions which critically address if a given policy is in accordance with the sustainability objectives. See Table 6.3 which illustrates the coupling between the objectives and the questions.

Table 6.3 Coupling between objectives and critical questions

Objective	Strategic questions
To develop London's tourism industry in ways that are economically, social and environmentally sustainable	Does the policy encourage sustainable tourism that will benefit the environment, social well being, and the economy? Does the policy encourage decentralisation of tourism?
To improve river and canal ecological and amenity qualities, and to seek more sustainable uses there of	Does the policy promote protection and enhancement of waterways? Does the policy promote sustainable use of waterways?

Objective	Strategic questions
To maintain and enhance the historic environment and cultural assets of London	Does the policy ensure protection and enhancement of conservation areas, listed buildings, archaeological features and Scheduled Ancient Monuments, Royal parks and other areas of intrinsic value?
To respect people and value their connection to society	Does the policy contribute to improved quality of life for Londoners? Does the policy promote public participation and decision making?

82 policies examined

In order to undertake a full sustainability appraisal, the 33 sustainability objectives are assessed against each of the policies laid out in the policy plan (housing, transport, business, etc.). No less than 82 policies have been examined; the outcome of which is a clear overview of the relation between sustainability objectives and specific policies. In doing so, it becomes clear how many and which polices are supporting the sustainable objectives. This is illustrated in Table 6.4.

Table 6.4 Overview of policies supporting sustainability objectives

Sustainability Objective	Related Policy
To develop London's tourism industry in ways that are economically, social and environmentally sustainable	Policy x,y,z
To improve river and canal ecological and amenity qualities, and to seek more sustainable uses there of	Policy a,b,c
To maintain and enhance the historic environment and cultural assets of London	Policy d,e,f,g,
To respect people and value their connection to society	Policy h,I,j

6.3.3 Sustainability appraisal of Teignbridge local plan

Communication is essential

As said, a key virtue of impact assessments is their communicative power. This aspect is further refined in this example. Similar to the London model, the appraisal developed in Teignbridge provides an assessment of new initiatives such as local plans, policies and strategies. The impacts are communicated clearly using simple signals.

The "Sustainability Appraisal of Teignbridge Local Plan" (Teignbridge Planning Department, 2001) aims to:

- "Determine environmental, social and economic criteria against which the plan can be assessed
- Demonstrate how the policies and proposals in the plan have taken regard of these environmental, social and economic criteria
- Enable potentially conflicting issues to be highlighted

- Provide a baseline against which sustainable development can be continuously improved and integrated as part of the planning process".

The new initiatives are, therefore, to be reviewed against a defined set of sustainability criteria. The first task is therefore to define sustainability criteria in regard to the three dimensions. Similar to the London sustainability appraisal, each criterion is set up as a question; "Will the policy…?"

The answer to the question shows the impact a new initiative will have on a local objective. The answers can either be very positive (shown by √√), positive (√), undeterminable (?) or negative (-). In that way, the assessment of a new initiative's impact is clearly communicated to stakeholders, local politicians and the public. An example of an assessment matrix using signal is shown in Table 6.5. The deferent criteria are set up n the left columns, and the different policy plans (x,y,z,,,) are listed in the upper row.

Table 6.5 Example of an Assessment Matrix

Criteria\ New Initiative	Housing policy plan x,y,z …	Employment policy plan a,b,c …	Transport policy plan h,l,j …	…
Economic dimension Will the policy encourage the provision of facilities intended primarily to service the immediate neighbourhood that could promote local trading?	√√	√	√√	
(another economic criteria) …				
…				
Environmental dimension Will the policy result in the degradation of estuarine/coastal water or reduce the quality of ground water resources generally?	-	?	-	
(another environmental criteria) …				
…				
Social dimension Will the policy lead to the increase in local employment opportunities for people?	√	√√	?	
(another social criteria)…				

Conflicting policies revealed

A clear advantages of this way of presenting the "match" between sustainability objectives and specific policies is obviously that it casts lights on contradicting or even conflicting policies which again may lead to an more enlighten decision-making process and public discussion.

