Information Sheet on Ramsar Wetlands

1. **Date this sheet was completed/updated**: 18 March 1998

2. **Country**: Luxembourg

3. **Name of wetland**: Haff Réimech

4. **Geographical coordinates**:

49° 30' North latitude
6° 22' East longitude

5. **Altitude**: approximately 145 metres above sea level

6. **Area**: 313 hectares

7. **Overview**:

This is a former gravel pit on the left bank of the Moselle River. There are many bodies of water of varying area and depth, with riparian vegetation, including marshes and natural herbaceous and leguminous grasslands, offering favourable conditions for waterfowl, other birds and a high number of animals and plants. The rehabilitation of the banks, the creation of new biotypes, such as large marshes and gravel , contribute to an increase in the ecological value of this wetland.

8. **Wetland type**: Continental O, Tp, Ts, W; Man-made 7

9. **Ramsar criteria**: 1d, 2b, 3b, 4a

The criterion that best characterizes this site: 2b

10. **Map of site included? Please tick yes -or- no**

11. **Name and address of the compiler of this form**:

Ministry for the Environment
18, montée de la Pétrusse
L-2918 Luxembourg

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12. **Justification of the criteria selected under point 9, on previous page**:

Criterion 1d: Given the absence of large bodies of water and wetlands in the area and the location of Haff Réimech on the major migration routes between Northern Europe and Africa, the Haff Réimech wetland plays a very important role in the migration of birds. The bodies of water serve as a resting place and feeding area.

Criterion 2b: The Haff Réimech wetland is of regional importance at the level of the Saar/Loraine/Luxembourg region and of trans-boundary importance because of its special role in maintaining ecological and genetic diversity in the region through its rich and unique fauna and flora.

Criterion 3b: The Haff Réimech wetland meets national criteria for the creation of a national nature reserve. The declaration of a nature reserve is especially appropriate because the site plays an important ecological role and is the habitat of a significant number of specimens of waterfowl that are indicators of the importance and diversity of the wetland.

Criterion 4a: Several surveys have recorded about 15 species of fish but it is difficult to determine their number because many other species have been introduced as stock for fishing. This wetland has potential habitats whose use and wildlife resources depend on management measures under way.

13. **General location**:

The Haff Réimech wetland is in south-eastern Luxembourg, near the German border, which is formed by the Moselle River, in the communes of Remerschen (whose largest city is Remerschen) and Wellenstein (whose largest city is Wellenstein). These two communes are located in the canton of Remich (whose largest city is Remich) in the district of Grevenmacher. The centre of this wetland is about 5 kilometres from the town of Remich, 1 kilometre from Remerschen and 0.5 kilometres from Wintrange in the commune of Wellenstein.

Population in the region

	Luxembourg	Gutland region	Grevenmacher district	Remich canton	Wellenstein commune	Remerschen commune
Population in 1997	418,031	355,368	47,840	14,923	1,110	1,293

14. **Physical features**:

Geology and geomorphology - The central part of this wetland, the lakes and their surroundings, are located on alluvial deposits from the Holocene. On the slopes to the west of the villages of Remerschen and Wintrange, there are the following layers: middle Keuper, Rhinian layers (upper Keuper), layers from the lower Lias (Hettangien and Sinémurien).

Hydrology - Several types of water that influence the Haff Réimech wetland can be identified by their characteristics and origin. Runoff from the slopes plays a dominant role in replenishing the ponds. Water from the upper Muschelkalk aquifer is found in the Moselle. The role of this aquifer in the water regime of the ponds varies and is difficult to define because of the many faults in the rocky bottom under the alluvial deposits. The captive water in the aquifers in the mixed sandstone originate on the eastern side of the Moselle in Germany and are rich in mineral salts. The water of the Moselle is rather polluted. There are high concentrations of chlorites, sulphates and nitrates, which have a negative influence on the water regime in the wetland. The level of the water table is slightly inclined towards the Moselle to the east, causing the water level in the ponds to vary.

Soils - The alluvial bottoms of the Moselle have the following stratification: a layer of soil between 0.1 and 1 meter thick; a layer of silt with a very fine structure (0.002–0.06 millimetres) and a thickness varying between 0.4 and 6 metres; sand and gravel beds divided into layers of rough sand (diameter of 2.0–60 millimetres) and gravels. On the bottom, the alluvial deposits are separated from the rocky bottom (Keuper or Muschelkalk) by a layer of clay several tens of centimetres thick. Current soils are quite variable because of human activities, mainly the excavation of gravel, which has strongly modified the natural stratification. Soil quality in the fills varies. In some places, anaerobic silt-clay soils have been formed through the washing of the gravel. The use of heavy machines has compacted the soils.

