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## D5.2 Database of SEA, SIA and EIA factors

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#### 1. Introduction

#### 1.1. Background of TESS

The call ENV.2007.4.2.1.1 was about development of innovative methodologies for scaling down from the EU or national level to the regional and local level the analysis of policy impacts on multifunctional land uses and the economic activity, with special emphasis on new Member States as well as on Accession and Candidate Countries. It was to include participatory approach and to take into account stakeholder perspectives. The improved methodologies should enhance the scope of strategic environmental assessment (SEA), sustainability impact assessment (SIA) and environmental impact assessments (EIA). The expected impact is to enhance analysis of possible policy impacts (in particular related to rural development and to Cohesion Policy and Pre-Accession Aid) on sustainable development by the different Commission services.

TESS has a three-stage approach to these requirements. The first was to investigate how information on biodiversity and related environmental matters from the national and local levels are integrated into formal assessment and planning decisions, and also what information is needed by individual stakeholders for their daily management decisions (as explained in more detail in Hodder et al. 2009, Perella et al. 2009 and Sharp et al. 2009). The second stage used information from that first stage to develop a standard survey, of how environmental assessment functions at national and local levels across all EU member states (plus 4 potential members), and to seek associations with indicators of biodiversity and related environmental quality across these states that may indicate best practise. This pan-European survey (described in more detail in Kenward et al. 2010) leads to a database of factors relevant to SEA and EIA (and to SIA if this became a formal assessment); this report describes the database. The third stage will design a Transactional Environmental Support System (TESS) to encourage collection of information, especially from mapping at local level, not only for development subject to statutory Environmental Impact Assessments and other formal land-use planning processes, but especially also to guide the myriad daily decisions made less formally by those who manage land or species (see Kenward et al. 2009).

#### 1.2. Introduction to the Pan-European Survey and Database

In the TESS Description of Work, Work-Package 5 contains a "Survey of government practices [in which] Country Coordinators ... will collect data systematically by means of a questionnaire design based on findings of WP2 [and] apply a similar process at local level based on findings of WP3." The ultimate objectives of WP5 include "to assess how use of SEA and SIA has affected ecosystem services and biodiversity", also noting that "the GEM-CON-BIO project will provide further data to complement those gathered here on processes used for SEA, SIA and EIA, for construction in WP6 of matrices relating policies on land uses and economic activity to trends in ecosystem services and biodiversity in cultivated areas as well as in protected areas."

In the reports from WP2 and WP3, it was noted that SIA (Sustainability Impact Assessment) has not been formalised in legislation at national or European levels and is best described as a methodological tool being used in a wide variety of sectors. It was also noted that formal environmental decision by government at various levels includes Biodiversity Action Plans (BAPs, NBSAPs) under Article 6 of the Convention on

Biological Diversity, planning for payments under the Common Agricultural Policy (CAP), and Land Use Planning (LUP) for all developments, whether or not EIA or SEA are also involved. Questions from WP2 on governance of all these formal decision processes therefore became part of EU-wide survey in WP5. So too did questions from WP3, on decision-making and related information requirements of local administrations, as well as on attitudes of local authorities towards managers of land and species and the extent of their participation in the formal decision processes. This was done systematically across countries with questionnaires refined carefully from the WP2 and WP3 work by partners.

### 2. The Pan-European Database

The variation in ecological and economic conditions across Europe, when combined with the rich diversity of cultural history and governance processes, provides a rich field for analyses of associations between existing conditions and environmental trends. To support such analyses, the Pan-European database of TESS contains 65 variables and 31 country cases. The analyses need to be based in an understanding of the origins of the variables, categories that provide an analytic framework, and characteristics of the individual measures and indices.

#### 2.1. Origins of the Data

The 65 variables were provided by three different activities. The Pan-European Survey provided 27 variables, after an elimination process for those questions that either gave similar answers across most countries or appeared to be misinterpreted in some cases. Another 28 variables were selected by ERENA from data collated by the European Environment Agency (and in some cases reworked extensively by ERENA) or by the United Nations. Ten variables on governance and participation were collected in the previous GEMCONBIO project.

#### 2.1.1 Pan European Survey

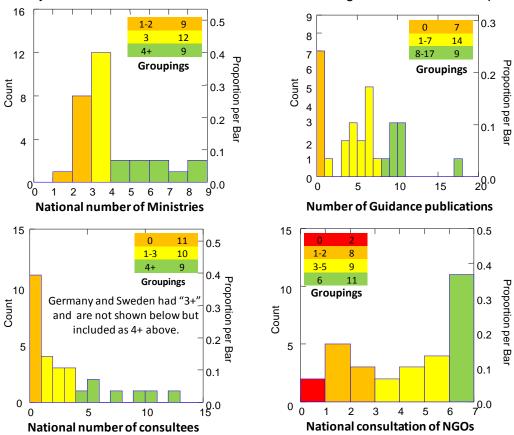
Methodology of the survey is described in Deliverable 5.1 (Kenward *et al.* 2009) and is not repeated here in detail. There were separate questionnaires for national level governments (Appendix 1) and for government at the lowest administrative level (LAU2, Appendix 2). In each case, Country Coordinators in the 27 EU states plus Norway, Switzerland, Turkey and Ukraine were required to approach appropriate officers and ask them to provide the information for the questionnaires.

At national level, Country Coordinators first needed to identify individuals responsible for the different decision areas (SEA, EIA, BAP/NBSAP, CAP, LUP), sometimes with help from one government representative, and then to approach these individuals by e-mail, telephone phone or in person for help completing the appropriate sections of the standard questionnaires; a few coordinators were able to complete the forms mostly from personal knowledge. The process was easiest in those countries where environmental policy is administered at national level by only one or two ministries or agencies, and most challenging where environmental policy is strongly devolved. These questionnaires were completed for 30 countries. In two cases, where ongoing devolution was resulting in substantially differing environmental governance (Belgium, UK), the area used to represent the state was the largest region (Walloon, English).

Questionnaires for local administrations were translated by Coordinators into national languages and provided for review accompanied by a standard introductory letter, then completed and checked by e-mail, telephone or (in a very few cases) personal visit. The sampling was a stratified, randomised design, aiming to complete five questionnaires in each country, irrespective of the country's population size, from the lowest level of public administration involving elections (LAU2). Listings on LAU2s on the Eurostat web site (NUTS 2009) are in geographically separated regions for each country, so that five lists could be selected based on landscape and/or culture in nationally recognised regions. For each of the 5 lists, a random sample was produced of 5 LAU2s that had a population of at least 200 (to achieve a representative administration) and a population density of <150 inhabitants per square kilometre (defined as rural in ESPON 2009, which makes clear that there is no standard definition of rurality for EU policy or statistical purposes). It was possible to sample consistently in areas with population densities below 150/km², apart from the very high density communities on Malta and Greek islands.

Country coordinators were asked to approach the first administration on each of the 5 lists and only to move down the list in the absence of cooperation. Problems arose in a countries where LAU2s lacked any responsibility for formal (EIA, SEA or LUP) or even for routine management of community areas. In these cases the Country Coordinators also interviewed the LAU1 administration one level above the randomly selected LAU2 in order to obtain information specific to these topics. Data were obtained from at least 5 local administrations in 21 countries and from at least 3 in 7 others.

In 4 cases, variables at national level were derived from lists of ministries with environmental decision-making roles, statutory government or NGO consultees during formal assessments, guidance publications. In these cases the values recorded for each country were transformed to a smaller number of categories as shown in depicted below.



#### 2.1.2 SEBI and CORINE data

Streamlining European 2010 Biodiversity Indicators is an initiative launched in 2004, in which the European Environment Agency (EEA) collaborates with DG Environment of the European Commission, the European Centre for Nature Conservation and United Nations Environment Programme to make data available on the EEA website (http://reports.eea.europa.eu/technical\_report\_2007\_11/en) and report trends, initially with a view to the 2010 biodiversity loss target. TESS assessed which of the 26 indicators had most comprehensive coverage across the 31 countries surveyed, and found 1 available for all countries, a further 2 available in all the 27 current EU states and 2 more (which each gave 2 variables in the database) in the EU25; none of these 5 indicators assessed biodiversity directly, but an index of farmland bird abundance was available for 22 of the 31 surveyed states.