6.4 Summary

From sectoral to broader assessments

The central learning from this chapter is that while the traditional assessments primarily have had a sectoral focus e.g. environment, social or economic, the sustainability assessments have a broader scope including all dimensions.

Different approaches

In the EU system, the Impact Assessment has been developed as a decision-aiding tool, which aims to provide transparency to the decision-makers and the public. It is conducted in two stages: a preliminary assessment and, if necessary, an extended impact assessment. It should be noted that the impacts revealed in the IA are not related to an existing set of objectives. The IA, therefore, does not lead to a systematic "match" between predefined sustainability objectives and the specific impacts detected.

In the UK, local and regional sustainability assessments have seen their first light. The London and Teignbridge assessments, in contrast to the IA, make use of a technique where the sustainability objectives are a basis for appraising new policy initiatives such as strategies, plans and projects. A precondition for this technique is obviously that sustainability objectives have been defined existing or new policies are being examined.

Communication

A further distinction is how the results are communicated: Using words/argumentation or simple signal. We have seen one example (Teignbridge) where the application of signals is used to communicate if policies are in conflict with the sustainability objectives.

Implications

Even though the Impact Assessment methodology has been developed for internal Commission use, the methodology can be made use of in other administrative systems, such as regional and local authorities in the Wadden Sea region. This requires obviously that the methodology is being modified so that the assessment criteria reflect the objectives of the Wadden Sea strategy.

7 Towards a Sustainability Strategy

Two key questions

The sustainability strategy for the Wadden Sea region should answer two basic questions:

- **What** are the principles and objectives of the strategy?
- **How** will the principles and objectives be achieved?

Regional stakeholder approach

The definition of the principles and objective is a core task of the Wadden Sea Forum, and the strategy will consequently be based upon a stakeholder approach. The Forum is in the midst of this definition process. The activities in this regard include general discussions at Forum meetings as well as thematic discussions in Thematic Groups aided by scenario building. Furthermore, the Forum should decide upon how the principles and objectives should influence political decision-making in the Region.

Purpose of chapter

The purpose of this chapter is to stimulate the answering of the "what" and the "how" questions; particularly in order to suggest main elements for a Wadden Sea Region Sustainability strategy.

The study did not include an empirical part, such as interviews with key stakeholders in the region. The suggestions are therefore first and foremost based on the findings generated in Chapters 2-6 of this report as these chapters represent the scope of the study. It has, furthermore, been inspired by the Consultants' participation in the Oldenburg meeting of the Forum, October 2003. Certain elements for a strategy have also been described in existing plans for the Region (see below Section 7.3) and can, for that reason, be outlined in this chapter.

Our approach

Our approach to suggestions for compiling the strategy can be summarised as concerns over feasibility and flexibility.

Feasibility. An elegant strategy which is not implementable is of limited value. We are therefore particularly concerned with the incentive structures of implementing a strategy for the region and have sought to provide a description of probable barriers to success.

Flexibility. The relevant decision-makers, in regard to the content of the strategy, are, initially, the Wadden Sea Forum, secondly the broader set of stakeholders in the region, and ultimately the representatives in 10th trilateral

Wadden Sea Conference to be held in 2005. This is why we have presented three models at an operational level which represents a continuum ranging from a very ambitious to a less ambitious strategy and which will thus give the Forum sufficient flexibility when deciding upon an appropriate and feasible level of ambition for the strategy.

7.1 Main elements of the strategy

The main elements of the strategy

The two basic questions - *what and how* - can be made operational in a well structured strategy. It is suggested that the strategy include five main elements:

- **Framework**. The strategy must be *realistic*. Understanding and describing the framework conditions should be an integral part of the strategy.
- **Principles**. The strategy must be *forward-looking*. It is necessary to set forth principles that can guide the path towards sustainability.´
- **Themes**. The strategy must be *focused*. It is therefore necessary to select relevant themes on which to focus; themes that the key stakeholders in the Region can relate to and perceive as meaningful.
- **Objectives**. The strategy should put some *obligations* on the key stakeholders (in a political sense, as a minimum). Specific and measurable objectives shall be developed.
- **Operational system(s)**. The strategy must be *implementable*. It is therefore imperative that the Wadden Sea Forum determines a proper operational system for implementing the strategy.

