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Oskarshamn site investigation

Identification of catchments, lake-related drainage parameters and lake habitats

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Abstract

The aim of this report is to serve as a dictionary of the catchments in the Simpevarp area. This report thus describes 26 river catchments entering the Baltic Sea and situated within the Simpevarp area. Some of the catchments have been further divided into sub-catchments, in order to identify the catchment for each lake, and for the rivers and creeks up to the third order of branches. As a result, a total of 96 small catchments and sub-catchments have been identified. The 26 major catchments and five lake catchments are presented in this report, together with some basic data regarding size, land use etc. In addition, five lakes within the area are described and characterised by lake morphometry and habitat parameters, which are given in tables and maps.

Sammanfattning

Syftet med denna undersökning är att beskriva Simpevarps avrinningsområden i ett slags uppslagsbok. Rapporten beskriver 26 av Simpevarps avrinningsområden mynnande i Östersjön. Vissa av avrinningsområdena har delats in i ytterligare mindre avrinningsområde, med avsikt att identifiera avrinningsområdet för varje sjö. Totalt 96 mindre avrinnings-områden har identifierats. De 26 avrinningsområdena beskrivs och basdata avseende storlek redovisas. De fem ingående sjöarnas morphometri och habitatparametrar redovisas i tabeller och på kartor.

Contents

1 Introduction

SKB, The Swedish Nuclear Fuel and Waste Management Company, has started investigations of potential sites for a deep repository of spent nuclear fuel. These sites include two different areas: the Simpevarp area in Oskarshamn and the Forsmark area in Östhammar. The sites are investigated for data relevant to evaluate the construction and function of a planned deep repository. This investigation have been carried out in accordance with activity plan AP PS 400-03-014 (SKB's internal controlling document). Scientists from several fields of investigation participate in this siting program. One part will describe potential effects on the biospere, and as a tool for this a descriptive ecosystem model has been developed /Löfgren and Lindborg, 2003/. The data gathered about the ecosystems will also be used for the environmental impact assessment of the project.

The most convenient way to handle all information about the ecosystems, terrestrial as well as aquatic, is to sort the data into a system of different catchments. These catchments can then be used in a geographical information system to "cut out" the appropriate data from different layers in the system, in order to calculate transport of different substances and to assess the interactions between different areas and ecosystems.

The Simpevarp area is situated between two large river catchments entering the Baltic Sea; River Marströmmen in north (SMHI catchment no 72) and River Virån in south (SMHI catchment no 73). The area between these two catchments, including the Simpevarp area, is called no 72/73 according to the SMHI numbering system. This system also divides the 72/73 area into five smaller catchments. Three of these five catchments are situated within the site investigation area: Kärrviksån, Laxemarån and Släthultebäcken. However, the siting programme needs a more detailed resolution. Hence 23 additional river catchments have been identified within the area, of which eight are situated on islands along the coast.

This report thus describes 26 river catchments entering the Baltic Sea and situated within the Simpevarp area. Some of the catchments have been further divided into sub-catchments, in order to identify the catchment for each lake, and for the rivers and creeks up to the third order of branches. As a result, a total of 96 small catchments and sub-catchments have been identified. The 26 major catchments and five lake catchments are presented in this report, together with some basic data regarding size, land use etc. In addition, five lakes within the area are described and characterised by lake morphometry and habitat parameters, which are given in tables and maps. The purpose of these data is to serve as the basic information and the structure used when sorting all other information gathered into the geographical information system of the Simpevarp area.

The geographical information system created for this investigation has been incorporated in SKB's database SICADA under field note number Simpevarp 169 and 275.

2 The structure of this report – instructions for reading

The aim of this report is to serve as a small "dictionary" of the catchments in the Simpevarp area. The structure and numbering of the catchments follows the same principles as the SMHI system for identifying and numbering catchments in Sweden, although at a smaller and more detailed scale. While SMHI identifies totally 3 large water systems situated within the site investigation area, we have identified and numbered a total of 26 smaller water systems discharging into the Baltic Sea. A hierarchic system has been constructed, where each catchment has been further divided if it contains more than one watercourse, or a lake. Each watercourse and lake within the area thus has its own catchment. The catchment Simpevarp 7, for example, has two sub-catchments; no 7:1 and no 7:2 (Lake Frisksjön). The catchment of the river outlet in the downstream area 7:1 includes also the area of 7:2, hence this catchment is named Simpevarp 7:1-2. The catchment Simpevarp 11, on the other hand, has only one lake (Söråmagasinet) discharging directly into the sea and no upstream tributaries large enough to be identified as sub-catchments. Accordingly, the catchment Simpevarp 11 is identical to the single sub-area 11:1. The catchment Simpevarp 10 has the most complicated hierarchy, with totally 32 sub-areas connected to each other in different branches of the water system. The different sub-areas have been numbered starting from the most downstream part and then proceeding upwards in the water system. If the water from upstream areas enter the same lake from different branches of the system, the flow direction of the different tributaries is prolonged until they meet the main direction of the flow through the lake (the latter may be visualized as a line drawn through the lake). This makes it possible to number the entering tributaries in the order that they attach to the main flow direction, from downstream and upwards. This numbering makes it possible to choose the appropriate level of hierarchy in the data used for evaluation of different aspects of the ecosystems, e.g. for transport calculations of various substances etc. It is possible to evaluate data for the whole catchment, but also for different branches of the water system or for a single upstream lake.

When using this system of numbering, some downstream sub-areas not representing a whole lake or river catchment are formed (cf Simpevarp 7:1 in the example above, which is only one part of the catchment Simpevarp 7:1-2). These downstream sub-areas are included in the tables of Appendix 3, 4, 5 and 6, with data on size, land use, geology, vegetation etc. The characteristics of these areas are valuable when evaluating the lakes and rivers, since the land use and other parameters in the close vicinity may have a profound effect on the aquatic ecosystems. These sub-areas are of course also useful for sorting and evaluating data of terrestrial and wetland areas and ecosystems.

The Result section starts with an overview map showing all the 26 catchments. In the following sections, each of the catchments Simpevarp 1 to Simpevarp 26 are shown in overview maps of the whole Simpevarp siting area, with the relevant sub-areas marked by red boundaries. If present, the different lake sub-catchments within the catchment then follow, indicated on map of the catchment showing which sub-area or sub-areas that are included.

The Appendices include tables with all data collected regarding the lakes (Appendix 1 and 2) and all the sub-catchments (Appendix 3, 4 and 5). Appendix 3, 4 and 5 have two parts, a and b. The first parts, 3a, 4a and 5a, respectively, gives data for the catchments and sub-areas defined in this report. The second part, 3b etc, gives data for areas (catchments) defined from the sampling sites of the regular monitoring programme that is performed

by SKB within the area. Finally, the Lake Index at the last page lists the names of all main watercourses and the five lakes included in this report in alphabetical order, together with the page on which they are found.

The terminology used regarding catchment identification is sometimes confusing and differs between English and American language. In this report we follow the English terminology, using “catchment” as an identification of the area draining to a certain point of a water system (usually a lake or river outlet), while “watershed” is defined as the border between different catchments.

3 Methods

3.1 Nomenclature/numbering of the catchments

The entire Simpevarp site investigation area is situated between the catchment of River Marströmmen (SMHI catchment no 72) and the catchment of River Virån (SMHI catchment no 73). Consequently, SMHI numbers this area as no 72/73. A systematic inventory of all smaller lakes and creeks entering the Baltic Sea within this area would render a set of catchments that could be numbered 72/73:1, 72/73:2 etc, until the most southern area 72/73:(n), north of the outlet of River Virån. As this kind of inventory has not been performed yet, the correct numbering of the Simpevarp area catchments, situated in the central parts of area 72/73, is unknown. When numbering the catchments that now have been identified, we have used a system that follows the principles of the SMHI system /SMHI, 1985/, but the Simpevarp area is treated as a separate area. The catchments discharging into the Baltic Sea are named Simpevarp 1 (in north), Simpevarp 2, etc until Simpevarp 18, the southernmost catchment. After that follows the catchments situated on the coastal islands, also numbered from north to south. By uncoupling the numbering from the SMHI system we avoid future confusion when other smaller sub-catchments of 72/73 may successively be identified.

Between the catchments identified here and draining to the sea, intervening areas are formed along the coast, which do not have any lakes or larger creeks. Following the principles of the SMHI numbering system, these areas will be named Simpevarp 1/2 (the area between Simpevarp 1 and Simpevarp 2), Simpevarp 2/3, and further to Simpevarp 25/26.

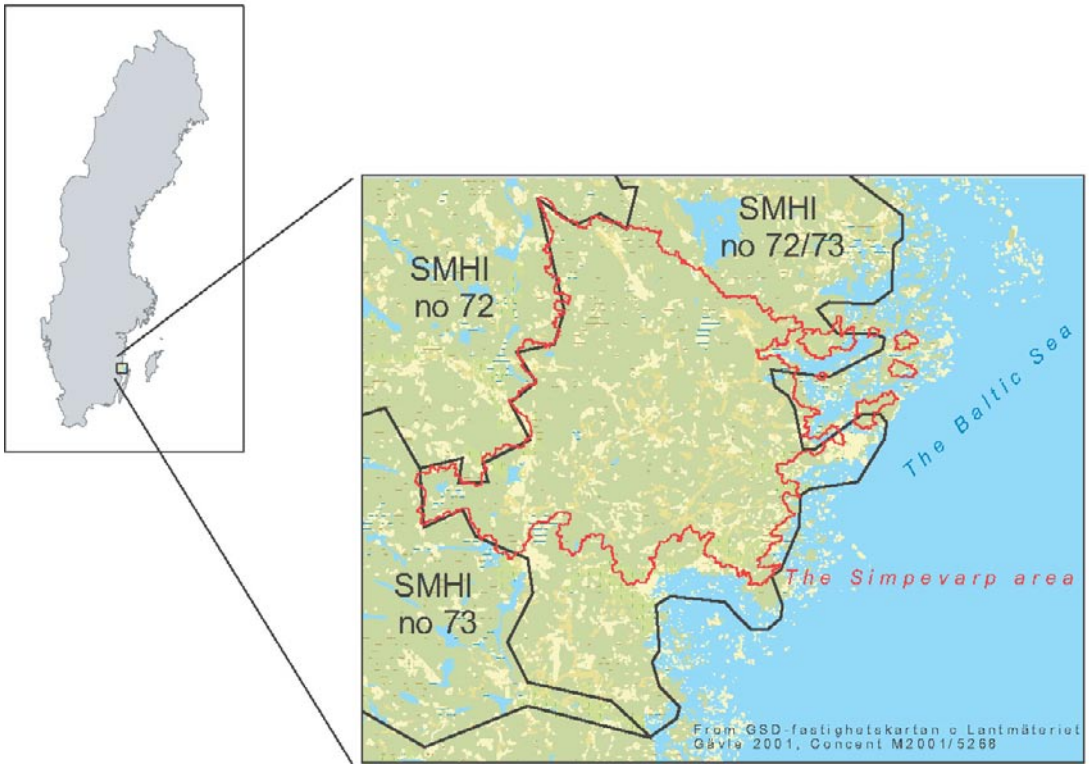

Figure 3-1. *The location of the Simpevarp area, situated within the SMHI catchment no 72/73.*

In addition to the numbering, some of the catchments and sub-catchments have been named. These names on lakes and watercourses have been taken from the SMHI register of Swedish lakes and from available digital maps. In some cases, when no name was found, a name was constructed from nearby places, e.g. “Långbonäsbäcken” for the watercourse in Simpevarp 1. These constructed names are given in the text within brackets.

3.2 Identification of watersheds

As a first step to identify the watersheds, a digital elevation model (DEM) was used in the ArcGIS 8 GIS-programme. The DEM (SKB 10 metre resolution grid) was converted to a flow direction grid using the Hydrological Modelling Extension in ArcGIS 8. Using hydrological modeling in ArcGIS 8 requires a DEM without local sinks. A local sink is defined as a cell situated at a lower level than all surrounding cells. Thus, this area would accumulate water. Local sinks in a DEM are normally due to error in the data. Naturally occurring sinks in a DEM with cell size larger than 10 metres are rare /Mark, 1988/, apart from in areas with glaciers or karsts. In order to delete unwanted errors in the DEM, the local sinks can be filled up to the level of the lowest of the adjacent cells. The sinks are filled in with the function *Hydrology* < *Fill sinks*... and the new DEM is established by right-clicking the name of the layer. Next step towards identifying the watersheds is to make a new grid with flow directions for each cell, using the filled DEM as input. ArcGIS calculates the slope gradient direction using the elevation value in the cell and elevation values for the eight adjacent cells. Hence, there are eight possible outcomes, which are classified in the new grid with a value 1 for north, 2 for northeast, 4 for east (always a doubled value) etc to 128 for northwest /Jensson and Dominique, 1988/. The flow direction grid is made with *Hydrology* < *Flow Direction*… using the filled grid as input and converted to a point layer in shape format using ArcToolbox. The flow direction code values are converted to degrees with geographic rotation format (360 degree circle, 0 degrees in positive Y-axis and clockwise increase).

Using the filled DEM as input, a new grid with gradient values was created. *Derive Slope* identifies the slope, or maximum rate of change, from each cell to its neighbours. The output slope grid theme represents the degree of slope for each cell location. This new grid was converted to a point layer in shape-format and spatially joined to the flow direction point layer. Each cell in the former DEM is now represented by a point with two attributes; flow direction in degrees (0–360) and slope in degrees (0–90). This point layer is displayed in the GIS-application with an arrow symbol where the directions of the arrows are in the flow direction and the lengths of the arrows are proportional to the slope value. The watersheds were digitized on the screen using the arrows as background. Watersheds situated at clearly formed ridges are easy to distinguish between long arrows directed in opposite directions (se red line in Figure 3-2), while in flat areas, where the arrows are short and the directions are varying or parallel, the exact position of the watersheds are difficult to distinguish (see blue line in Figure 3-2). In these areas the watersheds must be verified by field control.

Many of the watersheds suggested from the maps/computer calculations had to be verified by field control. This was made during fieldwork in summer 2003, using DGPS equipment and the topographical map. The corrected watersheds were stored in polygon layers in shape-format in the SKB GIS of the Simpevarp area.

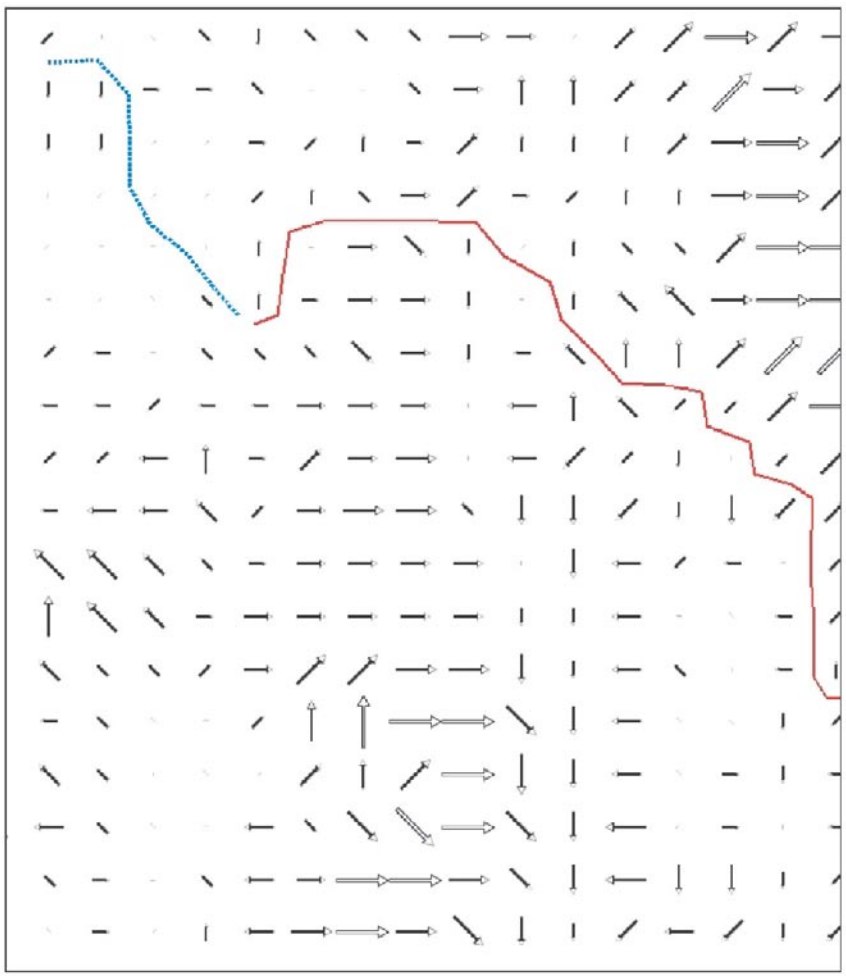

Figure 3-2. *Arrows showing flow direction and slope at each cell in a digital elevation model. The red line represents a watershed distinguished with high accuracy while the blue line represents a watershed that needs to be verified by field control.*

3.3 Data collection and field investigations

Simultaneous with the watershed identifications, data regarding the characteristics of lakes and catchments have also been acquired from various sources and by field investigations during 2003. The results have now been compiled and evaluated. The results from all lake catchments within the Simpevarp area are reported here, according to the following structure:

The location of the object

The name of the lake is given, as well as the x and y coordinates for the outlet, according to the SMHI register of Swedish lakes /SMHI, 1996/, using the Swedish national grid (RT 90 2.5 G W). The number of the appropriate topographic map is also given. A reference is made to the corresponding SMHI catchment number, in which the lake is situated.

The catchment area and its major constituents

Using overlay technique, the catchment GIS polygons achieved from the determination of watersheds were used to "cut" and calculate the distribution of different land use, vegetation etc, from the digital sources available in the SKB regional GIS (digital elevation models, topographical maps, vegetation maps, population densities, number of residences). Following the methodology of /Blomqvist et al. 2001/ a number of parameters regarding size, land use and morphometry, for each sub-catchment, have been calculated. All raw data for the different sub-catchments are given in Appendix 3, 4 and 5, including information from the Swedish digital topographical map and the SKB vegetation map of the Simpevarp area. The following information has been extracted and included in the report for each lake catchment:

- The total area of the catchment.
- The % coverage of different land uses, identified from the topographical map and classified into forest (Ma 2–3, Ma 6–7, Ma 9–10 and Ma 19), water surface (Ma 1), agriculture (Ma 4) and remaining open land (Ma 5, Ma 8 and Ma 11), respectively. In addition, the % coverage of wetland has been calculated, adding the categories "Ma 3" and "Ma 7–11". The % coverage of wetland areas thus represent varying parts of the other calculated land use classes.
- Surface waters within the catchment. Lakes are given, and, if available from the topographical maps, the number and location of inlet creeks. Outlet creeks, if present, have been located from the maps and from field observations.

Lake morphometry parameters

Following the methodology of /Blomqvist et al. 2000/, a number of lake morphometry parameters were measured and/or calculated, respectively. Depth soundings were performed in all the lakes during summer 2003, using the DGPS/echo-sounder equipment described by /Brydsten et al. 2004/. From these data, bathymetric maps as well as depth grid maps were constructed for each lake.

A large set of different lake morphometry parameters were calculated. From these data, the lake area, maximum and mean depth, lake volume and the theoretical water renewal time is given in a table for each lake. The full set of morphometric data is given in Appendix 1.

Lake ecosystem parameters

The ecosystem parameters performed so far, and reported here, includes the habitat diversity of the lake ecosystems. Lake ecosystems can be divided into five major habitats:

1. Littoral type I: The littoral habitat with emergent and floating-leaved vegetation. This habitat is developed in wind-sheltered, shallow areas where the substrate is soft and allows emergent and floating-leaved vegetation to colonize.

2. Littoral type II: The littoral habitat with hard substrate. This habitat develops in wind-exposed areas of larger lakes, but also in smaller lakes, where the lake morphometry includes rocky shores. The photosynthesising organisms colonizing these areas include species that are able to attach to the hard substrate, e.g. periphytic algae.

3. Littoral type III: The littoral habitat with submerged vegetation. This habitat is found in deeper areas of the lakes, where light enough to sustain photosynthetic primary production penetrates down to the sediment. The turbidity and colour of the lake water regulates the light penetration and thereby the distribution of this habitat.

4. The profundal habitat. This habitat develops at the sediments of the lakes where light penetration is less than needed to sustain a permanent vegetation of primary producers. Non-photosynthesising organisms dominate this habitat. The profundal organisms are dependent on carbon supplies imported from other habitats of the lake or from allochtonous sources.

5. The pelagic habitat. This habitat includes the open lake water, where a pelagic food-web based on planktic organisms is developed. Depending on the light availability, these plankton are dominated by either photosynthetic production (i.e. by autotrophic phytoplankton) or, if the water is strongly coloured or turbid, by heterotrophic carbon processing (e.g by heterotrophic or mixotrophic bacterioplankton and phytoplankton). The pelagic habitat covers the same area as the sum of all littoral type II, littoral type III and profundal habitats within a lake.

The distribution of these major habitats was determined in different ways. The shoreline was digitized from ortophotos and, if necessary, controlled in the field. The other habitat borders were determined with the DGPS equipment from a boat. In order to distinguish between littoral and profundal habitats, light measurements were used to identify the compensation level (1% of incoming light, cf /Rodhe, 1965/) for photosynthetic activity. Rocky shores, however may have a Littoral of type II along the shoreline, but also some Littoral of type I further out in the lake. In order to identify this border correctly, light measurements should be combined with determinations of the bottom substrate. However, we used general field observations instead of detailed analyses of substrate, and assumed the distribution of Littoral type II to a zone with maximum width of 2 m. The data were incorporated into the SKB regional GIS, as attributes to the “Lake polygon theme”, and used for calculating the areas of each major habitat present within the lake.

Additional remarks

No other systematic inventories have been performed so far, but any additional notes are reported in this section, e.g. obvious damages to the lakes by human activities etc. Plant species that have been encountered during fieldwork are listed, and in some cases also information regarding the distribution of these plants along the shores. It should be remembered, however, that a lack of such notes does not necessarily mean that there is a lack of damages, certain species etc. Further investigations are needed to complete these observations.

4 Results

The entire Simpevarp area is situated within the SMHI catchment no 72/73, i.e. in the area between River Marströmmen (SMHI catchment no 72) and River Virån (SMHI catchment no 73). In the SMHI system the 72/73 area is further divided into five smaller catchments. Three of these five catchments – Kärrviksån, Laxemarån and Släthultebäcken – are included in the Simpevarp area. This investigation has identified a total of 26 catchments that are situated partly or entirely within area; eight of them are situated on islands (no 19–26, Figure 4-1). These 26 catchments are further divided into a total of 96 sub-catchments in this report.

The eight catchments outside the coastline are located on four different islands. The catchments no 19 and 20 are situated on Upplångö, catchment no 21 on Äspö, catchment no 22 on Utlångö and catchments no 23–26 on Ävrö.

The 26 catchments have all outlets to the Baltic Sea within Kalmar County. Between some of these catchments, coastal areas without lakes or larger creeks are formed, which are delineated by the watersheds of the catchments and the coastal shoreline. These "rest areas" are not included in this report, but they will be included as catchments in the SKB data base, and named "Simpevarp 1/2" for the area between the catchments Simpevarp 1 and Simpevarp 2, "Simpevarp 2/3" for the area between the catchments Simpevarp 2 and Simpevarp 3, etc.

Figure 4-1. *The Simpevarp area, with the 26 catchments described in this report.*

A total of six lakes are located within the area: Lake Frisksjön (catchment no 7:2), Lake Fjällgöl (catchment no 10:16), Lake Grangöl (catchment no 10:19), Lake Plittorpsgöl (catchment no 10:26), Lake Jämsen (catchment no 10:30–32) and Lake Söråmagasinet (catchment no 11:1). No data from Lake Grangöl are included in this report, as the lake was not included in the field investigation programme. There are also four additional lakes situated within the upper parts of Laxemarån, within the catchment Simpevarp 10. They were not included in the field investigations, some of them because they were judged as completely dry from IR photos, but mainly due to the unclear hydrological conditions. However, the final judgement, which is reported here, is that they are part of the Simpevarp 10 catchment.

The entire area is covered by the Swedish topographical map no 6 G SO. The maximum elevation over the sea level within the area is 30 m (in the area of Simpevarp 10:30, see Appendix 3).

4.1 The catchment Simpevarp 1

This catchment is one of the smallest within the Simpevarp area and it does not include any lakes. The area consists of one single sub-area (Figure 4-2), in which the watercourse "Långbonäsbäcken" drains some wetland areas before entering the Baltic Sea in Djupesund.

Simpevarp 1:1, "Långbonäsbäcken"

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

The catchment area and its major constituents

The total catchment area is 0.070 km^2, and the land use is almost totally dominated by forest (Table 4-1, Figure 4-3). There is also a relatively large part of wetland within the catchment.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-1. The different land uses within the catchment of "Långbonäsbäcken".

Land use	Area %
Forest	99
Water surface	0
Agriculture	0
Remaining open land	1
Wetland (as parts of the above land use categories)	19

Figure 4-2. *The Simpevarp area with the single sub-area in the catchment Simpevarp 1 marked with red boundaries.*

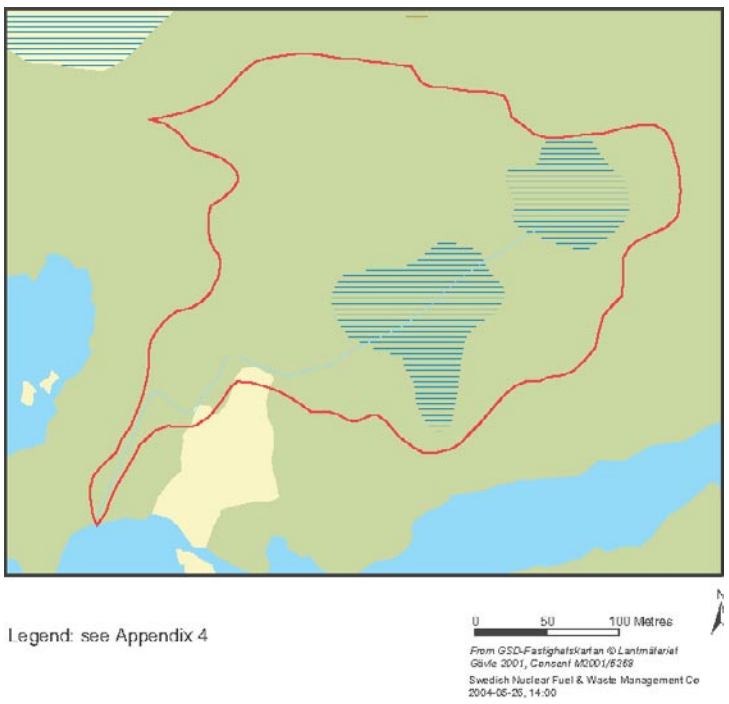

Figure 4-3. *The catchment Simpevarp 1 with the watercourse "Långbonäsbäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.2 The catchment Simpevarp 2

This catchment consists of one single sub-area (Figure 4-4). The watercourse, "Bodvikebäcken", drains into Bodviken, a small bay in the Baltic Sea that is included in this catchment area. The outlet north east of the catchment enters the Baltic Sea in Granholmsfjärden.

