

1. The Spatial Planning System of Luxembourg

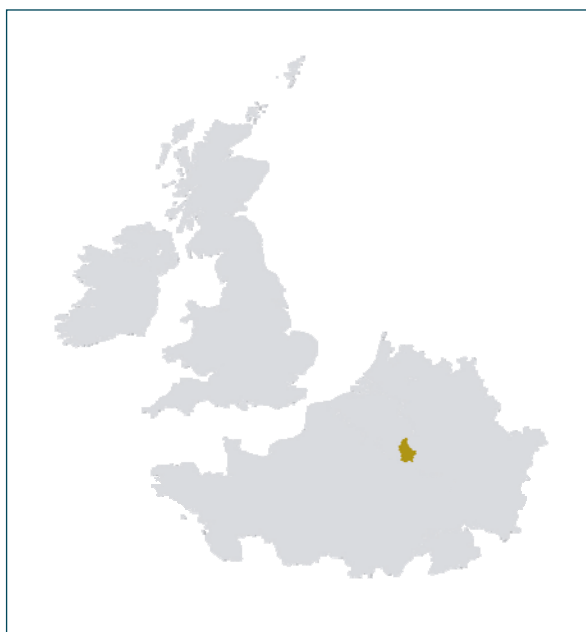


Figure 1: Luxembourg in the co-operation area of NWE, Royal Haskoning

1.1 General information

The Grand Duchy of Luxembourg is a parliamentary form of government with a constitutional monarchy by inheritance. As a result of the constitution of 1868, the executive power is implemented by the Grand Duke or Grand Duchess and the cabinet which is formed by the prime minister and several other ministers. The Grand Duke may dissolve the parliament and reinstate a new one. The legislative power is vested in the Chamber of Deputies. The Chamber is elected directly every 5 years. The “*Conseil d’Etat*” exists next to the Chamber and is composed by 21 ordinary citizens and appointed by the Grand Duke. The *Conseil* advises the Chamber of Deputies in drafting legislation.

The state is divided into 3 districts, 12 cantons and 118 communes of which 12 communes have the status of city. The total area of Luxembourg is 2,586 km² and the population is 468,500. The three official languages are: French, German and Luxembourgish (which is a Franconian language of the Moselle region similar to German).

The following table shows the competencies of the various levels of government concerning spatial planning:

Level	Decision making
Central government	Territorial structure of population, economic activities, infrastructures, investments, etc.
Communal government	Communal long and mid-term development, land use, zoning, buildings, rural areas, natural areas, etc.

Table 1: The competency regarding spatial planning of various levels of government, ISoCaRP

1.2 Scheme: spatial planning, water management, ecology

The following table shows the most relevant laws, policies and other planning instruments at three levels, starting at Europe and going down to the local level. The three coloured columns show the fields of spatial planning, water management and ecology. The main focus will be the column of spatial planning. Water management and ecology are added components related to spatial planning.

LEVEL WATER MANAGEMENT

SPATIAL PLANNING

ECOLOGY

EUROPEAN

POLICY
Flood risk management: Flood prevention, protection and mitigation
Trans European Networks (TEN)
LAW
Water Framework Directive, Nitrates Directive, Urban Waste Water Treatment Directive
Directive on the assessment and management of floods (proposal)
OTHER PLANNING INSTRUMENTS



POLICY
European Spatial Development Perspective (ESDP)
European Spatial Planning Observation Network (ESPON)
INTERREG, Trans European Networks (TEN)
LAW

OTHER PLANNING INSTRUMENTS



POLICY
Natura 2000 network
LAW
Strategic Environmental Assessment (SEA)
Environmental Impact Assessment (EIA), Habitats Directive, Birds Directive
OTHER PLANNING INSTRUMENTS

NATIONAL

POLICY
Plan National pour un Développement Durable
LAW
Loi du 27 mai 1961 concernant les mesures de protection sanitaire du barrage d'Esche-sur-Sûre
Loi du 28 juin 1976 portant réglementation de la pêche dans les eaux intérieures
Loi du 29 juillet 1993 concernant la protection et la gestion de l'eau
Loi du 24 février 1999 autorisant l'Etat à participer au financement de la mise en place par le syndicat SEBES d'une conduite d'eau potable allant de Grosbous via Mersch à Junglinster
Loi du 1er août 2001 portant approbation du Protocole sur l'eau et la santé à la Convention de 1992 sur la protection et l'utilisation des cours d'eau transfrontières et les lacs internationaux, le 17 juin 1999
OTHER INSTRUMENTS
Forecast- and Warning System for Civilian protection
Regulation of January 2nd 2000 prohibition of building in flood areas



POLICY
Programme directeur
Programme directeur six régions d'aménagement
Plans directeurs sectoriels (primaire et secondaire)
Integratives Verkehrs-und Landesentwicklungskonzept
LAW
Loi du 21 mai 1999 concernant l'aménagement du territoire
Loi du 19 juillet 2004 concernant l'aménagement communal et le développement urbain
OTHER INSTRUMENTS
Plan d'occupation du sol
National Park