Presenting the framework

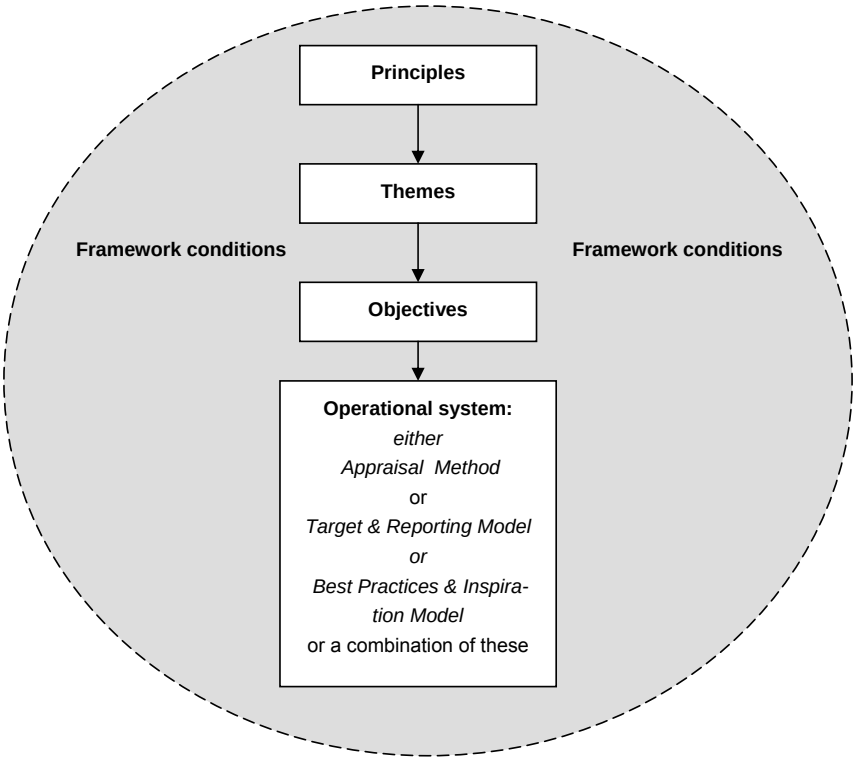
The Chapter proceeds in accordance with the five main elements of the strategy. The first step is to describe the framework conditions which are made up of i) the relevant lessons learned from the sustainability inventory and ii) the contextual factors that should be taken into account when drafting the strategy.

The next steps are to set out principles, focus upon relevant themes and to define objectives for the themes. Finally, three alternative operational systems are presented and discussed. The operational systems are suggestions for how the Region (Wadden Sea Forum, the Secretariat, other stakeholders) can put the substantial elements into real actions.

In chapter 2 on the concept of sustainability, it was argued that a "modern" perception of sustainability contains a distinction between the substantial and the procedural aspects of sustainability. Of the five elements in a strategy, the first and last elements refer primarily to the procedural part whereas the second, third and fourth elements have a substantial character.

The relations between these components are illustrated in the figure below.**Fehler! Verweisquelle konnte nicht gefunden werden.**

Figure 7.1 The main elements of the Wadden Sea Region Sustainability Strategy.



7.2 The framework conditions

7.2.1 Lessons learned from the review of sustainability

Four lessons

Throughout the report we have elaborated, briefly, on how the lessons learned can be made use of in relation to developing the strategy. Here, we only mention those lessons which should directly influence the preparation of the strategy. There are four of these:

- Lesson one: There is a need to define sustainability explicitly and with particular reference to the context of the Wadden Sea region.
- Lesson two: Sustainability in the Wadden Sea region context should be about substance (e.g. a target for pollution or employment levels) as well as process (e.g. a rule for policy-making).

