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# A COMPARATIVE ANALYSIS OF STRATEGIC ENVIRONMENTAL ASSESSMENT OF TWO URBAN PLANS: TORBAY, UNITED KINGDOM, AND CAGLIARI, ITALY

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#### ABSTRACT

Important conditions for Strategic Environmental Assessment (SEA) to be effective, in the spirit of Directive 2001/42/EC which rules over it, are its cooperative and inclusive attitudes. Cooperation should involve institutions, planning authorities and agencies who are involved in environmental assessment procedures. Inclusion implies favoring and catalyzing local communities' participation, that is participation of the public, in the planning/assessment process.

In Italy, the implementation of the Directive, based on the Law enacted by decree No. 2006/152, should be particularly careful, with reference to the assessment conceptual approach, to the general planning/assessment objectives, which have to be inclusive and incremental, and to participation of the process key-actors, which has to be effective and easy, in terms of its ex-ante and ongoing steps.

The regional government of Sardinia (an island of about 24,000 km2 and 1,6 million inhabitants, located west of the Italian mainland near the French island of Corsica), issued a Guidelines Manual (Regione Autonoma della Sardegna, 2010; "GL") which not only ensures formally that an inclusive and incremental SEA process is implemented, but also defines rigorously the steps a SEA proceeding authority, that is a Sardinian city or a province, has to take in order to favor participation of all potentially-interested subjects, were they public agencies, profit and non-profit enterprises, social and non-governmental organizations, or citizens, and speed-up plan approval and its formal establishment, which take place once the ex-ante SEA process is over. Unfortunately, the application of the GL is still far from being effective.

According to the 2006 Environmental Report of the SEA of the Local Transport Plan issued by the Torbay Council (2006; Devon, South-West England), "The goal of sustainable development is to enable people to satisfy their needs and enjoy a better quality of life without compromising the ability of future generations to satisfy their needs. Strategic Environmental Assessment assists in promoting sustainable development by integrating sustainability considerations into the plan making process" (p. 8). This approach is consistent: i. with the United Kingdom's strategy for sustainable development, A Better Quality of Life (UK Government Sustainable Unit, 1999), which defines four main objectives for the implementation of sustainable development: social progress which recognizes the needs of everyone; effective protection of the environment; prudent use of natural resources; maintenance of high and stable levels of economic growth and employment; ii. with UK Statutory Instrument 2004 No. 1633, The Environmental Assessment of Plans and Programmes Regulations 2004, which implement Directive 2001/42/EC of the European Parliament and Council on the assessment of the effects of certain plans and programmes on the environment (the "Directive"), as regards plans and programmes relating solely to any part of England; iii. with the following documents of the British government: SEA Guidance for Planning Authorities (UK ODPM, 2003); A Draft Practical Guide to the Strategic Environmental Assessment Directive (UK ODPM, 2004); A Practical Guide to the Strategic Environmental Assessment Directive (UK ODPM, 2005); Strategic Environmental Assessment Guidance for Transport Plans and Programmes (UK Department for Transport, 2004).

This paper discusses crucial points of SEA through a comparison of two case studies concerning these practices, and put in evidence good lessons that UK and Italy may eventually learn from them. The two case studies concern the SEA of the Local Transport Plan 2006 of the Torbay Council (cit.) and of the Masterplan of the Port of the City of Cagliari (Autorità Portuale di Cagliari, 2010; Sardinia, Italy).

The urban contexts of Torbay and Cagliari are shortly described in the following section, and the choice of these cities for the discussion developed in this paper is motivated.

The comparison concerns three aspects: i. the relationship between SEA and plan (LTPT, MPPC) with respect to endogeneity of SEA, sustainability, and participation, which is analyzed in the second section; ii. the question of the definition of planning alternative options and the monitoring process, examined in the third section. In the conclusion, fundamental differences between the SEA's of the LTPT and the MPPC are put in evidence and discussed. Since the former was born and defined before the SEA process started, and the latter ran by and large parallel to its SEA, SEA was fairly useless for the MPPC while it was very effective to generate a qualitative improvement of the LTPT.

#### 1. CAGLIARI, SARDINIA AND TORBAY, DEVON

Cagliari is the main Sardinian conurbation and a regional capital city. Here, all the main offices of the regional administration are located. Furthermore, Cagliari is the main site of the Cagliari province, which includes the whole territory of Southern Sardinia. The main Sardinian University, with a student population of about 40,000, and the most important Sardinian Law Court are located in Cagliari. Cagliari has been named as one of the main nine Italian metropolitan areas by the Italian Law No. 1990/142. It is therefore a site where a new metropolitan province can be established if the regional administration wishes. The importance of Cagliari as a key Italian conurbation has been officially recognized at the national level.