POLICY
Plan National pour un Développement Durable
LAW
Loi du 10 août 1993 relative aux parcs naturels
Loi modifiée du 11 août 1982 concernant la protection de la nature et des ressources naturelles
Règlement grand-ducal du 8 avril 1986 concernant la protection intégrale et partielle de certaines espèces animales de la faune sauvage
Règlement grand-ducal du 19 août 1989 concernant la protection intégrale et partielle de certaines espèces végétales de la flore sauvage
Règlement grand-ducal du 22 octobre 1990 concernant les aides pour l'amélioration de l'environnement naturel
Règlement grand-ducal du 14 juin 1994 relatif à la pratique du canotage sur les cours d'eau
Règlement grand-ducal du 14 mars 2002 concernant la pratique de l'escalade en forêt
Instruction ministérielle du 9 juillet 1999 à appliquer par les administrations relevant du Ministère de l'Environnement
Loi du 19 janvier 2004 - concernant la protection de la nature et des ressources naturelles - modifiant la loi modifiée du 12 juin 1937 concernant l'aménagement des villes et autres agglomérations importantes - complétant la loi modifiée du 31 mai 1999 portant institution d'un fonds pour la protection de l'environnement
La loi du 5 juillet 1989 modifiant et complétant la loi modifiée du 4 juillet 1973 portant réorganisation de l'administration des Eaux et Forêts définit les missions du service et des arrondissements de la conservation de la nature - la loi du 5 juillet 1989 résultent les travaux du service de la conservation de la nature et des arrondissements

OTHER INSTRUMENTS



REGIONAL LEVEL (no public level)
OTHER PLANNING INSTRUMENTS
Plan directeur régional (schéma de développement / schéma d'aménagement)



COMMUNAL

POLICY

LAW

OTHER PLANNING INSTRUMENTS
Hochwasserfibel



POLICY
Plans de développement communaux (plan d'aménagement généraux (PAG) / plan d'aménagement particulier (PAP))
LAW

OTHER PLANNING INSTRUMENTS
Plan verts



POLICY

LAW

OTHER PLANNING INSTRUMENTS
Scenarios (scenario for biodiversity and scenario for forests)

The symbol ----- signifies that it does not yet exist.

Comment: the names of the policies, laws and other planning instruments are in the original French / German language

Figure 2: Laws, policies and other planning instruments in water management, spatial planning and ecology, Royal Haskoning

1.2.1 Spatial Planning on National Level

Laws and decrees

Spatial planning in Luxembourg is based on two laws:

- The Law of May 21st concerning spatial planning in general (*Loi du 21 mai 1999 concernant l'aménagement du territoire*)
- The Law of July 19th concerning urban development (*Loi du 19 juillet 2004 concernant l'aménagement communal et le développement urbain*)

In 2005 a law was passed (*Loi du 19 juillet 2005*) that included four modifications towards the two laws mentioned above and to two other laws:

- The communal law of December 13th 1988 (*Loi communale modifiée du 13 décembre 1988*);
- The law of January 19th 2004 regarding the protection of nature and natural resources (*Loi du 19 janvier 2004 concernant la protection de la nature et des ressources naturelles.*).

The main goals of the laws concerning spatial planning in general are:

- A rational use of soil and space and protection of landscapes
- Optimal use of economical and human resources
- Responsible management of the environment in general and of natural resources and energy sources in particular
- Harmonic development of urban structures, including the residential areas and traffic and supply networks, with regards to the cultural and natural heritage
- Supplying a national contribution to cross-border and interregional policy
- Protection of population and goods against natural disasters

Another relevant law for spatial planning is the law of August 2nd 1939 concerning the right of visibility for state or municipal roads. This law prohibits buildings or installations along state or municipal roads that influence or diminish the visibility on these roads.

Policy

On the strategic national level the *programme directeur* is the most important spatial planning document. It concerns the whole of Luxemburg. In it are the strategic goals of the national government and the necessary means to achieve these goals. The *programme directeur* is an integrated planning document that gives direction to all fields of national policy that have spatial effects (like transportation, water issues, agriculture and natural heritage). In addition it sets a frame for regional and local plans. The responsible ministry is the *Ministère de l'Intérieur et de l'Aménagement du territoire*.

The *programme directeur* can be altered at any time by request of the responsible minister and must be altered periodically by the council of ministers. The latest *programme directeur* has been approved by the government on March the 27th 2003.

A set of sectoral plans exists on the operational level. These *plans directeurs sectoriels* all have more or less the same structure.

They all include:

- A description of the need for action in relation to spatial development
- A description of the goals off the sectoral plan
- A description of the necessary measures that have to be taken

- A description of the spatial effect of these measures
- Proposals for the elaboration
- Proposals for the propagation of policy in regional and local plans

The *plans directeurs sectoriel* are directly binding for municipalities and indirectly binding for citizens.

The *plan directeurs sectoriels* can be divided in the *plan directeurs sectoriel primaire* and the *plan directeurs sectoriel secondaire*. There are *plan directeurs sectoriels primaire* on the following subjects:

- Transport
- Housing
- Preservation of landscape and forests
- Zones of economic activity

There are *plan directeurs sectoriel secondaire* on more detailed subjects, for example on base stations for mobile communication.

In addition to the *plan directeurs sectoriels* in 2004 the *Integratives Verkehrs-und Landesentwicklungskonzept (IVL)* has been developed. It is an internal document for the synchronisation between the *plan directeurs sectoriels*. It focuses on the spatial development of Luxemburg based on the relation between infrastructure settlement structures and open space.

A very specific instrument of the national government is the *plan d'occupation du sol* (land use plan). It surpasses the autonomy of municipalities by determining the land use of a certain area. For example a *plan d'occupation du sol* has been made for the airport of Luxemburg City.

Other instruments

The minister of spatial planning is authorized to supervise the natural parks of Luxemburg (see 1.3.6. ecology).

1.2.2 Spatial Planning on Regional Level

With regard to spatial planning Luxemburg does not have an official governmental layer between the local and the national level (i.e. the cantons and districts do not play an official role). There is however a need for spatial regional plans on that level and communal governments are working together on matters of spatial planning. They have the instrument of the *plan directeur régional* to their disposal. The need for regional planning is also expressed by the fact that in the (national) *programme directeur six régions d'aménagement* are introduced.