- Lesson three: Various sustainability assessment techniques have been developed; the most prominent example being the EU´s Impact Assessment. It should be considered if a technique should be recommended in the Wadden Sea Sustainability Strategy.

- Lesson four: Communication and stakeholder involvement are inherent components of sustainability. This is clearly reflected in the EU's extended impact assessment. It is relevant to consider the level of participation in relation to developing a Wadden Sea Sustainability Strategy; specifically if the Wadden Sea Forum represents a sufficient level of stakeholder involvement or if the Forum activities should be supplemented with e.g. public hearings.

- Lesson five: A lack of a clear role assignment in relation to sustainability is often a weak point in sustainability strategies and one which should be avoided.

7.2.2 Understanding the context

The strategy should not only be formulated with reference to the sustainability discourse. It is vitally important that the drafting of the strategy carefully observes the context which the strategy will ultimately influence. There are five important contextual factors.

One plan but three administrative systems

The most obvious contextual factor is that the Wadden Sea region is international (three countries are involved) and therefore three political-administrative systems have to be considered. This factor has several implications one of which relates to the enforcement of the strategy. It will rely on the concerted action on the part of the three countries to enforce the strategy and as such we may find that the enforcement capacity is low.

Unclear definition of region

There is some uncertainty as to what constitutes the Wadden Sea Region. A distinction can be made between:

- the *core* Wadden Sea region; defined only by ecological boundaries, such as in the Wadden Sea Plan, as the Trilateral Wadden Sea Co-operation Area or the Trilateral Conservation Area;

- the *medium* Wadden Sea region: defined culturally as encompassing all people who perceive themselves as living in the Wadden Sea region and, geographically, as the area covered by the municipalities bordering the Wadden Sea and the islands; and

- the *broader* Wadden Sea region; defined as all neighbouring areas that de-facto have an impact on the core Wadden Sea region and which are populated by people who do not necessarily consider themselves as living in the Wadden Sea region.

The uncertainty of the geographical framework could hinder the development of a clear strategy. The strategy should therefore include a definition of the region.

Different actors

As we know, the Wadden Sea Forum shall develop proposal(s) for sustainable development in the Wadden Sea Region, to be submitted to the 10th Governmental Wadden Sea Conference in 2005. The Forum is composed of a diversified group of actors who are unlikely to share the same views on societal development and, therefore, also hold different views as to the content of the sustainability strategy. The process for developing the strategy should obviously pay attention to this factor.

Problem of collective action

It is always a tremendous task to have many actors moving in the same direction. The overall objective of the strategy is (presumably) to ensure that individual decisions within the region are made with a view to sound, long-term development of the region as a whole. However, the individual actors (e.g. municipalities) may in the short-term be tempted to accept solutions which are suboptimal to the strategy but, nevertheless, yield short-term benefits for a particular area. In other words; we face a problem of collective action where individual actors are tempted to free-ride, mainly because they can hardly be "punished" for such behaviour.

Who is the driving force?

Who is the driving force behind the strategy? Who will "own" the strategy and feel responsible for its implementation and impact? Concern over these factors points to the need to:

- create ownership;
- identify and present all possible (positive) incentives that can be made use of in order to implement the strategy; and
- recognise that the strategy should not impose too many burdens on actors such as municipalities and countries.

Summary of framework conditions

We are now able to give a full presentation of the framework conditions for developing a strategy which should be taken into account when deciding upon the most suitable model, cf. Table 7.1.

Table 7.1 Overview of the framework conditions

Lessons learned from the sustainability inventory	Contextual factors
Necessary to define the concept	Low enforcement capacity
Necessary to decide whether to focus on substantial or procedural aspects - or both	Actor may disagree as to the content of the strategy
Relevant to consider new assessment technique such as SIA	Important to relate the regional strategy with the national strategies
Important to assign clear roles in promoting, monitoring and implementing the strategy	Problem of collective action: are the actors in the region willing to accept that the sustainability strategy may restrict their room of manoeuvre?
	Potential lack of ownership and commitment

Recommendation

It is recommended:

- that the Wadden Sea Forum, prior to completing the strategy, thoroughly discusses (and therefore "tests") the willingness of authorities and actors in the region to attach importance to a Wadden Sea region sustainability strategy;
- that the strategy is drafted with clear focus its implementation;
- that the strategy, therefore, presents the institutional set-up necessary for its implementation and identifies the key actors.