Coordination of Information on the Environment (CORINE) is a European programme initiated in 1985 by the European Commission, aimed at gathering information relating to the environment on certain priority topics for the European Union (air, water, soil, land cover, coastal erosion, biotopes, etc.). CORINE is now the responsibility of the EEA (<a href="http://www.eea.europa.eu/publications/COR0-landcover">http://www.eea.europa.eu/publications/COR0-landcover</a>). CORINE was used to derive an index of negative impacts on biodiversity, based on the rate of conversion to land uses that are recognised to be detrimental for species and habitats, particularly those protected under Commission Directives 79/409/EEC (Birds Directive) and 92/43/EEC (Habitats Directive). Specifically, we used the rate of increase in built-up areas (CLC categories 11 and 12; level 2) to estimate urban sprawl inside and outside Natura 2000 sites, assuming a positive relationship between urban sprawl and biodiversity loss. Urban sprawl inside Natura 2000 was assumed to be a particularly serious indicator of negative impacts on European biodiversity, reflecting the limitations of environmental policies to secure the most important natural areas in Europe. We also estimated decrease in semi-natural habitats in the same way, using CLC categories 32 and 33.

#### 2.1.3 Other international data

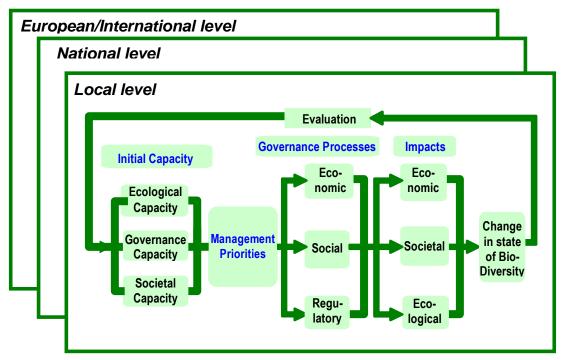
Data came from databases managed by the United Nations (http://esa.un.org/unpp/) and the World Bank (http://data.worldbank.org/indicator). Estimates of country area and size of human population, should be robust, with national values for Gross Domestic Product (GDP) probably also reasonably representative. However, as definitions of urbanisation and unemployment differ between countries, the basis for estimation of these variables was certainly not uniform. Six indicators of governance quality have been estimated by the World Bank since 1996 and are widely used although discussion continues as to their validity (Kauffman *et al.* 2010).

#### 2.1.4 GEMCONBIO

Statistics on the numbers of hunters and anglers in the EU were collected from national organisations representing these activities during the preceding project on Governance and Ecosystem Management for Conservation of Biodiversity (Manos & Papathansiou 2008). The majority of cases were based on license data and should therefore have been be robust. For TESS, these data were cross-checked against databases held by the partner FACE and by the European Anglers Alliance. Data for countries outside EU were collected from government or private sources by relevant Country Coordinators.

#### 2.2. Analytic Framework

The derivation of indicators for the database and analysis in Task 6.1 was based on the analytic framework developed in GEMCONBIO and used for analysis of governance relationships with conservation in Kenward *et al.* (in press).



The analysis Framework from GEMCONBIO that is used as a basis for the governance indicators derived by the TESS Pan-European survey.

Broadly speaking, the availability of particular institutions and of information in various categories (indicated by its current use) are measures of Governance Capacity, together with the 6 governance indices from the World Bank. Population density and GDP measures, together with tendency of governments to embrace knowledge leadership (Kenward et al. in press) are measures of Societal Capacity and the proportions of broad CORINE ecosystem categories are measures of Ecological Capacity. These have Management Priorities about which questions were asked directly and indirectly (e.g. in terms of data demand for social, economic and ecological aspects of ecosystem services, with further environmental priorities indicated by national extent of protected areas. Economic, Regulatory and other Social Processes are indicated, respectively and inter alia, by the provision of agri-environmental funding under the CAP, by the levels at which decisions are made and by presence or absence of different consultation practises as recorded in the survey. Societal impacts are indicated in the guestionnaires by attitudes of local administrations to wildlife costs and benefits, whereas ecological variables are Streamlined European Biodiversity Indicators and remote sensing data on, for example, urban sprawl. Economic impacts were measured as the number of hunters and anglers that the national environments were supporting.

# 2.3. Descriptions of the data

The 23 variables used in the analysis are tabulated below. There are descriptions for each in the following sections.

