



NATURE-GIS USE CASE

Name of the use case:

Handle Complaints on protected areas

Submitter information

Your name:	Annoni, Kanellopoulos, Peedell
Your organization:	JRC – IES
Your email:	

Geographical area where the use case takes place:

EU15

Describe the use case, write a scenario

DG- ENV receives formal complaints related to any part of the EU territory (about 800 complaints handled in 1999).

These requests may come from citizens (as complains or petitions), or from questions raised in the European Parliament.

An incoming request is registered- once registered it is a statutory requirement to process it.

Once registered, the request is allocated to an appropriate DG ENV desk officer.

The Desk Officer determines the geographic location to which the complaint refers, and will crossreference in order to identify whether any Natura2000 sites and/or LIFE projects correspond to the same location.

An element of major importance for handling a complaint is the presence or absence of a Natura2000 site and/or a LIFE project in the area. In affirmative case, the desk officer needs to retrieve all available information about them, to evaluate the relevance of the complaint. Furthermore, the availability of information about sites and projects that are operational in the surrounding area may be of key importance to correctly handle the complaint in question.

The ability to display this information, together with the visualization of nearby locations for which a (similar) complaint has been filed, will contribute to a better understanding of the overall situation in the area in question.

Often, it is not enough to only know the location. Additional background information sometimes is essential to formulate a correct and just answer to the complaint. The following is what a desk officer might need to look up:

1. in which administrative region is the location of interest situated;
2. which (major) roads run through the area of interest;
3. how does the altitude and the slope vary;
4. where are cities or villages located and what is their population;
5. how is the land cover or the land use distribution in the area;
6. where are polluting industrial nucleus' situated;
7. does the location of interest lie in an area eligible for community funding;
8. etc.

To answer to these and similar questions, the concurrent display of data layers is needed. One of the major problems to overcome is the non-availability of high quality data at an appropriate scale

Determine which data participates:

- Think about background data, basemaps
- Data on a node of Nature-GIS network?
- Data outside Nature-GIS (e.g. other WMS/WFS like ESA, UNEP, DEMIS, etc.)
- Is the data available or not?
- What is the format of the data (e.g shapefiles, ArcSDE, Oracle Spatial, flat text, etc.)

- DATA: Administrative boundaries, road network, urban settlements, land cover, DTM, industrial sites, Natura2000 boundaries, Life Project location, Gazetteer, structural funds, ...
- Data availability
 - High Quality data are not available at EU level (only 1:250K is available in GISCO db)
 - GISCO :Administrative Boundaries, (major) road network, structural funds, CORINE Land Cover
 - JRC: Image2000, Natura2000
 - Local: Province of Bolzano (?), Regione Piemonte
- Data format: Oracle Spatial (JRC), Shapefile (Reg.Piem), ArcSDE (Prov.Bz)

Describe the data model (text, sketch) and objects used (the Features Types)

<fill in here>

Based upon your scenario define the client functionalities that will be required in the prototype:

- Find a location using the gazetteer
- Display N2000 boundaries with background info (small scale)
- Zoom to area of interest (large scale local data)
- Measure distances between displayed objects

How would you build the demo:

Canvas (like shown at the meeting in Luxembourg):

- **Start by searching a place**
- **Compose the map**
- **Save context share/send (context = a set of layers, their portrayal style and a bounding box)**
- **Analyze**
- **Generate a report**
- Start by searching a place
- Compose the map (small scale – central db (GISCO)+ natura2000, image2000 data(JRC))
- Save context share/send (context = a set of layers, their portrayal style and a bounding box)
- Zoom
- Compose the map (large scale (local node) + natura2000 data(JRC))
- Save context share/send (context = a set of layers, their portrayal style and a bounding box)
- Analyze
- Generate a report

EXAMPLE 1

The complaint refers to the development of the area as a tourist centre in the heart of a mountain area famous for its bird species and natural habitats. To be able to develop tourism in the region, the local authorities wanted to build new road infrastructures besides the already existing ones. We want to give some extracts from this complaint to illustrate the way it was formulated towards the Commission. "(...) the touristic development which threatens to degrade finally the mountain region of the area X. More precisely it concerns a road construction aiming at connecting the municipality of A and the municipality of B cutting into pieces the mountain chain and a landscape of an extraordinary beauty that until now remained intact." (...) "Already today, a road network is in place in the area." As can be learned from these extracts, the complaint refers specifically to spatial data, including topography (altitude and slope), road infrastructure, place names, etc. Information available at EU scale is useful to situate the problem, but not detailed enough to verify the correctness of the elements as stated in the complaint. Desk officers need to be able to map this information in a more flexible way: mountain and altitude data, local roads – and if possible roads under construction and planned roads –, vegetation and landscape data, but also tourist sites (in the form of POIs), administrative data such as regions and municipalities. The data need to be visualised and queried, while it should be possible to edit / add some data. The latter could be done by integrating data coming from the Member State or by interpreting documents (indication of a new local road). Also, from this example it becomes clear that data at level 1/250.000 to 1/100.000 should be collected, at least for the areas concerned.