7.3 Principles

The Stade Declaration as a starting point

Based upon the conditions of the existing framework and the challenges to setting up a viable sustainability strategy, the overarching principles for the Region should be defined and settled.

A "Shared Vision" of trilateral co-operation is laid down in the Wadden Sea Plan from the Stade Declaration of 1997. It is stated that:

"the Wadden Sea Plan contributes to promoting the idea of nature protection and sustainable use of the Wadden Sea Area, for the long-term benefit of everyone living and working in the area, as expressed in the Shared Vision, being

1. *A healthy environment which maintains the diversity of habitats and species, its ecological integrity and resilience, as a global responsibility;*
2. *Sustainable use;*

3. *Maintenance and enhancement of values of ecological, economic, historic-cultural, social and coastal protection character, providing aspirations and enjoyment for the inhabitants and users;*

4. *Integrated management of human activities which takes into account the socio-economic and ecological relationship between the Wadden Sea Area and the adjacent areas;*

5. *An informed, involved and committed community."*

These five principles are already settled as valuable principles for the Region. For that reason it seems obvious that they should form the basis for the principles of the broader sustainability strategy.[14]

Although the principles are applied to a geographical area, limited to the core ecological area, the principles can be applicable to the broader Wadden Sea Region. In that connection, it should be recognised that at the Oldenburg Meeting in October 2003, the Forum members showed great interest in broader mainland issues, which primarily concern broader social, cultural, and economic issues. It must therefore be clarified by the Forum whether additional principles should be included. Such principles could emphasise the need and wish for social and economic development in the Region. The additional principles could be:

6. Balanced and equitable economic development decoupled from the environmental pressure

7. High levels of employment, social cohesion and inclusiveness

Recommendation

It is recommended:

- that the principles and objectives contained in the Stade Declaration should form the basis for the broader sustainability strategy;
- that it should be considered if the existing objectives relating to the Stade Declaration (the trilateral targets which primarily relate to the core Wadden Sea area) should be supplemented with objectives that relate to the broader Wadden Sea area;
- that the principles in the Stade Declaration are supplemented by additional principles which show the broadness of the sustainability strategy and which are in line with the discussions at the Oldenburg meeting, October 2003.

[14] The Wadden Sea Plan also contains more specific objectives for the Wadden Sea Area. These are main ecological targets but there are also targets on landscape and cultural heritage.

7.4 Themes

A narrowing of sustainable development to specific themes with particular relevance for the region is necessary.

Three sources of inspiration

There are three sources of inspiration that would be natural factors for the Forum to consider:

- The focus of the national strategies, cf. Chapter 4.
- The selection of Thematic Groups
- The selection at the Oldenburg Forum meeting, October 2003.

The National Strategies

As presented in Section 4.4.2 of the report (which compared the national objectives) there is a fairly high degree of consensus among the countries on overall objectives. Examples hereof are energy efficiency, a high level of environmental protection, health, innovation and modernisation, population issues, and participation.

The Thematic Groups

The Wadden Sea Forum has set up five Thematic Groups which are:

- Policy and Management
- Industry and Harbour
- Energy
- Agriculture
- Fisheries

In addition Tourism and recreation, Costal Defence, Infrastructure, Spatial planning and Shipping safety were identified by the Wadden Sea Forum as priority Themes.