Simpevarp 2:1, "Bodvikebäcken"

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-4. *The Simpevarp area with the single sub-area in the catchment Simpevarp 2 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.380 km^2. Forest dominates the land use (Table 4-2, Figure 4-5). The water surface (20% of the total area) is the bay Bodviken, which has been included in the area.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-2. The different land uses within the catchment of "Bodvikebäcken".

Land use	Area %
Forest	79
Water surface	20
Agriculture	0
Remaining open land	1
Wetland (as parts of the above land use categories)	2

Figure 4-5. *The catchment Simpevarp 2 with the watercourse "Bodvikebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.3 The catchment Simpevarp 3

This catchment is divided in two sub-areas (Figure 4-6). It includes the watercourse "Sörviksån", which drains into Granholmsfjärden in the Baltic Sea south of the catchment.

Simpevarp 3:1–2, "Sörviksån" (the entire catchment)

The location of the object

This catchment is part of THE SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-6. *The Simpevarp area with the two sub-areas in the catchment Simpevarp 3 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 1.000 km^2. Forest strongly dominates the land use (Table 4-3, Figure 4-7).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 3:1–3:2

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the two branches of the watercourse "Sörviksån".

Table 4-3. The different land uses within the entire catchment of "Sörviksån". The data are added from two sub-areas.

Land use	Area %
Forest	96
Water surface	0
Agriculture	3
Remaining open land	1
Wetland (as parts of the above land use categories)	1

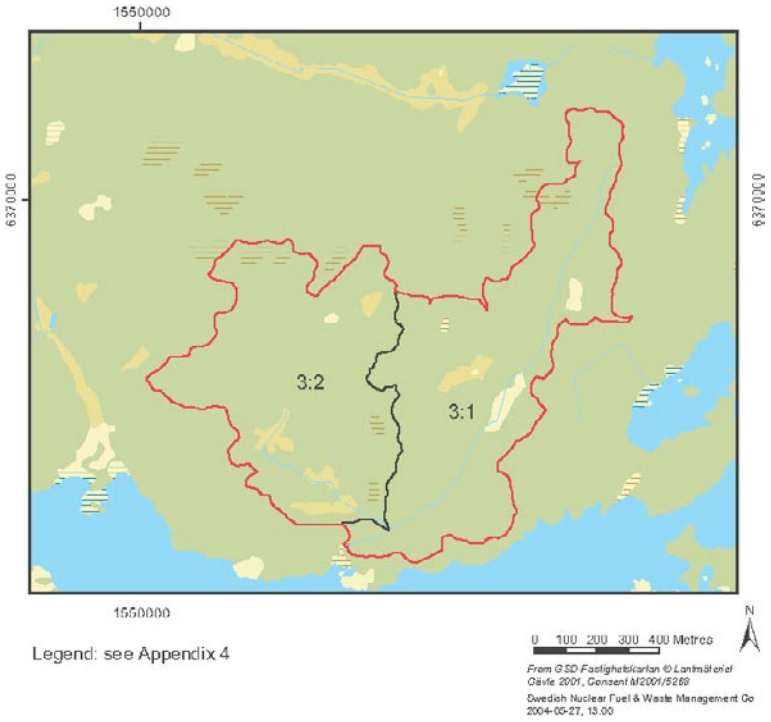

Figure 4-7. *The catchment Simpevarp 3 with the watercourse "Sörviksån" and its catchment (sub-areas 1–2) marked with red boundaries.*

4.4 The catchment Simpevarp 4

This catchment consists of one single sub-area (Figure 4-8), with no lakes present. The watercourse “Bjurhidebäcken” drains through some wetland in the south (downstream) part of the catchment before entering the Baltic Sea in Kärrsvik, Granholmsfjärden.

Simpevarp 4:1, “Bjurhidebäcken”

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-8. *The Simpevarp area with the single sub-area in the catchment Simpevarp 4 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.632 km^2. Forest dominates the land use (Table 4-4, Figure 4-9).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-4. The different land uses within the catchment of "Bjurhidebäcken".

Land use	Area %
Forest	95
Water surface	0
Agriculture	4
Remaining open land	1
Wetland (as parts of the above land use categories)	1

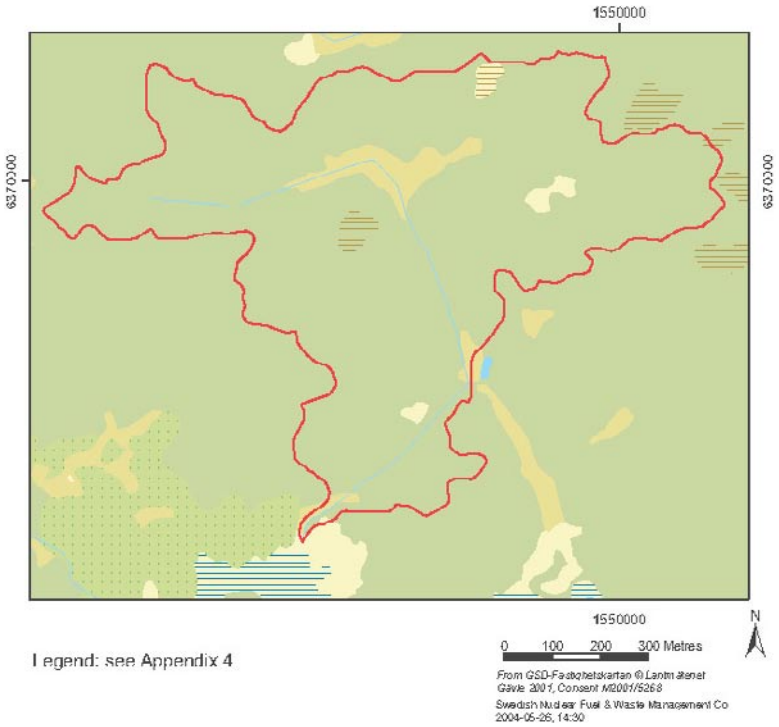

Figure 4-9. *The catchment Simpevarp 4 with the watercourse "Bjurhidebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.5 The catchment Simpevarp 5

This area consists of 20 sub-areas (Figure 4-10), but has no lakes. The area corresponds to the SMHI catchment no 72/73 Kärrviksån. The outlet passes through some wetland and then enters the Baltic Sea in Kärrsvik, Granholmsfjärden.

Ten different tributaries contribute to the main watercourse Kärrviksån. Five of these have, in their turn, two or more branches. The village Misterhult is situated within the catchment. In the downstream part, in close connection with the main watercourse, is the former lake Gäster (drained into a wetland) situated.

Simpevarp 5:1–20, Kärrviksån (the entire catchment)

The location of the object

This catchment corresponds to the SMHI catchment no 72/73:2 Kärrviksån.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: 636907, 154913 (SMHI).

Figure 4-10. *The Simpevarp area with the sub-areas in the catchment Simpevarp 5 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 27.154 km^2. Forest dominates the land use (Table 4-5, Figure 4-11).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 5:1–5:20

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries of Kärrviksån.

Table 4-5. The different land uses within the entire catchment of Kärrviksån. The data are added from 20 sub-areas.

Land use	Area %
Forest	90
Water surface	0
Agriculture	4
Remaining open land	6
Wetland (as parts of the above land use categories)	4

Figure 4-11. *The catchment Simpevarp 5 with the watercourse "Kärrviksån" and its catchment (sub-areas 1–20) marked with red boundaries.*

4.6 The catchment Simpevarp 6

This catchment consists of one single sub-area (Figure 4-12), and has no lakes. The watercourse in this area, "Mederhultsån", drains to the northeast and enters the Baltic Sea in Kärrsvik, Granholmsfjärden.

Simpevarp 6:1, "Mederhultsån"

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-12. *The Simpevarp area with the single sub-area in the catchment Simpevarp 6 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 2.003 km^2. Forest dominates the land use (Table 4-6, Figure 4-13), but a total of 17% is open areas used for agriculture or other purposes.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-6. The different land uses within the catchment of "Mederhultsån".

Land use	Area %
Forest	83
Water surface	0
Agriculture	12
Remaining open land	5
Wetland (as parts of the above land use categories)	0

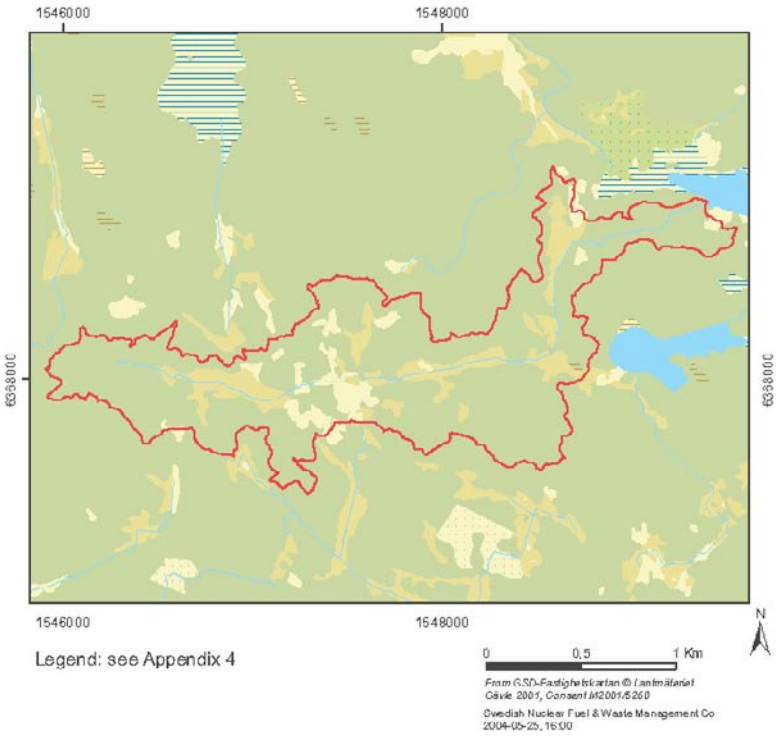

Figure 4-13. *The catchment Simpevarp 6 with the watercourse "Mederhultsån" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.7 The catchment Simpevarp 7

This area consists of two sub-areas (Figure 4-14), of which catchment 7:2 includes Lake Frisksjön. The watercourse, "Kåreviksån", drains trough Lake Frisksjön and catchment 7:1 before it enters The Baltic Sea in Kårevik, Granholmsfjärden northeast of the catchment.

Simpevarp 7:1–2, "Kåreviksån" (the entire catchment)

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-14. *The Simpevarp area with the sub-areas in the catchment Simpevarp 7 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 2.062 km^2. Forest dominates the land use (Table 4-7, Figure 4-15).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 7:1 (sub-area)

See Appendix 3, 4 and 5 for data on sub-catchment parameters of this area.

Table 4-7. The different land uses within the entire catchment "Kåreviksån". The data are added from two sub-areas.

Land use	Area %
Forest	86
Water surface	6
Agriculture	5
Remaining open land	3
Wetland (as parts of the above land use categories)	1

Figure 4-15. *The catchment Simpevarp 7 with the watercourse "Kåreviksån" and its catchment (sub-areas 1–2) marked with red boundaries.*

Simpevarp 7:2, Lake Frisksjön

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO.
Outlet coordinates: 636827, 154947 (SMHI).
Elevation: 1.37 m above sea level.

The catchment area and its major constituents

The total catchment area is 1.848 km^2, and forest is the dominating land use (Table 4-8).

Lake Frisksjön is situated within this catchment. The watercourse "Kåreviksån" passes through the lake, and further downstream enters the Baltic Sea in Granholmsfjärden, northeast of the catchment (Figure 4-16).

The close surrounding of the lake is dominated by mixed forest, mostly on steep sloping shores. A small part of the north side is bare rocks steeping into the lake.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Lake morphometry parameters

Figure 4-17 and Figure 4-18 show the bathymetric map and the depth grid map, respectively, for Lake Frisksjön.

The theoretical water renewal time of Lake Frisksjön is about 9 months (Table 4-9). The lake has three islets.

Table 4-8. The different land uses within the catchment of Lake Frisksjön.

Land use	Area %
Forest	85
Water surface	6
Agriculture	6
Remaining open land	2
Wetland (as parts of the above land use categories)	1

Table 4-9. Lake morphometry parameters for Lake Frisksjön.

Lake morphometry	
Lake area	0.13 km^2
Maximum depth	2.8 m
Mean depth	1.7 m
Volume	0.223 Mm^3
Theoretical water renewal time	264 days

Figure 4-16. *The catchment Simpevarp 7 with Lake Frisksjön and its catchment (sub-area 2) marked with red boundaries.*

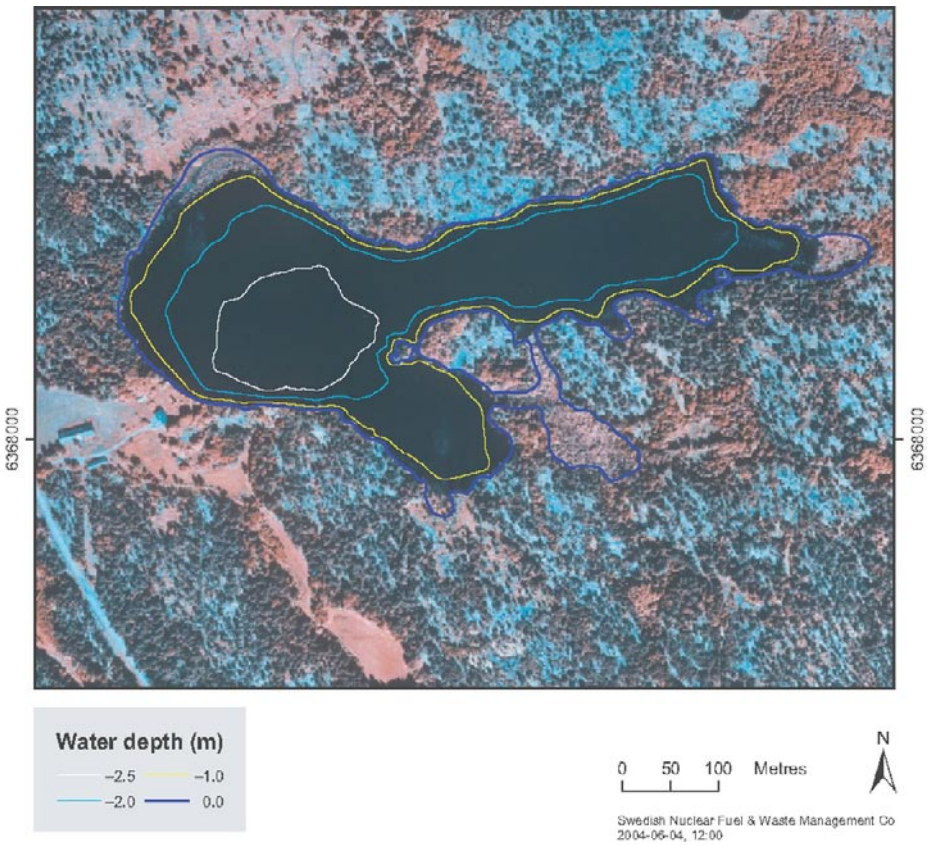

Figure 4-17. *Bathymetric map for Lake Frisksjön.*

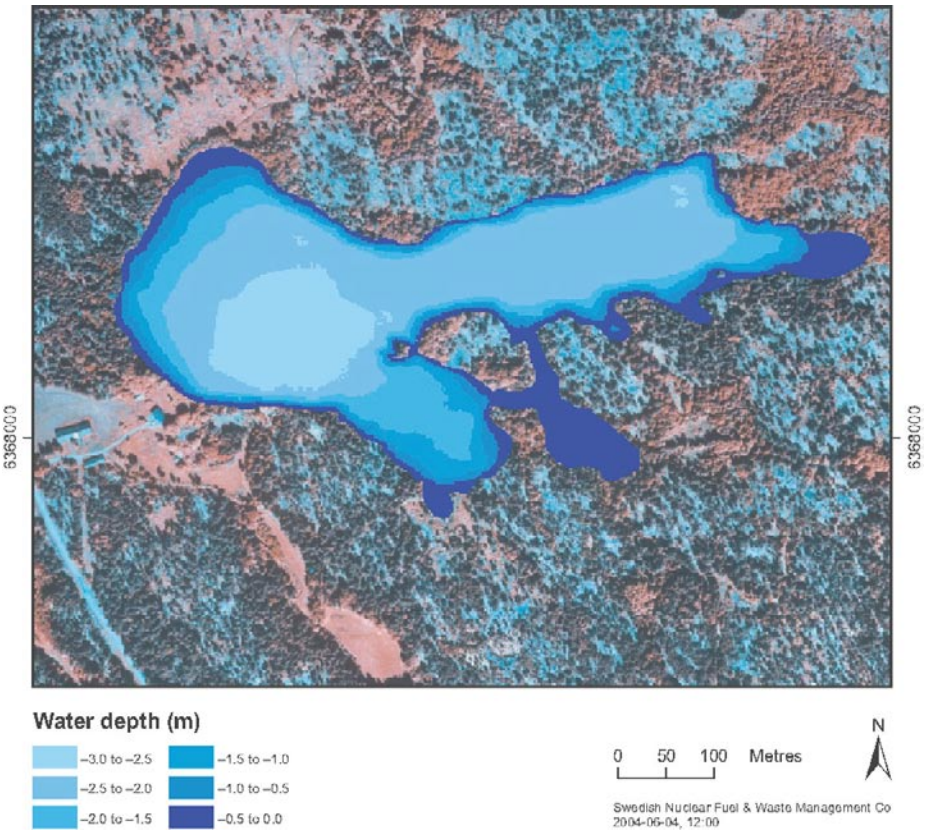

Figure 4-18. *Depth grid map for Lake Frisksjön.*

Lake ecosystem parameters

All five major habitats are present in Lake Frisksjön; the littoral habitat with emergent and floating-leaved vegetation (Littoral type I), the littoral habitat with hard-bottom substrate (Littoral type II), the littoral habitat with submerged vegetation (Littoral type III), the pelagic habitat and the profundal habitat (Table 4-10, Figure 4-19). Despite the relative shallowness of this lake, the brown colour of the water prevents light from penetrating all parts. Thus, the profundal habitat covers a substantial part of the bottom area (41%). The dominating littoral habitat is of type III.

Additional remarks

This lake has been drained to a lower water level. The largest islet in the south, central part of the lake is nowadays more or less connected with land by the shallow wetland/Littoral Type I.

Littoral plant species observed during field work: Common Reed (bladvass, *Phragmites australis*), White Water-lily (vit näckros, *Nymphaea alba*), Yellow Water-lily (gul näckros, *Nuphar lutea*), Bogbean (vattenklöver, *Menyanthes trifoliata*), Water Plan-tain (svalting, *Alisma plantago-aquatica*), Broad-leaved Pondweed (gäddnate, *Potamogeton natans*), Bulrush (bredkaveldun, *Typha latifolia*) and Yellow Iris (gul svärdslilja, *Iris pseudacorus*).

Table 4-10. Distribution of major habitats in Lake Frisksjön.

Habitats	Area [%]
Littoral type I	18
Littoral type II	< 2
Littoral type III	38
Pelagial	82
Profundal	41

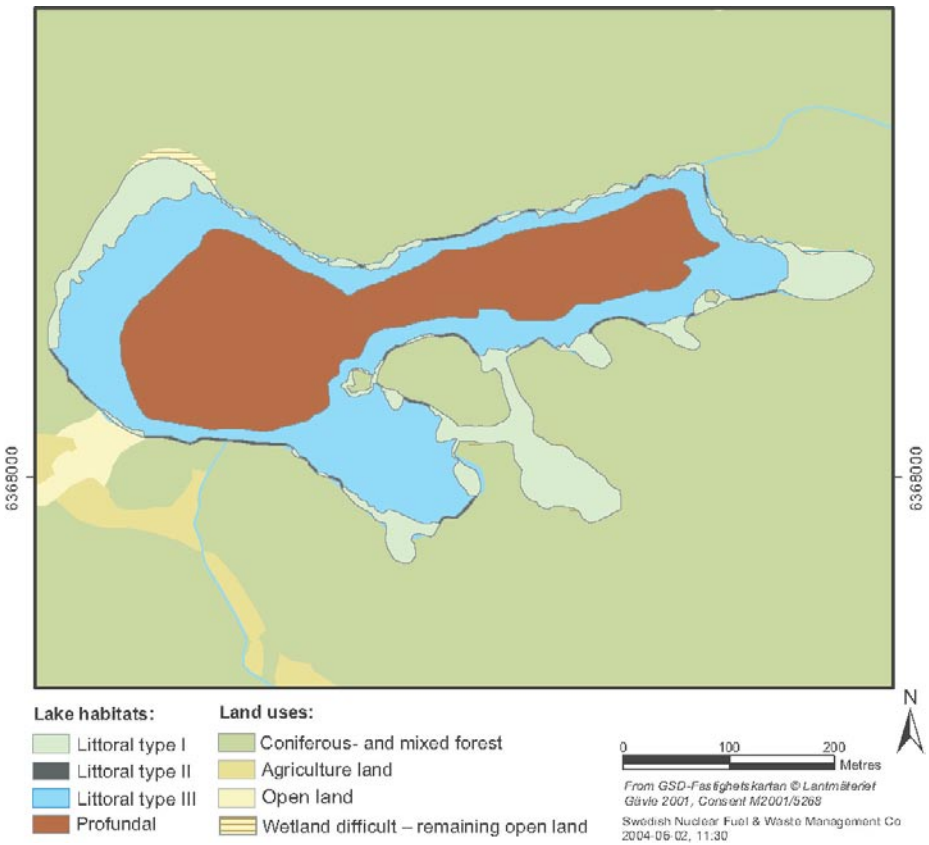

Figure 4-19. *Distribution of major habitats in Lake Frisksjön.*

4.8 The catchment Simpevarp 8

This catchment consists of one single sub-area (Figure 4-20). The only watercourse in this catchment, “Pistlanbäcken”, drains through a wetland area with a small open water surface, Pistlan, before entering the Baltic Sea in Borholmsfjärden.

Simpevarp 8:1, “Pistlanbäcken”

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

The catchment area and its major constituents

The total catchment area is 0.499 km^2. Forest strongly dominates the land use (Table 4-11, Figure 4-21). The wetland close to the coast has a small open water surface (Pistlan) but it is not classified as a lake in this investigation.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-11. The different land uses within the catchment of "Pistlanbäcken".

Land use	Area %
Forest	95
Water surface	1
Agriculture	0
Remaining open land	4
Wetland (as parts of the above land use categories)	2

Figure 4-20. *The Simpevarp area with the single sub-area in the catchment Simpevarp 8 marked with red boundaries.*

Figure 4-21. *The catchment Simpevarp 8 with the watercourse "Pistlanbäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.9 The catchment Simpevarp 9

This catchment is divided in three different sub-areas (Figure 4-22), but has no lake. The main watercourse, "Ekerumsån", has two tributaries in the upstream part of the catchment. It drains through the small village Ekerum before it enters the Baltic Sea in Ekerumeviken, Borholmsfjärden.

Simpevarp 9:1–3, "Ekerumsån" (the entire catchment)

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

The catchment area and its major constituents

The total catchment area is 2.834 km^2. Forest dominates the land use (Table 4-12, Figure 4-23), while agriculture areas cover 12% of the area.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries of "Ekerumsån".

Table 4-12. The different land uses within the entire catchment of "Ekerumsån". The data are added from three sub-areas.

Land use	Area %
Forest	84
Water surface	0
Agriculture	12
Remaining open land	4
Wetland (as parts of the above land use categories)	0

Figure 4-22. *The Simpevarp area with the three sub-areas in the catchment Simpevarp 9 marked with red boundaries.*

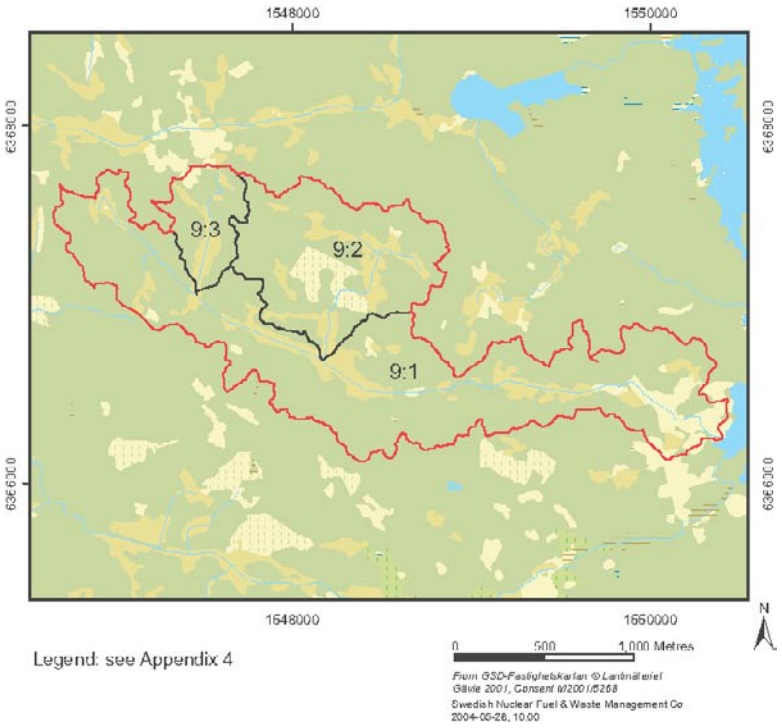

Figure 4-23. *The catchment Simpevarp 9 with the watercourse "Ekerumsån" and its catchment (sub-areas 1–3) marked with red boundaries. Simpevarp 9:1–9:3*

4.10 The catchment Simpevarp 10

This is the largest catchment in the Simpevarp area (corresponding to the SMHI catchment no 72/73 Laxemarån), and it is divided into 32 different sub-areas (Figure 4-24). The main watercourse, Laxemarån, has 19 different tributaries, of which six are further divided into smaller branches.

There are several lakes and former lakes within the river system. Three lakes are included in this investigation: Lake Fjällgöl (no 10:16), Lake Plittorpsgöl (no 10:26) and Lake Jämsen (no 10:30). Lake Grangöl (no 10:19) has a defined catchment, but the lake was not included in the field investigation programme. Four lakes situated within the most upstream parts of the catchment, Grytsjön, Lilla Grytsjön, Stamsjön and a small lake without name, were also excluded from the field investigations, some due to that they were judged as dry from IR photos, but also due to the unclear hydrological conditions. From the topographic map they seem to drain mainly to the south. However, they are reported here as part of the Simpevarp 10 catchment, which is also indicated on old editions of economic maps.

