

14. DENMARK

14.1 Water Resources Management Policies and Actions

According to Nature and Environmental 2003 – Water in Denmark, clean water ranks highly on the Danish Government's environmental policy agenda. Danish measures are targeted and focused, in line with the EU Water Framework Directive (WFD), on areas where nature and the environment are in need.

With the implementation of the EU WFD, a number of new environmental targets for groundwater must be introduced in Danish law. When setting the targets, the entire hydrological cycle, i.e. the impact of groundwater on other parts of the hydrological cycle, is considered. For instance, the magnitude of the impact on surface water in watercourses and lakes should not prevent compliance with the environmental targets set for groundwater.

Action Plan for the Aquatic Environment III

In March 2004, the Danish Government agreed with the Danish People's Party and the Christian Democrats on the Action Plan for the Aquatic Environment III. The agreement²²⁹ on the Action Plan for the Aquatic Environment III contains wide initiatives for improving the aquatic environment and nature, as well as farmers' relationships with their neighbours. It has a long-term perspective and contains measures to be implemented over the next ten years.

The Action Plan for the Aquatic Environment III runs to 2015 with evaluations in 2008 and 2011. When carrying out these evaluations, progress with regard to the general reduction objective will be assessed, and the need for further initiatives will be analysed. Below shows the targets for improving the aquatic environment:

- Reduction of excess phosphorus – target to reduce 50 per cent. This will halve the 32,700 tonnes phosphorus in 2001/2002. The reduction will be achieved through a tax of euro 0.5 per kg of mineral phosphorus in feed and through research on feed in the research programme.
- Reduction in discharges of phosphorus. This will be achieved through the establishment of close to 30,000 hectares of 10-metre crop-free buffer zones along watercourses and lakes before 2009 and a further 20,000 hectares before 2015. The buffer zones will be established by voluntary relocation of set-aside land along lakes and watercourses.
- Nitrogen runoff from agriculture is to be reduced by a minimum of 13 per cent by 2015 compared to 2003 through setting aside land, improved feed utilisation, and the implementation of the new EU agricultural reform. Furthermore, rules will be tightened on cover crops and on the utilisation of nitrogen content in livestock manure.
- Protection of particularly vulnerable nature against ammonia discharges from livestock farms, by designation of 300-metre protection zones around the

²²⁹ Details on the agreement can be found at http://www.vmp3.dk/Files/Filer/English%20version/engelsk_oversaettelse.pdf.

particularly vulnerable nature areas such as raised bogs, heaths, and dry grassland. Within this protection zone, no expansion of livestock farms can take place if the expansion would result in an increase in ammonia discharges.

- The Government and agriculture together will allocate a total of euro 25.5 million to a research programme to improve knowledge on how odour nuisances from livestock production spread, how they can be limited, and how technology can be developed to reduce discharges of ammonia and phosphorus.
- Euro 1.7 million will be allocated annually to a research programme to enhance organic agricultural production.
- Manure Action Plan. Distance requirements have been tightened for approval of livestock production close to neighbours, urban areas, or holiday-home areas etc, on the basis of the recommendations made in the report from the "Nabogeneudvalg" (committee on nuisances experienced by neighbours).
- Further elements, including the setting of requirements for establishment of winter-green fields.²³⁰

Besides, below lists out 10-point action programmes of the government for protection of the groundwater and drinking water:²³¹

- Particularly environmentally harmful pesticides to be removed from the market
- Pesticide levy – consumption of other pesticides to be halved
- Nitrate pollution to be halved by the year 2000
- Promotion on organic farming
- Protection of particularly vulnerable water abstraction areas
- New Contaminated Sites Act – contaminated sites to be remediated
- Enhanced afforestation and nature restoration to protect the groundwater
- Enhanced efforts in the EU
- Improved monitoring of ground water and drinking water
- Dialogue with agriculture

Other actions or programmes related to water resources management

In 1997, a special Water Fund was adopted by Parliament to provide financial support to the country's small waterworks and individual abstraction boreholes affected by pollution so that small local communities can continue to have their own waterworks.²³²

Besides, the designation of "Particularly valuable water abstraction areas" is an important step in ensuring that the groundwater will be able to supply Danish with good-quality drinking water in the future. An example of how the area is designed in Denmark has been briefly described in Section 14.5.