The Wadden Sea Forum, Oldenburg Meeting

The Wadden Sea Forum, at its Oldenburg meeting in October 2003, initially discussed which themes it would be relevant to address in the strategy. Several issues and themes were mentioned:

- Safety
- Education, research & development
- Demography
- Unemployment
- Health
- Housing
- Recreation/ attractions for citizens
- Welfare
- Cultural history
- Regional identity
- Employment
- Lifestyle
- Social institutions in rural areas
- Economic resilience
- Rural development
- Agriculture

- Tourism
- Employment
- Harbour
- Economic development
- Infrastructure
- Landscape
- Biodiversity
- Contamination

The three sources provide a gross list of relevant themes to include in a strategy. Although, the long list from the Oldenburg *is* long, all themes can meaningfully be connected to the seven principles set forth in Section 7.3. It should also be noted that the themes mentioned are firmly in line with the sustainability issues described in the national strategies.

Recommendation

It is recommended:

- that the number of themes selected for the strategy is determined with a view to the operational system. If an ambitious implementation strategy is decided upon (such as the one presented in Section 7.6.1) then fewer themes need to be selected than if the future Wadden Sea cooperation was to be less binding;

- that it would be natural to address the five themes covered by the Thematic Groups together with the themes Tourism and recreation, Coastal Defence, Infrastructure, Spatial planning and Shipping safety as identified by the Forum as priority themes.

- that the themes, furthermore, should include those which were suggested at the Oldenburg meeting, in particular:

  - Rural development (education, demography)
  - Protection of Wadden Sea, landscape integrity, and biodiversity
  - Regional identity

- that delimitation of themes will be a subject for discussion at the next Wadden Sea Forum meeting (April 2004).

7.5 Objectives

Iterative process

The process of identifying the main elements of the strategy is iterative and several "loops" will most likely be necessary before the Forum can eventually submit its recommendation to the Wadden Sea Governmental Conference in 2005. The process of going back and forth between the levels is constructive and necessary to reach a viable strategy. This means that the operational system may influence the determination of principles and vice versa - and this can only be fully realised once all five main elements of the strategy have been worked on. It is therefore primarily for the sake of clarity that we have presented the

main elements as progressing in one direction: from principles to an operational system.

Many Forum members may already now have clear perceptions as to likely objectives. It would therefore be natural that the Forum simultaneously focuses on the identification of themes and objectives.

The phrasing of an objective is typically; to maintain, to secure, to develop, to enhance etc.

Recommendation

It is recommended:

- that the determination of objectives of the Wadden Sea Region Strategy will take into consideration the objectives of the Wadden Sea Plan;
- that determination of objectives will be a subject for discussion by Wadden Sea Forum.

7.6 Operational systems

The substantial elements of the strategy, such as principles and objectives, must be implemented if they are to have any influence at all - apart from a discursive dimension. We suggest considering and applying operational systems. Three systems have been developed. They are presented one by one but can be used individually or combined as many of the features of one model can be integrated into the others.

They are prepared in the light of the lessons learned, documented in the previous chapters, as well as the contextual factors. The names given the systems aim at capturing the main elements of each system; the systems are:

- **The Appraisal system**
  - places emphasis on a common appraisal method covering the whole region; consequently, it shall be implemented by local and regional authorities.
- **Targets & reporting**
  - places emphasis on the definition of substantial targets for the development in the region and the set-up of a regional reporting mechanism. There is a need to apply indicators to assess the targets.
- **Inspiration & best practices**
  - places emphasis on the exchange of best practices of sustainable development between stakeholders but without the definition of new targets.

Common template for describing the models

The models are described on the basis of a common template which follows logically from our identification of the framework conditions. It involves the following dimensions:

- a general characterisation of the model
- a presentation of the rational upon which it is build
- a description of whether it requires institutional changes
- a description of the monitoring and reporting mechanism
- a description of who are the main actors of each model
- a description of prerequisites for a successful implementation
- a description if any additional tools are need to apply the model
- a presentation of examples within this model.