Simpevarp 10:1–32, Laxemarån (the entire catchment)

The location of the object

This catchment corresponds to the SMHI catchment no 72/73 Laxemarån.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: 636614, 155041 (SMHI).

Figure 4-24. *The Simpevarp area with the 32 sub-areas in the catchment Simpevarp 10 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 40.976 km^2. Forest dominates the land use (Table 4-13, Figure 4-25).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 10:1–10:15

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries 10:1–10:15 to Laxemarån.

Table 4-13. The different land uses within the entire catchment of Laxemarån. The data are added from 32 sub-areas.

Land use	Area %
Forest	88
Water surface	1
Agriculture	5
Remaining open land	6
Wetland (as parts of the above land use categories)	2

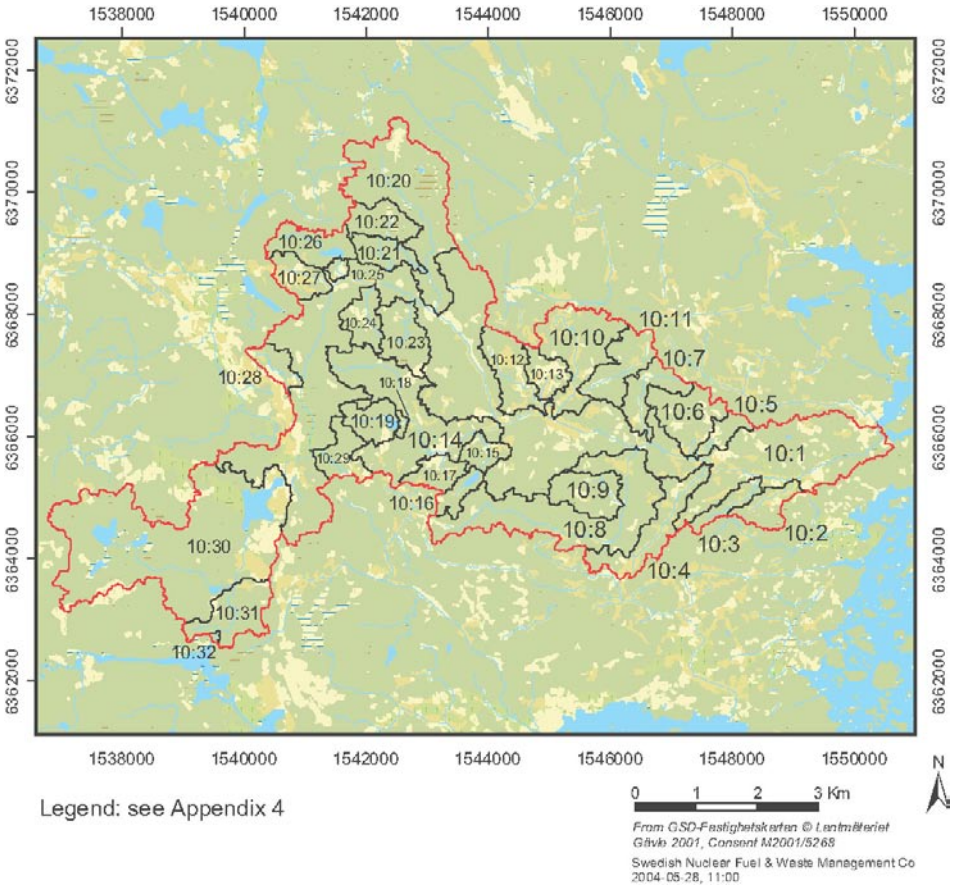

Figure 4-25. *The catchment Simpevarp 10 with the watercourse Laxemarån and its catchment (sub-areas 1–32) marked with red boundaries.*

Simpevarp 10:16, Lake Fjällgöl

The location of the object

This catchment is part of the SMHI catchment no 72/73 Laxemarån.

Topographic map: 6 G SO.
Outlet coordinates: 636543, 154382 (SMHI).
Elevation: (no data).

The catchment area and its major constituents

The total catchment area is 0.295 km^2. Forest is the dominating land use (Table 4-14).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

The only surface water within this catchment is Lake Fjällgöl. The lake has one small inlet creek in the south. The outlet north of the lake drains to Laxemarån and further downstream enters the Baltic Sea in Borholmsfjärden (Figure 4-26).

The nearest surroundings of the lake are dominated by mixed forest, mostly birch and pine. In a smaller part in the south, the shore steeply slopes down to the lake with stones of medium boulder frequency.

Table 4-14. The different land uses within the catchment of Lake Fjällgöl.

Land use	Area %
Forest	88
Water surface	7
Agriculture	2
Remaining open land	2
Wetland (as parts of the above land use categories)	0

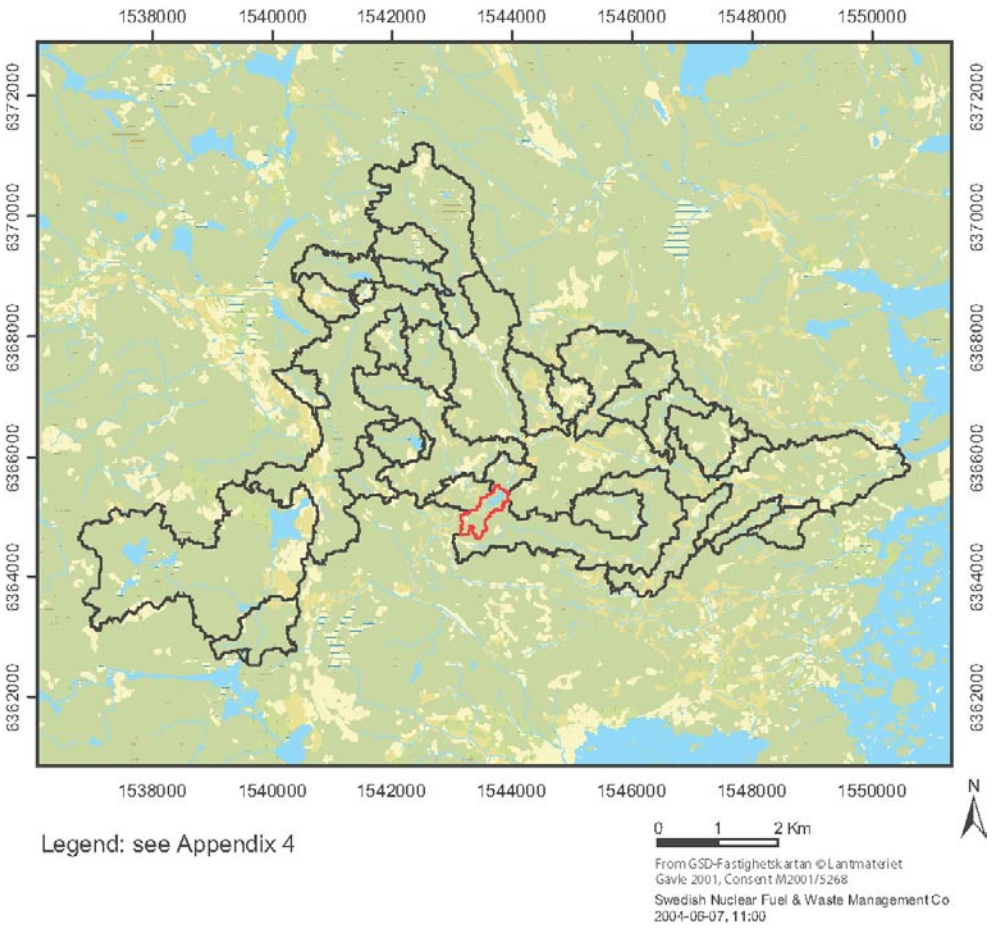

Figure 4-26. *The catchment Simpevarp 10 with Lake Fjällgöl and its catchment (sub-area 16) marked with red boundaries.*

Lake morphometry parameters

Figure 4-27 and Figure 4-28 shows the bathymetric map and the depth grid map, respectively, for Lake Fjällgöl.

Lake Fjällgöl is a tiny lake with the smallest area and volume compared to the other lakes in the Simpevarp area (Table 4-15). The theoretical water renewal time is about 7 months. The lake has no islets.

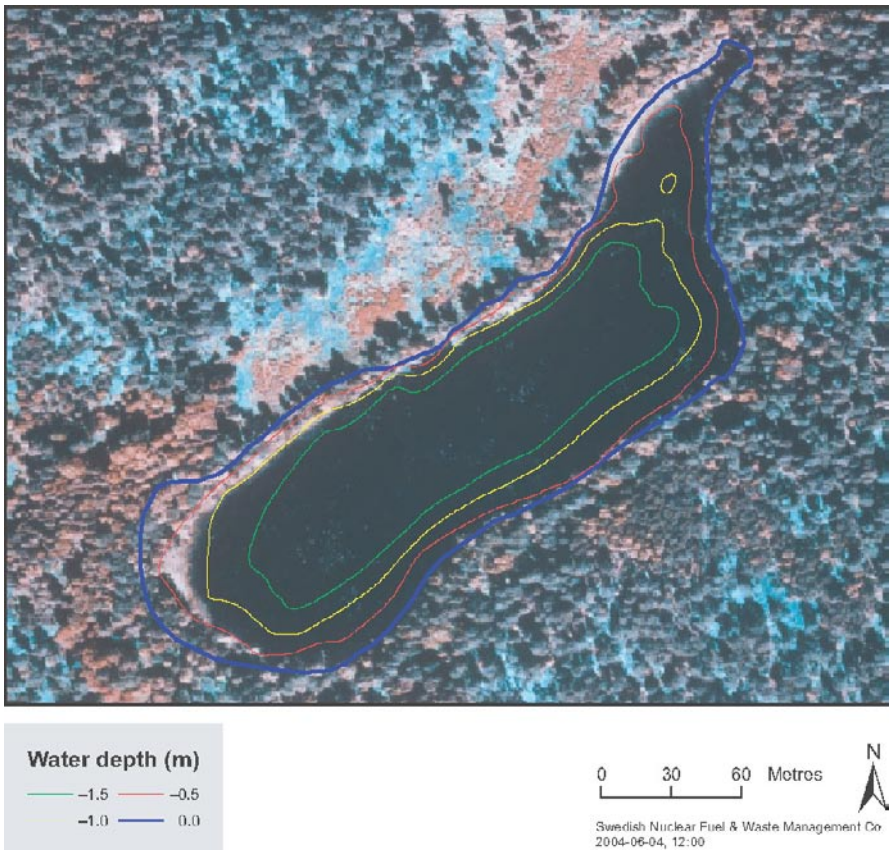

Figure 4-27. *Bathymetric map for Lake Fjällgöl.*

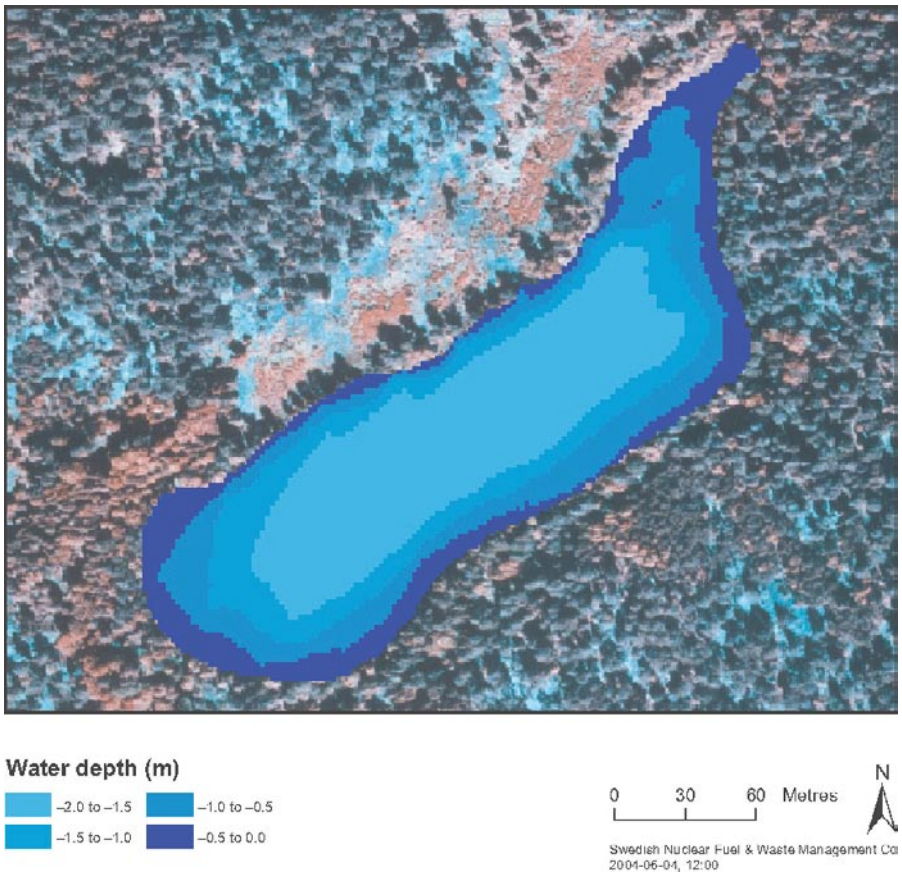

Figure 4-28. *Depth grid map for Lake Fjällgöl.*

Lake ecosystem parameters

Four major habitats are present in Lake Fjällgöl; the littoral habitat with emergent and floating-leaved vegetation (Littoral type I), the littoral habitat with submerged vegetation (Littoral type III), and the pelagic and profundal habitats (Table 4-16, Figure 4-29). Despite the shallow depth of this lake, light does not reach the deepest part due to the strong water colour. Hence, a profundal habitat covers 12% of the lake bottom.

Table 4-15. Lake morphometry parameters for Lake Fjällgöl.

Lake morphometry	
Lake area	0.03 km^2
Maximum depth	2.0 m
Mean depth	1.1 m
Volume	0.029 Mm^3
Theoretical water renewal time	218 days

Table 4-16. Distribution of major habitats in Lake Fjällgöl.

Habitats	Area %
Littoral type I	82
Littoral type II	–
Littoral type III	6
Pelagial	18
Profundal	12

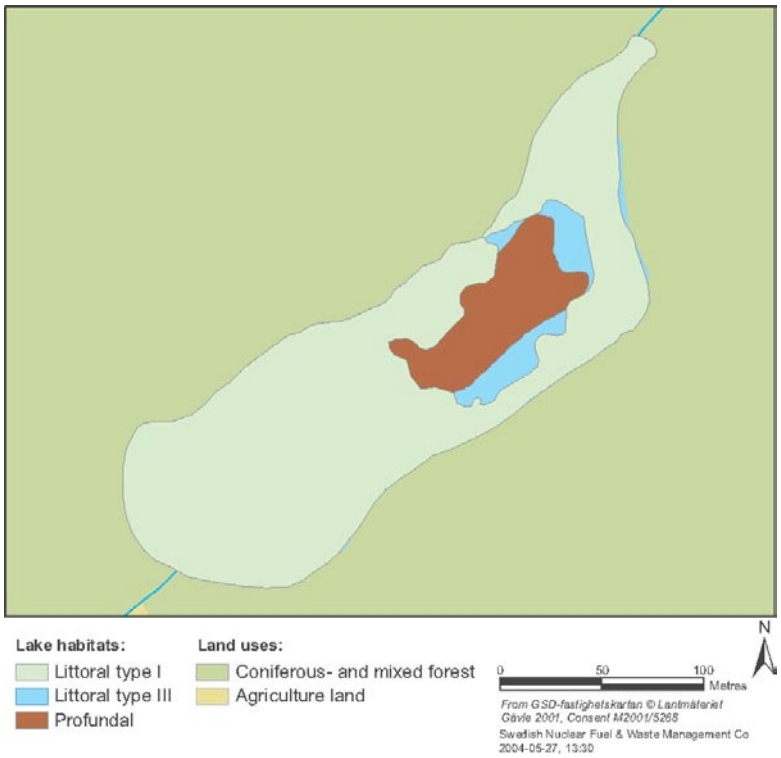

Figure 4-29. *Distribution of major habitats in Lake Fjällgöl.*

Additional remarks

The Littoral of type I is dominated by Broad-leaved Pondweed (gäddnate, *Potamogeton natans*), Water-lilies (näckrosor, *Nymphaeaceae*) and Common Club-rush (säv, *Schoenoplectus lacustris*). The littoral has a smaller part of Sphagnum wetland in the southeast end of the lake. A zone of *S lacustris* encircles the lake while the floating-leaved species are distributed in the central part of the lake. Other species that were observed during fieldwork: Bogbean (vattenklöver, *Menynathes trifoliata*), Marsh Cinquefoil (kråkklöver, *Potentilla palustris*), Bulrush (bredkaveldun, *Typha latifolia*), Water Horsetail (sjöfräken, *Equisetum fluviatile*).

Simpevarp 10:17–10:25

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries 10:17–10:25 to Laxemarån.

Simpevarp 10:26, Lake Plittorpsgöl

The location of the object

This catchment is part of the SMHI catchment no 72/73 Laxemarån.

Topographic map: 6 G SO.
Outlet coordinates: (no data).
Elevation: 24.79 m above sea level.

The catchment area and its major constituents

The total catchment area is 0.678 km^2. Forest is the dominating land use (Table 4-17).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

The only surface water within this catchment is Lake Plittorpsgöl. This lake has one inlet creek. The outlet passes under the highway E22 before it reaches the main watercourse (10:1–32) and further downsteram enters the Baltic Sea in Borholmsfjärden (Figure 4-30).

The nearest surroundings of the lake are dominated by mixed forest, situated on steeping shores in the north and south parts of the lake. Some parts of the north side consists of bare rocks. Along the east side of the lake runs the highway E22.

Table 4-17. The different land uses within the catchment of Lake Plittorpsgöl.

Land use	Area %
Forest	94
Water surface	5
Agriculture	1
Remaining open land	0
Wetland (as parts of the above land use categories)	0

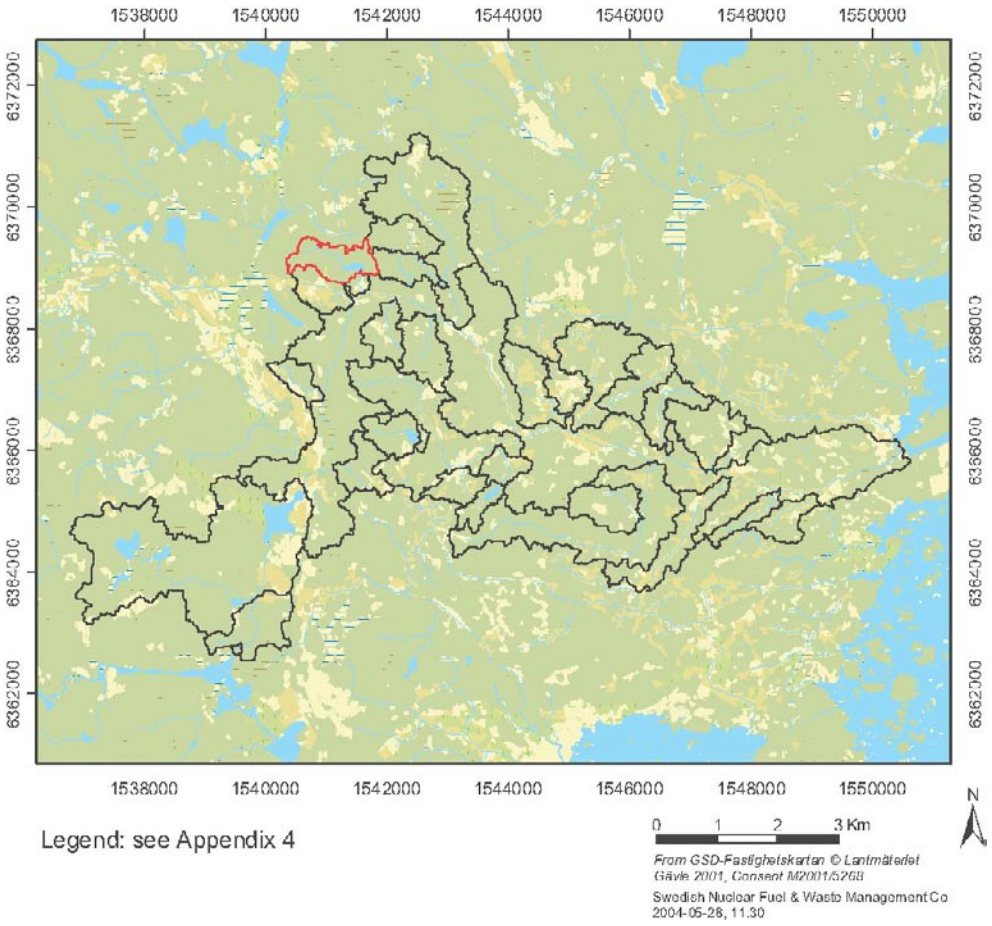

Figure 4-30. *The catchment Simpevarp 10 with Lake Plittorpsgöl and its catchment (sub-area 26) marked with red boundaries.*

Lake morphometry parameters

Figure 4-31 and Figure 4-32 shows the bathymetric map and the depth grid map, respectively, for Lake Plittorpsgöl.

Despite the small area, Lake Plittorpsgöl is relatively deep (maximum depth 7.2 m) compared to the other lakes in the Simpevarp area (Table 4-18). The theoretical water renewal time is about 13 months. The lake has one small islet.

Table 4-18. Lake morphometry parameters for Lake Plittorpsgöl.

Lake morphometry	
Lake area	0.03 km^2
Maximum depth	7.2 m
Mean depth	3.7 m
Volume	0.124 Mm^3
Theoretical water renewal time	399 days

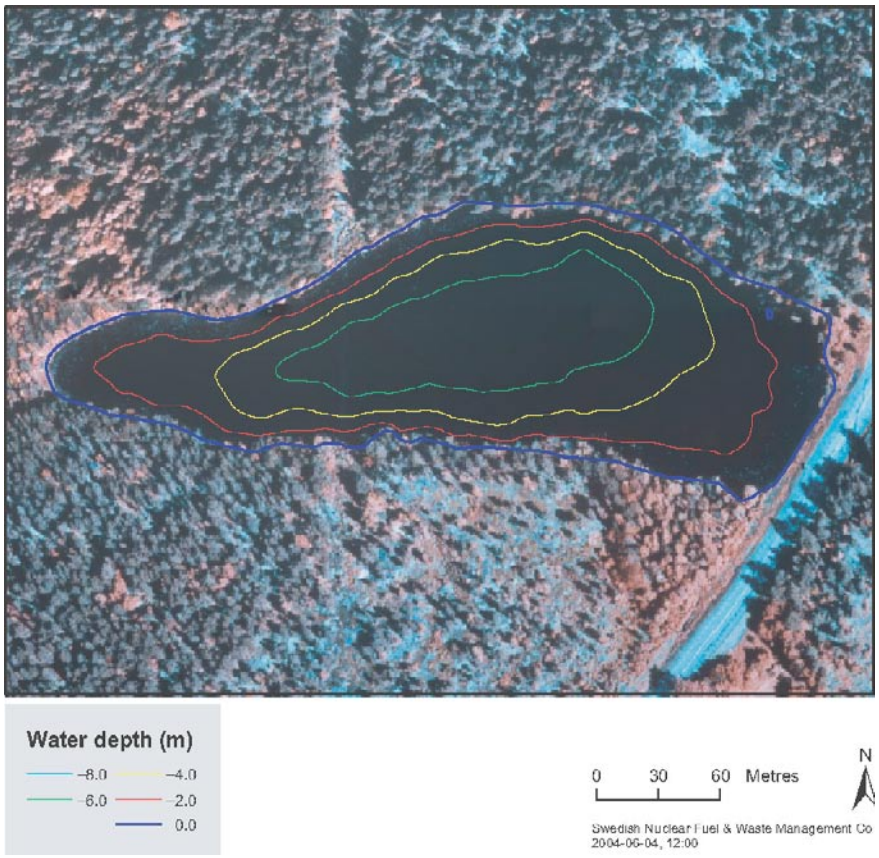

Figure 4-31. *Bathymetric map for Lake Plittorpsgöl.*

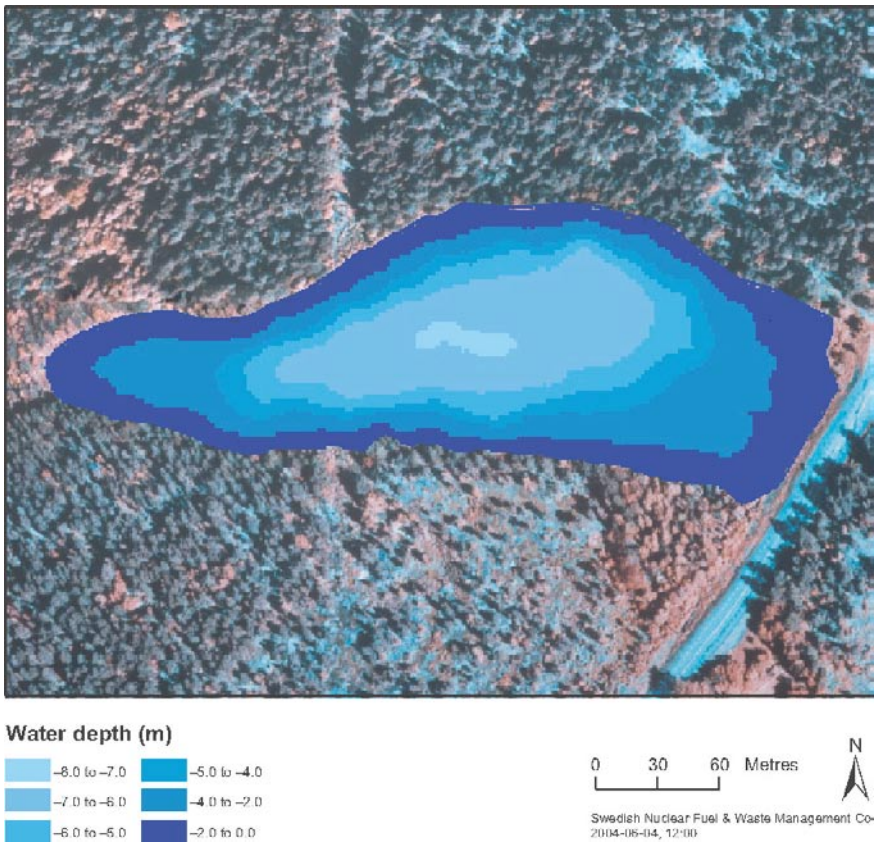

Figure 4-32. *Depth grid map for Lake Plittorpsgöl.*

Lake ecosystem parameters

All five major habitats are present in Lake Plittorpsgöl; the littoral habitat with emergent and floating-leaved vegetation (Littoral type I), the littoral habitat with hard-bottom substrate (Littoral type II), the littoral habitat with submerged vegetation (Littoral type III), the pelagic habitat and the profundal habitat (Table 4-19, Figure 4-33). Due to the depth and the strong brown colour of the lake water, the profundal habitat is present at a major part of the bottom area. The littoral habitat with hard bottom (Littoral type II) is found through shorter parts around the shores.