Moreover, the Sardinian regional administration has primary jurisdiction for land-use and urban planning, according to its special constitution. In other words, the Sardinian regional government may define Sardinian public planning policies. In fact, the Sardinian region is to some extent autonomous with respect to national planning policies.

For all these reasons, the metropolitan area of Cagliari can be considered a significant and well-defined urban environment in which to analyze SEA policies, one which is sufficiently internally developed and integrated, and isolated from external influences as well.

The Torbay Council comprises three towns: Torquay (63,998 inhabitants in 2001), Paignton (48,251), and Brixham (17,457). Torbay is the *English Riviera*, one of the most important tourist resorts of England.

Torbay is characterized by high density development, like the inner areas of Cagliari. This has perhaps been forced by the natural constraints placed on the area by its surrounding geography and steep topography, which makes further development problematic within the towns, the sea forms an absolute barrier to growth to the east. The nature designations which surround the towns also restrict further growth. The economy of Torbay has traditionally been based around tourism, the fishing industry at Brixham and in recent years the high-tech industry. Because of the nature of these sectors the economy of Torbay tends to be of a relatively low wage. There is also concern that these industries are hanging and there is a marked need to adapt to address this.

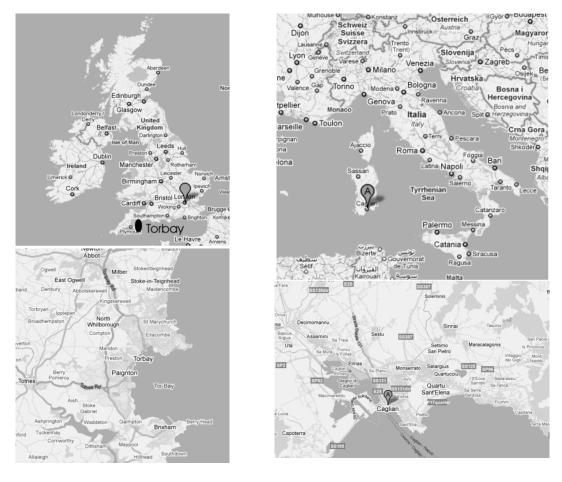


Figure 1. Cagliari (Google Maps).

Figure 2. Torbay (Google Maps).

Despite its peripheral location Torquay and Paignton are well served by rail, although the Service between Newton Abbot and Torquay could be improved. However the road links into Torquay from Exeter in particular are in need of improvement with a bottlenecking of traffic particularly at Kingskerswell causing heavy congestion. The proposed South Devon Link Road (to address this congestion) is largely outside the Torbay Unitary Authority and is subject to SEA by Devon County Council.<sup>1</sup>

The choice of Torbay and Cagliari is motivated as follows. Cagliari and Torbay are both medium-sized conurbations (both of them have less than two hundred thousand inhabitants). Torbay is governed by a Unitary Authority, which is in charge of the local government and transport. A unitary authority, the Autorità Portuale di Cagliari (the Cagliari Port Authority) rules over the port area.<sup>2</sup> Among the tasks of the Authority is the definition and implementation of land-use policy and city planning in the port area. Cagliari and Torbay are quite peripheral with respect to their national administrations, both politically and geographically, and, at the same time, they are quite central with respect to the local, regional administrations (Devon and Sardinia). Moreover, there is a strong practice of city planning concerning the local services in either conurbation, and a consolidated legislation on SEA. For these reasons, an

<sup>&</sup>lt;sup>1</sup> The information about the Torbay area is drawn from the SEA report of the LTPT (Torbay Council 2006, pp. 27-28.

<sup>&</sup>lt;sup>2</sup> The art. 8 of the Italian Law No. 1994/84 states that the President of the Port Authority is nominated by the Italian Ministry of Transport and Navigation. This Law concerns the "Redefinition of the legislation on the port areas".

analysis of how SEA was applied in Torbay and Cagliari in order to assess two local plans related to the organization of a system of local services, could be very useful to give information on analogies and differences between the Italian and English approach to SEA. What we draw from this comparison could be effectively utilized to develop future comparative studies on the implementation of SEA concerning city planning in England and Italy.