Because the *plan directeur régional* is about the spatial development and the management of the space it consist of two parts:

- The *schéma de développement*
- The *schéma d'aménagement*

Only the *schéma d'aménagement* has a binding character. Various governmental and non-governmental groups can take part in the development of the regional plans, mostly via official joint decision-making processes.

Plans directeur régional must always contain:

- SWOT (Strengths-Weaknesses-Opportunities-Threats) analyses of the region
- Description of the sustainable development of the region, holding into account the input of the national action plan on sustainable development and possible local agenda's 21
- Development schemes
- Management schemes
- Priority projects

1.2.3 Spatial Planning on Local Level

Policy

On the strategic level municipalities have the *plans de développement communaux* at their disposal. In these plans the local government and inhabitants can set the guidelines for a development project for the short-, medium- and long-term. There are two types of *plan de développement communaux*; one for the countryside and one for urban areas. They are financed by the national government.

On the operational level there are two *plans d'aménagement*.

- The *plan d'aménagement généraux* (PAG) is for the whole of the municipal territory and determines the land use for various zones. The plan consists of a graphic part that shows the different zones and a written part that holds the rules concerning those zones.
- The *plan d'aménagement particulier* (PAP) is for areas that are designated by the PAG. In a PAP the local government can express extra demands to ensure a good spatial planning in that specific area.

A building permit is given based of the rules in the PAG or in certain cases also on those in the PAP.

Other instruments

Since 1989 for every major spatial development there has to be an investigation into the effects of that development for the environment.

1.2.4 Water Management

Within the *Ministère de l'Environnement*, the *Administration des Eaux et Forêts* is responsible for the lakes and rivers in Luxembourg:

- The conservation, administration and surveillance of the forests of the state, communities and public companies
- The protection of the woods
- Improvement of public awareness on forestry
- Surveillance of the work done in the forests by private entities with the help of the state
- Promotion of private forests
- Execution of legal measures concerned with the conservation of nature and with hunting

Within the *Ministère de l'Intérieur et de l'Aménagement du territoire*, the *Administration de la Gestion de l'Eau* is responsible for all other matters of water (quality, quantity) in Luxembourg, with the exception of shipping (which is a responsibility of the *Ministère des Transports*). The job of the *Administration* can be described as followed:

- Analyzing the problems of the management and protection of water
- Concerned with structures of both non-navigable and navigable waters
- Consulting the public authorities and collective groups on all questions concerning the water domain
- Monitor the legal, obligatory and administrative conditions with regard to the management and protection of water and implement the relevant policies
- Contributing to the elaboration of the water management plans and to defining the measurement programmes to achieve the fixed objectives
- Implementing the necessary corrective and curative measures for safeguarding the qualitative and quantitative state of the surface water and groundwater and undertake all actions against pollution and deterioration
- Coordinating the actions regarding the protection against flooding
- Translate the demands resulting from legislation in the management and protection of water
- Realizing analyses and laboratory work in the water domain
- Take the lead in research in the water domain
- Participating in the implementation and elaboration of the European plans regarding water management to the national and local level
- Determining and applying the best techniques and technologies in the water domain
- Informing the public and encouraging all initiatives for a sustainable management of water

Over the last decade the policy objectives relating to the management and protection of water were largely defined by the law of 29 July 1993 on the protection and management of water. This law essentially defines the administrative procedures (authorizations and interdictions) that serve as instruments of control. The principal aim is to fight pollution of water and to regenerate by emphasizing the importance of prevention and reduction of pollution to various water users.

The future policy on water matters will be largely inspired by the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, especially in incorporating economic aspects in the utilization of water, which the current legislation fails to do.

The government also plans a national audit on wastewater treatment as well as a national sanitation plan for the communities. These studies have to consider the socio-economic aspects, in view of the implementation of the polluter-pays principle through the Water Framework Directive.

Next to that the National Plan for the Sustainable Development (*Plan National pour un Développement Durable* - 1999) aims at restoring the ecological functions of the water bodies in Luxembourg before 2010, by introducing efficient and effective new installations and techniques and also by improving existing installations.

1.2.5 Protection against Flooding

Flood protection is an important theme in Luxembourg (see figure 3). The political goal is to prevent damage from flooding as much as possible, within a long term vision.

The general rule is that the protection of one area may not cause harm in another area (downstream). Next to that, measures that may cause harm to the economical situation of farmers or other land owners in the areas are seen as not acceptable and unwanted.

Especially after the floodings of 1993 and 1995 several measures have been implemented more consequently. An important instrument in this regard is the regulation of January 2nd 2000 that prohibits building in flood areas to diminish possible damage from flooding. Another important instrument is the Forecast- and Warning System for Civilian protection (Vorhersage- und Frühwarnsystem des Zivilschutzes), which was first introduced in 1993 and has been developed further ever since. There are also local measures (which have mainly been implemented in Ingeldorf, Diekirch and Bettendorf). Another measure in terms of protection was the operation to take quite a lot of pictures of the flooding areas during the heavy flooding in the 90ties. These pictures were analysed and the former flooding areas were protected as much as possible against building by the government.

A catalogue has been set up in 2000 which holds thirty different possible measures that can be implemented by all municipalities for which flooding is an issue. It is up to the municipalities to decide when and where they come into action. The general rule for these measures is that the costs of these measures may not be higher than the costs of the damage that flooding might cause. An important project in which flood protection is combined with ecological development is the restoration of natural values of the Alzette river basin. This river basin (or part of it) is one of the three main natural retention areas in Luxembourg. Although the restoration was originally focused on ecological improvement, it also resulted in the optimizing of flood protection.