Table 7.2 Overview of the three operational systems

Dimension	An Appraisal system	A Targets & Reporting system	The Inspiration & good practices system
General characteristics	A model which "forces" political and administrative decision-making to consider regional impacts in a systematic way - via the Wadden Sea region Impact Assessment	A model which set forth a number of substantial objectives and which systematically monitors the development in relation to these but otherwise rely on a voluntary approach	A model which stimulates innovation via the systematic articulation of good practices of sustainability in the region
Rationale of the model	No changes without institutional changes	Common goals will encourage (and discipline) the actors	Systematic learning is the key to progress
Are institutional changes necessary?	Yes - to a large extent	Yes - to some extent	No - minor changes
Monitoring and reporting mechanism	Systematic reporting to all authorities on a regular basis	Systematic reporting on a regular basis	Not a reporting mechanism but a mechanism for exchange of good practices
Main actors	New strong Wadden Sea Region coordinator Municipalities and counties	New Wadden Sea Region coordinator Governments as well as municipalities and counties	Municipalities and counties as well as other stakeholders
Prerequisite for success	A high degree of a common "Wadden Sea region" identity	That local and regional decision-makers will not "forget" the objectives set forth	That there is willingness to learn and willingness to share information on a voluntary basis

7.6.1 The Appraisal System

General characterisation of the model

This is a system which "forces" political and administrative decision-making to consider regional impacts in a systematic way - via a regional appraisal method. The method can be inspired by an Impact Assessment[15] approach on the one hand and the Teignbridge or London appraisal methods on the other hand.

The Appraisal system would build on the assumption that the strategy should encourage the authorities in the Wadden Sea region to include the regional perspective, explicitly, in their everyday planning and decision-making practices. The key features of the model are:

- The Wadden Sea strategy could contain very specific or more general objectives. The main focus of this model is not the objectives but the establishment of an assessment method.

- A regional appraisal method should be developed based upon the objectives set forth in the strategy.

- It should be mandatory for the local and regional authorities to apply the method for certain types of planning and decision-making processes, such as:

  - the annual budget
  - main infrastructure projects
  - other decisions/projects that are likely to have an impact on the Wadden Sea region

  Another option would be to invite the relevant Wadden Sea authorities, on a voluntary basis, to undertake the appraisal system.

- A Wadden Sea coordination unit should be established and given the task to guide and monitor the use of the appraisal method as well as to provide overall reporting on progress.

The Appraisal system should obviously screen for something. This "something" would be dependent on the objectives of the strategy. If the strategy focuses on environmental implications for the Wadden Sea, the Appraisal system should be developed with a view to this. If, on the other hand, the strategy were to set out broader objectives (employment, demographic objectives, growth, eco-tourism, particular "profile" for the region, environmental protection, etc.) the appraisal method should be adjusted to cover these elements.

The rational of the model

The rational of this model is that the sustainability strategy will be "paper only" unless the relevant authorities are asked to make sure that they take the strategy objectives into account when they make decisions. An Appraisal System is thus

[15] A Wadden Sea regional appraisal system inspired by Impact Assessment could be named WIA.

the instrument that links the strategy objectives with local/regional decision-making.

Prerequisites for a successful implementation

This model is ambitious and necessitates a good deal of commitment from the local and regional authorities which will be the key actors. They should consider it relevant, meaningful and beneficial to strive for the common Wadden Sea region objectives and to use an Appraisal system. Whether this is the case depends partly on the degree to which there is a sense of common Wadden Sea region identity; otherwise there is the risk that "an empty structure" is created.

Examples

Useful examples to draw inspiration from are methods described in the previous chapter on sustainability assessment. As described, one approach is to make an Impact Assessment approach; another approach is to use the Teignbridge or London appraisal model.

7.6.2 Targets & reporting model

General characterisation of the model

This model emphasises the importance of establishing clear objectives for the development of the Wadden Sea region and to systematically report progress in relation to these. The objectives should focus on issues that naturally bind the region together. The model does not impose new specific duties on the authorities in the region (as the Appraisal system does).