Table 4-19. Distribution of major habitats in Lake Plittorpsgöl.

Habitats	Area %
Littoral type I	20
Littoral type II	<1
Littoral type III	13
Pelagial	80
Profundal	67

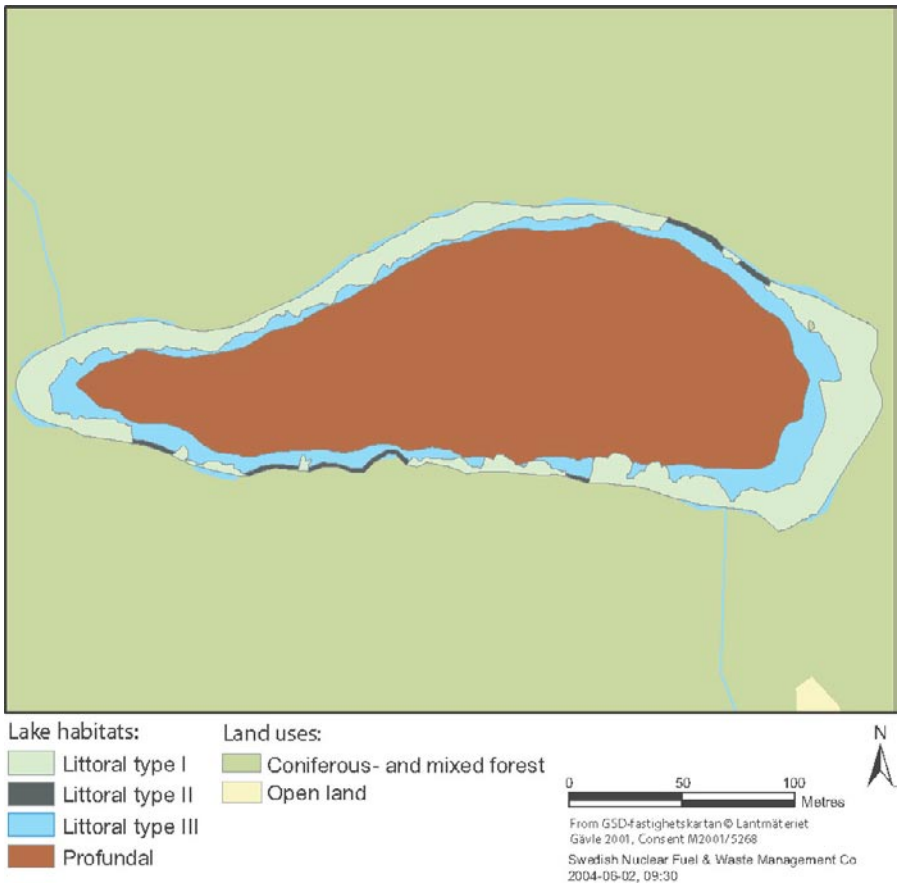

Figure 4-33. *Distribution of major habitats in Lake Plittorpsgöl.*

Additional remarks

Highway E22 is situated in close vicinity of the eastern part of the lake.

The vegetation in the littoral of type I is dominated by Sedge (starr, *Carex spp*), Bogbean (vattenklöver, *Menyathes trifoliata*), Water-lilies (näckrosor; *Nuphar lutea* and *Nymphaea sp*) and Common club-rush (säv, *Schoenoplectus lacustris*). Other species that were observed during fieldwork: Marsh Cinquefoil (kråkklöver, *Potentilla palustris*), Bulrush (bredkaveldun, *Typha latifolia*), Water Horsetail (sjöfräken, *Equisetum fluviatile*) and Water plan-tain (svalting, *Alisma plantago-aquatica*).

Simpevarp 10:27–10:29

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries 10:27–10:29 to Laxemarån.

Simpevarp 10:30–32, Lake Jämsen

The location of the object

This catchment is part of the SMHI catchment no 72/73 Laxemarån.

Topographic map: 6 G SO.
Outlet coordinates: 636528, 154063 (SMHI).
Elevation: 25.11 m above sea level.

The catchment area and its major constituents

The total catchment area is 6.959 km^2. Forest is the dominating land use (Table 4-20).

Table 4-20. The different land uses within the entire catchment of Lake Jämsen. The data are added from three sub-areas (see Appendix 4 for data of each sub-area).

Land use	Area %
Forest	84
Water surface	5
Agriculture	4
Remaining open land	6
Wetland (as parts of the above land use categories)	3

The surface waters within this catchment are Lake Jämsen, Lake Grytsjön, Lake Lilla Grytsjön, Lake Stamsjön and a smaller water surface without name. Lake Jämsen is situated in sub-area 10:30 and has one tributary draining the upstream sub-areas of 10:31–32. Lake Jämsen is situated within the main watercourse of Laxemarån (10:1–32) the outlet of which further downstream enters the Baltic Sea in Borholmsfjärden (Figure 4-34).

The lake is surrounded by deciduous forest, and the highway E22 runs next to the northeast shore, and an esker is located close to the southeast part of the lake.

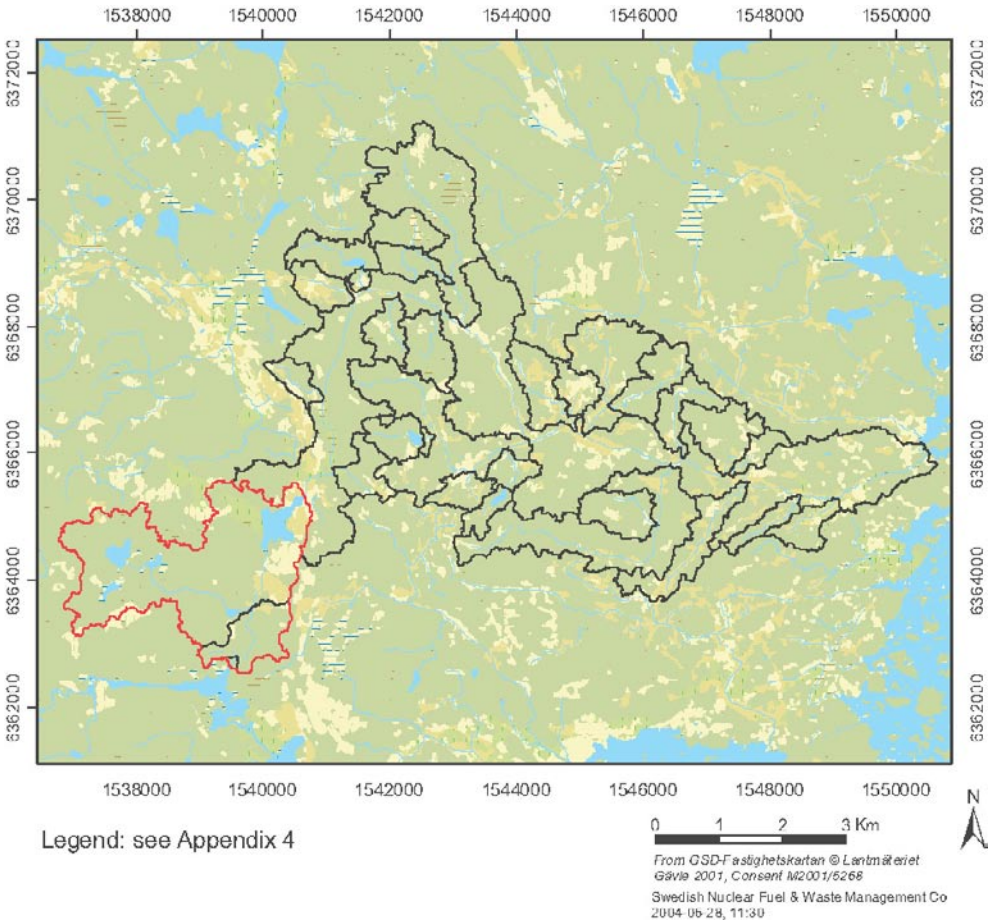

Figure 4-34. *The catchment Simpevarp 10 with Lake Jämsen and its catchment marked with red boundaries.*

Lake morphometry parameters

Figure 4-35 and Figure 4-36 shows the bathymetric map and the depth grid map, respectively, for Lake Jämsen.

Lake Jämsen is the largest lake in the Simpevarp area, regarding depth (maximum depth 10.9 m) as well as the area (0.24 km^2, Table 4-21). As a consequence, also the lake volume is the largest among the lakes of the Simpevarp area. There is one small islet in the south part of the lake.

Table 4-21. Lake morphometry parameters for Lake Jämsen.

Lake morphometry	
Lake area	0.24 km^2
Maximum depth	10.9 m
Mean depth	3.7 m
Volume	0.877 Mm^3
Theoretical water renewal time	275 days

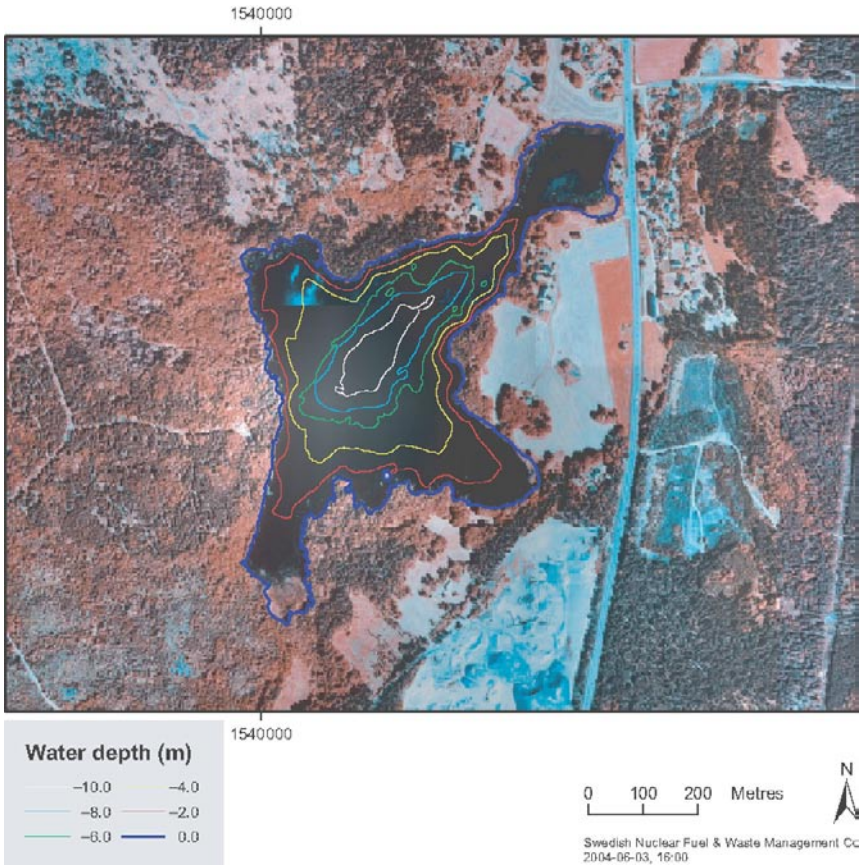

Figure 4-35. *Bathymetric map for Lake Jämsen.*

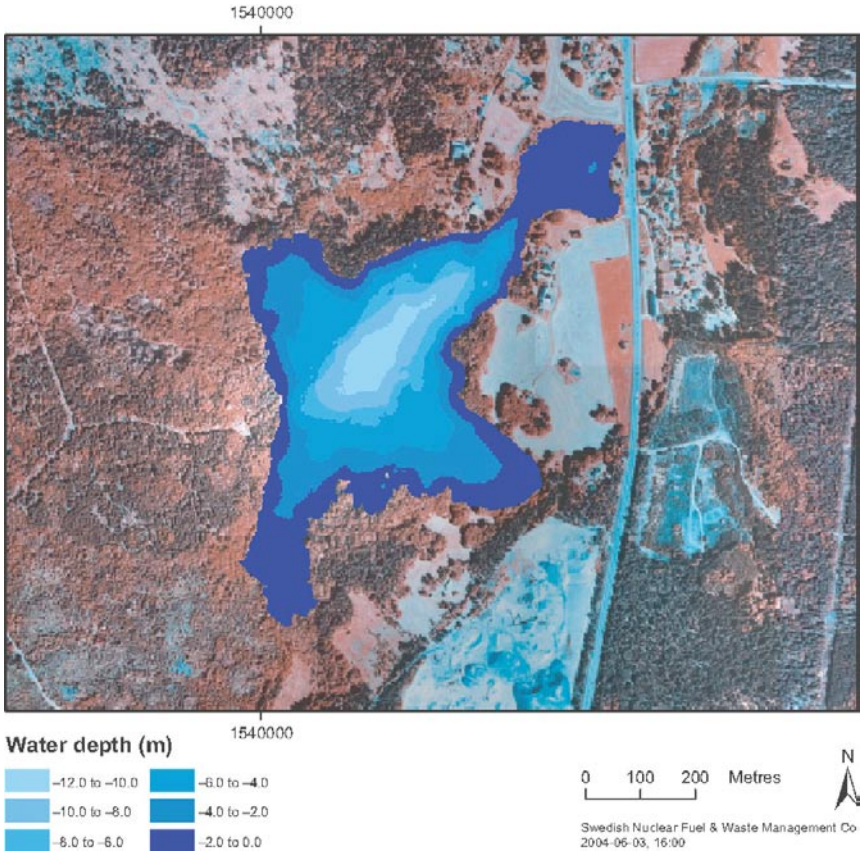

Figure 4-36. *Depth grid map for Lake Jämsen.*

Lake ecosystem parameters

All five major habitats are present in Lake Jämsen; the littoral habitat with emergent and floating-leaved vegetation (Littoral type I), the littoral habitat with hard-bottom substrate (Littoral type II), the littoral habitat with submerged vegetation (Littoral type III), the pelagic habitat and the profundal habitat (Table 4-22, Figure 4-37). Due to the brown water colour and relatively large depth of this lake, light does not reach large bottom areas and the littoral is restricted to the near-shore areas. The profundal habitat thus dominates the bottom areas.

Table 4-22. Distribution of major habitats in Lake Jämsen.

Habitats	Area %
Littoral type I	21
Littoral type II	<1
Littoral type III	5
Pelagial	79
Profundal	75

Additional remarks

The highway E22 passes by the lake, close to the northeast bay. The esker, which is situated close to the east side of the lake, might have profound impact of the local hydrology; investigations regarding this are needed. A substantial groundwater supply would affect the calculated theoretical water renewal time.

The littoral of Type I, situated in the northeast bay, was dominated by Common Reed (bladvass, *Phragmites australis*), Lesser Bulrush (smalkaveldun, *Typha angustifolia*) and Water-lilies (näckrosor, *Nuphar lutea* and *Nymphaea sp*). In the southeast bay, the vegetation belt was mechanically removed in an area close to a private house with a bridge. Other species observed during fieldwork: Broad-leaved Pondweed (gäddnate, *Potamogeton natans*) and Bogbean (vattenklöver, *Menyanthes trifoliata*).

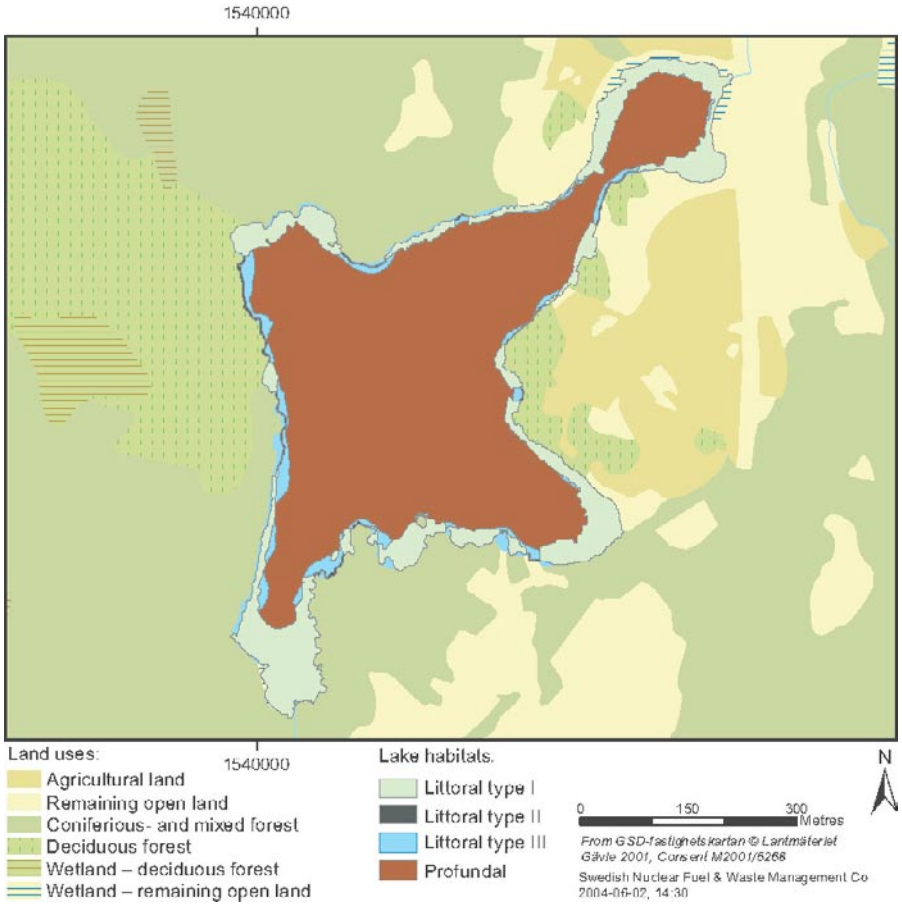

Figure 4-37. *Distribution of major habitats in Lake Jämsen.*

4.11 The catchment Simpevarp 11

This area consists of one single sub-area that includes Lake Söråmagasinet (Figure 4-38). The lake is located very close to the Simpevarp nuclear power plant. It has a diffuse inlet and the outlet enters the Baltic Sea in Båtstadsfjärden northeast of the catchment.

Simpevarp 11:1, Lake Söråmagasinet

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO.
Outlet coordinates: (no data).
Elevation: 2.07 m above sea level.

The catchment area and its major constituents

The total catchment area is 0.523 km^2. Forest is the dominating land use (Table 4-23). The lake itself constitutes a large part of this catchment (18%)

Figure 4-38. *The Simpevarp area with the single sub-area in the catchment Simpevarp 11 marked with red boundaries.*

Table 4-23. The different land uses within the catchment of Lake Söråmagasinet.

Land use	Area %
Forest	65
Water surface	18
Agriculture	0
Remaining open land	18
Wetland (as parts of the above land use categories)	1

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

The only surface water within this catchment is Lake Söråmagasinet. The lake has no visible inlet creeks. The nearshore area is dominated by mixed forest, and the outlet drains under a small road northeast of the lake before it enters the Baltic Sea in Båtstadsfjärden (Figure 4-39).

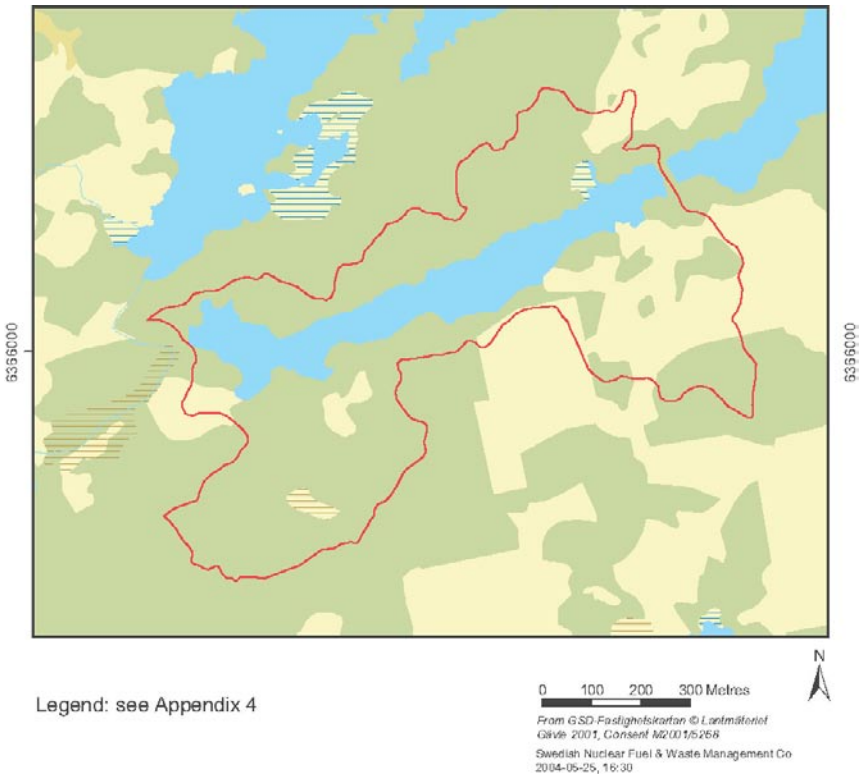

Figure 4-39. *The catchment Simpevarp 11 with Lake Söråmagasinet and its catchment marked with red boundaries.*

Lake morphometry parameters

Figure 4-40 and Figure 4-41 shows the bathymetric map and the depth grid map, respectively, for Lake Söråmagasinet.

Lake Söråmagasinet has the longest theoretical water renewal time (2.3 years) of the lakes in the Simpevarp area (Table 4-24). The lake has no islets.

Table 4-24. Lake morphometry parameters for Lake Söråmagasinet.

Lake morphometry	
Lake area	0.10 km^2
Maximum depth	4.9 m
Mean depth	2.0 m
Volume	0.199 Mm^3
Theoretical water renewal time	829 days

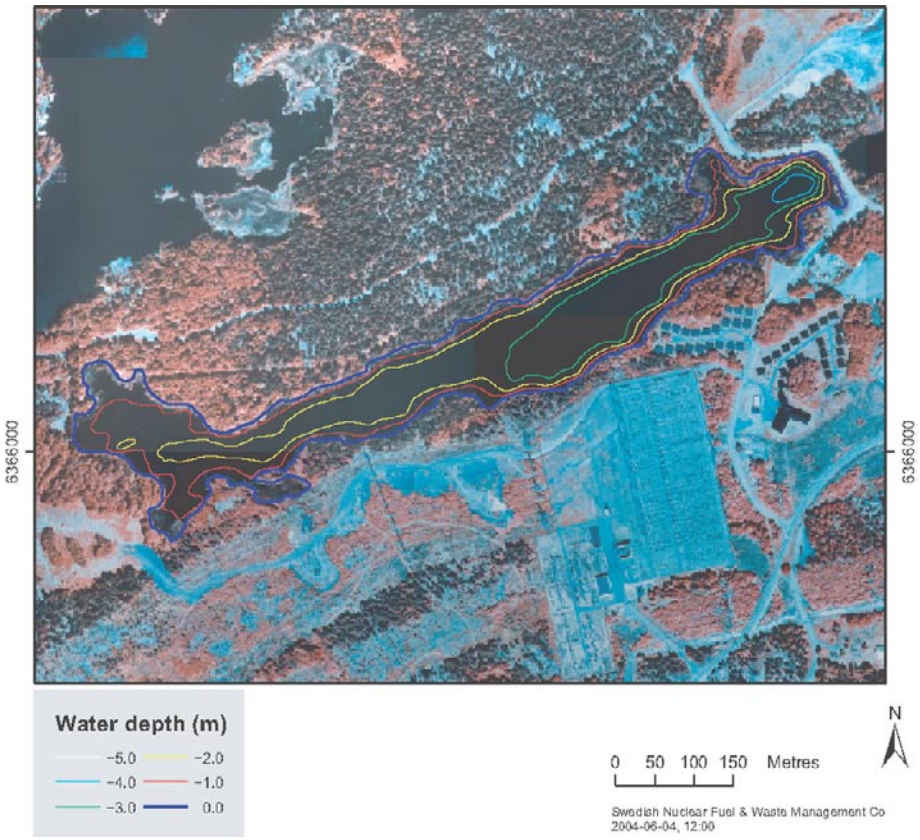

Figure 4-40. *Bathymetric map for Lake Söråmagasinet.*

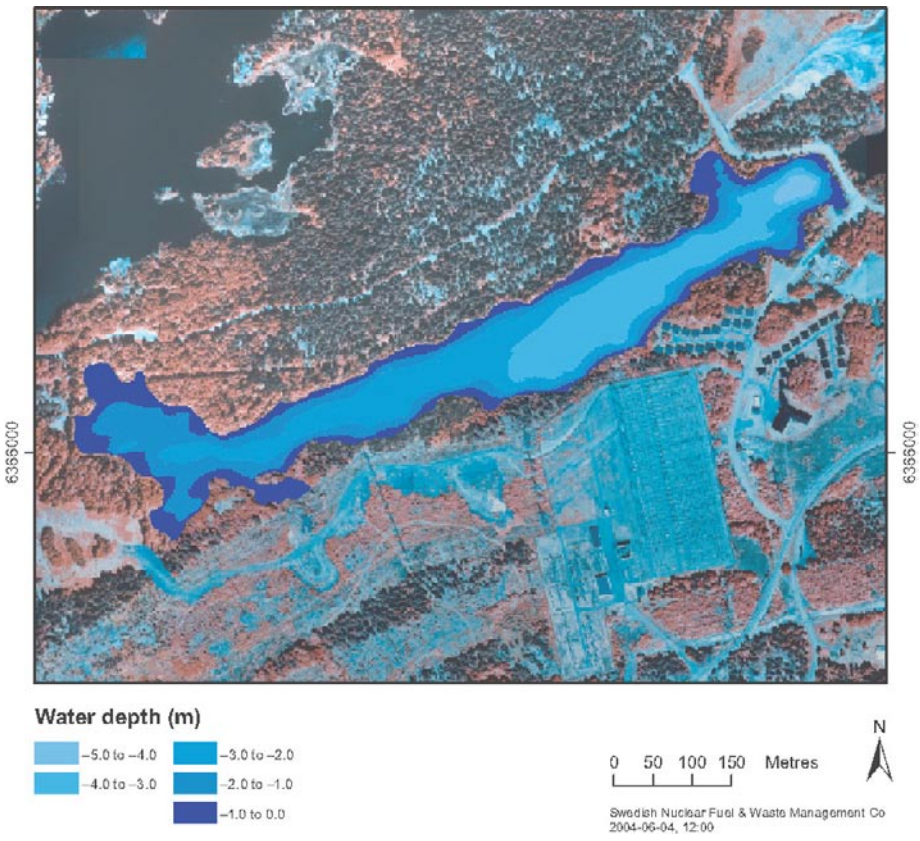

Figure 4-41. *Depth grid map for Lake Söråmagasinet.*

Lake ecosystem parameters

All five major habitats are present in Lake Söråmagasinet; the littoral habitat with emergent and floating-leaved vegetation (Littoral type I), the littoral habitat with hard-bottom substrate (Littoral type II), the littoral habitat with submerged vegetation (Littoral type III), the pelagic habitat and the profundal habitat (Table 4-25, Figure 4-42). This lake has a relatively small part of Littoral Type I compared to the other lakes in the Simpevarp area.