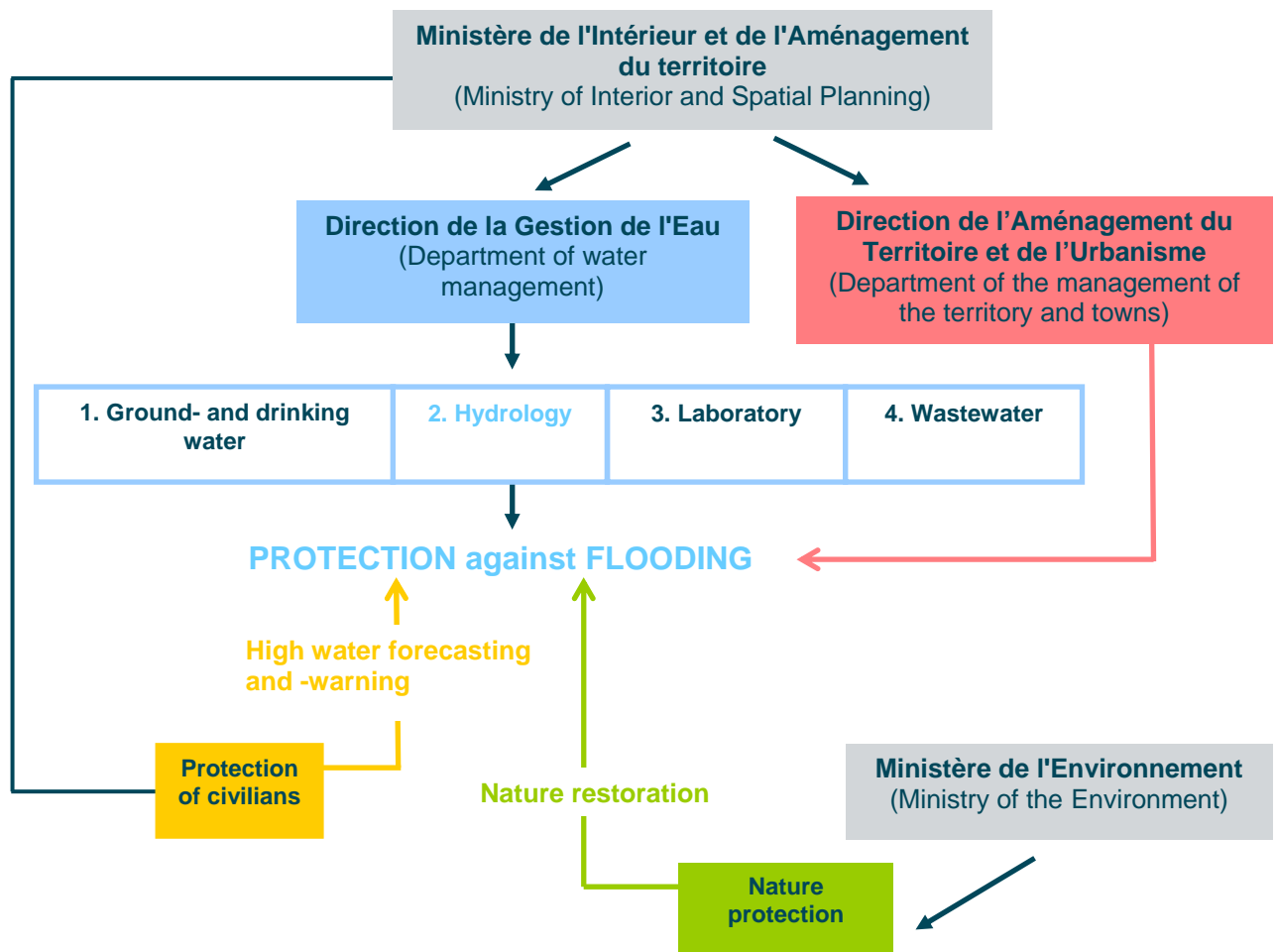


Figure 3: Relations between different competencies regarding high water and flood protection, Royal Haskoning

1.2.6 Water Legislation

Relevant laws are:

- *Loi du 27 mai 1961 concernant les mesures de protection sanitaire du barrage d'Esch-sur-Sûre*
- *Loi du 28 juin 1976 portant réglementation de la pêche dans les eaux intérieures (fishery)*
- *Loi du 29 juillet 1993 concernant la protection et la gestion de l'eau (quality and supervision of water)*
- *Loi du 24 février 1999 autorisant l'Etat à participer au financement de la mise en place par le syndicat SEBES d'une conduite d'eau potable allant de Grosbous via Mersch à Junglinster (for drinking water)*
- *Loi du 1er août 2001 portant approbation du Protocole sur l'eau et la santé à la Convention de 1992 sur la protection et l'utilisation des cours d'eau transfrontières et les lacs internationaux, fait à Londres, le 17 juin 1999 (Mémorial A 98)*

Luxembourg has accumulated delays with respect to the application or elaboration of various European directives in the water sector, such as the Directive 91/271/EEC on Urban Waste Water Treatment, the Directive 91/676/EEC on nitrates from agricultural sources and the most important piece of European water legislation, the Water Framework Directive.

1.2.7 Ecology

Legislation

In Luxembourg the conservation of nature and natural resources is covered by both national and international legislation.