The key features are:

- The Wadden Sea strategy should contain substantial and precise objectives as well as indicators.
- The set-up of a reporting mechanism/unit commissioned with the task to monitor fulfilment of objectives.
- The role of the coordination unit would be to compile and disseminate information but it would have no authority in relation to policy-making. The coordination unit could also act as the Secretariat in case a forum similar to the Wadden Sea forum were to be established.

The rational of the model

The rational of this model is as follows: with the current level of "Wadden Sea region identity" it would not be appropriate to establish a new institutional structure such as an appraisal system. Instead, efforts should be directed towards identifying the issues that naturally bind the region together and where there is an immediate common interest in striving towards common goals.

Prerequisites for a successful implementation

The political feasibility of this model will probably be quite high even if the objectives are clear-cut (because the "political cost" of non-fulfilment will be low). There is, on the other hand, the risk that the strategy will not be implemented unless positive incentives can be established. A prerequisite for success is therefore that the actors in the region will work towards common

goals even in the absence of a mechanism (as an appraisal system) that "forces" the actors to consider regional impact of local decisions.

In order to make the Target & Reporting model operational, indicators are needed.

7.6.3 Inspiration & best practices model

Characterisation of the model

Another way of bringing actors and authorities together in a loosely coupled network would be to disseminate information of general interest systematically to the relevant actors. This is the essence of this model. The model comes close to the existing situation in the sense that it does not require "new" clearly defined objectives. However, this model would strengthen the exchange of information and best practices. The key features are:

- The establishment of a broader Wadden Sea network (drawing on the experience of the Wadden Sea Forum).
- The formality of the network would be low, and the themes to be covered would be identified on ad-hoc basis. The network should be assisted by a secretariat.
- A coordination mechanism/unit should be established. It would be given the task of disseminating "best practices" to the network members. Best practices should be broadly understood (tourism planning, public participation, local environmental regulation, job creation initiatives, etc.)

The rational of the model

This model is based on the assumption that the local authorities and actors face with many similar problems and that the local problem-solving capacity can be increased if there is a systematic learning process.

Prerequisites for a successful implementation

At the surface level, a successful implementation of this model will come easy as it is not a demanding model to implement. However, if it is to have a real impact, the authorities and other key actors should be willing to invest some resources in the network and to share experience on a voluntary basis. Just as it requires a high level of a common Wadden Sea identity to have an appraisal system accepted, this model also requires a relatively high level of common identity in order to be *effective* in the long run.

Regional identity obviously cannot be imposed top-down if there is not a genuine basis for this identity. It should, on the other hand, be realised that regional identities not are static. For an example of "a region under construction" see Text Box 7.1.

Text Box 7.1 A region under construction

A region "under construction" - The case of the Øresund region

With the bridge across the Øresund it has become very easy to commute between Denmark and Sweden. One of the objectives for the region is to integrate the two countries'

labour markets and make the work force more mobile. This requires certain alignments of the legislation in Denmark and Sweden. The two governments acknowledge this need and have started the process. The integration between Denmark and Sweden will make it possible for companies and private persons to benefit from opportunities in the whole region. The opportunities will arise in line with the harmonisation of certain regulations such a social and labour market regulation.

Other opportunities arise because of the resemblance between Danish and Swedish language and culture. But also due to the ease of travelling and commuting between many different places in the two countries.

Homepage of Copenhagen Capacity (http://www.copcap.com/composite-1391.htm)

Recommendation

It is recommended:

- that the model named "Targets & reporting" be used as a point of departure for developing the Wadden Sea region sustainability strategy as it combines feasibility with momentum. However, the perspectives of developing a Wadden Sea region Impact Assessment or any other kind of a regional appraisal method should be further explored as it is the most challenging and ambitions model.

7.7 Summary

This chapter has described and set forth the main elements of a sustainability strategy. The main elements are:

- Framework conditions
- Principles
- Themes
- Objectives
- Operational system(s)

For the success of the Strategy, it has been stressed that the elements are discussed, defined and decided upon by regional stakeholders e.g. The Wadden Sea Forum. Furthermore, it has been emphasised that there is a need to focus on the implementation of the Strategy in order to make it - *sustainable.*

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