### 2. ENDOGENEITY, SUSTAINABILITY AND PARTICIPATION

The MPPC goals, and related planning decisions and actions, were defined before the SEA process started. As it may be noticed from the MPPC, the MPPC had a very long history, which started in the second half of the 90's and reached its seventeenth revision in 2007 (Autorità Portuale di Cagliari 2010). The SEA process was only activated following the response of the Italian Ministry of the Environment and of the Protection of the Territory and of the Sea to the Port Authority of Cagliari which asked if SEA had to be implemented for the MPPC (Autorità Portuale di Cagliari 2010).<sup>3</sup> As a consequence, there is no evident connection between the goals of the MPPC and the goals defined by the SEA. The general and specific goals of the SEA are so abstract and generic that they could be consistent with many urban contexts located close a coastal area. The list of these goals includes, for example: considering the opportunity of signing "Green Contracts" which establish ecological criteria with the firms which operate in the port area; improving and optimizing the irrigation system for the city parks and open spaces in order to prevent waste of water resources; efficient management of solid waste collection; increased use of energy from renewable sources in order to reach a 30 percent of the total energy consumption within five years; etc. (Autorità Portuale di Cagliari, 2010, pp. 243-244). In other words, the goals of the SEA of the MPPC are valid for the SEA of the LTPT as well.

The reason for this lack of contextualization is that, since the SEA process was referred to an already-defined plan by the Port Authority, and being the same Authority responsible for the implementation of the SEA process, this Authority did not like to reopen a debate on the MPPC, which came from long and cumbersome discussions between many public and private stakeholders. What we observe in this case is a very general characteristic of the Italian (and Sardinian) SEA processes concerning regional, city and land-use planning activity. The SEA is almost always referred to processes which started a long time ago, so by no means the plans are proceeding together with their environmental assessment. This very often implies that the SEA states environmental protection goals which are not context-specific, and, being so, they are not useful in order to pursue the main objective of the Directive, that is "to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans [...] with a view to promoting sustainable development" (art. 1). In other words, in most cases the Italian SEA processes show lack of endogeneity, since they do not integrate environmental considerations into the preparation of plans. By doing so, with reference to what the Directive indicates, these SEA's possibly do fail to promote sustainability, since sustainability is strictly connected to the integration of environmental considerations into the plan preparation processes. The SEA of the LTPT puts in evidence a very different attitude towards endogeneity and sustainability.

The five main goals of the LTPT are generated within the SEA process, or, the SEA process is integrated into the plan. These goals are the following: i. improving accessibility; improving the air quality; iii. Decreasing traffic congestion; iv. Increasing road safety; v. assisting in the achievement of the aims of the Torbay Community Plan and the delivery of its key initia-

<sup>&</sup>lt;sup>3</sup> This response is registered as No. DSA–2008–0012770 of May 12, 2008, by the Direzione Salvaguardia Ambientale [Direction for Environmental Protection] of the Italian Ministry of the Environment and of the Protection of the Territory and of the Sea.

tives, supporting economic and social development initiatives in Torbay through the provision of good access by all modes, minimizing the environmental impact of transport in Torbay and support environmental improvements wherever possible (Torbay Council 2006, pp. 31-32). Why these goals are endogenous with respect to the SEA process is explained if we look at the connections between the objectives related to the SEA topics, and the planning schemes, that it the systems of actions which implement the planning goals (Torbay Council 2006, pp. 63-74; see Figure 1).

High lovel abjective	Detailed questions: does the policy / proposal	Exploration of the datalled question (where not abvicus)	Vihat approiesi wili look for	Relovant Plans, Programman and Similegies reviewed (see Appendix 2)
SEA Topic	Climatic Factors			
3. Reduce vulnerability to the effects of	3.1. Minimise the vulnerability of the transport infrastructure to	Transport infrastructure such as bus routes are regularly flooded	Schemes within flood risk areas.	Kyoto Protocol on Climate Change 1997
climate change e.g. flooding, disruption to	climate change		Awareness of flooding issues within LTP	Environment 2010: Our Future Our Choice (EU Sixth Action Programme), 2001
travel by extreme weather				Climate Change: The UK Programme, DEFRA, 2001
	3.2. Reduce the contribution of transportation to greenhouse gas emissions including the use of low/zero carbon fuels		Objectives and schemes to encourage the use of low/zero carbon fuels in Torbay	A Sustainable Future for the South West: The Regional Sustainable Development Framework for the South West of England, SWRA, SWDA, GOSW, 2001

Figure 3. SEA objectives and LTPT schemes: an example (Torbay Council 2006, p. 65).