- *Loi modifiée du 11 août 1982 concernant la protection de la nature et des ressources naturelles*
- *Règlement grand-ducal du 8 avril 1986 concernant la protection intégrale et partielle de certaines espèces animales de la faune sauvage*
- *Règlement grand-ducal du 19 août 1989 concernant la protection intégrale et partielle de certaines espèces végétales de la flore sauvage*
- *Règlement grand-ducal du 22 octobre 1990 concernant les aides pour l'amélioration de l'environnement naturel*
- *Règlement grand-ducal du 14 juin 1994 relatif à la pratique du canotage sur les cours d'eau*
- *Règlement grand-ducal du 14 mars 2002 concernant la pratique de l'escalade en forêt*
- *Instruction ministérielle du 9 juillet 1999 à appliquer par les administrations relevant du Ministère de l'Environnement*
- *Loi du 19 janvier 2004 - concernant la protection de la nature et des ressources naturelles - modifiant la loi modifiée du 12 juin 1937 concernant l'aménagement des villes et autres agglomérations importantes - complétant la loi modifiée du 31 mai 1999 portant institution d'un fonds pour la protection de l'environnement*

The above presented laws all aim at safeguarding the character, diversity and integrity of the natural environment, the protection of the countryside and natural areas, the protection of flora and fauna and their biotopes, maintaining and improving the biological equilibrium, protecting the natural resources against degradation and improving natural structures.

Policy

The National Plan for a Sustainable Development (*Plan National pour le Développement Durable* -1999) is the main policy document with regard to a sustainable development of Luxembourg's environment. The plan consists of different visions that either relate to the protection of the environment, improving economic efficiency and improving social solidarity.

With regard to ecology the two most important visions are the one on biodiversity and the one on forests. The vision on biodiversity aims at the creation of a natural network that connects two kinds of natural areas:

- Protected zones of natural interest, where the goal is to restore the biological diversity in natural values at the national level
- Protected zones of international interest, where the goal is to preserve the biological diversity in natural areas at the European and global level

The natural network has not been installed to provide sanctuaries for nature where human activities are not allowed. Human activity is allowed, provided that the presence of human activity does not harm or diminish natural values.

The vision on forests aims at preserving the forests of Luxembourg in a state that resembles its nature, with a wide difference in age and an integrated structure (no large areas of hacked woods).

Other instruments

Next to that the *plans d'évaluation et de gestion écologique* or so called *plan verts* are non-binding plans to help the local government evaluate and manage the natural environment of non-urban areas. Although these plans are set up voluntarily, the Ministère de l'Environnement does (financially) support the elaboration of these plans.

1.2.8 Natural Parks

There are four natural parks in Luxembourg:

- *Parc Naturel de la Haute-Sûre*
- *Parc Naturel de l'Our*
- *Parc Naturel de la Moselle*
- *Parc Naturel transfrontalier "Dreilännereck"*

There is a special law for natural parks in Luxembourg: *Loi du 10 août 1993 relative aux parcs naturels* (1993). The law is set up not only as an instrument for the protection of the natural values in natural parks, but also for the further development of these natural values.

Actions are taken in teams that consist of both local representatives from the communes and representatives from the ministries that are concerned with development of the rural regions (environment, economy, agriculture, middle class and tourism and internal affairs). These "teams" envisage a sustainable development of the park and its region both in an economic and cultural way (from which local people can profit), with respect for the requirements resulting from the protection of nature and the environment and with special attention for a considerate and careful use of the resources.

1.3 Details of the Planning Instruments in Luxembourg: policy, law and other planning instruments

1.3.1 European level

EUROPEAN POLICY			
Subject	Policy	Year	Purpose/Contents
Spatial Planning	European Spatial Development Perspective, ESDP	1999	The aim of the spatial development policy is to work towards a balanced and sustainable development of the territory of the European Union. The ESDP is a policy framework for the sectoral policies of the Community and the Member States that have spatial impacts, as well as for regional and local authorities, aimed as it is at achieving a balanced and sustainable development of the European territory.
Water Management	Flood risk management: Flood prevention, protection and mitigation	2004	Towards a EU Action programme on Flood Risk Management: Many Member States are already taking flood protection measures but concerted and co-ordinated action at the level of the European Union would bring a considerable added value and improve the overall level of flood protection. Therefore in the Communication on Flood risk management; Flood prevention, protection and mitigation the Commission has proposed to develop and implement a concerted EU Action Programme on flood risk management as flood events have the potential to undermine the EU's drive towards sustainable development and the flood risks are increasing.
Ecology	The Convention on the Conservation of European Wildlife and Natural Habitats (The BERN Convention)	1982	The principal aims of the Convention are to ensure conservation and protection of all wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to afford special protection to the most vulnerable or threatened species (including migratory species) (listed in Appendix 3). To this end the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1000 wild animal species.
EUROPEAN LEGISLATION / LAW			
Subject	Legislation	Year	Purpose/Contents
Spatial Planning	----	----	----
Water Management	Council Directive 92/43/EEC (the Water Framework Directive)	2000	The European water framework directive has as objective to achieve in the year 2015 a good ecological status for the European waters and to manage them on catchment area level. The WFD is the European directive for the protection of surface-, coastal and groundwater.
	Protection of waters against pollution caused by nitrates from agricultural sources (91/676/EG)	1991	The objective is to reduce or prevent water pollution caused or induced by nitrates from agricultural sources.
	Urban Wastewater treatment (91/271/EEG)	1991	This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors. Its aim is to protect the environment from any adverse effects due to discharge of such waters.