²³⁰ Extracted from <http://glwww.mst.dk/udgiv/Publications/2004/87-7614-380-5/pdf/87-7614-381-3.pdf>, page 3, 7, 21

²³¹ Extracted from http://glwww.mst.dk/udgiv/pamphlets/87-601-9226-7/helepubl_eng.htm

²³² Extracted from http://glwww.mst.dk/udgiv/pamphlets/87-601-9226-7/helepubl_eng.htm

14.2 Environmental Evaluation/SEA in Denmark

In Denmark, SEA has influenced by a strong planning system since the early 70's. The legal framework provision of SEA was stipulated by Prime Minister's Office Circulars²³³ (1993²³⁴, further reviewed 1995, 1998²³⁵ when it became legally binding). All government bills and proposals submitted to parliamentary approvals required an assessment if they are expected to have significant effects on the environment. The requirement also applies to policies, plans and programmes (PPP) which are not subject to approval by parliamentary vote but on which the Parliament shall be consulted.

Until May 2004, a new SEA legislation (Lov om miljøvurdering af planer og programmer L nr 316) (The Act on Environmental Assessment of Plans and Programmes) was implemented to comply with the EU Directive 2001/42/EC on the assessment of the effects of plans and programmes (PP) on the environment applied by the Member States by 21 July 2004²³⁶. It aims to promote sustainable development through the environmental assessment of plans and programmes that may have significant environmental impacts.²³⁷

To conclude, two SEA systems are developed in Denmark:

- applied to Policy level under the Prime Minister's Office Circulars which is legally binding in 1998.
- applied to Plans and Programmes level, which is a statutory requirement under the "Act on Environmental Assessment" transposing the EU Directive 2001/42/EC on SEA.

In the following paragraphs, the overall processes for the implementation of SEA for PPP are discussed.

SEA at Policy level

SEA at policy is provided under the Prime Minister's Office Circulars which is legally binding in 1998. A four-stage process is identified as follows:

Screening: To identify proposals that are likely to have a potential significant environmental impact and require further assessment.

Scoping: To identify the nature and scope of the major or cumulative environmental effects of a bill or policy.

Assessment: To analyse the effects identified as potentially significant and decide how assessed impacts are to be described and documented.

Publication: A description of the environmental effects is included as a separate section in the commentary, which is attached to the bill or other government proposal when it is submitted to Parliament. This report should be easily understood, non-technical statement that is publicly accessible, together with other background assessment. If a

²³³ Detail Information on this Circular is referred to <http://147.29.40.91/DELFIN/HTML/C1998/0015909.htm>.

²³⁴ Prime Minister's Office Circular No. 31, 26 February 1993

²³⁵ Prime Minister's Office Circular No. 159, 16 September 1998

²³⁶ Prior to this date, "Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive" (European Parliament and Council of the European Union, 2001, Article 13).

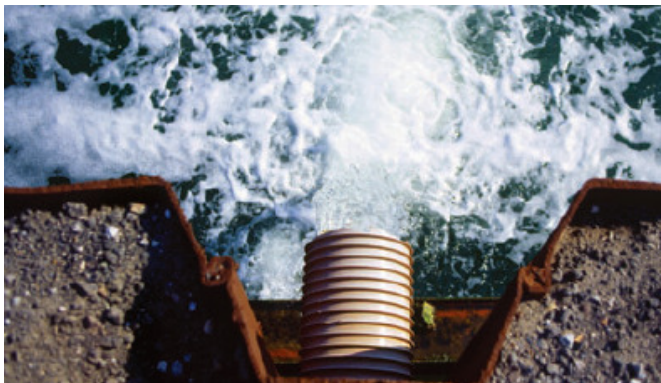
²³⁷ Referenced to web site of the Ministry of Environment and Energy, Spatial Planning Department, <http://www.nordregio.se/EA/denmark.htm>

proposal will have no significant impact, this must be indicated in the observations on the bill.²³⁸

SEA for Plan and Programme

As mentioned, it is a statutory requirement under the “Act on Environmental Assessment” (transposing the EU Directive 2001/42/EC on SEA) to conduct SEA for certain plans and programmes.