If we look at Figure 3, we may notice that the high-level objective related to the topic "climatic factors," defined as "Reduce vulnerability to the effects of climate exchange e.g. flooding, disruption to travel by extreme weather," is connected, in terms of appraisal, to (fourth column): i. the LTPT schemes within flood risk areas; ii. awareness of flooding issues within LTPT; iii. objectives and schemes to encourage the use of low/zero carbon fuels in Torbay. All these appraisal references consist of actions included in the schemes of the LTPT, summarized later on in the SEA report (Torbay Council 2006, pp. 79-92). The same procedure is adopted for the rest of the SEA topics, that is, air, biodiversity, economic factors, landscape and heritage, population and human health, social inclusiveness, soil, water. So, a profound and detailed integration of the SEA objectives into the plan schemes and viceversa is put in evidence, where the planning schemes are considered the *traits d'union* between the LTPT and its SEA.

The operational part of the MPPC is fundamentally referred to rules on land uses of the area identified as "The Port of Cagliari", planned works (excavation and dredging) on the seabed, and the identification of future projects subject to environmental impact assessment procedure (Autorità Portuale di Cagliari 2010, pp. 249-273). Neither of these actions or rules are referred to the (decontextualized) sustainability goals, while all of them are considered connected to the MPPC goals.

The condition of endogeneity of the SEA with respect to the LTPT is supported by the SEA participatory process. Participation is envisioned as strictly connected to sustainability. Sustainability relies on incremental and participatory processes, since "[b]y undertaking the SEA it is possible to look at the LTP during its development and examine how it will contribute to the aims of sustainable development. Opportunities to enhance the contribution to sustainable development can be identified, for example, by recognizing aspects where the strategy may compromise sustainable development, and possible amendments to the strategy to resolve any problems" (Torbay Council 2006, p. 16).

The Torbay Council recognizes that the participatory process should help seeing and addressing what may eventually not work when integrating sustainability and local development goals. Many contributions of different experts, stakeholders and representatives of public and private bodies are put together in a large consultation process. A vast consultation implemented during September and October 2005, whose results are detailed in the SEA rep*ort* (Torbay Council 2006, pp. 20 and ff.). A general and important characteristic of how these results are incorporated into the SEA process is that not only every observation, objection, criticism, which comes up in the scoping phase is annotated, but also carefully associated to a proper action which takes into account the issue.<sup>4</sup> The Torbay Council's approach to participation is quite consistent with what is stated by the UK Statutory Instrument 2004 No. 1633, which implement the Directive.<sup>5</sup>

A possible caveat of this SI is that it is not clear enough how to involve the potential participants who are not part of the public or private bodies which the proceeding administration identified as eligible to be part of the participatory process. In other words, the potential participants who do not belong to these bodies may not see their participatory power guaranteed by the procedure, which may eventually entail a loss of information and quality enhancement of the plan.

The MPPC treats participation very differently. Since participation is a formal requirement of the Italian Law enacted by decree No. 2006/152, which implements the Directive in the Italian legislation, the MPPC has to consider participatory moments, which consist mainly of a formal correspondence between the Port Authority and several public and private bodies which may have interest in the MPPC, and which may add substantially in terms of scientific and technical knowledge and contribute effectively to its feasibility. Unfortunately, the outcome of this formal consultation is that there are notes in the SEA report which certify that the Port Authority got in touch and tried to consult lots of public and private bodies, but no significant question raised by the representatives of these bodies was discussed and eventually addressed in the continuation of the SEA process.<sup>6</sup>

## 3. ALTERNATIVE PLANNING OPTIONS AND THE MONITORING PROCESS

According to the SEA of the LTPT (Torbay Council 2006, p. 77), since the publication of the scoping report and subsequent consultation the strategic alternatives within the plan were fur-

<sup>&</sup>lt;sup>4</sup> This is how the SEA report defines the participatory process (*ibid.*, p. 19): "The SEA Directive requires authorities to identify the public affected or likely to be affected by, or have an interest in a plan, including relevant non-Government organizations. Consultation will take place with the same group identified as consultees for the Scoping Report. Therefore copies of this report will be sent to English Heritage, English Nature, The Environment Agency and The Countryside Agency. Copies will also be sent to members of the Torbay Strategic Partnership, members of the Transport Stakeholders Group, relevant Council Directorates, Councilors, our neighboring Local Authorities, Devon County Council and the South West Regional Assembly. Additionally an electronic version (see link below) will also be available for the public to comment upon and this will be advertised."