Ecology	Council Directive 79/409/EEC (the Birds Directive)	1985	These Directives provide for the protection of animal and plant species of European importance and the habitats which support them, particularly through the establishment of a network of protected sites
	Council Directive 92/43/EEC (the Species and Habitats Directive)	1985	
OTHER EUROPEAN PLANNING INSTRUMENTS			
Subject	Instrument	Year	Purpose/Contents
Spatial Planning	-----		
Water Management	-----		
Ecology	-----		

Table 2: Policy, legislation and other planning instruments on European level

1.3.2 National, including all Luxembourg levels

POLICY			
Subject	Policy	Year	Purpose/Contents
Spatial Planning	<i>Programme Directeur</i>		There is no clear description of its content. It is the formal and material expression of the planning conception at national level. Its life is nearly 15 to 25 years. There is foreseen revision every 10 years. It fixes the territorial structure of population; economic activities; facilities; basic infrastructures; environmental protection; investments, etc. It fixes the framework for developing the Sectoral or Global Plans.
	<i>Sectoral Plan</i>		It develops a defined and specific aspect within the geographical space fixed by the <i>Programme Directeur</i> .
	Global Plan		It develops every planning aspect within the geographical boundaries fixed by the <i>Programme Directeur</i> .
	Planning Project		It comprises the whole communal territory. It establishes the long and mid-term development. It includes a Director Plan; a General Plan; a Building Code and a Land Use Norms; Land uses, facilities, etc. Outside the urban perimeter it defines rural areas, natural reserves, leisure areas and areas under special protection
	<i>IVL: Integratives Verkehrs- und Landesentwicklungsprogramm</i>	2004	This plan is an instrument to enhance the integration of the departments of transport and spatial planning. The plan aims at better coordinating the elaboration of the different plans directeurs sectoriels and it forms a framework for planning at the regional or local level. However, the plan does not include specific local projects, it's main purpose is to serve as an input for discussion.

	<i>Plans de développement communaux rural</i>	1999	The plan aims at a sustainable rural development, without harming both the competitiveness and quality of agriculture and the ecological values (both flora and fauna). The plan therefore concerns the total scala of characteristics of and issues concerning the countryside.
Water Management	<i>Plan National pour un Développement Durable</i>	2003	Le Plan a pour but de préciser les domaines d'action prioritaires du Luxembourg dans la perspective d'un développement durable, de formuler des objectifs concrets et de proposer les actions et instruments nécessaires à leur mise en œuvre. Son objectif est de préparer le Luxembourg au défi environnemental en mettant en synergie les trois forces motrices du développement durable: l'efficacité économique, la solidarité sociale et la protection de la nature. En l'absence d'une base légale appropriée, les objectifs du Plan n'ont pas de valeur juridique contraignante. Ils sont conçus comme des lignes directrices à suivre en vue de progresser vers un développement durable.
Ecology	<i>Plan National pour un Développement Durable</i>	2003	The Plan is the main policy document with regard to a sustainable development of Luxembourg's environment. The plan consists of different visions that either relate to the protection of the environment, improving economic efficiency and improving social solidarity. The plan does not have a legal base.

LEGISLATION / LAW

Subject	Law	Year	Purpose/Contents
Spatial Planning	<i>Loi du 21 mai 1999 concernant l'aménagement du territoire</i>	1999	Law concerned with the management of the territory http://www.legilux.public.lu/leg/a/archives/1999/0610306/0610306.pdf
	<i>Loi du 19 juillet 2004 concernant l'aménagement communal et le développement urbain</i>	2004	Law concerned with the management of the community and urban development http://www.mi.etat.lu/MAT/AmgCom/VersionCoordonneeLoi19072004modifieeAmmCommDevUrb.pdf
Water Management	<i>Loi du 27 mai 1961 concernant les mesures de protection sanitaire du barrage d'Esche-sur-Sûre</i>	1961	Law concerned with the protective measures for the dikes and dams of the Esche-sur-Sûre http://www.legilux.public.lu/leg/a/archives/1961/0211206/0211206.pdf#page=3
	<i>Loi du 28 juin 1976 portant réglementation de la pêche dans les eaux intérieures</i>	1976	Law holding the regulations on fish in the interior waters http://www.legilux.public.lu/leg/a/archives/1976/0432807/0432807.pdf?SID=bff081c8a7e27ba3c4274e94b86e5e67
	<i>Loi du 29 juillet 1993 concernant la protection et la gestion de l'eau</i>	1993	Law concerning the protection and management of water quality and quantity http://www.legilux.public.lu/leg/a/archives/1993/0700609/0700609.pdf?SID=5dc20156eff70d6e1ea23b150aab592d
	<i>Loi du 24 février 1999 autorisant l'Etat à participer au financement de la mise en place par le syndicat SEBES d'une conduite d'eau potable allant de Grosbous via Mersch à Junglinster</i>	1999	Law authorising the state to participate in financing the construction of a board of management (via the SEBES agreement) concerned with drinking water in de Grosbous/Mersch/Junglinster area http://www.legilux.public.lu/leg/a/archives/1999/0200903/0200903.pdf