According to the EU Directive 2001/42/EC²³⁹, an environmental assessment shall be carried out for all plans and programmes which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use. An environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The public should be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme or its submission to the legislative procedure.



Sewage²⁴⁰



Source: “Water in Denmark”²⁴¹

²³⁸ Refer to Strategic Environmental Assessment at the Policy Level: Recent Progress, Current Status and Future Prospects, Barry Sadler,
http://www.iaia.org/Non_Members/Conference/SEA%20Prague/SEA%20at%20the%20Policy%20Level.pdf, page 47

²³⁹ As the English version of the “Act on environmental assessment of plans and programmes” is not available, the general requirements under the EU Directive 2001/42/EC is referred here,
[http://www.environ.ie/DOEI/DOEIPol.nsf/0/b8aeb091f741ee9c80256f5d004cd61c/\\$FILE/0142_en.pdf](http://www.environ.ie/DOEI/DOEIPol.nsf/0/b8aeb091f741ee9c80256f5d004cd61c/$FILE/0142_en.pdf)

²⁴⁰ Extracted from “Water in Denmark”,
<http://glwww.mst.dk/udgiv/Publications/2004/87-7614-380-5/pdf/87-7614-381-3.pdf>, page 36

²⁴¹ Extracted from “Water in Denmark”,
<http://glwww.mst.dk/udgiv/Publications/2004/87-7614-380-5/pdf/87-7614-381-3.pdf>, page 31

14.3 Environmental Evaluation/SEA on Water Resources Management in Denmark

For policy or regulation related to water resources management, it is administrative to conduct SEA under the Prime Minister’s Office Circulars which is legally binding in 1998.

For any plans and programmes related to water resources management, it is a statutory requirement under the “Act on Environmental Assessment” (transposing the EU Directive 2001/42/EC on SEA) to conduct SEA.

For the process and requirements on SEA, information can be referred to Section 14.2.

A summary table for both the water resources management policies and actions and SEA status in Denmark is presented as follows:

Exhibit DK-1 Summary of Water Resources Management (WRM) Policies and Actions and SEA status in Denmark	
(a) WRM Policies and Actions	
WRM Policies and Actions	Policies: <ul style="list-style-type: none"> • Implementation of EU Water Resources Directive Actions: <ul style="list-style-type: none"> • Action Plan for the Aquatic Environment III • Water Fund • Designation of “Particularly valuable water abstraction areas”
Guidance/Legislations for WRM	N/A
(b) Environmental Evaluations / SEA Status in WRM Policies and Actions	
Type of Assessment	Strategic Environmental Assessment
Requirement Mechanisms	It is administratively required for policies level, while is statutory for plans and programmes.
Legislation for Environmental Evaluation / SEA	<ul style="list-style-type: none"> • For policies, it is governed by the Prime Minister’s Office Circulars • For plans and programmes, it is statutory under the Act on Environmental Assessment
Applications	Policies, Plans and Programmes

14.4 Analysis and Conclusions

WRM Policies

In Denmark, the main water policy is to implement the EU WFD, which sets out the targets to be achieved “good” water quality by 2015. For example, concerns are put on the reduction of excessive chemical ingredients in water. The Dutch government also provides research funds in advanced technology development.