Variabl	e Type/Category	ID	Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Capacity	Societal	_	National Knowledge Leadership (F16)
. ,			National Population Density
			National Population Growth Rate
			National GDP Per Capita
			National Annual Growth Rate of GDP
			National Unemployment Rate National Proportion of Population Urbanized
			Local Population Size (F2)
			Local Population Density (F1)
	Governance	•	Voice and accountability
			Political Stability
			Government Effectiveness
			Regulatory Quality Rule of Law
			Control of Corruption
			National number of Ministries (F32)
			National number of consultees (F15)
		18	National consultation of NGOs (F17)
			Number of guidance publications (F29)
			Local digital enablement index (F33)
			Data accessibility Index (F30)
			Data quality Index (F30) Proportion of species with unknown status (SEBI-3)
			Proportion of habitats with unknown status (SEBI-5)
	Ecological	_	Country area
			National land cover by artificial surfaces (%, CORINE 1)
		27	National land cover by agricultural areas (%, CORINE 2)
			National land cover by forest (%, CORINE 31)
			National land cover by other semi-natural areas (%, CORINE 32+33)
			National surface covered by wetlands (%, CORINE 4) National surface covered by water bodies (%, CORINE 5)
Priority	Social		Local social considerations index (F34)
lionty	Economic	_	
litionity		33	Local economic considerations index (F34)  Local environmental considerations index (F34)
. Honly	Economic	33 34	Local economic considerations index (F34)
Tionty	Economic	33 34 35 36	Local economic considerations index (F34) Local environmental considerations index (F34) Proportion of country surface in protected areas Proportion of country surface in SPA
lionty	Economic	33 34 35 36 37	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI
Tionty	Economic Environmental	33 34 35 36 37 38	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)
·	Economic Environmental Socio-economic	33 34 35 36 37 38 39	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)
Process	Economic Environmental	33 34 35 36 37 38 39	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)
·	Economic Environmental Socio-economic	33 34 35 36 37 38 39 40 41	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)
·	Economic Environmental Socio-economic	33 34 35 36 37 38 39 40 41 42	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)
·	Economic Environmental  Socio-economic Social	33 34 35 36 37 38 39 40 41 42 43 44	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)
·	Economic Environmental Socio-economic	33 34 35 36 37 38 39 40 41 42 43 44	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)
·	Economic Environmental  Socio-economic Social	33 34 35 36 37 38 39 40 41 42 43 44 45 46	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)
·	Economic Environmental  Socio-economic Social  Economic	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)
·	Economic Environmental  Socio-economic Social	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)
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Process	Economic Environmental  Socio-economic Social  Economic Regulatory	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)
Process	Economic Environmental  Socio-economic Social  Economic Regulatory	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (SEBI-8)
Process	Economic Environmental  Socio-economic Social  Economic Regulatory	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)
Process	Economic Environmental  Socio-economic Social  Economic Regulatory  Societal	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity loss
Process	Economic Environmental  Socio-economic Social  Economic Regulatory	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity loss  Number of hunters (GEMCONBIO+)
Process	Economic Environmental  Socio-economic Social  Economic Regulatory  Societal	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity loss
Process	Economic Environmental  Socio-economic Social  Economic  Regulatory  Societal  Economic	33 34 35 36 37 38 39 40 41 42 43 44 45 50 51 52 53 54 55 56 57 58	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  NGO consultation intensity index (F36)  NIGO consultation intensity index (F19)  Local disempowerment index (F6)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National number of assessments (T2)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity loss  Number of hunters (GEMCONBIO+)  Number of anglers (GEMCONBIO+)
Process	Economic Environmental  Socio-economic Social  Economic  Regulatory  Societal  Economic	33 34 35 36 37 38 39 40 41 42 43 44 45 50 51 52 53 54 55 56 57 58 59 60	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity (SEBI-26)  Public concern over biodiversity loss  Number of hunters (GEMCONBIO+)  Urban sprawl rate inside Natura 2000 (CORINE+)  Urban sprawl rate outside Natura 2000 (CORINE+)  Urban sprawl for whole country (CORINE+)
Process	Economic Environmental  Socio-economic Social  Economic  Regulatory  Societal  Economic	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity (SEBI-26)  Public concern over biodiversity (SEBI-26)  Public as prawl rate inside Natura 2000 (CORINE+)  Urban sprawl rate inside Natura 2000 (CORINE+)  Urban sprawl rate outside Natura 2000 (CORINE+)  Urban sprawl for whole country (CORINE+)
Process	Economic Environmental  Socio-economic Social  Economic  Regulatory  Societal  Economic	33 34 35 36 37 38 39 40 41 42 43 44 45 50 51 52 53 54 55 56 57 58 59 60 61 62	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity loss  Number of hunters (GEMCONBIO+)  Number of anglers (GEMCONBIO+)  Urban sprawl rate inside Natura 2000 (CORINE+)  Urban sprawl for whole country (CORINE+)  Semi-natural loss rate for whole country (CORINE+)  Number of invasive species (SEBI-10)
Process	Economic Environmental  Socio-economic Social  Economic  Regulatory  Societal  Economic	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity Ioss  Number of hunters (GEMCONBIO+)  Urban sprawl rate inside Natura 2000 (CORINE+)  Urban sprawl rate outside Natura 2000 (CORINE+)  Urban sprawl for whole country (CORINE+)  Semi-natural loss rate for whole country (CORINE+)  Number of invasive species (SEBI-10)  Farmland bird index (SEBI-1a)
Process	Economic Environmental  Socio-economic Social  Economic  Regulatory  Societal  Economic	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64	Local economic considerations index (F34)  Local environmental considerations index (F34)  Proportion of country surface in protected areas  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SPA  Proportion of country surface in SCI  Local data demand for ecosystem biodiversity and supporting services (F14b)  Local data demand for ecosystem provisioning, regulating and cultural services (F14b)  Local responsibility for informal decisions (F7)  Consultation intensity index (F35)  NGO consultation index (F36)  NGO influence index (F38)  Private versus public responsibility for EIA monitoring (F19)  Local disempowerment index (F6)  Private versus public responsibility for paying EIA monitoring (F20)  Data availability index (F14a)  National number of assessments (T2)  National assessment regulatory intensity (F18)  National Agri-Environment Schemes index (F25-28)  Wildlife positivity index (F39)  Ecosystem use/protection index (F40)  Natura 2000 Sufficiency Index (SEBI-8)  Public Awareness of Biodiversity (SEBI-26)  Public concern over biodiversity loss  Number of hunters (GEMCONBIO+)  Number of anglers (GEMCONBIO+)  Urban sprawl rate inside Natura 2000 (CORINE+)  Urban sprawl for whole country (CORINE+)  Semi-natural loss rate for whole country (CORINE+)  Number of invasive species (SEBI-10)

## 2.3.1 Capacity variables

# 2.3.1.1 Capacity variables: Societal

Variable Type/Category		ID	Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Capacity	Societal	1 National Knowledge Leadership (F16)	
		2	National Population Density
		3	National Population Growth Rate
			National GDP Per Capita
		5	National Annual Growth Rate of GDP
			National Unemployment Rate
		7	National Proportion of Population Urbanized
		8	Local Population Size (F2)
		9	Local Population Density (F1)

ID	Source	Name	Rationale	Description
1	F16	National Knowledge Leadership	Consultation upwards for EIA plus SEA	This variable came from responses to the national level questionnaire. Specifically from responses to Q 4 and 9. As regards SEA (Q4) if they did not report referring to institutions at the European level they were scored 0, if they did they were scored 2. In terms of EIA (Q9), they were scored 1 if there was written guidance and 1 if they were expected to ask higher level for guidance in specific circumstances. The codes from the EIA responses were summed and added to the value for the SEA. The highest score possible was 4, the lowest 0.
2	UN	National Population Density	UN data for 2010	http://esa.un.org/unpp/
3	UN	National Population Growth Rate	UN data for 2005- 2010	http://esa.un.org/unpp/
4	World Bank	National GDP per capita	World Bank data for 2005	http://data.worldbank.org/indicator/NY.GDP.PCAP.KD
5	World Bank	National Annual Growth Rate of GDP	World Bank data for 1997-2007	http://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG
6	World Bank	National Rate of Unemployment	World Bank data for 2006	http://data.worldbank.org/indicator/SL.UEM.TOTL.ZS
7	World Bank	National Proportion of Population Urbanized	World Bank data for 2005	Urban population as defined by national statistical offices, calculated using World Bank population estimates and urban ratios from the United Nations World Urbanization Prospects http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS
8	F2	Local Population Size	Population in local (LAU2) administration	This variable is the average population in the 25 randomly selected LAU2s.
9	F1	Local Population Density	Rural LAU2 population density	This variable is the average population density per km <sup>2</sup> in the 25 randomly selected LAU2s.

## 2.3.1.2 Capacity variables: Governance

Variab	le Type/Category	ID	Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Capacity	Capacity Governance		Voice and accountability
		11	Political Stability
		12	Government Effectiveness
		13	Regulatory Quality
		14	Rule of Law
		15	Control of Corruption
		16	National number of Ministries (F32)
		17	National number of consultees (F15)
		18	National consultation of NGOs (F17)
		19	Number of guidance publications (F29)
		20	Local digital enablement index (F33)
		21	Data accessibility Index (F30)
		22	Data quality Index (F30)
		23	Proportion of species with unknown status (SEBI-3)
		24	Proportion of habitats with unknown status (SEBI-5)

ID	Source	Name	Rationale	Description
10		Voice and accountability		
11		Political Stability		
12	World	Government Effectiveness	All are given as	Kaufmann-Kraay-Mastruzzi (KKM) Worldwide Governance Indicators have been computed by World Bank since 1996 as
13	Bank	Regulatory Quality	percentile scores	six key dimensions of governance. A convenient source is http://en.wikipedia.org/wiki/Worldwide_Governance_Indicators
14		Rule of Law		
15		Control of Corruption		
16	F32	National number of Ministries	Number of ministries making environmental decisions	This variable is the number of ministries listed on the "Government responsibilities" page of the national level questionnaire.
17	F15	National number of consultees	Number of official consultees for EIA	This variable was taken from the information returned on the "Government responsibilities" page where the respondents were asked to give the names of the designated mandatory consultees under Art 6.1 of EIA Directive and Art 6.3 of SEA Directive that are to be consulted by those who carry out the appropriate environmental assessment. In this case we restricted the responses to reflect the LEGAL standpoint, not what might happen in some cases.
18	F17	National consultation of NGOs	Number of other consultees	This variable was compiled from responses to Q11 in the National level questionnaire. It was simply a count of the number of NGOs that frequently comment on proposals where EIAs are required.
19	F29	Number of Guidance publications	Number of guidance publications	This variable was compiled from responses to Q16(a & b) on the national questionnaire, where respondents were asked to give examples of publications of formal and practical guidance conservation for authorities making decisions on cases requiring SEAs/EIAs/LUP.
20	F33	Local digital enablement index	Data occasional, systematic, GPS- based	This variable comes from the responses to 3a & b in the local questionnaire. A local LAU2 scored two points if they used and could name a GIS and one point if they used a GIS but could not name it in 3a. This was added to responses in 3b where they scored 3 if they took part in a scientific study of species or habitats, regardless of other responses for this question, 2 if they kept records from systematic survey or 1 if they kept occasional records. The maximum any LAU2 could score was 5. For each country we took an average of the responses from the LAU2s surveyed.