Additional remarks

Lake Söråmagasinet is a man-made reservoir, currently used as reserve water supply for OKG AB (Oskarshamns kraftgrupp). Pumping of water from River Laxemarån to Lake Söråmagasinet has been performed at three occasions (a few days each) during the last five years.

The sparse Littoral of Type I is dominated by Common Reed (bladvass, *Phragmites australis*) on the north side and of Water Horse-tail (sjöfräken, *Equisetum fluviatile*) along the south shoreline. Other species observed during field work: White Water-lily (vit näckros, Nymphaea alba), Bogbean (vattenklöver, *Menyanthes trifoliata*), Water Plan-tain (svalting, *Alisma plantago-aquatica*), Broad-leaved Pondweed (gäddnate, Potamogeton natans), Common Club-rush (säv, *Schoenoplectus lacustris*) and Yellow Iris (gul svärdslilja, *Iris pseudacorus*).

Table 4-25. Distribution of major habitats in Lake Söråmagasinet.

Habitats	Area %
Littoral type I	20
Littoral type II	<1
Littoral type III	40
Pelagial	80
Profundal	38

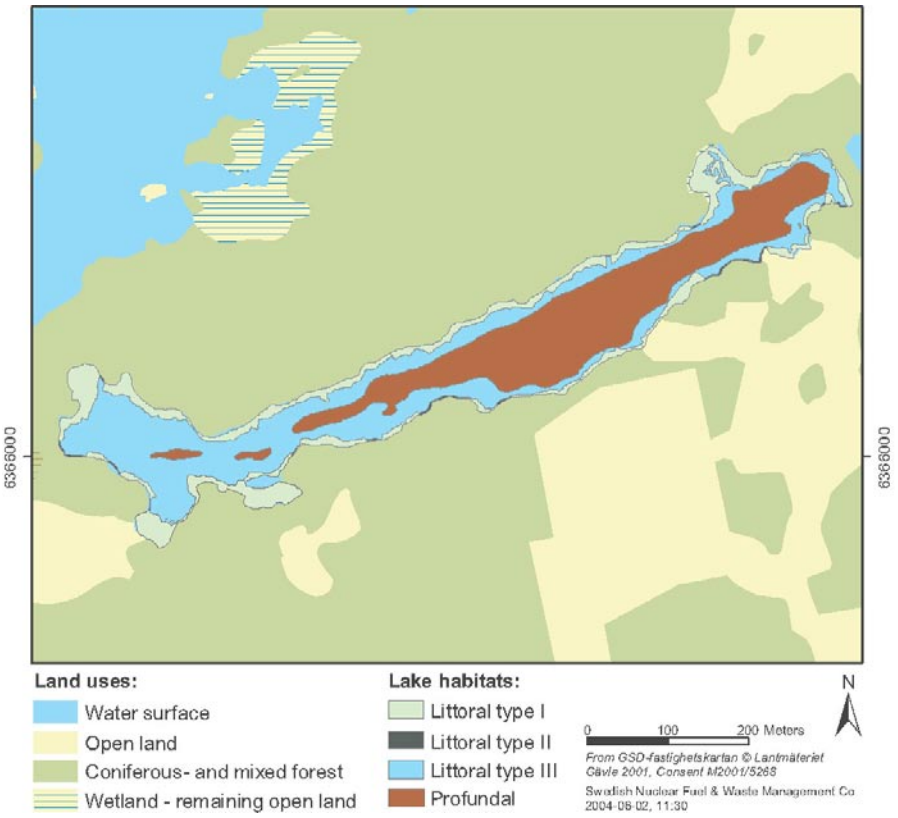

Figure 4-42. *Distribution of major habitats in Lake Söråmagasinet.*

4.12 The catchment Simpevarp 12

This area consists of three sub-areas, but no lakes are present (Figure 4-43). The main watercourse "Glostadsbäcken" drains through some wetland before it enters the Baltic Sea in Flagen, south of the Simpevarp nuclear power plant.

Simpevarp 12:1–3, "Glostadsbäcken" (the entire catchment)

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

The catchment area and its major constituents

The total catchment area is 2.054 km^2. Forest dominates the land use (Table 4-26, Figure 4-44).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 12:1–12:3

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries of "Glostadsbäcken".

Figure 4-43. *The Simpevarp area with the three sub-areas in the catchment Simpevarp 12 marked with red boundaries.*

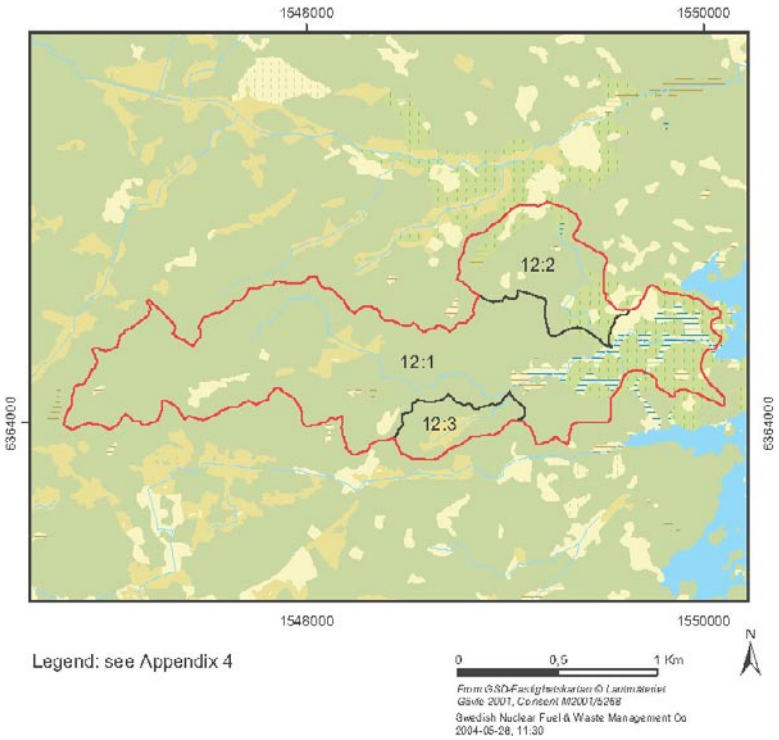

Figure 4-44. *The catchment Simpevarp 12 with the watercourse "Glostadsbäcken" and its catchment (sub-areas 1–3) marked with red boundaries.*

Table 4-26. The different land uses within the entire catchment of "Glostadsbäcken". The data are added from three sub-areas.

Land use	Area %
Forest	88
Water surface	0
Agriculture	3
Remaining open land	8
Wetland (as parts of the above land use categories)	6

4.13 The catchment Simpevarp 13

This area consists of one single sub-area, with no lakes (Figure 4-45). The watercourse "Stålglobäcken" passes through a small wetland before it enters the Baltic Sea in the bay Stålglo.

Simpevarp 13:1, "Stålglobäcken"

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

The catchment area and its major constituents

The total catchment area is 1.033 km^2. Forest dominates the land use (Table 4-27, Figure 4-46). Agriculture areas cover 14% of the area, which is a relatively large part, compared to the other catchments of the Simpevarp area.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-27. The different land uses within the catchment of "Stålglobäcken".

Land use	Area %
Forest	81
Water surface	0
Agriculture	14
Remaining open land	6
Wetland (as parts of the above land use categories)	1

Figure 4-45. *The Simpevarp area with the single sub-area in the catchment Simpevarp 13 marked with red boundaries.*

Figure 4-46. *The catchment Simpevarp 13 with the watercourse "Stålglobäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.14 The catchment Simpevarp 14

This area consists of two sub-areas, both without lakes (Figure 4-47). The main watercourse "Stekebäcken" drains through some wetland before it enters the Baltic Sea in Badhusfjärden southeast of the catchment.

Simpevarp 14:1–2, "Stekebäcken" (the entire catchment)

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-47. *The Simpevarp area with the two sub-areas in the catchment Simpevarp 14 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 1.338 km^2, and forest is the dominating land use (Table 4-28, Figure 4-48). Agriculture areas and remaining open land covers 6 and 12%, respectively, which is a relatively large part, compared to the other catchments of the area.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 14:1–14:2

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries to "Stekebäcken".

Table 4-28. The different land uses within the entire catchment of "Stekebäcken". The data are added from two sub-areas.

Land use	Area %
Forest	82
Water surface	0
Agriculture	6
Remaining open land	12
Wetland (as parts of the above land use categories)	4

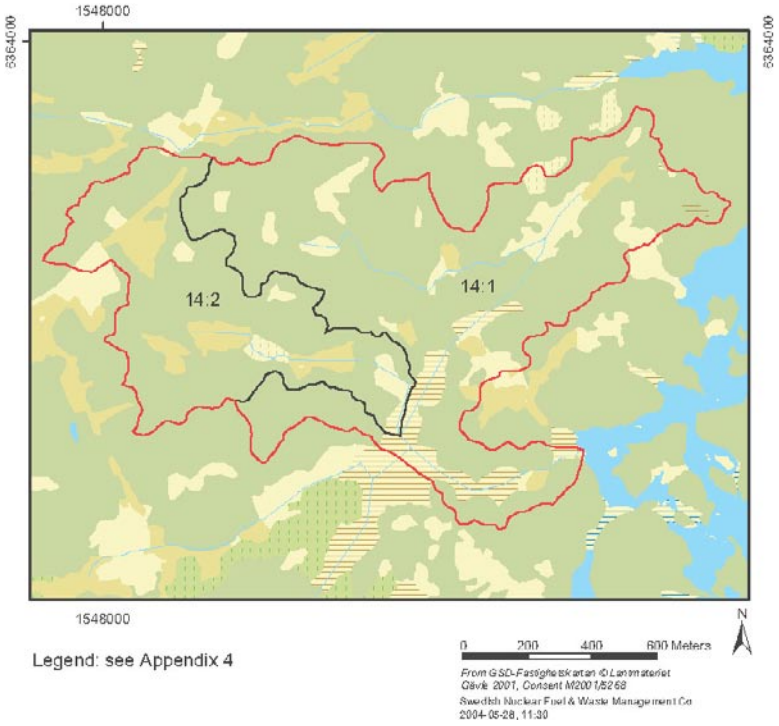

Figure 4-48. *The catchment Simpevarp 14 with the watercourse "Stekebäcken" and its catchment (sub-areas 1–2) marked with red boundaries.*

4.15 The catchment Simpevarp 15

This area consists of one single sub-area, without any lakes (Figure 4-49). The main watercourse, “Södra Uvöbäcken”, enters the Baltic Sea close to the village Södra Uvö.

Simpevarp 15:1, “Södra Uvöbäcken”

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-49. *The Simpevarp area with the single sub-area in the catchment Simpevarp 15 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.967 km^2. Forest dominates the land use (Table 4-29, Figure 4-50), but there is also a substantial part of agriculture areas and remaining open land within the catchment (6 and 21%, respectively).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-29. The different land uses within the catchment "Södra Uvöbäcken".

Land use	Area %
Forest	73
Water surface	0
Agriculture	6
Remaining open land	21
Wetland (as parts of the above land use categories)	5

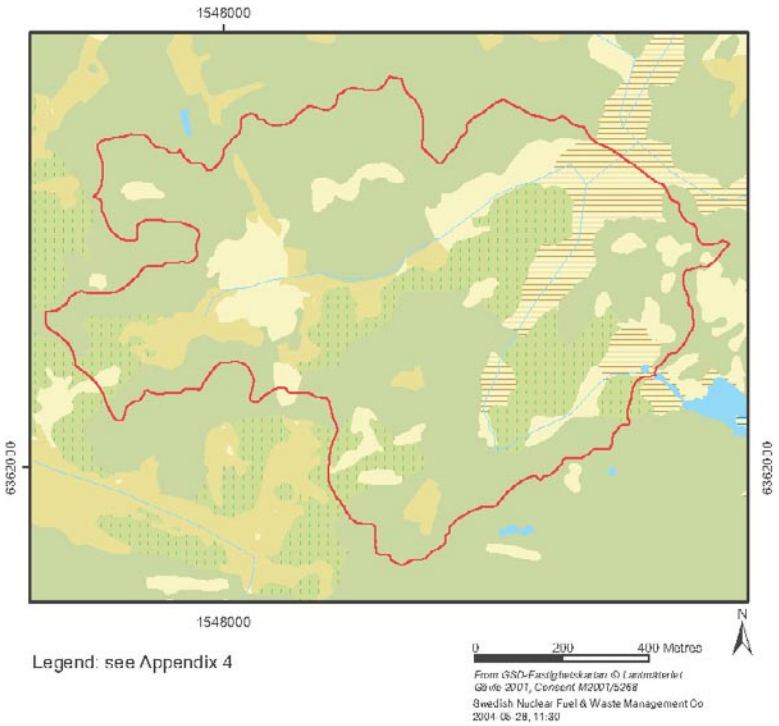

Figure 4-50. *The catchment Simpevarp 15 with the watercourse "Södra Uvöbäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.16 The catchment Simpevarp 16

This area consists of one single sub-area, without any lakes (Figure 4-51). The watercourse Svartebäck enters the Baltic Sea in the northeast part of the catchment.

Simpevarp 16:1, Svartebäck

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-51. *The Simpevarp area with the single sub-area in the catchment Simpevarp 16 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.504 km^2. Forest strongly dominates the land use (Table 4-30, Figure 4-52).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-30. The different land uses within the catchment Svartebäck.

Land use	Area %
Forest	97
Water surface	0
Agriculture	1
Remaining open land	2
Wetland (as parts of the above land use categories)	1

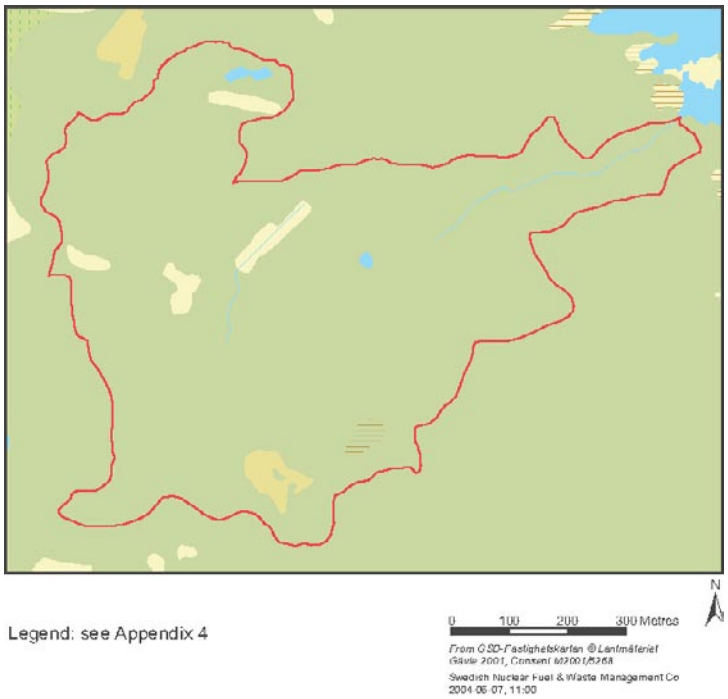

Figure 4-52. *The catchment Simpevarp 16 with the watercourse "Svartebäck" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.17 The catchment Simpevarp 17

This area is divided into six sub-areas, but has no lakes (Figure 4-53). The main watercourse, “Uthammarsån”, has five tributaries. It enters the Baltic Sea in Figeholms-fjärden, through an area of summer houses at Uthammars udde, situated in the southeast part of the catchment.

Simpevarp 17:1–6, “Uthammarsån” (the entire catchment)

The location of the object

This catchment is part of the SMHI catchment no 72/73.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-53. *The Simpevarp area with the six sub-areas in the catchment Simpevarp 17 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 7.019 km^2. Forest dominates the land use (Table 4-31, Figure 4-54). Agriculture areas and remaining open land together cover 18% of the area, which is a relatively large part, compared to the other catchments of the area.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 17:1–17:6

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries of "Uthammarsån".

Table 4-31. The different land uses within the entire catchment "Uthammarsån". The data are added from six sub-catchments.

Land use	Area %
Forest	82
Water surface	0
Agriculture	10
Remaining open land	8
Wetland (as parts of the above land use categories)	1

Figure 4-54. *The catchment Simpevarp 17 with the watercourse "Uthammarsån" and its catchment (sub-areas 1–6) marked with red boundaries.*

4.18 The catchment Simpevarp 18

This area consists of nine sub-areas, without any lakes (Figure 4-55). It corresponds to the SMHI catchment no 72/73 Släthultebäcken. The catchment drains through the village Figeholm before it enters the Baltic Sea in Figeholmsfjärden.

Four different tributaries drains into the main watercourse. Two of them have one or more further small tributaries entering the system. Some parts of the large wetland areas at Ficksjön (e.g. Lilla Ficksjön) are situated within the upstream areas of this catchment.

The main watercourse has, according to the digital map (fastighetskartan), three names. Upstream of Ficksjön the name is Skälbäcken, downstream of this wetland the name changes to Släthultebäcken, and the most downstream (and south) part is called Norrån.

Simpevarp 18:1–9, Släthultebäcken (the entire catchment)

The location of the object

This catchment corresponds to the SMHI catchment no 72/73 Släthultebäcken.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-55. *The Simpevarp area with the nine sub-areas in the catchment Simpevarp 18 marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 8.958 km^2. Forest dominates the land use (Table 4-32, Figure 4-56).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Simpevarp 18:1–18:9

See Appendix 3, 4 and 5 for data on sub-catchment parameters of the different tributaries to Släthultebäcken.

Table 4-32. The different land uses within the entire catchment Släthultebäcken. The data are added from nine sub-areas.

Land use	Area %
Forest	86
Water surface	0
Agriculture	5
Remaining open land	8
Wetland (as parts of the above land use categories)	3

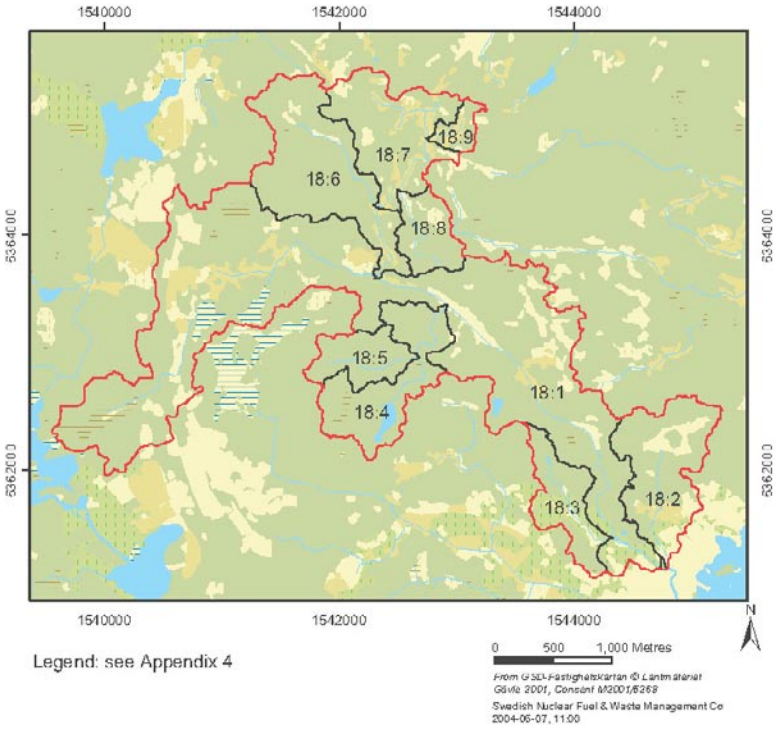

Figure 4-56. *The catchment Simpevarp 18 with the watercourse "Släthultebäcken" and its catchment (sub-areas 1–9) marked with red boundaries.*

4.19 The catchment Simpevarp 19

This catchment is situated on the island Upplångö (Figure 4-57). A wetland area with a small surface water, Räveskaften, drains into the watercourse “Flakvarpebäcken”, and passes through Flakvarpen before entering the Baltic Sea in Djupesund.

Simpevarp 19:1, “Flakvarpebäcken”

The location of the object

This catchment is situated on the island Upplångö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-57. *The Simpevarp area with the single sub-area in the catchment 19, situated on the island Upplångö, marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.184 km^2. Forest dominates the land use (Table 4-33, Figure 4-58). Wetland and open water surfaces cover a substantial part of the area. The most upstream open water surface is named Räveskaften.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-33. The different land uses within the catchment of "Flakvarpebäcken".

Land use	Area %
Forest	77
Water surface	8
Agriculture	0
Remaining open land	15
Wetland (as parts of the above land use categories)	14

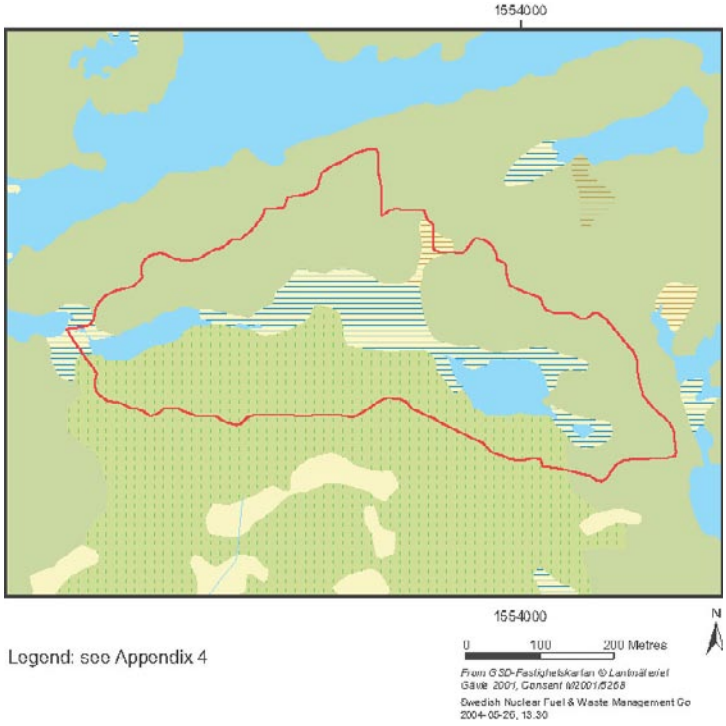

Figure 4-58. *The catchment Simpevarp 19 with the watercourse "Flakvarpebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.20 The catchment Simpevarp 20

This catchment is situated on the island Upplångö (Figure 4-59). The watercourse "Jössesbäcken" enters the Baltic Sea in the bay Jössesvik.

Simpevarp 20:1, "Jössesbäcken"

The location of the object

This catchment is situated on the island Upplångö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-59. *The Simpevarp area with the single sub-area in the catchment Simpevarp 20 situated on the island Upplångö, marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.111 km^2. Forest dominates the land use (Table 4-34, Figure 4-60) covering 83% of the area, together with 17% of remaining open land.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-34. The different land uses within the catchment "Jössesbäcken".

Land use	Area %
Forest	83
Water surface	0
Agriculture	0
Remaining open land	17
Wetland (as parts of the above land use categories)	0

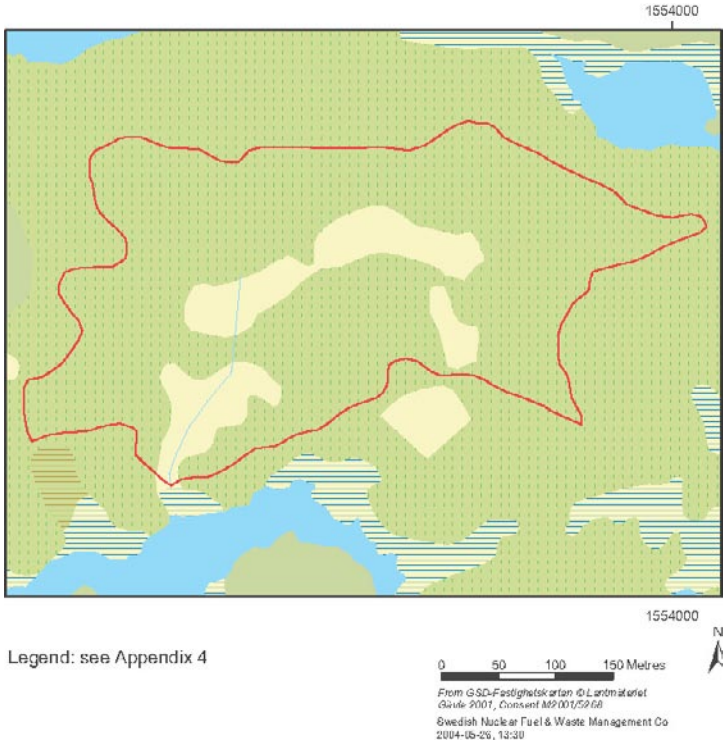

Figure 4-60. *The catchment Simpevarp 20 with the watercourse "Jössesbäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.21 The catchment Simpevarp 21

This catchment is situated on the island Äspö (Figure 4-61). The most upstream part of the watercourse "Äspöbäcken" passes through some wetland, and enters the Baltic Sea in Granholmsfjärden.

The location of the object

This catchment is situated on the island Äspö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-61. *The Simpevarp area with the single sub-area in the catchment Simpevarp 21 situated on the island Äspö, marked with red boundaries. Simpevarp 21:1. "Äspöbäcken".*

The catchment area and its major constituents

The total catchment area is 0.063 km^2. Forest is the only land use (Table 4-35, Figure 4-62), of which some parts, surrounding the upstream parts of the creek, are wetland areas.

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-35. The different land uses within the catchment "Äspöbäcken".