	<i>Loi du 1er août 2001 portant approbation du Protocole sur l'eau et la santé à la Convention de 1992 sur la protection et l'utilisation des cours d'eau transfrontières et les lacs internationaux, le 17 juin 1999</i>	2001	Law concerning agreements on the protection and use of cross-border waterways and international lakes http://www.legilux.public.lu/leg/a/archives/2001/0981408/0981408.pdf#page=2
Ecology	<i>Loi du 10 août 1993 relative aux parcs naturels</i>	1993	Law coming the natural parks. The law is set up not only as an instrument for the protection of the natural values in natural parks, but also for the further development of these natural values. http://www.mi.etat.lu/MAT/ParcNat/ParcNat.htm http://www.legilux.public.lu/leg/textescoordonnes/compilation/cod_e_environnement/VOLUME3/PARCS/PARCS1.pdf
	<i>Loi modifiée du 11 août 1982 concernant la protection de la nature et des ressources naturelles</i>	1982	Law concerned with the protection of nature and natural resources http://www.environnement.public.lu/conserv_nature/legislation/nationale/jurisprudence/index.html
	<i>Règlement grand-ducal du 8 avril 1986 concernant la protection intégrale et partielle de certaines espèces animales de la faune sauvage</i>	1986	Regulation concerned with the protection of wild animal species http://www.environnement.public.lu/conserv_nature/legislation/nationale/faunesauvage/index.html
	<i>Règlement grand-ducal du 19 août 1989 concernant la protection intégrale et partielle de certaines espèces végétales de la flore sauvage</i>	1989	Regulation concerned with the protection of wild flora http://www.environnement.public.lu/conserv_nature/legislation/nationale/floresauvage/index.html
	<i>Règlement grand-ducal du 22 octobre 1990 concernant les aides pour l'amélioration de l'environnement naturel</i>	1990	Regulation concerned with help and means for the improvement of the natural environment http://www.environnement.public.lu/conserv_nature/legislation/nationale/aidesamelioration/index.html
	<i>Règlement grand-ducal du 14 juin 1994 relatif à la pratique du canotage sur les cours d'eau</i>	1994	Regulation concerned with canoeing on the waterways http://www.environnement.public.lu/conserv_nature/legislation/nationale/canotage/index.html http://www.waasser.lu/gestion_de_leau/legislation/legis7.html
	<i>Règlement grand-ducal du 14 mars 2002 concernant la pratique de l'escalade en forêt</i>	2002	Regulation concerned with climbing activities in forests http://www.legilux.public.lu/leg/textescoordonnes/compilation/cod_e_environnement/VOLUME3/PROTECTION_NATURE/PROTECTION1.pdf
	<i>Loi du 19 janvier 2004 concernant la protection de la nature et des ressources naturelles</i>	2004	Law concerned with the protection of nature and natural resources, incorporating the protection of the zones protected under the EU Habitats and Birds Directive. http://www.legilux.public.lu/leg/textescoordonnes/compilation/cod_e_environnement/VOLUME3/PROTECTION_NATURE/PROTECTION1.pdf

OTHER PLANNING INSTRUMENT			
Subject	Instrument	Year	Purpose/Contents
Spatial Planning	Plan d'occupation du sol	---	Local land use plans
	<i>Plan directeur régional (schéma de développement / schéma d'aménagement)</i>		<p>The plan consist of the <i>schéma de développement</i> and the <i>schéma d'aménagement</i>. The former has a more strategic character and the latter has a binding character. Various governmental and non-governmental groups can take part in the development of the regional plans, mostly via official joint decision-making processes.</p> <p>Plans directeur régional must always contain: http://www.mi.etat.lu/MAT/PlanReg/PlanReg.htm</p>
Water Management	Forecast- and Warning System for Civilian protection	Since 1993	----
	Hochwasserfibel	2005	Brochure focusing on different precautions that can be taken in constructions of buildings to diminish damage from flooding http://www.gouvernement.lu/salle_presse/actualite/2005/12/19hal_sdorf_modert/hochwasserfibel.pdf
Ecology	National Parks	1993	<p>Protection schema, making it possible to focus on a sustainable development of the park and its region both in an economic and cultural way (from which local people can profit), with respect for the requirements resulting from the protection of nature and the environment and with special attention for a considerate and careful use of the resources.</p> <p>http://www.mi.etat.lu/MAT/ParcNat/ParcNat.htm http://www.legilux.public.lu/leg/textescoordonnes/compilation/cod_e_environnement/VOLUME3/PARCS/PARCS1.pdf</p>
	<i>Plan verts</i>	1999	<p>These plans are voluntary plans set up at the local level concerned with the management, development and revitalisation of the natural environment and biotopes. The Ministère de l'Environnement does (financially) support the elaboration of these plans.</p> <p>http://www.biodiv.org/doc/world/lu/lu-nr-01-fr.pdf</p>

Table 3: Policy, legislation and other planning instruments on national, including all Luxembourgish levels, Royal Haskoning

1.4 Interviews and conclusions

In order to evaluate the experience of the co-operation of water managers and spatial planners in Luxembourg 3 interviews have been held.

The people interviewed were:

- Ms. B. Lambert, Ministère de l'intérieur, Direction de la Gestion de l'Eau, Luxembourg
- Mr. R. Kipgen, Ministère de l'intérieur, Direction de la Gestion de l'Eau, Luxembourg
- Mr. A. Friesing, Ministère de l'Agriculture, de la Viticulture et du Développement Rural, Luxembourg

1.4.1 Integral approach

Integral approach is indeed a new form of working together within different ministries and departments in Luxembourg, such as the informal meeting once per month of the competence team water 2000 which exists of members of different departments and ministries. New developments and suggestions in terms of water management will be discussed. The goal is also to strengthen the relationships on the personal level and to keep all involved at the same level of information.

Another integral approach demonstrates the IVL, the so called *Integratives Verkehrs-und Landesentwicklungskonzept Luxemburg*. The IVL means a planning process which combines aspects of spatial developments, infrastructure planning and the protection of the nature and the landscape. Therefore the following ministries are involved: the interiors (DATUR), transport and infrastructure, the environment, the economy, the housing and building environment.

This planning instrument helps to convert the goals of the *Programme Directeur* as well as to transfer the sectoral plans into realisation.

Conclusion

Several ministries and departments have worked much too separated in the past. The dramatic and obliterated effects of the flooding of 1993 and 1995 have illustrated the need and demand of working together and to seek for an integral approach. The IVL as a planning process instrument has been installed in order support numerous instances in administration in work together. Different themes and issues in terms of water management spatial planning and ecology have been given a new platform to operate.

1.4.2 Co-operation of spatial planning and water management

The co-operation of spatial planning and water management is guaranteed in spatial development, see also 1.4.1 integral approach.

Because of the small size of the state and the involved ministries, it is quite common that co-operation between diverse disciplines takes place in Luxembourg.