Water quality - The water in the ponds comes primarily from two sources: runoff and the water table. Water quality varies considerably throughout the site. There is a steep gradient in the chemical composition at this site because of the complicated ground tectonics. Water in the Moselle has its greatest influence on the areas of water closest to the river through more or less regular flooding, at least once a year. Run-off closely resembles rainwater because it passes relatively quickly through the ground. The concentration of dissolved ions is low except for a greater concentration of nitrates and phosphates and, above all, of bicarbonates.

Depth, fluctuation and permanence of water - The depth of the ponds varies between 2.5 and 5 metres according to the degree of its excavation. There is a variation in water level of the ponds between 3 metres in the south-west and the north-west, as well as seasonal variations of an average of another 0.5 metres. The permanence of water in the ponds is guaranteed. The marshes at the edges of the ponds have fluctuations that are characteristic of this area: an average of 0.5 metres during the year.

Watershed - The watershed of this wetland corresponds to that of the Moselle River.

Climate - The Haff Réimech wetland, just like all of Luxembourg, is located in the temperate zone influenced by the sea, slightly continental, wet, a climate zone that dominates the west coasts of continents. Average annual rainfall is around 709 millimetres and average annual temperatures are above 9.5° C. The prevailing winds are from the west and south-west. The level of dryness is 35, a climate factor that is favourable to the growing of grapes and forests of beech and oak.

15. **Hydrological values**:

The areas of water are in direct contact with the water table, which is slightly inclined in the direction of the Moselle. The ponds are replenished primarily by run-off. Because of its elevation slightly above that of the Moselle and the lack of direct contact with the river, this wetland does not play an important role in controlling floods. However, the broad river valley at the site does play a role in retaining water in the Moselle River watershed. Extensification of agriculture in order to preserve nature and the existence of large wetlands for filtering and treating water (beds of reeds) contributes to the maintenance and improvement of water quality.

16. **Ecological features**:

Main habitats – The main type of habitat in the most of this wetland is the pond. The plant communities found there vary with the depth of the water and water quality.

In brackish water there is *Lemnotum gibbae*, and in eutrophized water there are *Potamogetono najodetum marinae*/*Nympheion* and *Phragmition.* The area of the marshes varies with the seasons (flooding from the Moselle and rainfall). These wetlands have a very diverse fauna and are found on diverse substrata, different water regimes and in different stages of succession.

Marsh and wetland: *Phragmition, Magnocaricion*

Next to the main river, the Moselle, which does not belong directly to the wetland but which has an importance influence on the area, there is still a small stream that flows through the wetland. On the edge of the wetland, but also at the site, dry hay fields and various stages of ruderal vegetation cover the fill and the highest parts of the site. There are traces everywhere of crops, vineyards, orchards and hay fields. On some sites that have been abandoned for some time, there is shrub vegetation or cover. The evolution of this type of habitat normally goes from the association *Phragmition* or *Filipendulion* (wet grasslands) to a eutrophized wet willow area (*Salicetum triandrae-viminalis*) and then to woodland or alluvial area (willow grove, willow and beech).

All of the site goes through rapid stages of plant succession (accompanied by a change in the fauna) and it is difficult to list each plant or animal association (see paragraphs 17 and 18).

17. **Noteworthy flora**:

The slightly brackish nature of several ponds implies the presence of aquatic species linked to these environments. These are associations of plants that are rather rare in Luxembourg and nearby regions. Seasonal changes in the water level in the basins promotes the development of other characteristic plants that grow in the mud exposed on the banks. Among the representatives of these environments, there are also rare plants in the region. In all, there are at least 30 rather rare to very rare plant species from the aquatic and semi-aquatic environments in the region (species listed on the Red Lists for Luxembourg and the surrounding regions, species protected by national or

international legislation), for example, *Erysimum cheiranthoïdes, Fragaria moschata, Hippuris vulgaris, Plantago intermedia, Potamogeton pectinatus, Potentilla supina, Ranunculus circinatus, Trifolium fragiferum*.

See the annexes for a list of species.

18. **Noteworthy fauna**:

Among the very rich fauna at Haff Réimech, surveys have been made of the following groups: mammals, birds, reptiles, amphibians, fish, insects (Carabideae and water spiders). Among the mammals, there are all the typical representatives of these habitats, but scientific studies to identify specific or rare species are not available. Among the bird life, there are at least four nesting water birds that are unique at this site for the rest of the country. In addition, the ponds play an international role for migratory birds. The presence of other birds varies with changes at the site (botanical succession). Forty-six species of birds protected by directive 79/409/CEE (Directive on birds) have been recorded for the site Haff Réimech. The reptiles and amphibians are well represented (all the species present are threatened in Luxembourg). Steps are being taken to create large areas of flat shores that will probably change and improve the situation of this group. It is difficult to estimate the species and populations of fish, because many fish have been introduced for fishing. Studies and data on insects are very incomplete. A study of Carabideae shows an evolution of the population of the open habitats (gravel plain, area of sand) toward woodland associations. The presence of water spiders (*Agyroneta aquatica*), the first time this species has been recorded in Luxembourg, is similar.