Land use	Area %
Forest	100
Water surface	0
Agriculture	0
Remaining open land	0
Wetland (as parts of the above land use categories)	8

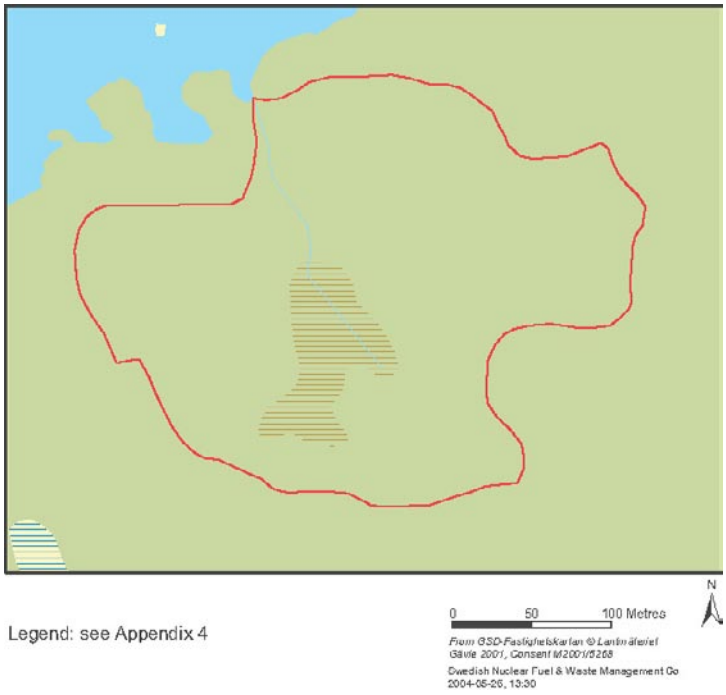

Figure 4-62. *The catchment Simpevarp 21 with the watercourse "Äsöpbäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.22 The catchment Simpevarp 22

This catchment is situated on the island Utlångö (Figure 4-63). The watercourse "Stekflagebäcken" drains through the water surface Stekflagen before it enters the Baltic Sea in Getbergsfjärden.

Simpevarp 22:1, "Stekflagebäcken"

The location of the object

This catchment is situated on the island Utlångö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-63. *The Simpevarp area with the single sub-area in the catchment 22, situated on the island Utlångö, marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.359 km^2. Forest dominates the land use (Table 4-36, Figure 4-64).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-36. The different land uses within the catchment "Stekflagebäcken".

Land use	Area %
Forest	86
Water surface	7
Agriculture	0
Remaining open land	8
Wetland (as parts of the above land use categories)	6

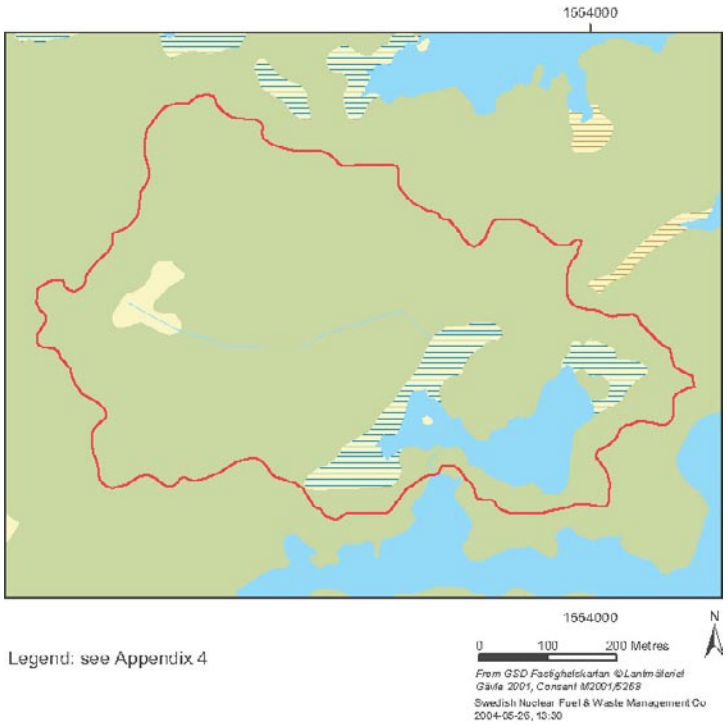

Figure 4-64. *The catchment Simpevarp 22 with the watercourse "Stekflagebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.23 The catchment Simpevarp 23

This catchment is situated on the island Ävrö (Figure 4-65). The watercourse in this area, "Vadvikebäcken", enters the Baltic Sea in Vadvikarna.

Simpevarp 23:1, "Vadvikebäcken"

The location of the object

This catchment is situated on the island Ävrö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-65. *The Simpevarp area with the single sub-area in the catchment Simpevarp 23 situated on the island Ävrö, marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.307 km^2. Forest completely dominates the land use (Table 4-37, Figure 4-66).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-37. The different land uses within the catchment of "Vadvikebäcken".

Land use	Area %
Forest	100
Water surface	0
Agriculture	0
Remaining open land	0
Wetland (as parts of the above land use categories)	1

Figure 4-66. *The catchment Simpevarp 23 with the watercourse "Vadvikebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.24 The catchment Simpevarp 24

This catchment is situated on the island Ävrö (Figure 4-67). The watercourse "Lindströmmebäcken" drains into the Baltic Sea in Lindströmmen, north of the catchment.

Simpevarp 24:1, "Lindströmmebäcken"

The location of the object

This catchment is situated on the island Ävrö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-67. *The Simpevarp area with the single sub-area in the catchment Simpevarp 24 situated on the island Ävrö, marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.192 km^2. Forest strongly dominates the land use (Table 4-38, Figure 4-68).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-38. The different land uses within the catchment "Lindströmmebäcken".

Land use	Area %
Forest	96
Water surface	0
Agriculture	0
Remaining open land	4
Wetland (as parts of the above land use categories)	0

Figure 4-68. *The catchment Simpevarp 24 with the watercourse "Lindströmmebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.25 The catchment Simpevarp 25

This catchment is situated on the island Ävrö (Figure 4-69). The watercourse "Gloebäcken" enters the Baltic Sea in Gloet, Båtstadsfjärden.

Simpevarp 25:1, "Gloebäcken"

The location of the object

This catchment is situated on the island Ävrö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-69. *The Simpevarp area with the single sub-area in the catchment Simpevarp 25 situated on the island Ävrö, marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.131 km^2. Forest strongly dominates the land use (Table 4-39, Figure 4-70).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-39. The different land uses within the catchment of "Gloebäcken".

Land use	Area %
Forest	97
Water surface	0
Agriculture	0
Remaining open land	3
Wetland (as parts of the above land use categories)	0

Figure 4-70. *The catchment Simpevarp 25 with the watercourse "Gloebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

4.26 The catchment Simpevarp 26

This catchment is situated on the island Ävrö (Figure 4-71). The watercourse "Skölkebäcken" enters the Baltic Sea in Skölket, east of the catchment.

Simpevarp 26:1, "Skölkebäcken"

The location of the object

This catchment is situated on the island Ävrö.

Topographic map: 6 G SO Vimmerby.
Outlet coordinates: (no data).

Figure 4-71. *The Simpevarp area with the single sub-area in the catchment Simpevarp 26 situated on the island Ävrö, marked with red boundaries.*

The catchment area and its major constituents

The total catchment area is 0.165 km^2. Forest strongly dominates the land use (Table 4-40, Figure 4-72).

See Appendix 3, 4 and 5 for more detailed data on land use, vegetation and catchment morphometry.

Table 4-40. The different land uses within the catchment of "Skölkebäcken".

Land use	Area %
Forest	96
Water surface	0
Agriculture	0
Remaining open land	4
Wetland (as parts of the above land use categories)	0

Figure 4-72. *The catchment Simpevarp 26 with the watercourse "Skölkebäcken" and its catchment (sub-area 1, the only sub-area within this catchment) marked with red boundaries.*

5 Discussion

The Simpevarp area is a hilly landscape, dominated by forest that covers almost 90% of the total area (Table 5-1). The maximum elevation within the area is 63 m above sea level (sub-area Simpevarp 10:30). The area is relatively free from antropogenic disturbances, apart from activities related to the construction and management of the nuclear power plant, and the currently ongoing site investigation activities within the area. Nevertheless, this area has, as most other parts of southern Sweden, been affected by human activities for centuries, although at a much less extensive level. Land-use for agricultural purposes is of minor importance (5% of the total area) and concentrated to some smaller areas, e.g. along some parts of Laxemarån and close to the eastern parts of Lake Jämsen (both areas within the catchment Simpevarp 10). Another form of anthropogenic influence is active forestry, mainly performed by private landowners. As in many parts of Sweden, drainage of land has affected the local hydrology and the present distribution of wetland and lake areas. There are some visible signs of drainage activities within the catchments, such as lowered lake water levels and some wetland areas that most probably were lakes in earlier days, before the large-scale drainage of Sweden started /Wolf, 1960/. Another sign of these drainage projects are that the watercourses within the area have been transformed and deepened into straight channels. A total of 6% of the area is classified as remaining open land (including e.g. villages and some open wetland areas). Two small villages, are situated within the area; Misterhult in the north part and Figeholm at the coast. In addition, there are some areas of summer houses at Bredviksnäs and Uthammars udde, along the bay of Figeholmsfjärden. The highway E22 runs through the area, passing close to two of the lakes, Lake Plittorpsgöl and Lake Jämsen.

Table 5-1. The different land uses within the entire Simpevarp area.

Land use	Area %
Forest	88
Water surface	1
Agriculture	5
Remaining open land	6
Wetland (as parts of the above land use categories)	3

There are relatively few lakes within the Simpevarp area – water surfaces constitute only 1% of the total area – and most of them are situated far from the coast and on an altitude that prevents intrusions of salt water from the Baltic Sea. Hence, the lake ecosystems are, in a geological perspective, old and stable, which is a large difference compared to the other area of site investigation, the Forsmark area in Uppsala County. In the flat areas of Forsmark, where shoreline displacement is substantial (also in this aspect the Simpevarp area differs), many young lakes with developing lake ecosystems are found, recently isolated from the sea and sometimes fluctuating between brackish and freshwater conditions /Brunberg et al. 2004/.

Five of the lakes within the Simpevarp area are included in this investigation. Three of them – Lakes Fjällgöl, Plittorpsgöl and Jämsen – are situated in the inland areas of the catchment Laxemarån (Simpevarp 10), at high altitudes above the sea level (around 25 m a s l for

L Plittorpsgöl and L Jämsen, as measured in August 2003). Lake Frisksjön is situated more close to the coast, within the catchment Simpevarp 7 (“Kåreviksån”), but still at a level of about 1.37 m above sea level. The fifth lake, Söråmagasinet in the catchment Simpevarp 11, is a man-made reservoir, constructed by damming a Baltic bay to the level of 2.07 m above the sea (August 2003). The salinity is on freshwater level and the lake drains into the lower water level of the Baltic Sea. It is used as a reserve water supply for the nuclear power plant. Pumping of water from River Laxemarån to the lake has been performed a few times during the last five years.

Lake Jämsen is the largest of the five investigated lakes, regarding lake area, maximum depth, as well as lake volume (Table 5-2). Lake Plittorpsgöl is also a deep lake, especially when considering the small lake area. The theoretical water renewal time varies between 7 and 13 months in the four natural lakes. However, the real water renewal time for Lake Jämsen should be further elucidated. It may differ substantially from the calculated theoretical renewal time, due to the esker, which is situated close to the lake basin. Eskers often function as “pipe lines” for water transport within the landscape, and may well contribute significantly to the water transport into Lake Jämsen. The theoretical water renewal time for Lake Söråmagasinet is calculated to about 2.3 years. This is also a calculated value that may be substantially altered due to antropogenic regulations and usage of the lake water.

In general, the lakes of the Simpevarp area are of small size and of medium depth, as many other lakes in Sweden. They may also be regarded as typical brownwater lakes, influenced by humic substances originating from the surrounding forests that dominate land use within their catchments. As a consequence, light penetration into the water is restricted, and large parts of the lake bottoms hosts a profundal habitat, i.e. they are colonised by non-photosynthesising organisms that utilise carbon imported from other habitats of the lake or from allochtonous sources (external, e.g. humic substances). However, the small lake size and the frequent lowering of lake water levels due to drainage of land, results in that also littoral habitats cover substantial areas of the lakes. All the three littoral habitats are present in most of the lakes. The only exception from this is Lake Fjällgöl, the most shallow lake. It is covered to more than 80% by emergent and floating-leaved vegetation in a littoral of Type I. The other lakes have approximately 20% coverage of Littoral Type I, mixed with Littoral of Type II along the shores. The littoral of type II, which is defined by photosynthesising organisms colonising rocky shores, covers a minor part of the lake areas, as it is restricted to a narrow zone in the nearshore areas. None of these lakes are large enough to get the typical wind-exposed littoral zones of Type II that can be found in large lakes. In this case it is instead the characteristic morphometry of the landscape that forms the steep rocky/stony shores. The extension of this habitat with depth is restricted either by the settled lake sediments or by the restricted light penetration in the brown lake water. The littoral of type III, i.e. light-exposed soft bottoms with submerged vegetation, is found mainly in the two coastal lakes, Lake Frisksjön and Lake Söråmagasinet. Lake Frisksjön is one of the shallower lakes, and the combination of this with moderate water colour may promote the development of submerged vegetation. Lake Söråmagasinet has a small catchment area and a long theoretical water renewal time, which may bring less concentrations of humic substances and, consequently, more light penetrating down to depths where this habitat develops.

Table 5-2. Median lake morphometry parameters for the lakes of the Simpevarp area.

Lake morphometry	Median	Range
Lake area (km^2)	0.1	0.03–0.24
Maximum depth (m)	4.9	2.0–10.9
Mean depth (m)	2.0	1.1–3.7
Volume (Mm^3)	0.199	0.029–0.877
Theoretical water renewal time (days)	275	218–829

In conclusion, the data available so far regarding the lakes and the catchments within the Simpevarp area, are now sorted into catchment and sub-catchment areas and are available from this report, as well as from the SKB local geographical information system of the area. In the future work within the site investigation, data gathered and stored in the SKB database may be sorted according to the same system, using the catchment and the lake habitat borders, respectively, as "frames" to identify and "cut out" the relevant information for each catchment or lake. This is a prerequisite for modelling ecosystem processes within the catchments and also for obtaining an integrated view for management of the terrestrial and aquatic environment.

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Appendix 1

Morphometry parameters for lakes in the Simpevarp area

Catchment Lake	Simpevarp 7 Frisksjön	Simpevarp 10 Fjällgöl	Simpevarp 10 Plittorpsgöl	Simpevarp 10 Jämsen	Simpevarp 11 Söråmagasinet
Lake catchment/Lake no	7:2	10:16	10:26	10:30-32	11:1
Elevation [m a s l]	1.37	-	24.79	25.11	2.07
Area [km^2]	0.13	0.03	0.03	0.24	0.10
Max depth [m]	2.8	2.0	7.2	10.9	4.9
Mean depth [m]	1.7	1.1	3.7	3.7	2.0
Volume [Mm^3]	0.223	0.029	0.124	0.877	0.199
Shore length [m]	2,632	864	933	4,036	2,992
Mean discharge [m^3/s]	0.010	0.002	0.004	0.369	0.003
Retention time [days]	264	218	399	275	829
Fetch [m]	705	116	349	959	936
Width [m]	248	55	119	603	184
Dynamic sediment ratio	0.21	0.14	0.05	0.13	0.16
Depth ratio	0.61	0.57	0.50	0.34	0.40
Relative depth ratio	9.89	15.29	49.31	28.02	19.22
Shoreline development factor	2.06	1.51	1.43	2.35	2.66

Fetch [m]	Maximum length, the longest straight line over the water surface
Width [m]	Maximum width, the longest straight line perpendicular to the length line
Dynamic sediment ratio	The square root of the area divided by the mean depth (DSR)
Depth ratio	The mean depth divided by the maximum depth
Relative depth ratio	The ratio of maximum depth to mean diameter represented by the square root of the lake area
Shoreline development factor	Shore length divided by circumference of a circle with an area equal to that of the lake

Appendix 2

Distribution of major habitats in lakes of the Simpevarp area

Catchment number	Name	Lake area [km²]	Littoral type I [m²]	[%]	Littoral type II [m²]	[%]	Littoral type III [m²]	[%]	Profundal [m²]	[%]	Pelagial [m²]	[%]
7	**Simpevarp 7**											
7:2	Frisksjön	0.13	24,200	18	1,430	< 2	49,130	38	52,250	42	107,270	82
10	**Simpevarp 10**											
10:16	Fjällgöl	0.03	21,580	82	–	–	1,440	6	3,240	12	4,680	18
10:26	Plittorpsgöl	0.03	6,630	20	290	< 1	4,260	13	22,800	67	27,340	80
10:30-32	Jämsen	0.24	48,500	21	1,550	< 1	12,650	5	177,300	75	187,700	79
11	**Simpevarp 11**											
11:1	Söråmagasinet	0.10	20,430	20	740	< 1	39,690	40	39,140	38	82,330	80

Littoral type I	The littoral habitat with emergent and floating-leaved vegetation.
Littoral type II	The littoral habitat with hard substrate.
Littoral type III	The littoral habitat with submerged vegetation.
Profundal	The sediments where light penetration is less than needed to sustain a permanent vegetation of primary producers.
Pelagial	The open lake water.

Appendix 3a

Morphometry parameters of catchments in the Simpevarp area

ID Code Shape	Catchment number	Name	Area [km²]	Max level [m a s l]	Min level [m a s l]	Difference in elevation [m]	Max slope [%][1]	Mean discharge [m³/s]	Perimeter [m]	ratio[2]
	1	**Simpevarp 1**								
ASM002446	1:1	"Långbonäsb."	0.070	10	2	8	1.77	0.0004	1,289	1.38
	2	**Simpevarp 2**								
ASM002447	2:1	"Bodvikeb."	0.380	13	0	13	2.27	0.0020	3,216	1.47
	3	**Simpevarp 3**								
ASM002448	3:1–2	"Sörviksån"	1.000	19	1	18	1.04	0.0053	6,735	1.90
ASM002473	3:1	Sub-area	0.530	19	1	18	2.19	0.0028	5,159	2.00
ASM002472	3:2		0.470	19	1	18	1.03	0.0025	3,806	1.57
	4	**Simpevarp 4**								
ASM002449	4:1	"Bjurhideb."	0.632	20	1	19	1.26	0.0034	5,380	1.91
	5	**Simpevarp 5**								
ASM001468	5:1–20	Kärrviksån	27.154	50	2	48	0.30	0.1439	37,337	2.02
ASM002486	5:1	Sub-area	6.657	50	2	48	0.30	0.0353	35,159	3.84
ASM001469	5:2		0.968	21	3	18	1.09	0.0051	6,144	1.76
ASM001470	5:3		0.398	22	3	19	1.54	0.0021	4,382	1.96
ASM001472	5:4		1.104	29	4	25	1.04	0.0058	6,570	1.76
ASM001471	5:5		2.794	26	3	23	1.02	0.0148	10,703	1.81
ASM001473	5:6–7		1.650	41	5	36	0.81	0.0088	10,791	2.37
ASM002487	5:6	Sub-area	1.200	40	5	35	0.79	0.0064	10,188	2.62
ASM001474	5:7		0.450	33	9	24	2.10	0.0024	4,515	1.90
ASM002488	5:8–14		8.317	45	5	40	0.59	0.0441	24,497	2.40
ASM001475	5:8	Sub-area	1.421	39	5	34	0.72	0.0075	9,743	2.30
ASM001476	5:9		3.619	33	6	27	0.56	0.0192	12,101	1.79
ASM001477	5:10–11		1.691	37	15	22	1.22	0.0090	7,344	1.59

ID Code Shape	Catchment number	Name	Area [km²]	Max level [m a s l]	Min level [m a s l]	Difference in elevation [m]	Max slope [%][1]	Mean discharge [m³/s]	Perimeter [m]	ratio[2]
ASM002489	5:10	Sub-area	1.198	35	15	20	1.29	0.0063	7,442	1.92
ASM001478	5:11		0.493	37	20	17	1.13	0.0026	3,782	1.52
ASM002496	5:12–14		1.585	45	16	29	1.70	0.0084	9,666	2.16
ASM002490	5:12	Sub-area	0.836	45	16	29	1.70	0.0044	5,658	1.75
ASM001479	5:13		0.647	44	30	14	1.56	0.0034	4,968	1.74
ASM001480	5:14		0.103	43	29	14	3.56	0.0005	1,352	1.19
ASM001481	5:15–17		3.131	43	7	36	0.77	0.0166	11,638	1.86
ASM002491	5:15	Sub-area	1.872	43	7	36	0.77	0.0099	8,932	1.84
ASM001482	5:16–17		1.260	42	11	31	1.02	0.0067	7,219	1.81
ASM002492	5:16	Sub-area	1.109	42	11	31	1.02	0.0059	7,209	1.93
ASM001483	5:17		0.151	30	14	16	2.12	0.0008	1,781	1.30
ASM002479	5:18		1.180	33	9	24	2.94	0.0063	5,927	1.54
ASM001485	5:19–20		0.955	32	11	21	1.13	0.0051	5,194	1.50
ASM002493	5:19	Sub-area	0.837	32	11	21	1.13	0.0044	5,634	1.74
ASM002474	5:20		0.117	32	19	13	1.10	0.0006	1,717	1.42
	6	**Simpevarp 6**								
ASM001486	6:1	“Mederhultsån”	2.003	32	1	31	0.69	0.0106	13,812	2.75
	7	Simpevarp 7								
ASM001487	7:1–2	”Kåreviksån”	2.062	25	1	24	1.04	0.0109	7,997	1.57
ASM001484	7:1	Sub-area	0.213	15	1	14	1.73	0.0011	2,416	1.47
ASM001445	7:2	Frisksjön	1.848	25	2	23	2.00	0.0098	7,673	1.59
	8	**Simpevarp 8**								
ASM002460	8:1	“Pistlanbäcken”	0.499	22	0	22	1.36	0.0026	4,152	1.66
	9	**Simpevarp 9**								
ASM001488	9:1–3	“Ekerumsån”	2.834	31	1	30	0.58	0.0150	14,066	2.36
ASM002483	9:1	Sub-area	1.845	29	1	28	0.44	0.0098	13,210	2.74
ASM001489	9:2		0.767	31	11	20	1.25	0.0041	4,533	1.46
ASM001490	9:3		0.222	31	12	19	5.51	0.0012	2,294	1.37

[1] Maximum slope — Difference in catchment level divided by square root of catchment area
[2] Shape ratio — Catchment perimeter divided by circumference of a circle with an area equal to that of the catchment

Appendix 3b

Morphometry parameters of sample site catchments in the Simpevarp area

ID Code	Catchment number	Local code	Area [km^2]	Max level [m a s l]	Min level [m a s l]	Difference in elevation [m]	Max slope [%][1]	Mean discharge [m^3/s]	Perimeter [m]	Shape ratio[2]
	Simpevarp 5									
ASM001454	5:1–20	PSM002083	27.154	50	2	48	0.30	0.1439	37,337	2.02
ASM001455	Part of 5:1–20	PSM002082	17.300	50	5	45	0.49	0.0917	30,032	2.04
ASM001457	Part of 5:1–20	PSM002080	4.882	50	8	42	0.64	0.0259	14,310	1.83
ASM001456	Part of 5:8–14	PSM002081	8.276	45	6	39	0.57	0.0439	24,301	2.38
	Simpevarp 6									
ASM001453	Part of 6:1	PSM002084	1.920	32	4	28	0.77	0.0102	13,044	2.66
	Simpevarp 9									
ASM001452	Part of 9:1–3	PSM002085	2.494	31	5	26	0.62	0.0132	12,086	2.16
	Simpevarp 10									
ASM001450	Part of 10:1–32	PSM002087	40.786	63	1	62	0.28	0.2161	64,306	2.84
ASM001458	Part of 10:1–32	PSM002079	34.593	63	6	57	0.34	0.1833	57,361	2.75
ASM001460	Part of 10:1–32	PSM002077	30.189	63	7	56	0.36	0.1600	53,566	2.75
ASM001464	Part of 10:1–32	PSM002071	13.536	63	11	52	0.46	0.0717	38,106	2.92
ASM001459	Part of 10:8–9	PSM002078	3.464	38	8	30	0.56	0.0183	13,968	2.12
ASM001463	Part of 10:20–22	PSM002072	3.388	44	11	33	0.80	0.0179	11,497	1.76
ASM001466	10:30–32	PSM002069	6.959	63	25	38	0.73	0.0369	19,683	2.11
ASM001467	Part of 10:30–32	PSM002068	5.123	63	29	34	0.65	0.0271	16,018	2.00
	Simpevarp 13									
ASM001451	Part of 13:1	PSM002086	0.671	21	3	18	1.47	0.0036	5,083	1.75
	Simpevarp 17									
ASM001461	Part of 17:1–6	PSM002076	4.728	36	8	28	0.60	0.0251	16,357	2.12
	Simpevarp 18									
ASM001462	Part of 18:1–9	PSM002075	8.183	44	1	43	0.48	0.0434	28,526	2.81
ASM001465	Part of 18:1	PSM002070	2.442	44	16	28	0.94	0.0129	11,142	2.01

[1] Maximum slope [%] Difference in catchment level divided by square root of catchment area
[2] Shape ratio Catchment perimeter divided by circumference of a circle with an area equal to that of the catchment

Appendix 4

Explanations of the different land use types

Column	Legend	In English	In Swedish
MA1		Water Surface	Vattenyta
MA2		Coniferous- and mixed forest	Barr- och blandskog
MA3		Wetland normal – coniferous forest	Sankmark normal – barrskog
MA4		Agriculture land	Åkermark
MA5		Remaining open land	Övrig öppen mark
MA6		Cut forest	Hygge
MA7		Wetland normal – decidous forest	Sankmark normal – lövskog
MA8		Wetland normal – remaining open land	Sankmark normal – annan öppen mark
MA9		Wetland difficult – coniferous forest	Sankmark svår – barrskog
MA10		Wetland difficult – decidous forest	Sankmark svår – lövskog
MA11		Wetland difficult – remaining open land	Sankmark svår – annan öppen mark
MA19		Decidous forest	Lövskog
MA3 and MA7–11		Wetland	Våtmark