Compared to Denmark, Hong Kong is not within the EU Directive regime and the scope of water resources need to be managed is restrained to the two main sources of water – rainfall from natural catchment and supply from Guangdong. It is Water Supplies Department’s (WSD) scope of work to cover the whole process from the collection of natural yield from rainfall, the reception of raw water from Guangdong to the provision of a supply with a quality of accepted international standards to the users’ taps. WSD also supplies sea water for flushing purposes to over 80% of the population. For protection against flooding, sewage collection, treatment and disposal, it is under Drainage Services Department’s (DSD) jurisdiction.

For the sustainable development of Hong Kong, WSD has initiated a *Total Water Management programme* comprising key elements of new water resources, water reclamation, water conservation and water resources protection and management was initiated for better utilization of the different water resources.

EE/SEA

As an EU Member State, Denmark is obliged to adopt the requirements of the EU Directive 2001/42/EC by bringing into force the laws, regulations and administrative provisions necessary to comply with the Directive.

Since 2004, a new SEA legislation (Lov om miljøvurdering af planer og programmer L nr 316) (The Act on Environmental Assessment of Plans and Programmes) was implemented to comply with the Directive on the assessment of the effects of plans and programmes on the environment.

Denmark has also built an administrative SEA-like system for policy level, this was stipulated by Prime Minister’s Office Circulars. All government bills and proposals submitted to parliamentary approvals are required to conduct an assessment if they are expected to have significant effects on the environment. This report should be easily understood, non-technical statement that is publicly accessible, together with other background assessment. If a proposal will have no significant impact, this must be indicated in the observations on the bill.

Hong Kong is not an EU Member. Hong Kong’s SEA/EE is under Environmental Protection Department’s (EPD) jurisdiction. Similar to the EU Member counterparts, there are both statutory and administrative systems for PPP projects in Hong Kong. While the statutory requirements govern primarily large scale development projects (i.e. over 20 ha of area or population over 100,000), the administrative

counterpart has been applied to land use planning, transportation and sectoral PPP.

In most EU Member States' practices, a statutory system is put in operation for WRM related plans and programmes. Hong Kong may adopt a similar approach by expanding the scope of the current statutory system to cover other sectors such as WRM.

Comparing to the SEA/EE systems in Denmark, both countries have a statutory and a non-statutory system. It would be taken into consideration by improving the administrative system in Hong Kong through adding the requirement of submitting a summary on environmental impacts, even if there is no significance. This would make the public understand clearer.

Also, the SEA Directive sets out the requirements for undertaking environmental assessments for plans and programmes in various sectors, namely, agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use, etc. A similar scope or categorisation of sectors is recommended for setting up within Hong Kong's next generation SEA management framework.

14.5 Examples of Water Resources Management Policies / Actions or their Environmental Evaluation/SEA

Example DK-1 Regional Plan safeguards water quality in Aarhus county ²⁴²	
Description of Study	<p>The objectives of designation of particularly valuable groundwater abstraction areas are to localise and designate valuable groundwater abstraction areas of regional significance.</p> <p>The areas designated in the 2001 Regional Plan in Aarhus county are subdivided into three categories:</p> <ul style="list-style-type: none"> ● Particularly valuable groundwater abstraction areas Through the designation, the Regional Plan ensures both future needs and a reserve. In the areas, the groundwater is of good quality with a high level of natural protection, for example, by thick layers of clay. Also, the abstraction areas are accorded highest priority when initiating projects aimed at improving groundwater quality or preventing contamination. This applies, for instance, to remediation of contaminated sites, renovation of sewers and the subsidising of set-aside or afforestation. ● Valuable groundwater abstraction areas In these areas, the groundwater is of good quality. It is primarily to be protected to ensure the water supply from local waterworks. ● Less valuable groundwater abstraction areas Activities that could pose a threat to the groundwater should primarily be established in those areas which are determined to have limited possibilities for abstracting groundwater.
Outcome of Study	Exhibit DK-2 shows the detailed distributions of the three categorised areas in Aarhus county.

²⁴² Extracted from http://www.nm.aaa.dk/publikat/pdf/water_supply_1_23.pdf, page 20-21

Exhibit DK-2 Groundwater Protection areas in Aarhus county