21	F30	Data accessibility Index	Data accessibility	This variable was compiled from responses to Q19a-d in the national questionnaire. Respondents were scored as: 2 each for a "yes", 1 for a "some" and zero for "no" to Q19a, and b, while for Q19c & d, they were scored 2 for a "no", 1 for a "some" and 0 for a "yes". These responses were summed, with a maximum available of 8.
22	F30	Data Quality Index	Data quality sum of positives	This variable was compiled from responses to Q19e-j in the national questionnaire. Respondents were scored as: 2each for a "yes", 1 for a "some" and zero for "no". These responses were summed, with a maximum available of 12.
23	SEBI-3	Proportion of species with unknown status	% of species having unknown status.	Percentage of species (Habitats Directive) assessed by member states as having Unknown status. Species in each country are assessed per biogeographical region. Marine species not included. (http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec)
24	SEBI-5	Proportion of habitats with unknown status	% of habitats having unknown status.	Percentage of habitats (Habitats Directive) assessed by member states as having Unknown status. Habitats in each country are assessed per biogeographical region. (http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec)

## 2.3.1.3 Capacity variables: Ecological

Variable Type/Category	ID	Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Ecological	25	Country area
	26	National land cover by artificial surfaces (%, CORINE 1)
	27	National land cover by agricultural areas (%, CORINE 2)
	28	National land cover by forest (%, CORINE 31)
	29	National land cover by other semi-natural areas (%, CORINE 32+33)
	30	National surface covered by wetlands (%, CORINE 4)
	31	National surface covered by water bodies (%, CORINE 5)

ID	Source	Name	Rationale	Description
25	World Bank	Country area		http://data.worldbank.org/indicator/AG.SRF.TOTL.K2
26	CORINE	National land cover by artificial surfaces (%)		Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps . CLC Category 1 (Level 1)
27	CORINE	National land cover by agricultural areas (%)	Standard habitats from remote- sensed data 1990- 2000-2006	Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps . CLC Category 2 (Level 1)
28	CORINE	National land cover by forest (%)		Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps . CLC Category 31 (Level 2)
29	CORINE	National land cover by semi- natural areas (%)		Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps . CLC Category 32+33 (Level 2)
30	CORINE	National land cover by wetlands (%)		Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps . CLC Category 4 (Level 1)
31	CORINE	National land cover by water bodies (%)		Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps . CLC Category 5 (Level 1)

## 2.3.2 Priority variables

Variable Type/Category		ID	Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Priority Social 32 Local social considerations index (F34)		Local social considerations index (F34)	
	Economic	33	Local economic considerations index (F34)
	Environmental	34	Local environmental considerations index (F34)
			Proportion of country surface in protected areas
		36	Proportion of country surface in SPA
		37	Proportion of country surface in SCI
		38	Local data demand for ecosystem biodiversity and supporting services (F14b)
	Socio-economic	39	Local data demand for ecosystem provisioning, regulating and cultural services (F14b)

ID	Source	Name	Rationale	Description
32	F34	Local social considerations index	Social considerations	These variables come from the responses to Q1o. in the local questionnaire. The local authorities were asked to estimate the proportion of their time was spent assessing either: the
33	F34	Local economic considerations index	Economic considerations	social, the economic, or the environmental aspects when making statutory decisions on land use (SEA, EAI, LUP). They were asked to do this individually for all sizes of
34	F34	Local environmental considerations index	Environmental considerations	decisions – in actuality most of the respondents made the same response for all sized areas but the averages across all sizes of decisions were used if there was a response across the size ranges. Within a country the average response of the LAU2s was used.
35	UN	Proportion of country surface in protected areas		UN data for 2008, obtained from http://data.worldbank.org/indicator/ER.LND.PTLD.TR.ZS
36	EC	Proportion of country surface in SPA	Interest in habitat protection	% of Total National Area within Terrestrial SPA http://ec.europa.eu/environment/nature/natura2000/baromete r/docs/SPA_EU27.pdf
37	EC	Proportion of country surface in SCI		% of Total National Area within Terrestrial SCI http://ec.europa.eu/environment/nature/natura2000/baromete r/docs/SPA_EU27.pdf
38	F14b	Local data demand for ecosystem biodiversity and supporting services	Sum for supporting + biodiversity	This variable comes from the responses to Q3d. 1-3 and Q3d.10 – 12 in the local questionnaire. Authorities were given a score of one for each data type that was needed, with a maximum here of 6 if all types of biodiversity and supporting services data were needed, regardless of whether or not it was available. Within a country the average response of the LAU2s was used.
39	F14b	Local data demand for ecosystem provisioning, regulating and cultural services	Sum for provisioning + regulating + cultural	This variable comes from the responses to Q3d. 4-9 and Q3d.13 – 15 in the local questionnaire. Authorities were given a score of one for each data type that was needed, with a maximum here of 9 if all types of biodiversity and supporting services data were needed, regardless of whether or not it was available. Within a country the average response of the LAU2s was used.

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## 2.3.3 Process variables

## 2.3.3.1 Process variables: social

Variab	Variable Type/Category		Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Process Social		40	Local responsibility for informal decisions (F7)
			Consultation intensity index (F35)
			NGO consultation index (F36)
			NGO influence index (F38)
		44	Private versus public responsibility for EIA monitoring (F19)

ID	Source	Name	Rationale	Description
40	F7	Local responsibility for informal decisions	Responsibility_ informal_ decisions	This variable comes from the responses to Q1a-g., yeses were coded as 1and these were summed, with a maximum score of 13 if there was responsibility for all listed matters on private land as well as land owned by the local authority. Within a country the average response of the LAU2s was used.
41	F35	Consultation intensity index	Composite_ consulting intensity	This variable comes from responses to Q1i-m. & Q1q. in the local questionnaire. Responses in Q1i-m. were quantified as: Mandatory or Always as 5, Usually as 4, Often as 3, Occasionally as 2 and Never as 1. Responses to Q1q were ranked as follows: If only one organisation was listed as being consulted then the response was ranked as 1, if more than two were listed but there was variation in the number of times they were consulted per year then the response was ranked 2, if more than 1 organisation was given and they were consulted equally the response was ranked 3. The average of the responses to Q1i-m was calculated and multiplied by the rank for the responses to Q1q. Within a country the average response of the LAU2s was used.
42	F36	NGO consultation index	Ratio of NGO to government consultation	This variable was calculated from the responses to Q1q in the local questionnaire. The number of NGO organisations and the number of government agencies listed were counted, with a ratio calculated of NGO/Government – the higher the value the more consultation with NGOs. Within a country the average response of the LAU2s was used.
43	F38	NGO influence index	Difference of NGO dialogue and influence	This variable was calculated from the responses to Q1j & k in the local questionnaire. Responses were quantified as: Mandatory or Always as 5, Usually as 4, Often as 3, Occasionally as 2 and Never as 1. A For each country we took an average of the responses from the LAU2 surveyed for each question. The average of the score for influence was subtracted from the average of the score for dialogue. Positive values represent more dialogue than influence; negative values represent more influence than dialogue.
44	F19	Private versus public responsibility for EIA monitoring	Private, public, civic index responsibility for EIA monitoring	This variable is taken from responses to Q8e in the national level questionnaire. An index was calculated for who undertook monitoring of a proposal post development, based on the relative responsibility of the government, developers and NGOs (e.g. +3= developer only, +2= developer +consultant, +1= developer +government, 0=developer+government + NGO, -1=government only, -2=government+ NGO, -3 = NGO only).