<sup>&</sup>lt;sup>5</sup> SI 2004, No. 1633, 13 (2) states what follows. "As soon as reasonably practicable after the preparation of the relevant documents, the responsible authority shall:

<sup>(</sup>a) send a copy of those documents to each consultation body;

<sup>(</sup>b) take such steps as it considers appropriate to bring the preparation of the relevant documents to the attention of the persons who, in the authority's opinion, are affected or likely to be affected by, or have an interest in the decisions involved in the assessment and adoption of the plan or programme concerned, required under the Environmental Assessment of Plans and Programmes Directive ("the public consultees");

<sup>(</sup>c) inform the public consultees of the address (which may include a website) at which a copy of the relevant documents may be viewed, or from which a copy may be obtained; and

<sup>(</sup>d) invite the consultation bodies and the public consultees to express their opinion on the relevant documents, specifying the address to which, and the period within which, opinions must be sent."

<sup>&</sup>lt;sup>6</sup> The participatory process is described very concisely in the SEA report: see Autorità Portuale di Cagliari, 2010, pp. 329-331.

ther developed. Even though no alternative local transport plan was identified, changes within the LTPT to the proposed five year plans for improving air quality, congestion, accessibility and road safety are possible, although not discussed in the LTPT. These are appraised using a plan/no plan scenario, "where 'no plan' means how the current situation would progress without the five year plan" (Torbay Council 2006, p. 77). So, the question of alternative planning options is considered quite superficially in the LTPT. The same issue is simply neglected in the SEA report of the MPPC, where a paragraph is titled "Sintesi valutativa ed analisi delle alternative" [A synthesis of the assessment process and analysis of the alternative options] (Autorità Portuale di Cagliari 2010, pp. 295-296), but if you read the paragraph you can not find anything about possible alternatives.

The lack of a serious alternative planning options analysis may be due to the incomplete endogeneity of the SEA of the LTPT, which started a couple of months later than the plan. This timing mismatch might have discouraged the Torbay Council from taking seriously the task of designing planning alternatives, which would probably have been useless and timeconsuming. The total lack of endogeneity was certainly the reason why the Port Authority of Cagliari did not consider alternative options at all.

Differently from the question of the alternatives, both the LTPT and the MPPC treat rigorously the issue of monitoring the plan implementation. As the SEA report of the LTPT states, "Monitoring the environmental outcomes of a plan should make it possible to identify the needs for any future corrective action and to establish how well the plan complies with SEA objectives." (Torbay Council 2006, p. 100) This concept is implemented through the definition of a strict connections between a set of environmental indicators, SEA topics, planning goals and therefore planning schemes. The role of the indicators is to allow the Torbay Council to detect, in real time, if and how changes to the ongoing planning policies should be implemented. Figure 2 shows an extract of the monitoring table of the SEA of the LTPT.

Higher objective	Indicator	Baselino data (year)	Terget zvoljablo? (yeor)	Source	How etten monitored	comments
Control air pollution to a level which does not cause damage to natural systems and human health	Journey time around the Bay	17.4 mph (mcan) (2004/05)	25 mph (2010/11)	Council surveys	Annually	Data available from Strategic Transport Team
	Number of AQMAs	1 AQMA (2004/05)	0 AQMAs (2010/2011)	Mandalory Indicator Air Quality Monitoring data	Annually	Data available from Environmental Health

Figure 4. An extract of the SEA of the LTPT monitoring table (Torbay Council 2006, p. 101).

The monitoring effort of the MPPC aims at identifying those indicators which may give a good picture of the environmental context of the Port of Cagliari, but it fails to consider the relations between planning strategies and actions, and the health status of the environment (Autorità Portuale di Cagliari 2010, pp. 338 and ff.). So, the monitoring table is quite similar to Figure 4, except for column 1. It is hard to understand how the monitoring process of the MPPC could be effective, if the monitoring plan does not state how the environmental status is connected to the planning schemes.