Land use in the catchments of the Simpevarp area

ID Code	Catchment number	Name	MA1 [%]	MA2 [%]	MA3 [%]	MA4 [%]	MA5 [%]	MA6 [%]	MA7 [%]	MA8 [%]	MA9 [%]	MA10 [%]	MA11 [%]	MA19 [%]
	1	**Simpevarp 1**												
ASM002446	1:1	“Långbonäsb.”	0	81	0	0	1	0	0	0	18	0	0	0
	2	**Simpevarp 2**												
ASM002447	2:1	”Bodvikeb.”	20	78	1	0	0	0	0	0	0	0	1	0
	3	**Simpevarp 3**												
ASM002448	3:1–2	“Sörviksån”	0	95	1	3	1	0	0	0	0	0	0	0
ASM002473	3:1	Sub-area	0	96	1	1	2	0	0	0	0	0	0	0
ASM002472	3:2		0	93	2	4	0	0	0	0	0	0	0	0
	4	**Simpevarp 4**												
ASM002449	4:1	”Bjurhideb.”	0	94	1	4	1	0	0	0	0	0	0	0
	5	**Simpevarp 5**												
ASM001468	5:1–20	Kärrviksån	0	86	1	4	3	2	0	1	0	0	2	1
ASM002486	5:1	Sub-area	0	82	1	5	6	1	0	1	0	0	2	1
ASM001469	5:2		0	98	1	1	1	0	0	0	0	0	0	0
ASM001470	5:3		0	90	0	10	0	0	0	0	0	0	0	0
ASM001472	5:4		4	84	2	2	4	0	0	4	0	0	0	0
ASM001471	5:5		0	85	1	1	1	0	0	0	0	0	11	0
ASM001473	5:6–7		0	98	1	0	1	0	0	1	0	0	0	0
ASM002487	5:6	Sub-area	0	98	1	0	0	0	0	1	0	0	0	0
ASM001474	5:7		0	96	0	0	2	0	0	2	0	0	0	0
ASM002488	5:8–14		0	87	1	3	2	4	0	1	0	0	0	1
ASM001475	5:8	Sub-area	0	91	1	2	3	0	0	2	0	0	1	0
ASM001476	5:9		0	77	1	6	4	9	0	1	0	0	0	3
ASM001477	5:10–11		0	96	1	1	0	0	0	2	0	0	0	0

ID Code	Catchment number	Name	MA1 [%]	MA2 [%]	MA3 [%]	MA4 [%]	MA5 [%]	MA6 [%]	MA7 [%]	MA8 [%]	MA9 [%]	MA10 [%]	MA11 [%]	MA19 [%]
ASM002489	5:10	Sub-area	0	96	1	1	1	0	0	2	0	0	0	0
ASM001478	5:11		0	95	3	0	0	0	0	1	0	0	0	0
ASM002496	5:12–14		0	94	1	0	2	1	0	0	0	0	1	0
ASM002490	5:12	Sub-area	0	92	1	1	3	2	0	0	0	0	2	0
ASM001479	5:13		0	98	1	0	0	0	0	1	0	0	0	0
ASM001480	5:14		0	93	1	2	4	0	0	0	0	0	0	0
ASM001481	5:15–17		0	84	3	5	7	0	0	1	0	0	0	0
ASM002491	5:15	Sub-area	0	93	3	1	3	0	0	1	0	0	0	0
ASM001482	5:16–17		0	70	2	12	13	0	0	2	0	0	0	0
ASM002492	5:16	Sub-area	0	71	2	13	11	0	0	2	0	0	0	0
ASM001483	5:17		0	66	0	8	27	0	0	0	0	0	0	0
ASM002479	5:18		0	96	2	0	0	0	0	1	0	0	1	0
ASM001485	5:19–20		0	78	1	17	4	0	0	0	0	0	0	0
ASM002493	5:19	Sub-area	0	79	1	17	3	0	0	0	0	0	0	0
ASM002474	5:20		0	70	0	23	7	0	0	0	0	0	0	0
	6	**Simpevarp 6**												
ASM001486	6:1	“Mederhultsån”	0	83	0	12	5	0	0	0	0	0	0	0
	7	**Simpevarp 7**												
ASM001487	7:1–2	“Kåreviksån”	6	86	0	5	2	0	0	0	0	0	1	0
ASM001484	7:1	Sub-area	0	95	0	0	0	0	0	0	0	0	5	0
ASM001445	7:2	Frisksjön	6	85	0	6	2	0	0	0	0	0	0	0
	8	**Simpevarp 8**												
ASM002460	8:1	“Pistlanbäcken”	1	95	0	0	1	0	0	3	0	0	0	0
	9	**Simpevarp 9**												
ASM001488	9:1–3	“Ekerumsån”	0	81	0	12	4	3	0	0	0	0	0	0
ASM002483	9:1	Sub-area	0	83	0	11	6	0	0	0	0	0	0	0
ASM001489	9:2		0	75	0	14	0	10	0	0	0	0	0	0
ASM001490	9:3		0	79	0	17	3	0	0	0	0	0	0	0

ID Code	Catchment number	Name	MA1 [%]	MA2 [%]	MA3 [%]	MA4 [%]	MA5 [%]	MA6 [%]	MA7 [%]	MA8 [%]	MA9 [%]	MA10 [%]	MA11 [%]	MA19 [%]
	10	**Simpevarp 10**												
ASM001491	10:1–32	Laxemarån	1	84	1	5	5	2	0	1	0	0	0	1
ASM002476	10:1	Sub-area	0	81	1	5	6	2	1	0	0	0	0	3
ASM001492	10:2		0	67	0	11	3	0	0	1	0	0	0	17
ASM001493	10:3		0	89	0	7	3	0	0	0	0	0	0	1
ASM001494	10:4		0	81	1	15	4	0	0	0	0	0	0	0
ASM001495	10:5		0	79	1	4	2	13	0	0	0	0	0	0
ASM001496	10:6		0	87	1	4	3	6	0	0	0	0	0	0
ASM001497	10:7		0	91	0	3	2	4	0	0	0	0	0	0
ASM002458	10:8–9		0	93	1	3	3	1	0	0	0	0	0	0
ASM001498	10:8	Sub-area	0	94	0	4	2	1	0	0	0	0	0	0
ASM001499	10:9		0	92	1	0	7	0	0	0	0	0	0	0
ASM001500	10:10–11		0	88	0	10	2	0	0	0	0	0	0	0
ASM002457	10:10	Sub-area	0	86	0	12	2	0	0	0	0	0	0	0
ASM001501	10:11		0	92	0	5	3	0	0	0	0	0	0	0
ASM001502	10:12–13		0	73	0	15	11	0	0	0	0	0	0	0
ASM002454	10:12	Sub-area	0	76	0	18	6	0	0	0	0	0	0	0
ASM001503	10:13		0	67	0	11	21	0	0	0	0	0	1	0
ASM001504	10:14–19		1	86	0	4	4	3	0	0	0	0	0	0
ASM002452	10:14	Sub-area	0	87	1	5	4	4	0	0	0	0	0	0
ASM001505	10:15–16		3	89	0	4	4	0	0	0	0	0	0	0
ASM002451	10:15	Sub-area	0	90	0	5	5	0	0	0	0	0	0	0
ASM001447	10:16	Fjällgöl	7	88	0	2	2	0	0	0	0	0	0	0
ASM001506	10:17		0	81	0	7	12	0	0	0	0	0	0	0
ASM001507	10:18–19		5	85	1	1	1	6	0	0	0	0	2	0
ASM002499	10:18	Sub-area	0	89	0	6	5	0	0	0	0	0	0	0
ASM001448	10:19	Grangöl	5	84	1	0	0	7	0	0	0	0	2	0
ASM001508	10:20–22		0	89	3	0	1	3	0	4	0	0	0	0
ASM002450	10:20	Sub-area	0	87	5	0	1	4	0	3	0	0	0	0

ID Code	Catchment number	Name	MA1 [%]	MA2 [%]	MA3 [%]	MA4 [%]	MA5 [%]	MA6 [%]	MA7 [%]	MA8 [%]	MA9 [%]	MA10 [%]	MA11 [%]	MA19 [%]
ASM001509	10:21–22		0	93	0	0	0	0	0	6	0	0	0	0
ASM002453	10:21	Sub-area	0	100	0	0	0	0	0	0	0	0	0	0
ASM001510	10:22		0	88	0	0	0	0	0	11	0	0	0	0
ASM001511	10:23		0	89	4	0	1	5	0	1	0	0	0	0
ASM001512	10:24		0	84	3	0	1	12	0	0	0	0	0	0
ASM001513	10:25–26		4	92	0	1	3	0	0	0	0	0	0	0
ASM002459	10:25	Sub-area	0	72	0	2	26	0	0	0	0	0	0	0
ASM001446	10:26	Plittorpsgöl	5	94	0	1	0	0	0	0	0	0	0	0
ASM001514	10:27		0	63	0	23	14	0	0	0	0	0	0	0
ASM001515	10:28		0	75	0	5	17	0	0	1	0	0	0	2
ASM001516	10:29		0	89	0	2	5	0	0	0	0	0	0	4
ASM001449	10:30–32	Jämsen	5	76	1	4	4	3	0	0	0	0	2	4
ASM002480	10:30	Sub-area	6	70	1	4	5	3	0	0	0	0	2	4
ASM002484	10:31–32		0	91	1	3	0	5	0	0	0	0	0	0
ASM002482	10:31	Sub-area	0	91	1	3	0	5	0	0	0	0	0	0
ASM002478	10:32		0	100	0	0	0	0	0	0	0	0	0	0
	11	Simpevarp 11												
ASM001444	11:1	Söråmagasinet	18	65	0	0	17	0	0	1	0	0	0	0
	12	Simpevarp 12												
ASM002456	12:1–3	“Glostadsb.”	0	76	0	3	3	0	0	1	0	0	4	12
ASM002498	12:1	Sub-area	0	78	0	2	3	0	0	1	0	0	6	10
ASM002485	12:2		0	66	0	0	7	0	2	0	0	1	0	24
ASM002495	12:3		0	84	0	16	0	0	0	0	0	0	0	0
	13	Simpevarp 13												
ASM001518	13:1	“Stålglob.”	0	79	0	14	5	2	0	1	0	0	0	0
	14	Simpevarp 14												
ASM002461	14:1–2	“Stekebäcken”	0	81	0	6	7	1	0	5	0	0	0	0
ASM001517	14:1	Sub-area	0	81	0	2	8	1	0	7	0	0	0	0
ASM002497	14:2		0	79	0	13	5	2	0	1	0	0	0	0

ID Code	Catchment number	Name	MA1 [%]	MA2 [%]	MA3 [%]	MA4 [%]	MA5 [%]	MA6 [%]	MA7 [%]	MA8 [%]	MA9 [%]	MA10 [%]	MA11 [%]	MA19 [%]
	15	Simpevarp 15												
ASM002462	15:1	“S.Uvöbäcken”	0	55	0	6	12	0	0	9	0	0	0	18
	16	Simpevarp 16												
ASM002463	16:1	Svartebäck	0	96	1	1	2	0	0	0	0	0	0	0
	17	Simpevarp 17												
ASM001519	17:1–6	“Uthammarsån”	0	76	1	10	8	0	0	0	0	0	0	5
ASM002494	17:1	Sub-area	0	73	1	9	9	0	0	0	0	0	0	8
ASM001533	17:2		0	73	0	17	10	0	0	0	0	0	0	0
ASM001520	17:3		0	82	0	13	4	0	0	0	0	0	1	0
ASM001521	17:4		0	83	1	15	0	0	0	1	0	0	0	0
ASM001522	17:5		0	88	1	10	0	1	0	0	0	0	0	0
ASM001523	17:6		0	84	0	10	7	0	0	0	0	0	0	0
	18	Simpevarp 18												
ASM001524	18:1–9	Släthulteb.	0	81	2	5	7	0	0	0	0	0	1	3
ASM002481	18:1	Sub-area	0	78	3	5	9	0	0	0	0	0	2	3
ASM001525	18:2		0	73	0	5	16	0	0	0	0	0	0	6
ASM001526	18:3		0	62	1	1	5	0	0	0	0	0	0	31
ASM001527	18:4–5		2	95	2	0	0	0	0	0	0	0	0	0
ASM002477	18:4	Sub-area	4	93	3	0	0	0	0	0	0	0	0	0
ASM001528	18:5		0	100	0	0	0	0	0	0	0	0	0	0
ASM001529	18:6–9		0	88	0	7	3	1	0	0	0	0	0	0
ASM002475	18:6	Sub-area	0	96	0	3	2	0	0	0	0	0	0	0
ASM001530	18:7–9		0	82	0	11	5	2	0	0	0	0	0	0
ASM002455	18:7	Sub-area	0	80	0	14	6	0	0	0	0	0	0	0
ASM001531	18:8		0	88	1	0	4	7	0	0	0	0	0	0
ASM001532	18:9		0	74	0	23	2	0	0	0	0	0	0	0
	19	Simpevarp 19												
ASM002464	19:1	”Flakvarpeb.”	8	46	0	0	0	0	0	1	0	0	14	31

ID Code	Catchment number	Name	MA1 [%]	MA2 [%]	MA3 [%]	MA4 [%]	MA5 [%]	MA6 [%]	MA7 [%]	MA8 [%]	MA9 [%]	MA10 [%]	MA11 [%]	MA19 [%]
	20	Simpevarp 20												
ASM002465	20:1	”Jössesbäcken”	0	0	0	0	17	0	0	0	0	0	0	83
	21	Simpevarp 21												
ASM002471	21:1	”Äspöbäcken”	0	92	8	0	0	0	0	0	0	0	0	0
	22	Simpevarp 22												
ASM002466	22:1	”Stekflageb.”	7	86	0	0	2	0	0	0	0	0	6	0
	23	Simpevarp 23												
ASM002467	23:1	“Vadvikeb.”	0	99	1	0	0	0	0	0	0	0	0	0
	24	Simpevarp 24												
ASM002468	24:1	”Lindströmmeb.”	0	96	0	0	4	0	0	0	0	0	0	0
	25	Simpevarp 25												
ASM002469	25:1	”Gloebäcken”	0	97	0	0	3	0	0	0	0	0	0	0
	26	Simpevarp 26												
ASM002470	26:1	“Skölkebäcken”	0	96	0	0	4	0	0	0	0	0	0	0

Land use of sample site catchments in the Simpevarp area

ID Code number	Catchment	Local code	MA1 [%]	MA2 [%]	MA3 [%]	MA4 [%]	MA5 [%]	MA6 [%]	MA7 [%]	MA8 [%]	MA9 [%]	MA10 [%]	MA11 [%]	MA19 [%]
	Simpevarp 5													
ASM001454	5:1–20	PSM002083	0	86	1	4	4	2	0	1	0	0	2	1
ASM001455	Part of 5:1–20	PSM002082	0	86	2	3	4	2	0	1	0	0	0	1
ASM001457	Part of 5:1–20	PSM002080	0	88	2	4	3	2	0	0	0	0	1	0
ASM001456	Part of 5:8–14	PSM002081	0	87	1	3	2	4	0	1	0	0	0	1
	Simpevarp 6													
ASM001453	Part of 6:1	PSM002084	0	82	0	12	5	0	0	0	0	0	0	0
	Simpevarp 9													
ASM001452	Part of 9:1–3	PSM002085	0	83	0	13	1	3	0	0	0	0	0	0
	Simpevarp 10													
ASM001450	Part of 10:1–32	PSM002087	1	82	1	5	4	2	0	1	0	0	0	1
ASM001458	Part of 10:1–32	PSM002079	1	83	1	4	4	2	0	1	0	0	0	1
ASM001460	Part of 10:1–32	PSM002077	2	82	1	5	5	2	0	1	0	0	0	1
ASM001464	Part of 10:1–32	PSM002071	3	80	1	4	5	2	1	0	0	0	1	3
ASM001459	Part of 10:8–9	PSM002078	0	93	1	3	3	1	0	0	0	0	0	0
ASM001463	Part of 10:20–22	PSM002072	0	89	4	0	1	3	0	4	0	0	0	0
ASM001466	10:30–32	PSM002069	5	76	1	4	4	3	0	0	0	0	2	4
ASM001467	Part of 10:30–32	PSM002068	3	84	2	3	1	3	0	0	0	0	2	0
	Simpevarp 13													
ASM001451	Part of 13:1	PSM002086	0	77	0	18	4	0	0	1	0	0	0	0
	Simpevarp 17													
ASM001461	Part of 17:1–6	PSM002076	0	86	1	7	6	0	0	0	0	0	0	0
	Simpevarp 18													
ASM001462	Part of 18:1–9	PSM002075	0	82	2	5	6	0	0	0	0	0	1	3
ASM001465	Part of 18:1	PSM002070	0	75	4	7	9	1	0	0	0	0	4	0

Appendix 5

Explanations of the different vegetation types

Column	In English	In Swedish
Veg11	Old spruce forest, mesic-wet types	Äldre gran, frisk-fuktig
Veg12	Young spruce forest, mesic-wet types	Yngre gran, frisk-fuktig
Veg13	Old pine forest, mesic-wet types	Äldre tall, frisk-fuktig
Veg14	Young pine forest, mesic-wet types	Yngre tall, frisk-fuktig
Veg15	Dry pine forest on acid rocks	Hällmarkstallskog
Veg23	Deciduous forest in near coastal areas, birch/oak/thicket	Kustnära lövskog (björk/ek)/sly på hygge
Veg24	Birch or oak/maple mixed with spruce/pine	Björk eller ek/lönn blandad med gran/tall
Veg25	Oak-dominated forest	Ekdominerad lövskog
Veg30	Mixed forest (coniferous/deciduous)	Blandskog, barr – löv
Veg41	Young spruce	Granungskog
Veg42	Young pine	Tallungskog
Veg43	Unspecified young conifer	Ospecificerad barrungskog
Veg44	Birch thicket	Sly på hygge huvudsakl björk
Veg45	Birch thicket/meadow type	Äldre hyggen, sly/ängsartat frodigt
Veg50	New clear-cut	Nya hyggen, ej hygge -89
Veg62	Forested wetland, pine-dominated	Talldominerad sankmark
Veg63	Forested wetland, deciduous-dominated	Björkdominerad sankmark
Veg71	Open wetland, lush carpet mire/mud-bottom mire	Öppen våtmark, ristuvemyr
Veg72	Lush wet mire	Frodig blöt myr
Veg73	Open wetland, lush lawn mire	Öppen våtmark, frodig fastmattemyr
Veg74	Lush lawn mire	Frodig fastmattemyr
Veg75	Open wetland, lush lawn mire, with willow	Frodig fastmattemyr med viden
Veg76	Open wetland, lush lawn mire, with birch	Frodig fastmattemyr med björk
Veg77	Open wetland, reed-dominated, less wet	Vassdominerad torrare myr
Veg78	Open wetland, reed-dominated/more lush	Vass/frodigare, ev buskar
Veg79	Open wetland, reed-dominated, wet	Vassdominerad blötare myr
Veg80	Floating mire/floating-leaved vegetation	Gungfly/flytbladsvegetation
Veg81	Agriculture land (according to the topographic map)	Odlad mark enligt topokarta
Veg82	Other open land (pastures and meadows)	Övrig öppen mark
Veg85	Sand or stone pit	Sandtag/stenbrott
Veg91	Weekend cottages	Fritidsbebyggelse
Veg93	Low rise house	Låghus
Veg96	Other hard surfaces	Övriga hårda ytor/grus etc
Veg100	Water	Vatten

Different vegetation types in the catchments of the Simpevarp area

ID Code Number	Catchment	Name	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
	1	**Simpevarp 1**																	
ASM002446	1:1	"Långbonäsb."	0	0	23	0	15	14	5	0	24	0	0	0	0	0	0	0	0
	2	**Simpevarp 2**																	
ASM002447	2:1	"Bodvikeb."	0	0	31	1	21	11	2	0	11	0	0	0	0	0	0	0	1
	3	**Simpevarp 3**																	
ASM002448	3:1-2	"Sörviksån"	0	2	28	0	51	8	0	0	5	0	0	0	0	0	0	1	0
ASM002473	3:1	Sub-area	0	3	27	1	53	6	0	0	6	0	0	0	0	0	0	1	0
ASM002472	3:2		0	0	29	0	49	11	0	0	4	0	0	0	0	0	0	2	0
	4	**Simpevarp 4**																	
ASM002449	4:1	"Bjurhideb."	0	0	24	1	39	8	0	0	9	0	8	2	2	0	1	0	0
	5	**Simpevarp 5**																	
ASM001468	5:1-20	Kärrviksån	1	2	18	0	18	0	2	1	10	0	18	10	3	1	4	1	0
ASM002486	5:1	Sub-area	0	4	16	1	19	0	3	1	10	0	13	10	4	1	3	1	0
ASM001469	5:2		2	2	28	2	11	0	1	0	17	0	20	12	2	0	1	1	0
ASM001470	5:3		0	1	21	0	33	0	1	1	8	0	14	5	1	0	6	0	0
ASM001472	5:4		1	2	7	0	11	0	3	0	12	1	25	7	3	0	9	0	2
ASM001471	5:5		2	1	18	0	15	0	1	0	7	1	23	10	3	0	4	0	0
ASM001473	5:6-7		0	2	11	0	13	0	2	0	9	2	32	12	4	1	10	0	0
ASM002487	5:6	Sub-area	0	2	11	0	15	0	2	0	7	2	32	12	4	1	9	1	0
ASM001474	5:7		0	1	11	0	5	0	0	0	13	3	34	14	5	0	11	0	0
ASM002488	5:8-14		1	1	22	0	19	0	1	1	10	0	17	11	3	1	4	1	0
ASM001475	5:8	Sub-area	0	0	17	0	28	0	0	0	6	0	29	7	2	0	2	1	0
ASM001476	5:9		2	2	18	1	5	0	3	2	11	1	18	16	6	1	5	0	1
ASM001477	5:10-11		0	3	16	0	35	0	0	0	12	0	13	10	2	1	4	1	0

ID Code Number	Catchment	Name	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
ASM002489	5:10	Sub-area	0	4	11	0	32	0	1	0	13	0	14	13	3	1	4	1	0
ASM001478	5:11		0	0	29	0	41	0	0	0	10	0	10	3	0	0	2	2	1
ASM002496	5:12-14		1	1	40	0	25	0	0	0	9	0	11	6	1	0	1	1	0
ASM002490	5:12	Sub-area	2	1	29	0	30	0	0	0	7	0	16	5	1	0	2	1	0
ASM001479	5:13		1	0	58	0	20	0	0	0	12	0	5	1	0	0	0	1	0
ASM001480	5:14		0	0	12	0	7	0	0	0	4	0	11	41	10	3	5	0	1
ASM001481	5:15-17		0	1	17	0	19	0	2	2	14	0	19	6	2	0	1	3	0
ASM002491	5:15	Sub-area	0	1	20	0	22	0	2	2	15	0	22	7	2	0	1	3	0
ASM001482	5:16-17		0	1	14	0	15	0	3	1	13	0	15	6	2	0	1	2	0
ASM002492	5:16	Sub-area	0	1	14	0	16	0	3	1	11	0	15	6	2	0	1	2	0
ASM001483	5:17		0	0	14	0	3	0	2	0	28	0	13	0	4	0	2	0	0
ASM002479	5:18		0	6	23	0	32	0	0	0	7	0	17	6	1	0	2	1	1
ASM001485	5:19-20		0	3	14	0	6	0	2	1	13	0	15	14	5	2	2	0	0
ASM002493	5:19	Sub-area	0	3	13	0	6	0	2	1	14	0	16	15	5	3	2	1	0
ASM002474	5:20		0	4	23	3	2	0	1	0	12	0	8	8	6	0	2	0	0
	6	**Simpevarp 6**																	
ASM001486	6:1	“Mederhultsån”	8	1	27	2	7	0	1	0	10	0	10	9	3	0	3	0	0
	7	**Simpevarp 7**																	
ASM001487	7:1-2	“Kåreviksån”	2	2	33	2	10	0	1	0	9	0	15	8	3	0	1	0	0
ASM001484	7:1	Sub-area	3	9	12	1	7	0	4	0	5	0	19	24	8	1	2	0	0
ASM001445	7:2	Frisksjön	2	1	35	2	11	0	0	0	10	0	15	6	2	0	1	0	0
	8	**Simpevarp 8**																	
ASM002460	8:1	“Pistlanbäcken”	1	0	69	5	11	0	0	0	4	0	3	0	0	0	0	0	0
	9	**Simpevarp 9**																	
ASM001488	9:1-3	“Ekerumsån”	3	1	33	3	9	0	1	1	11	0	7	7	4	1	3	0	0
ASM002483	9:1	Sub-area	3	1	33	4	8	1	2	1	12	0	7	5	4	1	3	0	0
ASM001489	9:2		2	1	31	1	12	0	0	0	8	0	8	12	4	3	3	0	0
ASM001490	9:3		3	1	45	1	10	0	0	0	10	0	3	5	1	1	0	0	0

ID Code Number	Catchment	Name	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
	10	**Simpevarp 10**																	
ASM001491	10:1-32	Laxemarån	4	3	24	3	8	0	3	1	16	0	9	8	5	1	2	1	1
ASM002476	10:1	Sub-area	5	3	21	3	6	0	3	2	17	0	10	9	6	1	2	0	1
ASM001492	10:2		2	0	31	1	6	0	1	5	7	0	10	7	12	0	2	0	0
ASM001493	10:3		7	0	43	2	5	0	1	0	16	0	6	5	5	0	0	0	0
ASM001494	10:4		3	1	32	3	7	0	3	1	15	0	6	5	2	0	2	1	0
ASM001495	10:5		2	0	8	4	1	0	2	3	11	0	3	21	6	14	19	0	1
ASM001496	10:6		5	1	25	1	3	0	3	1	16	0	8	15	6	3	5	0	0
ASM001497	10:7		3	2	33	6	10	0	3	0	11	0	12	8	4	1	4	0	0
ASM002458	10:8-9		4	5	39	4	16	0	0	0	12	0	8	3	1	0	1	1	0
ASM001498	10:8	Sub-area	5	5	38	4	16	0	0	0	12	1	8	3	2	0	1	0	0
ASM001499	10:9		1	2	40	4	18	0	0	0	12	0	8	5	1	0	0	1	0
ASM001500	10:10-11		12	3	27	3	3	0	2	0	19	0	7	5	3	0	3	0	0
ASM002457	10:10	Sub-area	14	3	25	2	2	0	2	0	18	0	7	6	3	1	4	0	0
ASM001501	10:11		9	3	30	4	4	0	1	0	21	0	9	4	4	0	3	0	0
ASM001502	10:12-13		4	2	30	1	4	0	2	2	14	0	5	5	3	1	2	0	0
ASM002454	10:12	Sub-area	6	3	35	1	4	0	1	0	15	0	4	4	1	0	2	0	0
ASM001503	10:13		0	0	20	0	3	0	3	5	13	0	5	8	6	1	1	0	0
ASM001504	10:14-19		8	2	35	6	8	0	1	1	12	1	9	5	2	0	0	0	0
ASM002452	10:14	Sub-area	7	3	31	6	8	0	1	1	13	1	11	5	3	0	0	1	0
ASM001505	10:15-16		2	1	46	3	13	0	0	0	12	0	9	3	1	0	0	0	0
ASM002451	10:15	Sub-area	0	0	55	2	9	0	0	0	17	0	5	1	1	0	1	0	0
ASM001447	10:16	Fjällgöl	3	2	36	4	18	0	0	0	6	0	13	5	0	0	0	0	0
ASM001506	10:17		3	0	47	1	9	0	0	0	10	0	10	2	0	0	0	0	0
ASM001507	10:18-19		22	1	30	9	6	0	1	0	10	0	2	7	3	0	0	1	0
ASM002499	10:18	Sub-area	27	6	13	18	0	0	0	0	10	0	6	6	3	0	0	0	0
ASM001448	10:19	Grangöl	22	1	32	8	7	0	1	0	10	0	2	7	3	0	0	1	0
ASM001508	10:20-22		0	2	17	2	27	0	1	0	8	1	17	13	1	1	3	3	0
ASM002450	10:20	Sub-area	0	3	13	1	29	0	1	0	8	1	18	11	2	1	3	5	0