1.4.3 Co-operation beyond boundaries

Co-operation beyond boundaries mainly takes place with regard to quite a few INTERREG IIIa/b projects, with regard to IKSMS (International Commission to Protect the Mosel and Saar) and the nature parks, for example the nature park our.

The co-operation happens mostly in the cross-border regions. Belgium, Germany and Luxembourg have a long history of exchange and collaboration in nature and water related projects.

General steps in co-operation related to flooding are to:

- Put in order a stocktaking of the catchment area
- Discuss problem and issues
- Define common goals
- Agree on the action plan
- Carry out of projects

The project level is therefore the main operational and transnational level. These projects related to flood prevention are quite often initiated by associations or other interest groups.

1.4.4 EU WFD and sustainable development

With regard to the EU WFD the position of the water managers and the spatial planner are quite the opposite.

The water managers distinguish no added value in the EU WFD in terms of sustainable development. The directive leads without doubts to a higher quality standard in water management. A sustainable development can be achieved for certain within the Mosel commission. The IKSMS delivers much more effective projects which have an influence and a positive effect on sustainable development.

On the other hand the spatial planner is convinced that the EU WFD takes effect on sustainable development. This opinion is mainly based on the fact that the water managers started to think on spatial developments areas. Another reason is the fact that the catchment areas of the whole river will be regarded; the scale has been changed.

1.4.5 Necessity of new tools

The existing instruments such as the sectoral plans or the IVL guarantee an integrative approach during spatial developments. Numerous ministries, parties and stakeholders are involved in the set-up of development plans. The necessity of new tools is therefore quite little. A given statement or advice is to use this kind of process and network of competences more creatively which needs a wider understanding of a sustainable development. In addition to that the success of any developments depends much more on the ambition, the engagement and the courage of the involved members if they are willing to aim a step further than the minimal request conform the official procedure.

Conclusion

The existing instruments are enough to reach a reasonable level in the protection against flooding and to ensure as a result a sustainable spatial development.

1.4.6 Suggestions for the future

The suggestions for the future from water managers are clearly expressed. There is a need of more professional staff and more money for the realisation of projects. In this perspective, projects signify to enlarge the retention areas in the catchment area. The nature conservation and the environmental protection should get always the priority within all interests of involvements.

In addition to all related policies, strategies and ideas, the implementation phase could improve. The success of a project should be directly linked and evaluated besides from innovation and improvement to its implementation.

Literature and sources

- ISoCaRP, International Society of City and Regional Planners, 2002 (www.isocarp.org)
- Interview with Minister of Internal Affairs Michel Wolter: "Es gibt keinen absoluten Schutz!" "Télécran" 15-01-2003, as seen on:
http://www.gouvernement.lu/salle_presse/Interviews/20030115wolter/index.html
- Plan National pour un développement durable (1999)
- Local land & soil news no. 12/13 I/05 pp.21-22
- Stratégie globale en matière de zones inondables - Définition des principes (Conseil de gouvernement 10th of May 1996)
- Overzicht van de ruimtelijke ordeningsstelsels binnen de BENELUX (Benelux-samenwerking ruimtelijke ordening – 2003)

Links to relevant policy and legislative documents can be found on the following websites:

- **General information**

<http://www.ce.etat.lu>

<http://www.etat.lu>

- **Water management**

http://www.crte.lu/mmp/online/website/content/water/index_EN.html

<http://www.legilux.public.lu/leg/a/archives/1961/0211206/0211206.pdf#page=3>

<http://www.legilux.public.lu/leg/a/archives/1976/0432807/0432807.pdf?SID=bff081c8a7e27ba3c4274e94b86e5e67>

<http://www.legilux.public.lu/leg/a/archives/1993/0700609/0700609.pdf?SID=5dc20156eff70d6e1ea23b150aab592d>

<http://www.legilux.public.lu/leg/a/archives/1999/0200903/0200903.pdf>

<http://www.legilux.public.lu/leg/a/archives/2001/0981408/0981408.pdf#page=2>

http://www.gouvernement.lu/salle_presse/actualite/2005/12/19halsdorf_modert/hochwasserfibel.pdf

- **Natural parks**

<http://www.mi.etat.lu/MAT>

- **Environment and nature**

<http://www.environnement.public.lu/index.html>

<http://www.gouvernement.lu/dossiers/environnement/devdurable/index.html>

<http://www.mi.etat.lu/MAT/ParcNat/ParcNat.htm>

http://www.legilux.public.lu/leg/textescoordonnes/compilation/code_environnement/VOLUME3/PARCS/PARCS1.pdf

http://www.environnement.public.lu/conserv_nature/legislation/nationale/jurisprudence/index.html

http://www.environnement.public.lu/conserv_nature/legislation/nationale/faunesauvage/index.html

http://www.environnement.public.lu/conserv_nature/legislation/nationale/floresauvage/index.html

http://www.environnement.public.lu/conserv_nature/legislation/nationale/aidesamelioration/index.html

http://www.environnement.public.lu/conserv_nature/legislation/nationale/canotage/index.html

http://www.waasser.lu/gestion_de_leau/legislation/legis7.html

http://www.legilux.public.lu/leg/textescoordonnes/compilation/code_environnement/VOLUME3/PROTECTION_NATURE/PROTECTION1.pdf

- **Spatial Planning**

<http://www.ivl.public.lu/>

<http://www.gouvernement.lu/dossiers/agriculture/plandevrural/index.html>

<http://www.mi.etat.lu/MAT/>

<http://www.legilux.public.lu/leg/a/archives/1999/0610306/0610306.pdf>

<http://www.mi.etat.lu/MAT/AmqCom/VersionCoordonneeLoi19072004modifieeAmmComDevUrb.pdf>