# 4. CONCLUSION

The question of endogeneity of the SEA process with respect to the plan development process is dealt with very differently in the Italian and English cases. In the former, the plan is almost completely defined when the SEA starts, and endogeneity is totally neglected. This enormous contradiction between the Directive and its practical implementation in Italy (the Sardinian experience is unfortunately consistent with what happens in the rest of Italy with reference to regional and urban planning processes) is possibly due to the late implementation of the Directive in the Italian legislation.<sup>7</sup> There are several recent plans, e.g.: the regional and city plans of the Region Emilia-Romagna, where the gap between the plan and the SEA process is shortened, and it may possibly happen the ex-ante SEA and plan definition processes proceed altogether, at least to some extent. Moreover, the regional administration of Sardinia has recently issued a guidelines manual (Regione Autonoma della Sardegna 2010) which not only ensures formally that an inclusive and incremental SEA process is implemented, but also defines rigorously the steps a SEA proceeding authority, that is a city or a province, has to take in order to favor participation of all potentially-interested subjects, were they public agencies, profit and non-profit enterprises, social and non-governmental organizations, or citizens, and speed-up plan approval and its formal establishment, which take place once the ex-ante SEA proceess is over.

England implemented the Directive on time (2004), and the question of endogeneity was taken into account properly. The SEA of the LTPT bears witness of this, since the SEA process is assumed as a very important reference for the plan definition. It is highly significant, from this point of view, that the SEA report complains that "The main obstacle to conducting this SEA was the late beginning of the SEA process. With hindsight it is easy to see that the SEA should have begun in July 2004 rather than January 2005. The Environmental Report should have gone out for public consultation with the LTP2 in July 2005, rather than in March 2006." (Torbay Council 2006, p. 25) This indicates to what extent the Torbay Council is aware of the importance of endogeneity, since a very short timing mismatch (a few months) is signaled as an outstanding negative point. The new version of the LTPT shows an almost perfect correspondence between SEA and plan processes. Endogeneity of the SEA process seems granted, event though the new LTPT will not be in force before April 2011 (Devon County Council and Torbay Council 2010), so we are not yet able to assess the whole process.<sup>8</sup>

With reference to participation, we put in evidence that, if we compare the two approaches, we can easily see that the English approach is site-specific and oriented to incorporate the participants' contributions into planning decisions. The Port Authority of Cagliari seems not to rely on a real improvement of the quality and effectiveness of the plan coming from a participatory process. On the other hand, the issue of the involvement of the public remains not addressed even in the LTPT. This issue is fundamental in order to implement sustainability in the SEA and planning process, as the European Commission put in evidence in its guidelines (European Commission Environment 2001). Dissemination of information and fairness of the decision processes, which are most likely to be ensured by awareness and participation of the local community in defining and implementing public policies, are certainly important in generating the most socially desirable outcome. The role of the Port of Cagliari and of the transport system of Torbay.

Moreover, the presence of real alternative planning options would make it easier for the public to understand what is at stake. Alternatives must be presented to the local community and public hearings on the outcomes and implications must be held. Tentative rankings of alternatives should be discussed and criteria defined, which should prove more-or-less decisive in determining the rankings. What are the alternatives' pros and cons has to be made as clear as possible, and further consideration and discussion on the main issues must be encouraged, even though they possibly may delay the implementation of the final plan.

<sup>&</sup>lt;sup>7</sup> The chapters of the Italian Law enacted by decree No. 2006/152 which implement the Directive were established in a proper way only in 2008 and 2010 (Law enacted by decree No. 2008/4 and 2010/128).

<sup>&</sup>lt;sup>8</sup> The new LTPT will be in force between April 2011 and March 2026. It has been studied and will be implemented by a partnership which includes the Devon County Council and the Torbay Council. A detailed description of the plan and SEA process is available on Internet (Devon County Council and Torbay Council 2010).

Finally, the importance of the monitoring process is not understated by either SEA processes. However, the Torbay Council is more effective than the Cagliari Port Authority in identifying connections between plan and SEA goals and the health status of the environment. It seems difficult that an effective monitoring process could eventually be developed without awareness of this connections. This seems to be consistent with the fact that the Torbay Council indicates that "[s]ustainability monitoring reports will be published as part of the LTP Progress Reports", while this kind of indication cannot be retrieved in the SEA report of the MPPC. A common characteristic of the two monitoring processes is that there is a significant lack of data, since in both cases there is a number of indicators for which no data are currently available.

The substantial failure of the SEA of the MPPC indicates that endogeneity is fundamental for the SEA to be useful and successful, even though the other aspects should not be neglected in the SEA implementation process.

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