ID Code Number	Catchment	Name	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
ASM001509	10:21-22		1	0	28	2	21	0	0	0	7	0	14	16	0	0	4	0	0
ASM002453	10:21	Sub-area	2	1	11	1	23	0	0	0	2	0	18	35	0	0	7	0	0
ASM001510	10:22		0	0	41	3	19	0	0	0	11	0	11	1	0	0	1	1	0
ASM001511	10:23		2	6	36	7	7	0	1	0	13	0	9	8	3	0	1	4	0
ASM001512	10:24		1	3	25	6	1	0	1	1	19	1	15	17	4	2	1	3	0
ASM001513	10:25-26		6	3	44	5	9	0	0	1	8	0	9	4	2	0	1	0	0
ASM002459	10:25	Sub-area	0	0	5	0	5	0	0	4	4	0	21	13	15	1	3	0	0
ASM001446	10:26	Plittorpsgöl	6	4	50	5	9	0	0	0	9	0	8	2	0	0	1	0	0
ASM001514	10:27		0	0	15	0	3	0	1	1	7	1	9	14	5	2	4	0	0
ASM001515	10:28		1	2	9	1	1	0	6	7	20	0	4	6	16	1	3	0	0
ASM001516	10:29		12	4	35	2	7	0	2	1	13	0	7	7	2	0	1	0	0
ASM001449	10:30-32	Jämsen	2	4	9	2	2	0	8	3	23	0	4	11	10	2	2	1	1
ASM002480	10:30	Sub-area	2	3	10	2	2	0	7	3	23	0	5	11	10	1	2	1	1
ASM002484	10:31-32		4	11	4	1	1	0	15	2	22	0	1	13	13	4	6	0	1
ASM002482	10:31	Sub-area	4	10	4	1	1	0	16	2	22	0	1	13	12	4	6	0	1
ASM002478	10:32		4	47	0	0	0	0	9	4	20	0	0	3	14	0	0	0	0
	11	**Simpevarp 11**																	
ASM001444	11:1	Söråmagasinet	1	0	17	0	4	4	2	2	4	0	8	10	4	0	8	0	0
	12	Simpevarp 12																	
ASM002456	12:1-3	“Glostadsb.”	8	5	27	6	6	0	7	4	11	0	5	3	5	0	1	0	0
ASM002498	12:1	Sub-area	7	6	31	7	6	0	6	3	11	0	5	2	4	0	1	0	0
ASM002485	12:2		13	0	11	4	2	0	11	8	15	0	3	11	10	0	1	1	1
ASM002495	12:3		1	0	28	1	14	0	6	2	8	0	13	3	3	0	6	0	0
	13	**Simpevarp 13**																	
ASM001518	13:1	“Stålglob.”	1	0	28	2	3	1	4	1	11	0	10	9	7	1	2	0	0
	14	Simpevarp 14																	
ASM002461	14:1-2	“Stekebäcken”	1	0	32	2	8	3	5	2	14	0	5	4	5	0	1	0	0
ASM001517	14:1	Sub-area	1	0	33	3	5	1	7	2	17	0	5	2	6	0	0	0	0
ASM002497	14:2		0	0	31	1	13	5	0	1	8	0	6	8	4	1	2	0	0

ID Code Number	Catchment	Name	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
	15	Simpevarp 15																	
ASM002462	15:1	“S.Uvöbäcken”	0	0	17	1	8	2	8	6	12	0	4	5	8	1	1	0	0
	16	Simpevarp 16																	
ASM002463	16:1	Svartebäck	1	2	35	11	8	4	3	0	12	0	4	3	11	0	0	1	0
	17	Simpevarp 17																	
ASM001519	17:1-6	“Uthammarsån”	4	1	25	2	6	0	4	3	16	0	6	6	7	0	1	0	0
ASM002494	17:1	Sub-area	4	0	23	2	5	0	4	4	17	0	5	6	8	0	1	0	0
ASM001533	17:2		1	0	30	3	4	0	6	1	8	0	9	6	4	0	1	0	0
ASM001520	17:3		0	0	34	0	7	0	0	0	14	0	8	13	4	0	1	0	0
ASM001521	17:4		2	1	36	2	9	0	0	0	2	0	7	5	5	1	14	1	0
ASM001522	17:5		8	14	19	3	6	0	1	0	17	0	8	6	7	0	0	1	0
ASM001523	17:6		4	0	29	3	11	0	3	3	17	0	3	6	4	0	1	0	0
	18	**Simpevarp 18**																	
ASM001524	18:1-9	Släthulteb.	6	2	21	3	4	0	5	3	18	0	7	7	8	0	0	1	1
ASM002481	18:1	Sub-area	5	1	20	2	3	0	7	3	19	0	6	6	7	0	1	1	2
ASM001525	18:2		0	0	0	0	0	0	7	4	20	0	5	15	27	0	0	0	0
ASM001526	18:3		0	0	12	1	0	0	17	11	32	0	2	5	10	0	0	0	1
ASM001527	18:4-5		6	3	23	2	5	0	1	0	15	3	19	14	4	0	0	2	0
ASM002477	18:4	Sub-area	6	3	25	3	6	0	1	0	16	3	19	8	3	0	0	3	0
ASM001528	18:5		5	4	18	2	3	0	1	0	13	3	17	28	5	0	0	0	0
ASM001529	18:6-9		13	4	29	7	7	0	1	0	13	0	8	4	4	0	0	0	0
ASM002475	18:6	Sub-area	15	5	25	10	6	0	0	0	17	1	7	4	6	0	0	0	0
ASM001530	18:7-9		11	3	33	4	9	0	1	0	9	0	9	3	2	0	0	0	0
ASM002455	18:7	Sub-area	4	4	32	3	10	0	1	0	8	0	10	3	3	0	0	0	0
ASM001531	18:8		32	0	33	5	4	0	2	0	12	0	4	4	1	0	0	1	0
ASM001532	18:9		4	0	39	2	11	0	0	0	4	0	10	2	1	0	0	0	0
	19	**Simpevarp 19**																	
ASM002464	19:1	”Flakvarpeb.”	0	0	24	0	6	17	1	12	17	0	0	0	0	0	0	0	0

ID Code Number	Catchment	Name	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
	20	**Simpevarp 20**																	
ASM002465	20:1	”Jössesbäcken”	0	0	2	0	2	30	4	43	2	0	0	0	0	0	0	0	0
	21	**Simpevarp 21**																	
ASM002471	21:1	”Äspöbäcken”	0	0	20	0	28	11	2	0	32	0	0	0	0	0	0	0	8
	22	**Simpevarp 22**																	
ASM002466	22:1	”Stekflageb.”	0	0	39	1	13	11	3	0	19	0	0	0	0	0	0	0	0
	23	**Simpevarp 23**																	
ASM002467	23:1	“Vadvikeb.”	0	6	62	2	10	12	0	0	7	0	0	0	0	0	0	1	0
	24	**Simpevarp 24**																	
ASM002468	24:1	”Lindströmmeb.”	0	1	23	0	4	38	9	11	11	0	0	0	0	0	0	0	0
	25	**Simpevarp 25**																	
ASM002469	25:1	”Gloebäcken”	0	1	38	2	7	26	7	1	14	0	0	0	0	0	0	0	0
	26	**Simpevarp 26**																	
ASM002470	26:1	”Skölkebäcken”	0	0	37	4	9	22	5	0	20	0	0	0	0	0	0	0	0
	1	**Simpevarp 1**																	
ASM002446	1:1	“Långbonäsb.”	0	0	0	0	0	0	0	19	0	0	0	1	0	0	0	0	0
	2	**Simpevarp 2**																	
ASM002447	2:1	“Bodvikeb.”	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	20
	3	**Simpevarp 3**																	
ASM002448	3:1-2	“Sörviksån”	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0
ASM002473	3:1	Sub-area	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
ASM002472	3:2		0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
	4	**Simpevarp 4**																	
ASM002449	4:1	”Bjurhideb.”	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0
	5	**Simpevarp 5**																	
ASM001468	5:1-20	Kärrviksån	0	0	0	0	0	0	0	1	0	0	4	3	0	0	1	0	0
ASM002486	5:1	Sub-area	0	0	0	1	0	0	0	1	0	0	5	4	0	0	2	0	0
ASM001469	5:2		0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
ASM001470	5:3		0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0

ID Code Number	Catchment	Name	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
ASM001472	5:4		0	0	1	2	0	0	0	0	0	0	2	0	4	0	0	0	4
ASM001471	5:5		0	0	0	0	0	0	1	10	0	0	1	1	0	0	0	0	0
ASM001473	5:6-7		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
ASM002487	5:6	Sub-area	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASM001474	5:7		2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
ASM002488	5:8-14		0	1	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0
ASM001475	5:8	Sub-area	0	1	0	0	0	0	0	1	0	0	2	3	0	0	0	0	0
ASM001476	5:9		0	0	0	0	0	0	0	0	0	0	6	4	0	0	0	0	0
ASM001477	5:10-11		0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
ASM002489	5:10	Sub-area	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
ASM001478	5:11		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASM002496	5:12-14		0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
ASM002490	5:12	Sub-area	0	0	0	0	0	0	2	0	0	0	1	2	0	0	0	0	1
ASM001479	5:13		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASM001480	5:14		0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0

ID Code	Catchment Number	Name	Veg71 [%]	Veg72 [%]	Veg73 [%]	Veg74 [%]	Veg75 [%]	Veg76 [%]	Veg77 [%]	Veg78 [%]	Veg79 [%]	Veg80 [%]	Veg81 [%]	Veg82 [%]	Veg85 [%]	Veg91 [%]	Veg93 [%]	Veg96 [%]	Veg100 [%]
ASM001481	5:15-17		0	1	0	0	0	0	0	0	0	0	5	6	0	0	1	0	0
ASM002491	5:15	Sub-area	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	0	0
ASM001482	5:16-17		1	1	0	0	0	0	0	0	0	0	13	13	0	0	0	0	0
ASM002492	5:16	Sub-area	1	1	0	0	0	0	0	0	0	0	13	11	0	0	0	0	0
ASM001483	5:17		0	0	0	0	0	0	0	0	0	0	8	27	0	0	0	0	0
ASM002479	5:18		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
ASM001485	5:19-20		0	0	0	0	0	0	0	0	0	0	18	3	0	0	0	0	0
ASM002493	5:19	Sub-area	0	0	0	0	0	0	0	0	0	0	17	3	0	0	0	0	0
ASM002474	5:20		0	0	0	0	0	0	0	0	0	0	23	7	0	0	0	0	0
	6	**Simpevarp 6**																	
ASM001486	6:1	“Mederhultsån”	0	0	0	0	0	0	0	0	0	0	12	5	0	0	0	0	0
	7	**Simpevarp 7**																	
ASM001487	7:1-2	“Kåreviksån”	0	0	0	0	0	0	0	0	1	0	5	2	0	0	0	0	6
ASM001484	7:1	Sub-area	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
ASM001445	7:2	Frisksjön	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	6
	8	**Simpevarp 8**																	
ASM002460	8:1	“Pistlanbäcken”	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	9	**Simpevarp 9**																	
ASM001488	9:1-3	“Ekerumsån”	0	0	0	0	0	0	0	0	0	0	12	4	0	0	0	0	0
ASM002483	9:1	Sub-area	0	0	0	0	0	0	0	0	0	0	11	6	0	0	0	0	0
ASM001489	9:2		0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0
ASM001490	9:3		0	0	0	0	0	0	0	0	0	0	17	3	0	0	0	0	0
	10	**Simpevarp 10**																	
ASM001491	10:1-32	Laxemarån	0	0	0	0	0	0	0	0	0	0	5	4	1	0	0	0	1
ASM002476	10:1	Sub-area	0	0	0	0	0	0	0	0	0	0	5	5	1	0	0	0	0
ASM001492	10:2		0	1	1	0	0	0	0	0	0	0	11	3	0	0	0	0	0
ASM001493	10:3		0	0	0	0	0	0	0	0	0	0	7	3	0	0	0	0	0
ASM001494	10:4		0	0	0	0	0	0	0	0	0	0	15	4	0	0	0	0	0

ID Code	Catchment Number	Name	Veg71 [%]	Veg72 [%]	Veg73 [%]	Veg74 [%]	Veg75 [%]	Veg76 [%]	Veg77 [%]	Veg78 [%]	Veg79 [%]	Veg80 [%]	Veg81 [%]	Veg82 [%]	Veg85 [%]	Veg91 [%]	Veg93 [%]	Veg96 [%]	Veg100 [%]
ASM001495	10:5		0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0
ASM001496	10:6		0	0	0	0	0	0	0	0	0	0	4	3	0	0	0	0	0
ASM001497	10:7		0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0
ASM002458	10:8-9		0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0
ASM001498	10:8	Sub-area	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0
ASM001499	10:9		0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
ASM001500	10:10-11		0	0	0	0	0	0	0	0	0	0	10	2	0	0	0	0	0
ASM002457	10:10	Sub-area	0	0	0	0	0	0	0	0	0	0	12	2	0	0	0	0	0
ASM001501	10:11		0	0	0	0	0	0	0	0	0	0	5	3	0	0	0	0	0
ASM001502	10:12-13		0	0	0	0	0	0	0	0	0	0	15	11	0	0	0	0	0
ASM002454	10:12	Sub-area	0	0	0	0	0	0	0	0	0	0	18	6	0	0	0	0	0
ASM001503	10:13		0	0	0	0	0	0	1	0	0	0	11	21	0	0	0	0	0
ASM001504	10:14-19		0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	1
ASM002452	10:14	Sub-area	0	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0	0
ASM001505	10:15-16		0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	3
ASM002451	10:15	Sub-area	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0
ASM001447	10:16	Fjällgöl	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	7
ASM001506	10:17		0	0	0	0	0	0	0	0	0	0	7	11	0	0	0	0	0
ASM001507	10:18-19		0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	5
ASM002499	10:18	Sub-area	0	0	0	0	0	0	0	0	0	0	6	5	0	0	0	0	0
ASM001448	10:19	Grangöl	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	6
ASM001508	10:20-22		0	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ASM002450	10:20	Sub-area	0	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ASM001509	10:21-22		0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASM002453	10:21	Sub-area	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASM001510	10:22		0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASM001511	10:23		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ASM001512	10:24		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

ID Code	Catchment Number	Name	Veg71 [%]	Veg72 [%]	Veg73 [%]	Veg74 [%]	Veg75 [%]	Veg76 [%]	Veg77 [%]	Veg78 [%]	Veg79 [%]	Veg80 [%]	Veg81 [%]	Veg82 [%]	Veg85 [%]	Veg91 [%]	Veg93 [%]	Veg96 [%]	Veg100 [%]
ASM001513	10:25-26		0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	4
ASM002459	10:25	Sub-area	0	0	0	0	0	0	0	0	0	0	2	26	0	0	0	0	0
ASM001446	10:26	Plittorpsgöl	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5
ASM001514	10:27		0	0	0	0	0	0	0	0	0	0	24	13	0	0	0	0	0
ASM001515	10:28		0	0	0	1	0	0	0	0	0	0	5	8	9	0	0	0	0
ASM001516	10:29		0	0	0	0	0	0	0	0	0	0	2	5	0	0	0	0	0
ASM001449	10:30-32	Jämsen	0	0	0	0	0	0	0	0	1	0	4	3	2	0	0	0	5
ASM002480	10:30	Sub-area	0	0	0	0	0	0	0	0	1	0	4	3	2	0	0	0	6
ASM002484	10:31-32		0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
ASM002482	10:31	Sub-area	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
ASM002478	10:32		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11	**Simpevarp 11**																	
ASM001444	11:1	Söråmagasinet	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	15	17
	12	**Simpevarp 12**																	
ASM002456	12:1-3	“Glostadsb.”	0	0	0	0	0	0	0	4	1	0	3	3	0	0	0	0	0
ASM002498	12:1	Sub-area	0	0	0	0	0	0	0	4	1	0	2	3	0	0	0	0	0
ASM002485	12:2		0	0	0	0	0	0	0	1	0	0	0	7	0	0	0	0	0
ASM002495	12:3		0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0
	13	**Simpevarp 13**																	
ASM001518	13:1	“Stålglob.”	0	1	0	0	0	0	0	0	0	0	14	5	0	0	0	0	0
	14	**Simpevarp 14**																	
ASM002461	14:1-2	“Stekebäcken”	0	0	2	3	1	0	0	0	0	0	6	7	0	0	0	0	0
ASM001517	14:1	Sub-area	0	0	2	4	1	0	0	0	0	0	2	8	0	0	0	0	0
ASM002497	14:2		0	0	1	0	0	0	0	0	0	0	13	5	0	0	0	0	0
	15	**Simpevarp 15**																	
ASM002462	15:1	“S.Uvöbäcken”	1	2	3	3	0	0	0	0	0	0	6	12	0	0	0	0	0
	16	**Simpevarp 16**																	
ASM002463	16:1	Svartebäck	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0

ID Code	Catchment Number	Name	Veg71 [%]	Veg72 [%]	Veg73 [%]	Veg74 [%]	Veg75 [%]	Veg76 [%]	Veg77 [%]	Veg78 [%]	Veg79 [%]	Veg80 [%]	Veg81 [%]	Veg82 [%]	Veg85 [%]	Veg91 [%]	Veg93 [%]	Veg96 [%]	Veg100 [%]
	17	**Simpevarp 17**																	
ASM001519	17:1-6	“Uthammarsån”	0	0	0	0	0	0	0	0	0	0	10	7	0	0	0	0	0
ASM002494	17:1	Sub-area	0	0	0	0	0	0	0	0	0	0	10	9	0	1	0	0	0
ASM001533	17:2		0	0	0	0	0	0	0	0	0	0	17	10	0	0	0	0	0
ASM001520	17:3		0	0	0	0	0	0	0	0	1	0	13	3	0	0	0	0	0
ASM001521	17:4		1	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0
ASM001522	17:5		0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
ASM001523	17:6		0	0	0	0	0	0	0	0	0	0	10	6	0	0	0	0	0
	18	**Simpevarp 18**																	
ASM001524	18:1-9	Släthulteb.	0	0	0	0	0	0	0	1	0	0	5	5	1	0	1	1	0
ASM002481	18:1	Sub-area	0	0	0	0	0	0	1	1	0	0	5	7	1	0	0	1	0
ASM001525	18:2		0	0	0	0	0	0	0	0	0	0	5	9	0	0	7	0	0
ASM001526	18:3		0	0	0	0	0	0	0	0	0	0	1	4	0	0	1	0	0
ASM001527	18:4-5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
ASM002477	18:4	Sub-area	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
ASM001528	18:5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASM001529	18:6-9		0	0	0	0	0	0	0	0	0	0	7	3	0	0	0	0	0
ASM002475	18:6	Sub-area	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0
ASM001530	18:7-9		0	0	0	0	0	0	0	0	0	0	11	5	0	0	0	0	0
ASM002455	18:7	Sub-area	0	0	0	0	0	0	0	0	0	0	14	5	0	0	0	0	0
ASM001531	18:8		0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
ASM001532	18:9		0	0	0	0	0	0	0	0	0	0	23	2	0	0	0	0	0
	19	**Simpevarp 19**																	
ASM002464	19:1	”Flakvarpeb.”	0	1	0	0	0	0	0	0	13	2	0	0	0	0	0	0	7
	20	**Simpevarp 20**																	
ASM002465	20:1	”Jössesbäcken”	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
	21	**Simpevarp 21**																	
ASM002471	21:1	”Äspöbäcken”	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID Code	Catchment Number	Name	Veg71 [%]	Veg72 [%]	Veg73 [%]	Veg74 [%]	Veg75 [%]	Veg76 [%]	Veg77 [%]	Veg78 [%]	Veg79 [%]	Veg80 [%]	Veg81 [%]	Veg82 [%]	Veg85 [%]	Veg91 [%]	Veg93 [%]	Veg96 [%]	Veg100 [%]
	22	**Simpevarp 22**																	
ASM002466	22:1	”Stekflageb.”	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0	7
	23	**Simpevarp 23**																	
ASM002467	23:1	“Vadvikeb.”	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	24	**Simpevarp 24**																	
ASM002468	24:1	”Lindströmmeb.”	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
	25	**Simpevarp 25**																	
ASM002469	25:1	”Gloebäcken”	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
	26	**Simpevarp 26**																	
ASM002470	26:1	”Skölkebäcken”	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0

Appendix 5b

Different vegetation types of sample site catchments in the Simpevarp area

ID Code	Catchment Number	Localcode	Veg11 [%]	Veg12 [%]	Veg13 [%]	Veg14 [%]	Veg15 [%]	Veg23 [%]	Veg24 [%]	Veg25 [%]	Veg30 [%]	Veg41 [%]	Veg42 [%]	Veg43 [%]	Veg44 [%]	Veg45 [%]	Veg50 [%]	Veg62 [%]	Veg63 [%]
	Simpevarp 5																		
ASM001454	5:1-20	PSM002083	1	2	18	0	18	0	2	1	10	0	18	10	3	1	4	1	0
ASM001455	Part of 5:1-20	PSM002082	1	2	21	0	19	0	2	1	11	0	16	9	3	1	3	1	0
ASM001457	Part of 5:1-20	PSM002080	0	5	25	1	22	0	1	0	9	0	12	10	2	1	3	2	0
ASM001456	Part of 5:8-14	PSM002081	1	1	22	0	19	0	1	1	10	0	17	11	3	1	4	1	1
	Simpevarp 6																		
ASM001453	Part of 6:1	PSM002084	8	1	26	2	7	0	1	0	11	0	10	9	3	0	4	0	0
	Simpevarp 9																		
ASM001452	Part of 9:1-3	PSM002085	3	1	35	3	9	0	1	0	12	0	6	7	4	1	3	0	0
	Simpevarp 10																		
ASM001450	Part of 10:1-32	PSM002087	4	3	24	3	8	0	3	1	16	0	9	8	5	1	2	1	1
ASM001458	Part of 10:1-32	PSM002079	4	3	24	3	9	0	3	1	15	0	9	8	5	1	2	1	1
ASM001460	Part of 10:1-32	PSM002077	4	3	22	3	8	0	3	1	16	0	10	8	5	1	2	1	1
ASM001464	Part of 10:1-32	PSM002071	5	4	15	3	2	0	6	2	20	0	6	9	8	1	2	1	1
ASM001459	Part of 10:8-9	PSM002078	4	5	39	4	16	0	0	0	12	0	8	3	1	0	1	1	0
ASM001463	Part of 10:20-22	PSM002072	0	0	18	2	28	0	0	0	8	1	17	12	1	1	3	4	0
ASM001466	10:30-32	PSM002069	2	4	9	2	2	0	8	3	23	0	4	11	10	2	2	1	1
ASM001467	Part of 10:30-32	PSM002068	2	4	12	2	2	0	8	2	25	0	5	11	10	1	2	1	1
	Simpevarp 13																		
ASM001451	Part of 13:1	PSM002086	0	0	25	1	5	0	3	0	10	0	11	12	8	1	2	0	0
	Simpevarp 17																		
ASM001461	Part of 17:1-6	PSM002076	6	2	28	3	6	0	3	2	19	0	5	5	6	0	1	0	0
	Simpevarp 18																		
ASM001462	Part of 18:1-9	PSM002075	7	2	23	3	4	0	5	2	17	1	7	6	6	0	0	1	1
ASM001465	Part of 18:1	PSM002070	4	2	17	2	4	0	6	1	16	0	7	8	7	0	1	1	3

ID Code	Catchment Number	Localcode	Veg71 [%]	Veg72 [%]	Veg73 [%]	Veg74 [%]	Veg75 [%]	Veg76 [%]	Veg77 [%]	Veg78 [%]	Veg79 [%]	Veg80 [%]	Veg81 [%]	Veg82 [%]	Veg85 [%]	Veg91 [%]	Veg93 [%]	Veg96 [%]	Veg100 [%]
	Simpevarp 5																		
ASM001454	5:1-20	PSM002083	0	0	0	0	0	0	0	1	0	0	4	3	0	0	1	0	0
ASM001455	Part of 5:1-20	PSM002082	0	0	0	0	0	0	0	0	0	0	4	3	0	0	1	0	0
ASM001457	Part of 5:1-20	PSM002080	0	0	0	0	0	0	0	0	1	0	4	2	0	0	0	0	0
ASM001456	Part of 5:8-14	PSM002081	0	1	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0
	Simpevarp 6																		
ASM001453	Part of 6:1	PSM002084	0	0	0	0	0	0	0	0	0	0	12	5	0	0	0	0	0
	Simpevarp 9																		
ASM001452	Part of 9:1-3	PSM002085	0	0	0	0	0	0	0	0	0	0	13	1	0	0	0	0	0
	Simpevarp 10																		
ASM001450	Part of 10:1-32	PSM002087	0	0	0	0	0	0	0	0	0	0	5	4	1	0	0	0	1
ASM001458	Part of 10:1-32	PSM002079	0	0	0	0	0	0	0	0	0	0	4	4	1	0	0	0	1
ASM001460	Part of 10:1-32	PSM002077	0	0	0	0	0	0	0	0	0	0	5	4	1	0	0	0	2
ASM001464	Part of 10:1-32	PSM002071	0	0	0	0	0	0	0	0	0	0	4	4	2	0	0	0	3
ASM001459	Part of 10:8-9	PSM002078	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0
ASM001463	Part of 10:20-22	PSM002072	0	4	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ASM001466	10:30-32	PSM002069	0	0	0	0	0	0	0	0	1	0	4	3	2	0	0	0	5
ASM001467	Part of 10:30-32	PSM002068	0	0	0	0	0	0	0	0	1	0	3	1	0	0	0	0	3
	Simpevarp 13																		
ASM001451	Part of 13:1	PSM002086	0	1	0	0	0	0	0	0	0	0	19	3	0	0	0	0	0
	Simpevarp 17																		
ASM001461	Part of 17:1-6	PSM002076	0	0	0	0	0	0	0	0	0	0	7	6	0	0	0	0	0
	Simpevarp 18																		
ASM001462	Part of 18:1-9	PSM002075	0	0	0	0	0	0	0	1	0	0	5	5	1	0	0	1	0
ASM001465	Part of 18:1	PSM002070	0	0	0	0	0	0	1	3	0	0	7	5	2	0	0	2	0

Lake and watercourse index

Index for lakes and watercourses in the Simpevarp area