## 2.3.3.2 Process variables: economic and regulatory

Variab	Variable Type/Category		Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Process	Process Economic		Local disempowerment index (F6)
		46	Private versus public responsibility for paying EIA monitoring (F20)
			Data availability index (F14a)
	Regulatory		National number of assessments (T2)
		49	National assessment regulatory intensity (F18)
		50	National Agri-Environment Schemes index (F25-28)

ID	Source	Name	Rationale	Description
45	F6	Local empowerment index	Sum of LAU2 responsibility scores for assessments	This variable is from responses to the national questionnaire in Q1, Q6, Q14 on the level where decisions on assessments are made for (SEA, EIA, LUP) and LAU2 answers to Q1p. Responses were coded: 2 where national indicated that LAU2 (municipalities) are responsible and LAU2s indicate decisions, or LAU2s record much decision-making consistently; 1 where national didn't indicate LAU2 responsibility but consultation, or a few decisions were recorded by some LAU2s; 0 where national did not indicate LAU2 responsibility and no LAU2 decisions were recorded. The responses for all 3 questions were summed and the total divided by the number of responses times 2. The higher the proportion, the more power the local government had over decisions.
46	F20	Private versus public responsibility for paying EIA monitoring	Private, public payment index	This variable is taken from responses to Q8d in the national level questionnaire. An index of relative responsibility of developer and government for payment (e.g. +1=developer alone, 0=developer+government, -1=government alone) was calculated.
47	F14a	Data availability index	ratio_of_ data_ needed_ that_ were_availabl e_to_that_ unavailable	This variable was calculated from responses to Q3d.1-15 in the local level questionnaire. For those data that were reported as "needed" by the local authorities we summed up the number that respondents indicated they could access "all" or "most" of this data (considered available) and also summed up the number where they reported only "some" or "none" of the data could be accessed (unavailable). We divided the number available by the number unavailable for each LAU2 surveyed. Within a country the average response of the LAU2s was used.
48	T2	National number of assessments	SEA_EIA_ MATRIX_ STATISTIC	This variable comes from information gathered in the national questionnaire. If both the number of SEAs and EIAs are known, we took an average; if only one was known we used that figure.  *NB we extrapolated from LAU2s surveyed in Italy and Poland.*
49	F18	National assessment regulatory intensity	sum of codes: alternatives, mitigation, monitoring	This variable is taken from responses to Q8a,b & c in the national level questionnaire. Responses to these three questions regarding mitigation, alternative approaches and monitoring were categorised into voluntary – no mandatory responses – coded as 0, Sometimes mandatory – only one mandatory response to these questions – coded as 1, Sometimes Mostly mandatory – two of the three responses were mandatory or yes in the instance of monitoring undertaken, Mandatory – all of the responses were mandatory or yes.
50	F25-28	National Agri- environment Schemes index	Sum AES: designation, map, baseline, monitoring	This variable is taken from responses to Q23, 27, 25a & d in the national level questionnaire. Values were coded from Q23: 0 if funds only available on Natura 2000 lands, 1 if available there and other designated land, 2 if available everywhere provided certain conditions are met. Values were coded from Q27 as: No map required = 0, map but not allowed to be digital = 1, map and can be digital = 2. Values were coded from Q25a as: no requirement for prior information = 1, requirement for prior information = 2. Values were coded for Q25d as: No monitoring of compliance with agri-environment option implementation = 0, monitoring of compliance only but not environmental outcomes = 1, monitoring of both compliance and environmental outcomes = 2. Codes for each country were summed to give a value out of a possible 8.

## 2.3.4 Impact variables

## 2.3.4.1 Impact variables: societal and economic

Variabl	Variable Type/Category		Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)		
Impact	Impact Societal		Wildlife positivity index (F39)		
			Ecosystem use/protection index (F40)		
			Natura 2000 Sufficiency Index (SEBI-8)		
			Public Awareness of Biodiversity (SEBI-26)		
			Public concern over biodiversity loss		
	Economic 5		Number of hunters (GEMCONBIO+)		
			Number of anglers (GEMCONBIO+)		

ID	Source	Name	Rationale	Description
51	F39	Wildlife positivity index	ratio of benefits to costs from biodiversity	This variable attempts to describe the attitudes of local authorities to the people that manage land and species. It is taken from responses to Q2.k-o and Q2. q-t. Responses for Q2.k-o were coded as from 5 = "Highly" valued to 1 for "Not at all" valued. Responses for Q2.k-o were coded as from 5 = "A lot" of cost to 1 for costing "Not at all". A ratio was calculated of the benefits to the costs and within a country the average response of the LAU2s was used.
52	F40	Ecosystem use/protection index	Cons land ratio others conservation benefits from activities	This variable attempts to describe the attitudes of local authorities to the people that manage land and species. It is taken from responses to Q2.a-j. Responses were coded as 1 = never, 2 = occasionally, 3 = often, 4 = usually and 5 = always. The sum of these for consumptive stakeholders (collectors of snails, fungi etc., fishing and hunting) and landuse stakeholders (farming and forestry) was divided by the value for other stakeholders (bird feeders, walkers etc., horse riders, wildlife excursion participants and gardeners) to give a ratio of conservation benefits between the two types of stakeholders. Higher values indicated that consumptive and landuse stakeholders were considered by the local authorities to undertake conservation work than other stakeholders. Within a country the average response of the LAU2s was used.
53	SEBI-8	Natura 2000 Sufficiency Index	Implementati on efficacy	State of progress by Member States in reaching sufficiency for the Habitat Directive Annex I habitats and Annex II species http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plu gin=1&language=en&pcode=tsien160
54	SEBI-26	Public Awareness of Biodiversity	Public awareness	From Gallup Organization (2007). Flash Eurobarometer Series #219. Attitudes of Europeans towards the issue of biodiversity (http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plu gin=1&language=en&pcode=tsien170): Percentage of population knowing the meaning of the term biodiversity (% I've heard of it and I know what it means + % I've heard of it but I do not know what it means)
55	Gallup	Public concern over biodiversity loss		From same survey as (53): Percentage of population answering that loss of biodiversity in their country was a very serious + a fairly serious problem
56	GEM- CON-BIO	Number of hunters	Typically,	Data on EU27 in GEMCONBIO were collected from national NGOs, checked against databases held by federations at European level
57	GEM- CON-BIO	Number of anglers	counts of licences	(FACE, EAA) and completed by country coordinators for the four countries outside the EU.

## 2.3.4.1 Impact variables: ecological

Variab	Variable Type/Category		Variable (source in D5.1 as "Fx", SEBI, CORINE, GEMCONBIO etc)
Impact	Ecological 58		Urban sprawl rate inside Natura 2000 (CORINE+)
	59		Urban sprawl rate outside Natura 2000 (CORINE+)
	60		Urban sprawl for whole country (CORINE+)
	61		Semi-natural loss rate for whole country (CORINE+)
62		62	Number of invasive species (SEBI-10)
	63		Farmland bird index (SEBI-1a)
		64	Species favourable conservation status index (SEBI-3)
		65	Habitats favourable conservation status index (SEBI-5)

ID	Source	Name	Rationale	Description
58	CORINE	Urban sprawl rate inside Natura 2000	`Standard	Computed in a CIC from Coring Land Cover mana available at
59	CORINE	Urban sprawl rate outside Natura 2000	habitats from remote-	Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps .  CLC Category 2 (Level 1)
60	CORINE	Urban sprawl rate for whole country	1990-2000- 2006	
61	CORINE	Semi-natural loss rate for whole country	2000	Computed in a GIS from Corine Land Cover maps available at http://www.eea.europa.eu/data-and-maps . CLC Category 32+33 (Level 3)
62	SEBI-10	Number of invasive species	Invasives indicate lack of care	Number, in each country, of the listed 'worst' terrestrial and freshwater invasive alien species threatening biodiversity in Europe. Only index available for all survey countries.
63	SEBI-1a	Farmland bird index	Composite population trend indicator	Slope of linear trend of Farmland bird index vs. Year (countries with > 3 years; Dates 2000-2007) from Eurostats: (http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plu gin=1&language=en&pcode=tsien170)
64	SEBI-3	Species favourable conservation status index	% of species having favourable status.	Percentage of species (Habitats Directive) assessed by member states as having Favourable status. Species in each country are assessed per biogeographical region. Marine species not included. Computation of % Favourable excludes species with unknown status (http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec)
65	SEBI-5	Habitats favourable conservation status index	% of habitats having favourable status.	Percentage of habitats (Habitats Directive) assessed by member states as having Favourable status. Habitats in each country are assessed per biogeographical region. Computation of % Favourable excludes habitats with unknown status (http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec)

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http://epp.eurostat.ec.europa.eu/portal/page/portal/region\_cities/regional\_statistics/nuts\_classification

### TESS WP5 Survey – National Level

#### To TESS Country Co-ordinators:

Please use this template to assemble information needed from your country for the WP5 EU-wide survey.

Use information from published sources including websites where possible, if you need to

Where information is not readily available you may wish to approach government level contacts by introducing TESS and posing specific questions by email, telephone or if it is easier by meeting face to face. Normally they should be sent in advance a copy of a TESS document which explains why the project is asking for their help.

Please do not hand over the template for completion by others.

Country	
Co-ordinator	
Telephone number	
e-mail	

Please return NO LATER THAN 31 JANUARY 2010 to: Robin Sharp, Dr Julie Ewald and Prof Robert Kenward robisharp@googlemail.com, jewald@gwct.org.uk, reke@ceh.ac.uk

## **Some Abbreviations**

Environmental Impact Assessment

Strategic Environmental Assessment

Land-Use Planning

European Union Common Agricultural Policy

National Biodiversity Strategies and Action Plans

An EU wide network of protected areas under the Habitats Directive

EIA

SEA

LUP

CAP

NBSAP

NBSAP

Natura2000

Please name government department and/or	agency (extend columns if necessary):	
With overall responsibity for SEA	Ministry (and dependent Agency)	
	Contact(s)	
	e-mail/phone	
Vith overall responsibity for EIA	Ministry (and dependent Agency)	
·	Contact(s)	
	e-mail/phone	
Nith overall responsibity for pollution control	Ministry (and dependent Agency)	
	Contact(s)	
	e-mail/phone	
For EIA of changes in agricultural holdings, or	uncultivated or semi-natural land	
Ministry (and dependent Agency)	Contact(s)	
	e-mail/phone	
Responsible for approving EIA & SEA assessme	ents in specific cases (N.B. only applies	
n certain countries)	Ministry (and dependent Agency)	
	Contact(s)	
	e-mail/phone	
Responsible for other land-use planning (if diffe	erent from those named above)	
Ministry (and dependent Agency)	Contact(s)	
	e-mail/phone	
Responsible for CAP administration and dealin	g with farmers	
Ministry (and dependent Agency)	Contact(s)	
	e-mail/phone	
Responsible for administration of forestry	Ministry (and dependent Agency)	
	Contact(s)	
	e-mail/phone	
Responsible for nature conservation	Ministry (and dependent Agency)	
	Contact(s)	
	e-mail/phone	
Responsible for hunting	Ministry (and dependent Agency)	
	Contact	
	e-mail/phone	
Responsible for angling	Ministry (and dependent Agency)	
to policials for aligning	Contact	
	e-mail/phone	
Please list the designated mandatory consulted	·	6.3 of SEA Directive, to be consulted by those who carry out the
		for environmental protection and nature conservation.)
FF -F (HB)		

	level only one step removed from national) or lower level, at which plans and programmes requiring SEA assessments are approved:  b) If formal approval of the SEA assessment is required (i.e. separately from the relevant plan or programme), please give name of the level:		onal		national	intermed	diate level	First tier of	government
	Since 2002, has SEA been applied to plans and programmes covering: i) Sustainable development ii) Ecological infrastructure iii) Waste management iv) Transport v) Energy vi) Climate change vii) Agricultural viii) Forestry ix) Other sectors		Yes	No					
2	a) How many SEA's are completed annually in your country? Please give	Number	Please i	ndicate if	Precise	Estimated	for which		1
	precise or estimated number.			estimated			year(s)?		
	b) In making these decisions, approximately what % of administration time is spent on considering:  Please use X to show which of the following sources are used as data	econo	mics (jobs &	ĺ	social issues		he environme		lata from loca
	sources when considering SEA's:	government	agencies /	NGOs /	or advisors	/ internet /	publications/	knowledge/	stakeholders
	c) species								
	d) habitats (cultivated, amenity, semi-natural and wild) e) environmental hazards (e.g. floods, wildfires, wildlife vectored disease)						<u> </u>		
	f) socio-economics (e.g. finance, jobs, social institutions, regulations)								
1	Does the Department responsible for SEA refer to institutions at the				9				
	European level (eg. European Commission) for guidance (other than in		Yes	No	_			Number	_
	infraction cases)?				If yes, hov	v many times	s per year?		

	EIA responsibilities and processes	Number			Precise	Estimated			
5	a) How many formal EIA's are completed annually in your country? give precise or estimated number.			indicate if estimated			for which year(s)?		
	b) Are there any legal rules or processes (other than formal SEA and impact of their projects or plans on the environment? Examples migl pollution control or in cases related to extractive industries (mining examples)	ht include pr	t include processes in relation to the Ha					Yes	No
	c) If yes, please name the EIA-like process concerned and give a							-	
	precise or estimated number completed annually.	Number	<b>1</b>		Precise	Estimated	1 ,		1
				indicate if estimated			for which year(s)?		
			1	indicate if			for which	<del> </del>	1
				estimated			year(s)?		
			Please	indicate if			for which		1
			precise/	estimated			year(s)?		
6	(a) Please name for your country the level(s) i.e. national, subnational (Regional or other level only one step removed from	Nat	ional Sub-n		ational	Interme	diate level	First tier of	government
	national) or lower level at which developers submit projects requiring formal EIA or EIA-like assessments for approval:								
	b) If that government level submits these assessments to another level (i.e. separately from the project itself), please name the level:								
7	a) Who pays for a formal EIA or EIA-like assessment?	Developer	Government /Agency	NGO	Other	Please give	e comments i	f necessary	
	Please put X in all that apply.								
	b) Who prepares the information for each EIA/-like assessment?	Developer	Government /Agency	NGO	Other Consultants	Other	Please give	comments	if necessary
	Please put X in all that apply.								
8	a) In cases of significant damage to the environment from a proposal is mitigation, through creation of conservation benefit	Mandatory	1 1	Encouraged	1				
	elsewhere, such as habitat creation, required at the outset?		J I		J				
	b) If significant damage to the environment is likely, are alternative development approaches required to be submitted?	Mandatory	)	Encouraged	)				
	c) Is there subsequent monitoring of the environmental impact of the development?	Yes	Sometimes	No	]				
	d) If there is any monitoring, please indicate who pays for it?	Developer	Government /Agency	NGO	Other Consultants	Other	Please give	comments :	if necessary
	Please put X in all that apply.								
	e) If there is any monitoring, please indicate who does it?	Developer	Government /Agency	NGO	Other Consultants	Other	Please give	comments	if necessary
	Please put X in all that apply.								
9	Are the authorities responsible for approval of projects requiring form	al EIA or EIA	A-like assessr	ment:	Yes	No			
	a) sent general written guidance						, , ,	ccurs, about	
	b) expected to ask higher (eg. National ministry or agency) level for			how many ti	mes a year?				

## **EIA** application and participation

10	a) The EIA Directive applies to certain changes in rural land management as listed in its Annex II paragraph 1, for example 'projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes or restructuring of rural holdings, subject to thresholds set by national governments'. Since 2005 how many EIA's have been submitted under these provisions?	Number	Please gi	ve comme	nts if neces	sary	
	b) If known, please give number of cases, since 2005, where land managers have been subject to sanctions after infringements under these provisions.						
11	If certain biodiversity or environmental NGOs frequently comment on proposals where EIAs are required, please list them as far as you are able to do so and indicate if the are national, regional or local.(N.B. a single NGO can be at more than one level.)	Use X to s	show if the Regional				
40							
12	Does the government department or agency responsible for EIA refer regularly to institutions at the European level (eg. European Commission) for guidance (other than in infraction cases?)	Yes Number	No				
	If yes, how many times per year?	Yes	No				
13	Is the environmental information, including any on species and habitats, collected during the EIA assessments stored centrally?						
		Other go	vernment		General		
		depart	ments	NGO	public		
	Is this information permanently available to:						

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	Land Use Planning	Nation	al	Sub-national/Regional		Intermediate level	First tier of government
14	Please name the level i.e. national, sub-national (Regional or other level only one step removed from national) or lower level, to which development projects needing approval under LUP are submitted:						
15	Do any national laws on LUP take species and/or habitats into account by:  a) supporting species, habitats or nature conservation in a positive way?  b) requiring significant negative effects on species, habitats or nature conservation to be taken into account when development proposals are being considered?  General SEA, EIA & LUP Capacities	Yes S	ometimes	No			
16	Has your national government or any authority below its level issued a) formal guidance on species, habitats or nature conservation to authorities who have to make decisions on cases requiring either SEA's/EIA's or under the LUP system?  If 'yes' please give title example (with English translation) and reference	Yes		No			
	b) practical guidance on species, habitats or nature conservation to authorities, developers, the public, NGO's etc who need to prepare SEA's/EIA's or LUP applications or comment on them?  If 'yes' please give title example (with English translation) and reference	Yes e:		No	ļ	Please give comments	if necessary
17	Do any national laws on SEA, EIA or LUP require ecological connectivity beyond the development site to be taken into account?	Yes		No		Please give comments	if necessary

	Information for assessments and planning	Yes	No						
18	a) Are there national repositories or centers for species and/or	. 55		7					
	habitats data?			<u>J</u>	Please be	sure to co	mplete part	(d) below:	
	b) If so, how many?			d) Please lis	t websites w	vhere informa	ition on spec	ies and/or ha	abitats can
	c) Is there a single ministry or national agency responsible for	Yes	No			if they are na	_		
	collating species and/or habitat data?			some way (	e.g. taxon-sp	ecific, area-		· •	
	Please list all agencies or ministries responsible for collating data.	Ī				-	National	Regional	Specialised
19	Is the species and/or habitat information required for EIA, SEA, LUP								
	or conservation planning and management:	Yes	Some	No		If "some"	olease give	an explanat	ion.
	a) accessible to anyone concerned?								
	b) accessible via the internet?								
	c) fragmented (i.e. are there multiple sources)?								
	d) only available after payment of charges?								
	e) reasonably up-to-date?								
	f) available at a local scale?								
	g) of sufficient accuracy?								
	Does it include:	Yes	Some	No					_
	h) habitat maps?								
	i) species populations distributions?								
	j) in relation to (h $\alpha$ i) is there any density and trend information?								
	Data for NBSAP/BAP (National Biodiversity Strategy	and Actio	n Plan/B	iodiversity	Action Pl	an, see ht	tp://www	.cbd.int/nl	osap/)
20	Please give name(s) for level i.e. national, sub-national (Regional or	Nati	onal	Sub-nation	al/Regional	Intermed	diate level	First tier of	f government
	other level only one step removed from national) or lower level, at which government engages to produce the NBSAP/BAPs:								
	If formal approval of the NBSAP is required, please name the level:					<u> </u>			
21	How many NBSAPs are prepared for species, habitats (or both) at:	a) nationa	l or sub-nati	onal level		i	o) lower level		
		Species	Habitats	Both		Species	Habitats	Both	_
									_
	ı	Government	1	Partnerships	<b>;</b>	Please give	comments	if necessary	/
	c) Who prepares the NBSAP/BAPs?								

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	AGRICULTURAL data	Yes	No			Please giv	e commen	ts if necessa	ary		
22	Is there still government funding to plant some crops, per capita of										
	livestock or for other productivity support (e.g. EU Pillar I)?  Please name the level at which decisions regarding such funding for	Nati	onal	Sub-natio	nal/Regional	Interme	diate level	First tier of	government		
	productivity are made.	INali	Ullai	Oub Hall	na, regiona	intenne	ulate level	i iist tiel oi	government		
	F	Yes	No			<u> </u>					
23	Do you have payments for agri-environmental schemes?										
	If 'yes' are they: a) For 'Natura 2000' or Emerald Network sites only?			(The Emerald Network is the Bern Convention pan-European project							
	b) for 'Natura 2000', Emerald Network and other special habitats only?			,	that has b	oecome Nat	ura2000 in 1	the EU)			
	c) available everywhere provided conditions are observed?							First	tier of		
	Disease in a second of the level is a setimal subsectional (Decisional sections)	Nati	ational Sub-national/Regional			Interme	diate level	gover	nment		
24	Please give name(s) for level i.e. national, sub-national (Regional or other level only one step removed from national) or lower level, at which any such										
	agri-environmental applications are made?										
	Please give name(s) for level at which approval for agri-environment funding										
	is given:				-			<u> </u>			
25	a) Do governmental payments to farmers for agri-environment schemes	Yes	No	] _	. 4     4   4			la a a l			
	require prior input of information on species and/or habitats?	government	/ agencies /	NGOs /	other consultant  or advisors		/ publication	local ns/ knowleda	data from locate/ stakeholders		
	b) If "yes", please use X to show sources of species data for government	gevenmen	, agenere ,		0. 00.00.0		, pasiicatio	1	, or orange or		
	c) If "yes", please use X to show sources of habitat data for government										
		Yes	No		=	-	Yes	No			
	d) In all these schemes, is there subsequent monitoring (i) of compliance?			(ii) of er	nvironmental ou	tcomes?			J		
26	About what % of the agricultural funding budget is devoted to agri-	Percent	٠,			D1		4. 16			
	environmental programmes?	Yes	% No			Please giv	e commen	ts if necessa	ary		
27	Do governmental payments to farmers require a map from the farmer?	100	110								
	If 'yes', can this be in electronic format?										
	Degree of financial devolution to local level	-									
28	Please use X to show governance level at which taxes are collected on (Please tick all that apply):	Persona	l income	Busine	ess income	Value (ho					
	National								)		
	Sub-national (Regional or other level only one step removed from national)				_				Į		
_	Lower level		0 1				<del> </del>		J		
<u> I</u>	HANK YOU VERY MUCH! Please return NO LATER THAN 31 January 2010	to: robishar	p@googlem	aıı.com, rek	e@ceh.ac.uk,	jewald@gw	ct.org.uk				

#### **TESS WP5 LOCAL INFORMATION SURVEY**

This form is to be answered at the level of government that typically interacts with citizens to make decisions about land for develoment, recreation and conservation. This will usually be the lowest level for which a council or mayor are elected. This local government may administer law or merely consult citizens about statutory land-use planning (LUP) for development. It may also make decisions about managing habitats and species on its own land or on land owned by others.

The information is to be obtained through telephone interview with elected representatives or employees of the local administration.

The kind respondent needs to look at questions 1i-1q, about environmental impact assessment (EIA) and strategic environmental assessment (SEA), and question 3 on environmental data, to see if they can answer; if not, they need to be asked for contact details of the best person to approach in another administration; boxes with data from another administration should be coloured yellow.

Data from individual survey forms will not be dis	sclosed.		
Country name	Administration name		
Details of person(s) providing data	Name:		
E-mail:		Phone:	
Total area (in hectares) within the boundary of t	the administration		Some Abbreviations
Land area (hectares) actually owned by the loc	al government (if any)		Environmental Impact Assessment = <b>EIA</b>
Population size			Strategic Environmental Assessment = <b>SEA</b>
% of land used for farming (arable or pasture)(r	nearest 5-10%)		Land-Use Planning = <b>LUP</b>
% of land covered by woodland (forestry or nate	ural)(nearest 5-10%)		European Union Common Agricultural Policy = CAP
% of natural/semi-natural land (heath, maquis,	montane, wetland)(nearest 5-10%)		National Biodiversity Strategies and Action Plans = NBSAP
Country Coordinators please return forms by <u>Jairobisharp@googlemail.com</u> , <u>reke@ceh.ac.uk</u>			of areas protected under the Habitats Directive = <b>Natura2000</b> Prof Robert Kenward at <a href="mailto:jewald@gwct.org.uk">jewald@gwct.org.uk</a> ,
Coordinator name:	<u>-</u>		
Coordinator phone:	Cool	rdinator e-mail:	

# APPENDIX 2 page 2

1	Responsibilities for nature conservation and management (please use X to indicate the answer	er) yes	no			
a	Does the administration (or those working for it) have responsibilities for managing any rural land, wetlands or open water?	?			yes	no
b	Does this include: amenity areas (e.g. parks, public gardens, play areas, paths, road verges) owned by the administration	n?		on		
c	protecting wild species and habitats (e.g. old trees, ponds) on land owned by the administration?			land		
d	conserving wild species and habitats (e.g. by creating reserves) on land owned by the administration?			owned		
e	managing pest/invasive species to protect other wild or domestic species/habitats on land owned by the administration	1?		by other		
f	limiting wild species to protect social interests (e.g. road safety, domestic nuisance, recreation, well-being) on owned la	land?		people		
g	restoring native wild species/habitats (e.g. creating new habitats or reintroducing wild plants) on owned land?			?		
h	When making decisions for this management, what is the range of areas (ha) covered by EACH decision?	t	io	hectares		
	Responsibility for statutory decisions concerning or affecting land use (including EIA and SEA) mandatory	y <u>alway</u> s	usually	often oc	<u>casiona</u> ll	<u>y never</u>
	Are there consultations with private individuals, enterprises etc. (other than developer) when considering any statutory land use planning decisions (SEA, EIA or others) in the administrative area?					
	Is there dialogue with conservation NGOs when considering these decisions ?					
•	Do these NGOs exert a strong influence on the decisions?					
l	Is there dialogue with government conservation agencies when considering these decisions?					
m	Is higher government or its agencies the main influence on the decisions?					
	<1 ha	1-50 ha	5	0-500 ha	who	ole area
n	Approximately how many of these assessments or planning decisions involving this administration annually are:					
0	In making these decisions, what % of administration time is spent on considering: economics (jobs & costs)					
	social issues					
	the environment					
р	Approximately how many of all these decisions are:	EIA	A	LUP		
q	What government organisations/agencies or other interests are regularly consulted with when the administration makes er	nvironmental d	ecisions?			
	Please list these below indicate how often they are consulted annually and their category. times	Govern		NGO		Other
ı	/year	-ment	National	Regional	Local	
	<del> </del>					

<u>2</u>	Ecosystem Services: benefits and costs of wild resources:  For residents in this administrative area (not tourists) what approximate % of the	plea	please use X to indicate the answer			If 20+%, please estimate to the nearest 10%	in wo	Are these groups considered to engagin work to protect, maintain or restor wild species and/or habitats?				_	
	households engage locally or anywhere in each of the following:	<1%	2-5%	5-10%	11-20	% <u>20+%</u>		always	usually	often	occasiona	ally never	
а	Feed birds or other wildlife?												
b	Collect wild snails, fungi, fruits, flowers or other plant materials?												
С	Do outdoor pursuits eg. walking/skiing/climbing/boating/camping/off-road cycling?												
d	Go horse-riding?												
е	Make excursions in order to watch wildlife?												
f	Cultivate a garden or lawn?												
g	Go fishing?												
h	Go hunting with gun, dog or other animal?												
i	Engage in farming?												
j	Engage in forestry?												
	Are local households considered generally to value wild species for:	Highl	у		N	ot at al	I			-			
k	Food or other materials												
ı	Wildlife-related recreation as listed above												
m	Tourism												
n	Aesthetics and other intrinsic value												
0	Environmental security such as flood protection						Please give e	xample	es				
р	Other benefits												
	To what extent are households in the administrative area considered to suffer costs, in time or money, from wild species or habitats?	A lot			N	ot at a	I						
q	Damage from pest species to household food or property	=	Щ										
r	Damage from pests, predators or weeds to livestock, crops or woodland	=	Щ										
s	Increasing the risk of fire	$\sqsubseteq$	Щ	Щ									
s	Increasing the risk of flooding	$\square$	Щ	Щ									
t	Transmission of disease to humans or livestock		Щ				Please give e	xample	es				
u	Other issues				1								

# APPENDIX 2 page 4

3	Information	sources for making environmental decisions				yes	no	_				
a	Is a Geographi	ic Information System used to help make decisions on environmental issue	es for the adr	ministrati	ive area?							
		If YES, what is the name and/or web-site of the system?						=	-	]		
h		electronic records of wild species and habitats kept by the administration	on for the are	ea?	yes			lno		4		
U		ese records (please mark all that apply): Unsystematic			gular survey		mlaaaa mis	,				
	ii i ES, ale tii	,		Ke	•		piease giv	e examples		7		
		Survey / monitoring as part of scientific study		<u> </u>	Other							
<u>C</u>		ironmental topics would information be welcome in the administrative ar				ise use X fo		rces of informa		to guide ded	cisions on e	each issue?
		sue arise now (5=common, 1=rare), how much time does it take to reso	olve(5=high,	1=low)?				Other consulta	nts		Local	Own
	List of issues	For examples please see the following page.	Frequency	Time	government	agencies	NGOs	or advisors	internet	publications	knowledge	plans+records
				-								
								<u> </u>		<del></del>		
d	In detail, wh	at information is needed to make environmental decisions in the	administra	ative ar	ea?							
			Please put	How	much of the	data requir	ed are you	Please put X	Put X if data	1		
			X if data	able to	access? P	lease use >	to indicate	if data are in	are updated			
			are		your	answer.		electronic	at least every	/		
			needed.	All	Most	Some	None	format.	5 years.			
1	Biodiversity	Protected species								1		
2	information	Harmful species (as in 2q-r on previous sheet) or invasive species										
3		Habitat maps (eg. protected, designated or otherwise important)										
4	Ecosystem	Economically exploited wild species (mammals/birds/fish/plant										
4	Services:	food/medicine/materials/fungi)										
5	Provisioning	Cultivated food, livestock or forest crops										
6		Biofuels										
7	Ecosystem	Flood risk / protection										
8	Services:	Fire risk / protection								_		
	- 3 3	Risk of disease from wildlife (to people or domestic animals/plants)								1		
	Ecosystem	Water quality, availability and pollution								4		
	Services:	Air quality (and pollution)								4		
	Supporting	Soil quality, fertility & erosion risk								4		
	Ecosystem	Amenity areas (parks, paths, verges)								4		
	Services:	Eco-tourism capacity and impacts								4		
15	Cultural	Environmental recreation and access for residents (including impacts)	)		1							

# APPENDIX 2 page 5

ISSUES CITED BY PARISH COUNCIL REPRESENTATIVES IN UK
Impact of agriculture & industry changes in land use on environment/people
Impact of extractive industry (gravel, clay, sand, water)
Impact of holiday/residential/business properties
Impact of camping & caravans & other tourism
Heritage site access, erosion
Impacts of developments on traffic
Relative values of different habitats for wildlife and humans
Access (presence and maintenance)
Common land – where, maintenance
Development on designated areas (e.g. green belt)
Allotments
Road verge management – cutting, spraying (costs, impacts)
Gully maintenance – when and how often
Green area maintenance (parks, play areas, greens, cemeteries)
Hedge management- cutting, laying (costs, impacts)
Trees – retention, danger, liabilities (TPOs, planting guidelines)
Leaves on roads
Car noise & air pollution
Contaminated land – previous use
Landfill – building safety
Human sewage spreading, sewage & drains.
Smells
Domestic animal impacts (dogs, cats, horses)
Animal pests (mammals, birds, insects)
Noxious weeks (hogweed, ragwort) on verges & private land
Where water goes when drainage systems change
Flood prediction and how to manage land to avoid them
Identifying boggy areas and subsidence risk
Weather damage (storms, droughts)