EXAMPLE 2

*Between 1993 and 1995, a discussion and investigation started concerning the construction of a new Trans European Network road, the A20 in Mecklenburg-Vorpommern, Germany. The main objective of the road construction was to support socio-economic development of this Länder, one of the Objective 1 areas in Europe. By adding this new road, the German local authorities aimed at opening up the main cities of the region for economic development. The proposed A20 was originally foreseen to pass by the main cities of the coast (Wismar, Rostock, Stralsund, Creifswald amongst other) and link Western Germany on the one hand and Poland on the other hand. A complaint was addressed to the Commission stating that this development – although it was recognised to be useful as such – would interfere with the preservation of at least 7 NATURA 2000 sites. It was admitted by the organisation that formulated the complaint, that the construction of the road would not be possible without influencing these seven sites. Therefore, the discussion was concentrated on the sites where damage would have a major impact on some of the most precious habitats. We describe here the essentials of the complaint to better understand how complaints arrive at the Commission. The information provided pointed out that the Recknitz and Trebel valleys were not only SPAs under Directive 79/409/EC, but also hosted a range of important habitats under Directive 92/43/EC, including priority habitats (44A1-44A4, for both valleys together at least 1449 ha). Together with the Peen valley, they constitute the largest fen complex in central Europe and are an important corridor between habitat systems on the Baltic coast and further east. For the Trebel, a proposed crossing at Tribsees following the line of an existing highway close to the town of Tribsees was held to be the least negative. This route would have crossed the Trebel at one of the narrowest points of the valley. A more northerly route crossing the Trebel near Bad Sülze would go straight through a biotope for the priority bird species *Aquila pomarina*. For the Recknitz, a proposed crossing south of Tessin was held to be more destructive than for the north of Tessin. The northern route (more or less parallel to the B105 along the coast) was considered to have a lower impact on the Trebel and Recknitz ecosystems than any of the central routes. This route appeared though to be less desirable from the point of view of traffic management. Finally there was also a southern route. This route would have followed a trajectory Laage-Gnoien-Demmin and appeared to have the great advantage that all three ecosystems (Recknitz, Trebel and Peene) would be crossed simultaneously at one point instead of three different points as in the northern and central routes. As can be seen from the description above the main issue during the discussion was the place for the crossing of the different sites, the characteristics of the sites at these sections from the ecological point of view and the overall situation within the region. Finally, the discussion focused on three alternatives when the decision had to be taken for the Peene valley: crossing the valley (1) east of Jarmen, (2) west of Jarmen or (3) west of Loidz. A fourth alternative south of Jarmen was not taken into account anymore. During the discussions several socio-economic arguments came to the forefront. For example certain cross-sections could not be taken into account at all due to various elements. For example the dropping of the southern route*

appeared to be justified by the fact that it was not suitable in terms of traffic management (too far south to be of use for the coast, in particular Stralsund). It would also lead to a greater impact on the environment because of the greater distance vehicles would have to cover to reach e.g. Stralsund. If this route was to serve as a motorway to reduce traffic on the coastal highway B105, then indeed the southern route and even the central routes appeared to be less suitable. If it was however to serve as a fast link between Hamburg and the east (Stettin), then the southern route was actually the shortest in terms of mileage. As for Stralsund itself, the southern route appeared to be the least suitable because it would require a long 'feeder route' from e.g. Demmin to Stralsund. Figure 6 gives an idea of the planned road by 1995. The data coming from the GISCO database do not yet reflect the discussions on the alternatives and the final option chosen. Information was also provided concerning a simulation made in which traffic from Hamburg was routed over the central route to Stralsund and over the southern route plus a feeder route, again to Stralsund. Assuming an average speed of 120 km/h, the difference in time to reach Stralsund by the longer southern route instead the central route was calculated as only 134 seconds – the total difference in kilometers appeared not that great for traffic from Rostock or further west. All this information was analysed by the Commission during its evaluation of this important case. In 1996, a final opinion was delivered by the Commission based on article 6.4 of the Habitats Directive. This article states that if, in spite of a negative assessment of the implication for a site hosting priority habitats type and/or species a project must be carried out for imperative reasons of overriding public interest, an opinion of the Commission is required. The preferred solution was that were the crossing of the river Peene would take place east of Jarmen (precisely 300 m east of the existing crossing by the national road B96 and close to a commercial distribution centre). The above described example of the A20 in Germany revealed that for DG Environment staff to be able to situate the problem, data are needed at different levels. At level 1, data describe the overall situation of the region, the socio-economic parameters, the general road infrastructure, but also calculated information (e.g. unlocking parameters), etc. At the second level more detailed information of the populated places, the land cover, the road construction is needed. Information for both levels can be provided by the Commission as far as data is available at scale levels 1/1.000.000 and 1/100.000. The third level needs even more detail and must be prepared by the Member States (indicating more detailed information on the species, the landscape, etc.). It is also clear that during the discussion it must be possible to include in a flexible way new alternatives (data) from the Member States, together with existing data from the Commission and that the final results should be integrated in the database of the Commission (GISCO).