19. **Social and cultural values**:

The wetland Haff Réimech can be divided into several parts. The main part plays the role of nature conservation with light tourist activity (introduction to science, education, recreation and nature observation). Then there are the ponds, which play a role in tourism and outdoors recreation. Another part, agriculture and vineyards, dominates the area surrounding the wetland. Areas with different functions are well defined in the overall management plan for Haff Réimech and all activities must respect the main purpose of nature conservation.

20. **Land tenure/ownership of**:

In the Haff Réimech nature reserve, the government is the owner of most of the land and promotes agreement with private owners on management methods through conventions. On the rest of the land, there is a large number of private owners, a part which is owned by the community and a small portion that is owned by the government. A management plan for all of the area seeks to coordinate the various interests in an attempt to reorganize the site.

21. **Current land use**:

The management plan creates the following activities:

- an area for economic activities (extraction of sand and gravel)
- a recreation and sport area (outdoor activities, fishing)
- an area with community and sport infrastructure (camping, boating harbour)
- an area of vacation homes
- a protected area of nature reserves at Baggerweieren and Taupeschwues
- a buffer zone around the nature reserves
- a farming and vineyard area

The human activities in the surrounding area are primarily farming (vineyards on the slopes of the Moselle, fields, hay fields, pastures in the Moselle valley and the exploitation of forests on the plateau). The economic activities, such as industry and commerce, play a secondary role, as far as land use.

22. **Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects**:

Because of the declaration of a nature reserve and the management plan being prepared, no adverse effect on the activities and land use at the site is foreseen. Only the construction of a highway south of the site (but in the watershed) can have indirect consequences on the wetland.

23. **Conservation measures taken**:

Decision of the government of 26 July 1985 creating the conservation plan for Haff Réimech.

Regulations of 10 October 1985 making the overall conservation plan obligatory for Haff Réimech. This regulation divides the site into several areas and sets boundaries for each area, management practices, prohibitions (Ministère de l'Aménagment du Territoire).

The management plan (officially approved by this regulation) is being gradually implemented.

The general conservation plans of the neighbouring communes should be in agreement with the general conservation plan.

The national regulations (probably in April 1998) declaring this a protected area, the Haff Héimech wetland including the land located on the territory of the communes of Remerschen and Wellenstein.

24. **Conservation measures proposed but not yet implemented**:

Project Interreg IIA Teilprogramm Luxemburg-Saarland "Grenzüberschreitendes regionales Entvicklungskonzept für das Moseltal von Perl/Schengen bis Nennig/Remich". This is a regional development plan for sectors such as urbanism, the economy, road infrastructure and the landscape.

A preparatory study for the conservation of a nature park of the three borders.

25. **Current scientific research and facilities**:

Over a long period of evolution of the site, several studies of the abiotic factors (soil, water…) and the fauna and flora (detailed studies on several groups of insects) were carried out by nature conservation associations, local interested persons, the museum of natural history, ministries (for the environment, infrastructure) and consultants. A local employee of the administration for water and forests has made observations, above all for bird life. The creation of a visitors' centre will be complemented by creation of the infrastructure required for certain studies.

26. **Current conservation education**:

A nature discovery trail and an exhibit for school children at the visitors' centre.

27. **Current recreation and tourism**:

Only one of about thirty ponds is used for recreation and sports, the other ponds outside the nature reserve are accessible to fishermen and walkers. There is now a snack bar/restaurant and the possibility of renting a sailboard, canoes and kayaks. The creation of a visitors' centre outside the nature reserve and the creation of teaching trails are planned. This wetland is inside the nature park Dreiländereck, for which an interregional development project is being prepared. The potential for tourism of all this region is also an advantage for the Haff Réimech site.

28. **Jurisdiction**:

Public authority with territorial jurisdiction: The Luxembourg government (locally several private owners and the communal domain).

Public authority with functional jurisdiction: Ministry for the Environment and for the wetland: Ministère de l'Aménagement du Territoire for the overall conservation plan for Haff Réimech.

29. **Management authority**:

Ministry for the environment
18, montée de la Pétrusse
L-2918 Luxembourg

30. **Bibliographical references**: