SPICOSA

ACRONYM : **S**cience **P**olicy **I**nterface for **C**oastal **S**ystems **A**ssessment

DELIVERABLE D10.12

"**Policy Searching Tools (Final version with documentation)**"

(Final Report)

*WORK PACKAGE(10): **Alternatives Strategies***

REPORTING PERIOD :	From : Month 37	To : Month 48
PROJECT START DATE:	1st February 2007	DURATION : 48 Months
Date of Issue of this report :	October 2010	Month 45
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Integrated Project funded by The European Community

Under the Sixth Framework Programme

Priority 1.1.6.3

Global Change and Ecosystems

INDEX

1. Introduction

The aim of this report is to document the SPICOSA database on global ICZM policy experiences and references, classify them based on their relevance to Sustainable Development for EU Coastal Zones and make them accessible to SPICOSA study sites and to ICZM researchers and practitioners in general.

The contents and usage of the provided database is documented in this report which thus complements and complete the draft D10.1 (Policy Instruments) and the draft D10.4. (Policy Searching tools) and D10.7 (Prototype database with documentation). It also includes material specifically applicable to the SSAs. The PO database itself is accessible on the SPICOSA public data portal *http://www.spicosa.eu/dataportal/index.htm*.

The Work Package 10 evaluates options for decision-makers that could make ICZM policy change more effective. It assesses Policy Instruments as well as Technical Options to reduce damaging practices of Human Activities, and provide better supporting observational data for continued assessments. For the three Work Tasks of WP 10, the state-of-the art will be published in a series of technical papers made available under their respective headings of the Coastal Wiki. These papers will be regularly updated as new and better information becomes available. In collaboration with and in support of Node 3, more in depth information specifically applicable to the various SSAs will also be gathered and included. The research in Work Task 10.1 has also resulted in a database tool hosted on the SPICOSA portal for consultation among a broad group of ICZM-Professionals. At first this is made available as part of relational databases (developed first in MS Access) for the SPICOSA partnership. The SSA will be very important for this testing phase in order to highlight Data-Base limits, usage and improvements in order to produce an instrument for the broader circle of ICZM technical experts.

The role of SSAs will be also fundamental for the integration of national legislation to produce a more complete database that take into consideration not only the EU level, but connect it with local governance and local collective action where such information is available.

After an initial testing period this database will be developed into a more advanced on-line information base aimed at a broader public and made available via the SPICOSA portal. Standard queries will be developed to get a straightforward access to the information. The tool will be developed in a collaborative effort with WP9 where WT10 provides the contents and WT9 provides the digital platform.

The database is based on a desk study on research publications and literature on ICZM – policies. In this database you will find literature and articles regarding policy instruments and policy issues in the CZ. The main goal for the database is to help scientists, politicians, managers and others to find literature on CZ issues, and from that get information on how to deal with different policy issues. To search in the database one can use different entrances or search keywords. You can search for some main environmental issues in the CZ like biodiversity, eutrophication or erosion. Or you can search by keywords regarding policy instruments like economic, legal or deliberative policy instruments.

This report from Work Task 10.1 documents various instruments for designing policies and technical options for management and monitoring to reduce damaging practices of Human Activities and constructs a globally sorted information base concerning the effectiveness of various ICZM policy strategies. As part of the output of the whole Work Package 10, this will enrich the scenario options during the design phase (WP3) and the output-recommendations during the final Information Portfolio (WP6) (cfr. SPICOSA DOW 2009).

In general, the ***Work Task 10.1 Policy Instruments*** has classified and made accessible published and unpublished policy research material as well as policy review papers in the area of Coastal Zone Management. An MS-Access databases developed within WP 10 as the result of the first two years is now the bases for them development of an Online information E-tool being developed within SPICOSA (WP 9).

The text collection on General literature on CZM has been done during the first year of activity and it has been published in the ***Deliverable D10.1-Policy instruments in Integrated coastal zone management***. This anthology on General literature on Coastal Zone Management contains a bibliography classified according the following main categories:

- Policy instruments in coastal zone management
- Deliberative processes and participation
- Legislative controls
- CZM planning instruments
- Economic instruments

The WP.10.1 has also provided a web based article on the Spicosa Wiki titled: "Policy instruments for integrated coastal zone management" (Skorstad et.al 2010) and is to be found on the http://www.coastalwiki.org/spicosa/Portal:SPICOSA. There is also articles and reports under "Publications" and linked to Wiki articles from the Work package 10.

The task of the current report (***D 10.12 Policy Searching Tools – Final version with documentation***) is to complement and to complete the deliverable D10.1 and the D 10.4 draft report (**Policy Searching tools**), and document and explain the usage of the prototype database. It also includes some examples of use of Alternative Policy Instruments relevant to SSAs collected from Deliverable **D7.2 :SSA Result of Design step and progress**, and Deliverable **7.3: SSA Result of the Formulation Step**, as help to the understanding of the feasibility and implementation of various policy instruments from selected SSAs.

2. Purpose of a Policy Searching tools

The purpose of this report is parallel to the purpose of SPICOSA, i.e. to improve the integration between Science and Policy, but providing in addition alternative strategies that a user could explore and apply through the SAF project methodology. Such integration can be achieved through a System Approach Framework with formalized models and a deliberation tool to discuss possible scenarios among stakeholders and policy makers. But it can also be achieved through Alternative strategies, and it is the task of WP10 to provide such alternative policy strategies that can be tested in real life situations.

The SPICOSA interest in alternative strategies for integrating science/knowledge with policies is based on the following definition of policy instruments:

- Policy instruments are the institutionalized tools which can be used to overcome problems and achieve objectives.

- Policy instruments also include examples of local and regional institutions and national laws and policy instruments – as experienced in the various Study Sites in SPICOSA.

Policies have a key role in determining the state of the environment. The EU has a period of 35 years experience in environmental policy-making, during which well over 200 legal acts have been put in place and strategic paths have been defined. Initially, policies have focused on regulating technical standards. Gradually, the spectrum of policy instruments has broadened, so as to implement both a Habitat Directive and a Water Framework Directive. Gradually there is also an increased awareness that there is no single universal policy tool that can provide solutions to all problems, but that different mixes of policy tools are necessary in order to reach a certain political goal.

The EU is working towards a more integrated approach to policy making, guided by the principles of impact assessment and more knowledge-based regulation. This also includes recommendations for improving stakeholder involvement and public participation in managing the interactions between science, technologies and society

http://ec.europa.eu/governance/better_regulation/impact_en.htm

Identifying specific Human Activities and related issues connecting to ecological impacts is important to Policy making. Specifying such impacts are important to both researchers and stakeholders, and both are equally important to SPICOSA.

Impact assessment is designed to help in structuring and developing policies. It can identify and assess the problem at stake and the objectives pursued. It helps to identify the main options for achieving the objectives and analyses their likely impacts in the economic, environmental and social fields. It outlines advantages and disadvantages of each option and examines possible synergies and trade-offs.

Impact assessment is thus an aid to political decision-making, not a substitute for it. Knowledge based impact assessment informs the political decision-makers of the likely impacts of proposed measures to tackle an identified problem, but leaves it to them to decide if and how to proceed.

Wide-ranging consultation with stakeholders is therefore an integral part of the impact assessment approach.

Policy instruments are the tools which can be used to overcome possible impacts and achieve objectives. Policy instruments to promote environmental protection include official restrictions and positive incentives designed to control activities that may be harmful to the environment. Environmental policies are therfore increasingly including more preventive measures and preemptive controls imposed on potentially harmful activities, rather than corrective measures to repair damage already done.

Evaluating environmental policy instruments?

In documenting and evaluating policy instruments the specific characteristics of these instruments are expected to be of relevance not only for that particular situation, but also more generally. Thus, it should be possible to transfer or extrapolate the results of an evaluation that focuses on policy instruments to other similar contexts, at least to some degree. But it is not possible to extrapolate the results of a particular evaluation to the environmental policy as a whole.

Policy makers who are searching for alternative mandates, rarely have detailed information on the whole range of Policy Instruments available, nor do they have sufficient knowledge of the political and organizational conditions needed for each instrument to work as planned. Policy decisions would therefore clearly benefit from more comprehensive information about these instruments.

This raises the following question: under what conditions are different instruments most likely to produce their expected effects?

To understand this, it is important to be aware of the reason why policy makers choose different instruments, how those instruments operate in the policy situation, and how they differ from one to another in their expected effects, the costs and benefits the different outcomes of a tool produce, and the expected consequences of these outcomes. The importance of the local context in understanding the variable effects of policy is also of great significance.

Different types of Policy Instruments can be used to address the similar policy goal. The policymakers typically choose to rely on one instrument alone, in rare cases on a mixture of instruments. What leads policymakers to prefer one policy instrument over another? The choice might be conditioned both by ideology and by how policy issues are defined and how the relationship to the resources are constituted (e.g. property rights and jurisdictions)

To sum up important factors that can influence the choice - and the effect - of a Policy Instrument:

- Money and information
- Institutional context
- Ideological preferences
- Governmental capacity
- Fiscal resources
- Political support and opposition
- Past policy choices

In selecting different options, policymakers often choose a single policy strategy to achieve a particular goal. Usually policymakers will select a conventional or a dominant Policy Instrument for any given policy issue. But crisis awareness – or new scientific knowledge - may make them adopt alternative policy instruments in order to augment or to modify the conventional one. For example can an EU Directive sustain or strengthen a local policy such as Municipality Action Plan or *vice versa.*

Taking sustainable development into account in ICZM project

An alternative method to take into account sustainable development into ICZM project could be based on the well known French RST method (The French RST02 evaluation grid user guide, CERTU 2008)
This method was produced by the Scientific and technical Network bringing together the Directorate General for urban Planning, Housing and Construction, the regional Civil Engineering research agencies and the Centre for the Study of urban Planning and Transport and Public facilities.

The RST method provides a reference framework for analysing and setting project in terms of sustainable development, which means to integrate environmental protection and enhancement with economic development and social progress.

The RST method can be adapt for ICZM as an alternative method to check the sustainable implementation to follow and re-oriented an ICZM project. We will not describe in this report the detailed methodology but the main keyword that we will need to add in the database and to fulfil for each element of the database.

Meta-keywords use for each dimensions:

- environmental,
- economic
- social
- governance.

Meta-keywords for the interfaces of the dimensions, such as

- between Environmental and economically :viable,
- between Economic and social: Equitable,
- between Social and environmental: liveable,
- and between social, economic and environmental: sustainable

The dimensions

Social

Environmental

Economic

Liveable

Equitable

Sustainable

Viable

The interfaces
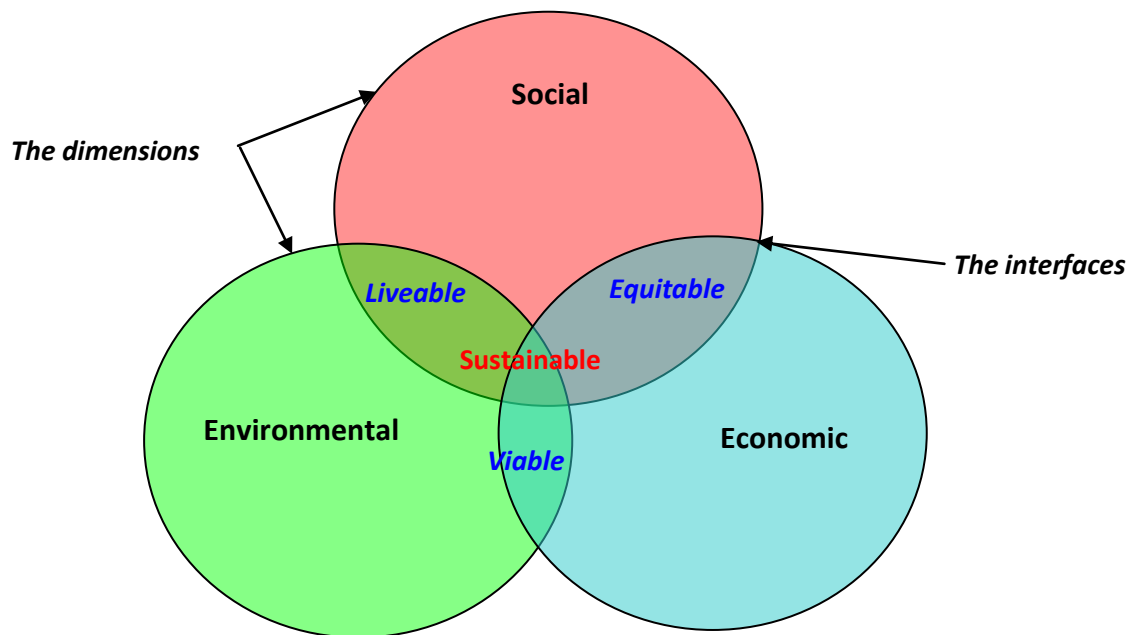
3. Database Documentation

Sources of databases

The databases that are built as part of Work Task 10.1 have two different sources:

One is a desk study on research publications and literature on ICZM – policies. This is reported and documented in the deliverable D.10.1: Policy instruments in Integrated coastal zone management (Berit Skorstad, BUC).

The other database is a list of scientific articles on impacts, problems and problem solving strategies in coastal zones. This is reported and documented in D 10.4: Policy Searching Tools - Strategies for Sustainability in Coastal Zone Management.(BUC – CORILA – IAMC).

These two databases are now cleaned up and merged into one single prototype database named SPICOSATEST, which is a searchable database according to certain criteria. SPICOSATEST is constructed based upon Microsoft ACCESS software, which is universally available through most MS Office Professional applications. In addition the prototype is also available as an entirely free database solution using OpenOffice3 BASE. OpenOffice3 BASE is free to download and use, and can be downloaded from this link: http://download.openoffice.org . This utility works very much like the Microsoft ACCESS software in use. The prototype should thus be easily accessible for most SSAs and should be ready to be tested out in their particular policy environment. After a

testing period, and subsequent update of the database, this database will be merged with the other databases of WP10, one on technology and one on monitoring. This compound database will then be transformed to an "Online information base" that will be formatted according to the specifications provided by WP 9. The compound database will need to be revised regularly (probably every 6 months) in order to clean up redundancies and to insert new information about the progress of EU law, governance and strategies. Here the role of the SSAs is very important in order to include in the database more detailed information and news from the local level. The database updating plan will be worked out in cooperation with WP9.

Structure of database

The structure for the finalized merged base of WT10.1 is of a flexible nature, and this nature should be maintained in order to guarantee connections with the other databases produced by WT 10.2 &10.3. The database of D 10.1 has been structured according to seven criteria that are mainly of a managerial and governance character:

1. Policy instruments
2. Deliberative processes
3. Legislative controls
4. CZM planning
5. Economic instruments
6. Informative measures
7. Technology instruments
[8.General literature]

Building the prototype database SPICOSATEST, we have used these categories and added an eight category labelled "general literature", and labelled these eight categories as variable "POLICY INSTRUMENTS". These categories make it possible to address queries to the database and obtain reports relevant to a certain governance process.

The database underlying D 10.4 was structured according to 15 different ecosystem related items belonging to a class of "Strategies for sustainability" in Coastal Zones. The topics are related to these policy issues, based on experiences from the study sites in SPICOSA:

1. Conflict of interests in Coastal Zone Management
2. Lack of policy
3. Biodiversity
4. Erosion
5. Invasive Species
6. Eutrophication
7. Toxic Pollution
8. Tourism
9. Shoreline
10. Pathogens in Coastal Zones. Fisheries
12. Habitat Destruction

13. Nutrient Loading.
14. Sediments
15. Water Cycle.

These fifteen categories have been labelled as variable "STRATEGY" in the SPICOSATEST prototype database. This variable makes it possible to address queries related to sustainability and ecosystem functions to the database, and obtain reports relevant to a certain ecosystem problem.

The structure of the merged database is flexible, and based on both these sets of criteria., as well as on information about title of the research piece, authors name, year published, publisher and in some cases the abstract as well (in 20% of the cases).

The previous criteria can then be connected with a general menu that will include all the topics related to ISSUES and impacts detected starting from the SSAs experiences. So that starting from an issue the final user can explore the database easily. With such an open and flexible solution, there should not be any problem structuring the final compounded database – (with technologies and monitoring) and then run queries on the basis of this general menu.

Variables in prototype database SPICOSATEST
The prototype SPICOSATEST includes 13 variables, and they are as follows:

1 – ID:
Just an individual id number help keeping track of each individual observation.

2 – PAPER:
Equals value 1 or 2. 1 = Policy instruments in Intergrated coastal zone management WT10.1, 2 = Strategies for Sustainability in Coastal Zone Management

3 – SURNAME:
Last name of 1st author

4- AUTHOR
Name of 1st author

5 – AUTHORS
Name of other authors

6 – TITLE
Title of paper/publication

7 – YEAR
Year published

8 – PUBLISHED
Where it was published

9 – ABSTRACT
Abstract of paper, if available.

10 – STRATEGY NUMBER
Numbering of Strategies for Sustainability in Coastal Zone Management (value 1 to 15)

11 – STRATEGY
Strategies for Sustainability in Coastal Zone Management

12 - POLICY INSTRUMENT NUMBER

Numbering of Policy instruments in Intergrated coastal zone management WT10.1 (value 1 to 8)

13 - POLICY INSTRUMENT

Policy instruments in Integrated coastal zone management WT10.1

14 – DIMENSION and INTERFACE (technical, economic, social or governance, and Liveable, equitable or viable) *see paragraph A from SOGREAH*

15 – GEOGRAPHICAL LOCATION (Pilot site number, or other – if other which country and name of the site)

16 – TECHNICAL OPTIONS (link the list of the technical options proposed in WP10.2 leader by Ahmet Baban)

The beta version should probably get a few facelifts after the group has tested the prototype. Firstly, it is likely that we remove two variables - 3 (surname) and 4 (author) - since the search utility is expected to be able to search within a text variable. It might also be done a grouping of all papers so that each paper only takes one line in the database. As it is today, several authors would give several observation lines, one for each author. This was done in order to be as open and flexible solution as possible in the start, but might be a sound clean up after the test period.

Access to the prototype database (http://www.spicosa.eu/dataportal/index.htm)

The database SPICOSATEST can be accessed by Microsoft ACCESS or OpenOffice3 BASE. The prototype is available as an ACCESS 2003 file format (*.mdb*), as well as ACCESS 2007 (*.accdb*) file format and OpenOffice3 BASE file format (*.odb*). The prototype can furthermore be exported from within ACCESS to several other well known formats (XML, HTML, EXCEL, DBASE, ODBC and others). Thus there should not be any problems for SSAs to access the database once it is made available on the SPICOSA PORTALwebsites.

Fig.1 The Spicosa Data Portal

4. Searching in the database

Searching in the prototype - introduction

The database prototype SPICOSATEST is coming from a merge between previous databases from D10.1 and D10.4. We will start of briefly discussing a simple search based on policy instruments, running a query in both ACCESS 2003 and BASE.

At this stage we can search on one or more criteria within each variable or several variables at a time, running so called queries. That is, we can run several search criteria at the same time using simple instructions we will outline below.

It should be noted that by running a search within ACCESS or BASE, we are not able at this prototype stage to search within variable "ABSTRACT", utilizing the abstract information got available in the database. This has to do with many characters forcing us to utilize a broader format called "note". However, since the variable is still in a form of text format, a search would be possible in some other kind of format (XLM, HTML etc). This issue would need some further work in collaboration with WP9 before the database is launched in an online version.

Searching the prototype – Microsoft ACCESS 2003

SPICOSATEST is available in both ACCESS 2003- and 2007-format. We would here focus on a simple search in the 2003 version.

In this example we would like to make a simple search based on finding all papers focusing on CZM planning, Economic Instruments, name of authors and year published. This search we would like to make into a new table in ACCESS (i.e. into a new data sheet), for further work if needed. The new table should include variables "authors", "year" and "policy instruments". In order to make this kind of search, we would need to create a query in ACCESS.

Firstly, searching in the prototype database, you would first need to start ACCESS 2003. Then you would need to open the prototype SPICOSATEST.mdb clicking FILE > OPEN > SPICOSATEST, and click OPEN. You might get a security warning, but just choose OPEN once more.

Clicking on TABLES on the left hand side, you should now find a table labelled SPICOSATEST, which is the prototype database we want to run a search from. In order to open it, just double click it. Maximize the new window, and you should now see a datasheet with variables like ID, PAPER, and so on. Click SHOW > DESIGN VIEW, and you would see the variables and their definitions in this table. Click SHOW > DATA SHEETS, and you would get back to the datasheet you started of with.

To run the query, start with closing the table SPICOSATEST. Then, on the left hand side, click on QUERIES, then click CREATE QUERY IN DESIGN VIEW and click NEW, then choose DESIGN VIEW and OK. In the new window choose our prototype SPICOSATEST, and click OK and close SHOW TABLE.

Then make your choice of variables (here: authors, year and policy instruments), drag and drop them to the fields below, define search criteria (here: policy instruments equal CZM planning or Economic Instruments). Just type each criteria, and then run this query (VIEW > RUN).
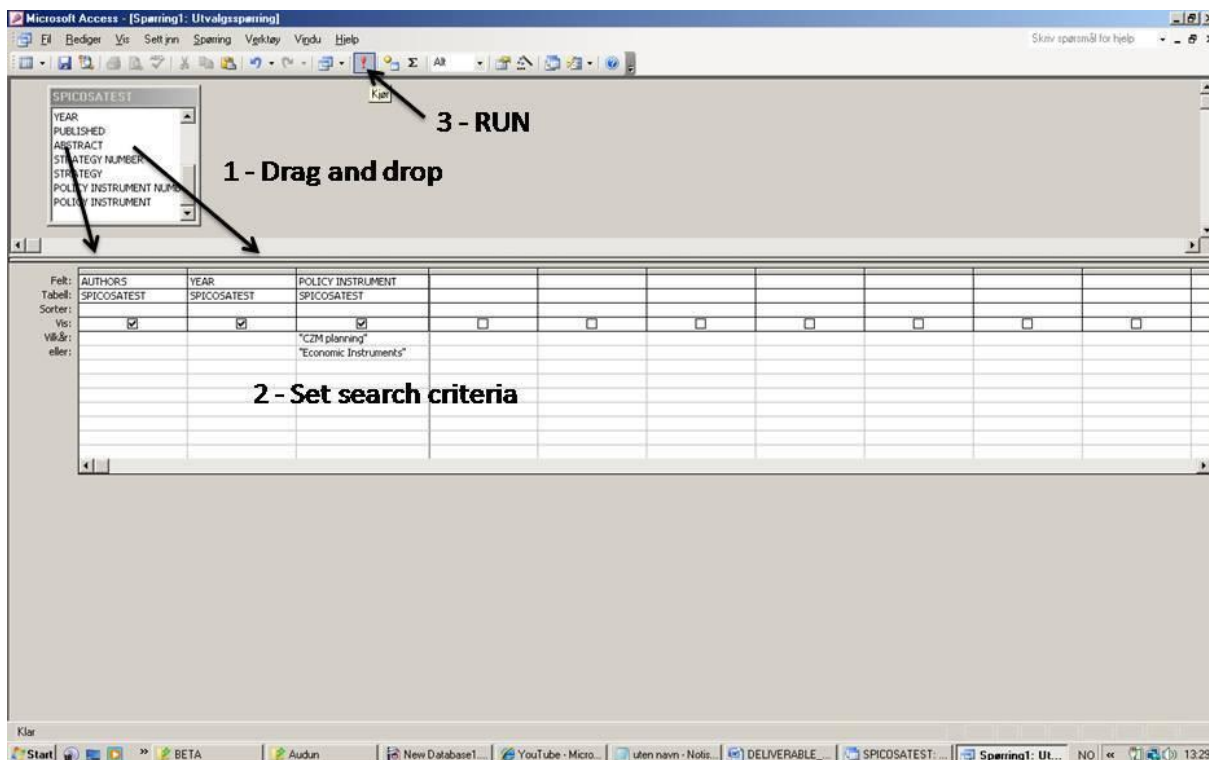
Fig.2-Tables of the database

You would then end up with a new table consisting of all observations focusing on CZM planning, Economic Instruments, name of authors and year published. If you want this saved as a permanent table, you need to go back (VIEW > DESIGN VIEW), and check for making a permanent table (you find it under VIEW > PERMANENT TABLE), label it the name you want to give the new table, and run the query once more (VIEW > RUN).

Alternatively this query could be run as the following SQL query (click VIEW > SQL and enter the commands):

SELECT SPICOSATEST.AUTHORS, SPICOSATEST.YEAR, SPICOSATEST.[POLICY INSTRUMENT]
FROM SPICOSATEST
WHERE (((SPICOSATEST.[POLICY INSTRUMENT])="CZM planning")) OR
(((SPICOSATEST.[POLICY INSTRUMENT])="Economic Instruments"));

Either way you end up with a new datasheet consisting of 281 observations. It should be noted that this would not be equivalent to 281 different publications - due to the structure of the prototype. In order to get only different publications in the new table, you would need to run the following SQL:

SELECT SPICOSATEST.YEAR, SPICOSATEST.AUTHORS, SPICOSATEST.[POLICY INSTRUMENT]
FROM SPICOSATEST
GROUP BY SPICOSATEST.YEAR, SPICOSATEST.AUTHORS, SPICOSATEST.[POLICY INSTRUMENT]

HAVING (((SPICOSATEST.[POLICY INSTRUMENT])="CZM planning")) OR (((SPICOSATEST.[POLICY INSTRUMENT])="Economic Instruments"));

Searching the prototype – OpenOffice3 BASE

We run very much the same query here, i.e. simple search based on finding all papers focusing on CZM planning, Economic Instruments, and including name of authors and year published in a new table.

Firstly, searching in the prototype database, you would first need to start OpenOffice3 BASE. You then get the Database Wizard, where you choose CONNECT TO AN EXISTING DATABASE, and choose ACCESS 2007 file format, and click NEXT. Then locate the SPICOSATEST.AACDB file, and choose NEXT. Then answer NO, NOT REGISTER, and click FINISH. Choose a name for this new file, and SAVE AS with your filename. The database will then open, and you get a view of TABLES, QUERIES and so on, much like in ACCESS. Click on SPICOSATEST in TABLES, and you get the datasheet of our prototype. In order to close this window, you hold down CTRL and W.

To run a query, you can access this very much in the same matter as with ACCESS. Click QUERIES, and click CREATE QUERY IN DESIGN VIEW. Choose SPICOSATEST table by clicking ADD, and then CLOSE. Drag and drop the variables we want to include ("authors", "year" and "policy instruments"), define search criteria (policy instruments equal CZM planning or Economic Instruments),, and run this query (VIEW > RUN).
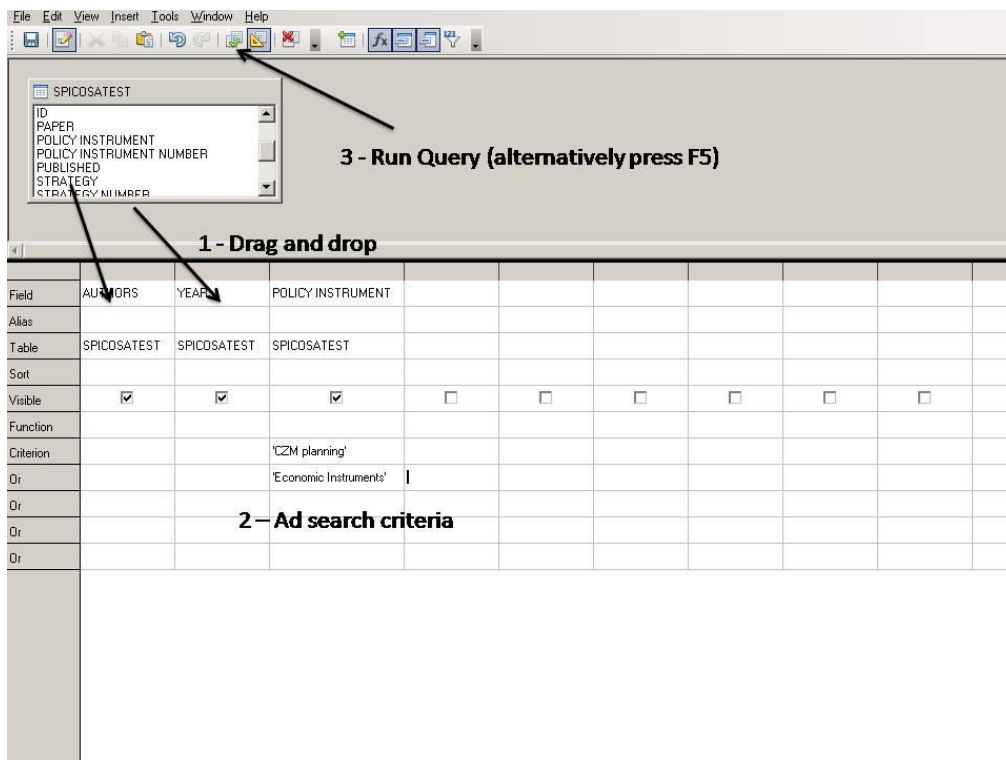

Fig.3.Acces a query in the database

You would then end up with a new table consisting of all papers focusing on CZM planning, Economic Instruments, with the name of authors and year published. Also here you can run a search using SQL query. To start this, just go to TABLES and click on time on SPICOSATEST table, and then click INSERT > QUERY (SQL VIEW), and type the following:

SELECT `AUTHORS`, `YEAR`, `POLICY INSTRUMENT` FROM `SPICOSATEST` WHERE (`POLICY INSTRUMENT` = 'CZM planning' OR `POLICY INSTRUMENT` = 'Economic Instruments')

Then run this query by clicking a RUN button on the top.

A final note on using OpenOffice3 BASE: It does not seem like we can make a permanent table of a query like this. It might have to do with the database design since the Open Office links itself to the ACCESS base. It also seems to be some issues concerning grouping in order to find the exact number of papers and publications. This can be solved by changing a bit of the way the prototype database structure is built, so that any publication is just having one database observation line. That would in imply that a beta version 2 of the base implements this option.

Limitations of search capabilities in the prototype database

Considering the material provided by the two databases merged, and what we suggested to adopt in terms of searching strategy, there are some important limitations of search capabilities in the prototype database:

1. Search terms may represent different meanings and consequently that may not deliver the right information ; this could be improved if we decide to build a thesaurus

2. If we consider that not only researchers but stakeholders and decision makers could use the database, the multilingual question becomes very important. How to proceed with documents in the databases provided in different languages? It would be interesting to provide a multi- lingual index allowing finding the equivalent searching words in the database. *(Watershed or River basin or Catchment (English)/ Bassin versant (French)/ Cuenca (spanish))*

3. In a lot of cases, the information provided will be either global/general or very local/specific of a geographic area and the difficulty will be a generic use of the results.

Further refinement of searching capabilities towards a web-based database solution

The material from databases has been identified and classified and has now to be made accessible for the use of researchers within SPICOSA by organizing the search for existing sources of information (available literature on ICZM and ongoing policy experimentations). The database should be accessible either by researchers or stakeholders, and the exact needs of these needs to be tested in real life situations. The present DB architecture allow users only to explore the database starting from a main keyword related to either one of 8 Policy Instruments or to 15 Strategies for sustainability and Governance. A testing phase (with SSAs users) is now going to be performed in order to guarantee the correct relationships between topics. A feasible refinement of searching tools could then in the next phase include:

-Identifying more appropriate search terms, including free search on text in the provided abstratcts. It could be done from the previous work realised by WT10.1 and completed if necessary.

-Identifying crucial keywords and phrases linked to the Policy Instruments or the Strategies for sustainability that can improve the user friendliness of the database.

- Identifying additional subject headings, that can be added to the "title" of the research piece , giving information about the geographical location, the scientific disciplines involved, the methods used etc.

In a web-based database solution, the text of the abstracts in the database can be made searchable for any keyword. However, this capability would apply to only 20% of the entries in the merged database, for the remainder the search will still have to be based on the policy instrument category or the strategy category – or on any keyword derived from these broad categories.

In addition to main an derived keywords/phrases, it could be useful to think of additional subject headings to ensure it will be possible to find easily the information relevant to the topics identified previously.

A possibility is also to look into the possibility to use a thesaurus to help expanding the number of keywords. A thesaurus contains synonyms and sometimes antonyms, in contrast to a dictionary, which contains definitions and pronunciations. It should not be taken as a complete list of all the synonyms for a particular word. The entries are also designed for drawing distinctions between similar words and assisting in choosing exactly the right word. Unlike a dictionary, a thesaurus entry does not define words. If undertaken, this work can also be based on some existing experiences (see below some references of coastal thesaurus).

- *ASFA MULTILINGUAL AGRICULTURAL THESAURUS COASTAL ZONE*
www4.fao.org/.../asfa.exe?...Coastal%20zone%22... (Note: FAO websites under reconstruction)

- *Coastal zone management - Transportation Research Thesaurus*
(TRT)www.vocabularyserver.com/.../index.php?...&/coastal-zone...

- *Coastal zone planning GEMET Thesaurus. www.eionet.europa.eu/gemet/concept?...*

- *Coastal Zone Management Program -*
acronyms.thefreedictionary.com/Coastal+Zone+Management+Program -

The following improvements in the database searching capabilities are considered as desirable, but not fully feasible to undertake with the limited resources available to WP10. It is also uncertain what the net gain would be to the overall SPICOSA project of a perfection of the search capabilities of the database:

- Most of the documents included in the database lack an abstract or a summary: these often provide   essential points and helps to decide if a certain document is relevant to the query. However, it is considered too time consuming to produce fresh abstracts where such does not exist for the further development of searching tools.

- A number of the documents in the database lack keywords, it would be desirable to improve the information on these documents in terms of specific key-words to ensure the physical search link. A first solution that could be considered is to generate keywords through an automatic process extracting them from the full text : *(if digitalized - example search "basin versant "in the full text*

and if founded, copy "basin versant" in the selected field "keywords"). A second solution would be to manually re-read all the items and to select relevant keywords, or to ask the colleagues who provided the information. This second solution is more accurate, but clearly more difficult to implement.

- The date of the document, in addition to the year published, is missing in the database. Whenever available, this could be added to the database if the net gain of this is considered worth the extra effort.

- Other information which could be useful is the geographical location (where the policy has been implemented, for instance) but currently there is no dedicated field for this in the database. This information would have to be extracted from the full text or from the origin of the information, and if retrieved, it could conveniently be added as an "additional subject heading" (for SSAs, the geographical information is given by the site identification).

- Finally, additional useful information, reports and documents can be extracted from the study sites in the SPICOSA project and entered into the database in connection to its transfer to an online format : Each study site should be asked to provide some keywords to describe the characteristics , human activities, forcing and impact responses (see below one example from SSA). This information could be used to complete if necessary a field concerning the typology of sites (estuary, lagoon, etc.) These SSA specific entries could be in this form:

a. keywords : small gulf, shallow waters, oceanic to estuarine, tidal forcing, river basin, wetlands, marine ponds

b. Human Activities : shellfish cultivation, tourism, agriculture, urbanization, commercial fishing, sailing

c. Unsustainable Forcings : Intensive agricultural (irrigation, nutrients and pesticides loadings…), Urban and industrial wastes, Unresolved use conflicts (fresh water management)

d. Impact Responses: salinity/lack of freshwater, bio-chemical pollution, Ground and surface water deterioration, ecotoxicological issues

(extract from the SSA10 site form)

Developing an improved system of keywords

In order to improve the user friendliness of the database tool, there are certain avenues that can be pursued for refining the search capabilities of the database and identifying crucial keywords and phrases linked to the Policy Instruments or the Strategies for sustainability:

It is worth exploring these possibilities by asking the following questions:

1 - The first access would be the question of which issue are we interested in – among the 8 policy instruments issues plus the 15 strategy issues ?

2 - It would then be useful to be able to ask what is going on in terms of physical system/ bio-physical processes related to these issue.

3 - Then the query could be completed by asking which EU directives, national laws, regulations, policies of intervention, mitigation measures and local policies could be linked to each issue (by keyword links) – examples : water framework directive, habitat directive,…

4 – A last access by geographical area or typology of the coastal zone (database-fields or keywords) could be added.

In testing the SPICOSATEST prototype database, the SSA's should thus consider very thoroughly whether the development of such a keyword structure of the database is useful and is worth the extra resources that will have to be allocated to this work:

- A first level of classification using the established keywords of D10.1 and D10.4
- A second level that would be defined from a system of keywords hierarchically related to the first level.

Developing a two tier system of keywords implies that we have to provide a list of relevant keywords for each theme which must be defined by topic. In the same way, we have to provide a definition for each key-word and to determine which word is relevant as there are sometimes alternative meanings. Then we have to explain and define how to combine keywords for a specific strategy. Finally, we have to take in account how to organize searches for a particular geographic area or a particular coastal system, as estuaries for instance.

Keywords about coastal systems, as we saw previously, can also be extracted from study sites, in that case the database has to be updated with site relevant categories in order to be able to use them.

Below are given a number of examples of how the development of such a 2nd tier of keywords can be developed from the initial 1st tier of keywords in the database.

Example 1 : List of 1st and 2nd level of keywords derived from Policy Instruments Categories for the management of water quality and quantity :

Keywords 1st level	Keywords 2nd level
Economic Instruments: Fee / Charges	General tax for pollutants
	Water use royalty
	Wastewater user charges
Legislative instruments: Penalties	Fines for non-compliance with the regulations
Legislative instruments: Regulation instruments	PGE (Animation/ training)
	SAGE
	a posteriori compensatory actions
	Agricultural calamity funds
	Insurance (in France subsidy rate for companies 35%; excess by farm or production

Economic Instruments: Subsidies	Environmental or agri-environmental grant schemes;
	Environmental or agri-environmental grant schemes;
	Accelerated capital depreciation for industries;
	Soft loans for investments in pollution control and waste disposal;
	Allowances for better compliance with the regulation…
Deliberative processes: Voluntary approaches	Water quantity voluntary initiative (volumetric water management)
	Pesticides voluntary initiative…
	Nitrates voluntary initiative
Policy Instrumwents: Policies	CAP decoupling (75% 1 january 2006)
	Eco-conditionality
Economic Instruments: Markets	Water rights markets

Example 2: List of 1st and 2nd level of possible keywords derived from the Strategies for Sustainability. Keywords at the first level are in bold.

Conflict of interests in Coastal Zone Management
coastal zone management; resource management; conflict
Coastal protection; Environmental conflict resolution; Mediation; Nature protection
Lack of policy
None.

Biodiversity
'No take' marine reserve; Biodiversity; Conservation; Marine protected area; Multiple-use marine protected area; Sustainable use
Fishing; MPA; Network; Pollution; Reserve design; Species introduction
Non-governmental organization; Pilot project; Specially protected areas; Sustainable coastal management
Communication; Communities; Education
Coastal management; Diversity; Nature conservation; Research
Ecosystem Functioning; Habitats directive; Mitigation banking; No-net-loss; Restoriation
conservation management; fishery management
Assessing fisheries management; Catchment management; Ecological performance indices; Large marine ecosystems; Marine reserves; Refuges; Water quality
Assessment; Conservation; Evolution; Infra-specific biodiversity; Management; Molecular ecology; Monitoring
Benthos; Biodiversity; GIS assessment; Habitat; Marine protected areas; Mediterranean sea; Protection efficacy; Rocky shores
coastal change; ecohydrology; nutrients; phytotechnology; pollutants; river basin management; sediment
Erosion
Artificial shoreline development; Beach conservation; Beach management; Mediterranean coast; Tourism
Invasive Species
Alien species; Altitudinal gradient; Disturbance; Invasive plants; pDCCA; Quadratic

regression
Exotic species; Balearic islands; Numberical model
Estuaries; Baltic sea; Neva estuary; Plankton; Eutrophication; Pollution; Invasive species
Eutrophication
None
Toxic Pollution
Air, water and food contamination; Xenobiotics; Inorganic acid anhydrides; Ozone; Photochemical smog; Lead; Polycyclic aromatic compounds
Tourism
None
Shoreline
None
Pathogens in Coastal Zones
Heterodera arenaria; Meloidogyne maritima; Pratylenchus penetrans; Root-feeding nematode; Soil community; Soil pathogen
Weed survey; Small-scale-farms; Weed control
Vibrio vulnificus; Plankton-associated vibrios; PCR assay; Cytolysin primers; 16S rRNA primers
enteroviruses; adenoviruses; nested PCR; coastal waters; detection
Urban forest; Forest pathology; Plant epidemiology; Fungal pathogen; Exotic microbe; Pitch canker; Fusarium circinatum
Fisheries
Aboriginal rights; Fisheries management; Saami; Mi'kmaq; Dependency; Agency
Demersal fish assemblages; Experimental trawl surveys; Fisheries management; South and Southeast Asia
Development; fisheries; management; pollution; sustainable.

Habitat Destruction	
Estuary management; Global warming; Human impacts; Introduced species; Saltmarsh; Sea level rise	
Beach management; Coastal resource; Habitat; Llobregat delta; Sand dune	
Compensatory actions; Development of harbour infrastructures; Integrated coastal zone management; Seine estuary	
Nutrient Loading	
Eutrophication model; Harbour water quality management; Hong Kong; Water quality management	
Ecological impacts; Estuaries; Freshwater; Nutrients; Pressures; State; Trends	
Coastal; Coastal wetlands; Ecosystem models; Freshwater discharge; Landscape impacts; Resource management	
Sediments	
Agricultural runoff; Coastal management; Mathematical model; Mediterranean region; Nonpoint source pollution; Soil erosion	
Catchment; Contaminants; Driver-pressure-state-impact-response (DPSIR); Economic analysis; Estuary; EUROCAT; Humber; Metals; Nutrients; Policy; Scenarios; Water Framework Directive (WFD); Water quality	
Water Cycle	
Baix Ter wetlands; Eutrophication; Mediterranean coastal lagoons; Nutrient composition; Water resource management; Zooplankton	
Biological processes; Coastal management; Physical processes; Spatial scales; Temporal scales	
Environmental impacts; Historical practices; Institutional aspects; Integrated management; Shrimp aquaculture; Sustainability; Thailand; Water treatment	
Environmental impact; Hydrological planning; Territorial economic imbalance; Territorial regulation; Territorial units; Water integral cycle	

Coastal areas; Nutrients; Sustainability; Urine source separation; Wastewater treatment
Coastal zones; Life cycle; Sand management
ELOISE; Europe; Hydrochemistry; INCA project; Nitrogen; Water quality

In developing an improved keyword structure for the SPICOSA database, it is also possible to use experiences from existing search tools which have been evaluated in D10.1 (*See e.g. The CoPraNet (http://www.coastalpractice.net/), and the Encora's ICZM Websearch (http://www.encora.eu/websearch.php) and Coastal Wiki (http://www.encora.eu/coastalwiki/Main_Page)"*)

Updates
The data in the database have been updated in autumn **2010**. It can easily be updated further by using Microsoft Access or Excel. In the last updates we have also put in a reference to another search portal ScienceDirect where one also can get access to the abstract and, in some occasions, the whole article or book.   The 2010 update was important because it includes some of the deliveries from the SPICOSA – project.

5. Feasibility of Alternative Policy Instruments in Some SSAs

This Work Task reviews advantages and disadvantages of different types of policy instruments and policy implementation schemes with reference to available literature on ICZM and in reference to ongoing policy experimentation within the EU region and globally (SPICOSA DOW 2007)

The task of the report presented here (***D 10.12 Policy Searching Tools- Database with documentation***) is to be a complement and to complete the draft D 10.1 (Policy Instruments). It includes examples of Alternative Policy Instruments relevant to SSAs collected from Deliverables 7.2 SSA Result of the Design step and progress, and Deliverable 7.3 SSA Result of the Formulation Step, to help to comprehend the feasibility and implementation of the best applicable policy instruments from selected SSAs, and as a result of SPICOSA interest in reform policies to improve the integration between Science and Policy, based on the definition of policy instruments delineated in Chapter 2. It is here important to understand that policies have a key role in determining the state of the environment. The EU has 35 years experience of environmental policy-making, during this period over 200 legal acts have been put in place and a number of strategic paths have been defined. Initially, policies have focused on regulating technical standards. But gradually, the spectrum of policy instruments has broadened, recognizing that there is no single universal policy tool that can provide solutions to all problems (Ostrom 2009). Thus "trial policies" and experimental "mixes of policies" have become more necessary in order to address complex socio-ecological policy issues. Examples of some of these environmentally related policies are presented in Fig. 3 below.

- Birds Directive (79/409/EC)
- Habitat Directive – Conservation of natural habitats and of wild fauna and flora (1992/43/EC)
- Water Framework Directive (2000/60/EC)
- Integrated Coastal Zone Management (2002/413/EC)
- Maritime Spatial Planning (2007/575/EC)
- Integrated Marine Strategy (2008/56/EC)
- Urban Waste Water Treatment Directive(91/271/EEC).
- Bathing Water Quality Directive (Council Directive 76/160/EEC concerning the quality of bathing water and the new Directive 2006/7/EC)
- Flood Risk Directive (2007/60/EC)
  - Ground water (a new proposal and an existing Directive 80/68/EEC)
  - Strategies against chemical pollution of surface water under the Water Framework Directive (including Priority substances under Article 16 of the Water Framework Directive as well as the existing legislation on the Discharges of Dangerous Substances Directive (76/464/EEC))
  - EU Water initiative focuses on the implementation of the Millennium development goals on clean water adopted in Johannesburg 2002.
  - In recognition of the acuteness of the droughts and water scarcity challenge, the Commission is preparing a Communication on these issues. A Stakeholder Forum has been set up in order to ensure an active involvement of all the interested parties.

Birds Directive (79/409/EC)

Habitat Directive
(1992/43/EC)

Natura 2000

Water Framework Directive
(2000/60/EC)

Integrated Coastal Zone
Management (2002/413/EC)

Maritime Spatial Planning
(2007/575/EC)

Integrated
Marine Strategy
(2008/56/EC)

Conserving single species

Conserving status of
community of species

Enhancing connectivity

Ecosystem services
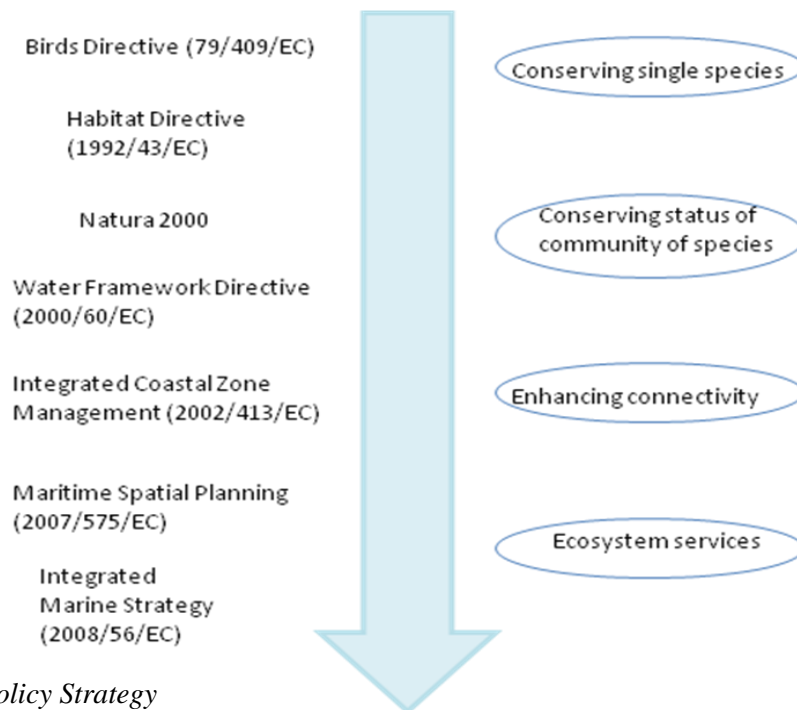
Fig. 4-Policy Strategy

Policy Searching Tools in selected SSA's

One goal of the DELIVERABLE D 10.7 is to test the feasibility and potential impact of policy instruments in selected SSA.
From the eighteen Study Sites has been chosen:

- Study Site 7.10 Pertuis Charentais (FR)
- Study Site 7.14 Taranto Mare Piccolo (IT)
- Study Site 7.17 Izmit Bay (TR)

SPICOSA SAF methodology has been an useful instrument for science to approach stakeholders and policy makers involved in the policy issue chosen, and for finding the most suitable policy instruments to manage the Impacts of the Human Activities considered.
A collection of information and knowledge in connexion with the main Policy Issue has been done, these are examples of factors that can influence the choice of Policy Instruments. All policy instruments require information, otherwise they could not function, but it is necessary to distinguish between information on policy instruments and information as input into policy instruments.

SSA	POLICY ISSUE	Supply information
Pertuis Charentais	Freshwater management of the Charente River on the Atlantic Coastal Zone	- HAs: agriculture, oyster farming - Drinking water demand - Water management system - Social and economic patterns - Governance and legislation
Taranto Mare Piccolo	Including mussel culture in a management plan for the sustainable use for the Mar Piccolo resources	- Environmental data - Economic data: catch and mussel market - Social component, such as public perception
Izmit Bay	Improvement of water quality in Izmit Bay	- Impact of decrease of water quality to main HAs ad response - Economic component: impact on Real Estate Value - Social component: public willingness to pay for environmental improvement

For all these 3 Study sites the most important Human Activities in the area and the relative Impacts have been considered. It has thus been possible for policymakers together with the scientists to select a set of Policy Instruments that can work in concert to address the same policy goal.

Mare Piccolo di Taranto: list of HAs and consequences ecological dysfunction and impacts
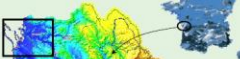
Human Activities	Ecological dysfunction	Key Variables linking Forcing to Impact	Impacts on ecosystem goods and services
Mussel culture	Reduction of the mussel productivity and health	mussel recruitment, employment, local jobs	Reduction of the local market, loss of jobs
Urbanization	Eutrophication effects	anoxia, benthic habitat, diversity loss, toxic and harmful algal blooms	Change of trophic structure
Heavy industry	Biochemical pollution	Heavy metals, PAHs, PCBs	Contaminated mussels, stress on organisms
Agriculture	Eutrophication and toxic substances	fertilizer use, field drainage, crops, pesticide use, surface water transport	Same as urbanization, ground-water contamination, ammonia emissions
Navy docks, large ship traffic	Physical habitat destruction	shoreline development, resuspension from large ship traffic	Reduction of mussels recruitment, perceived environmental quality
Transport	Diversity loss and invasive species	bacteria, phyto- and zooplankton, phyto- and zoobenthos, necton	Perceived environmental quality, water trasparence

Fig. 5: Mare Piccolo de Taranto

To select the dominant Policy Instrument and the appropriate Alternatives to support the policy management, as suggest from the SAF methodology, stakeholders primarily involved in the issue
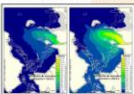
was approached. One important feature of policy instruments is that they invariably involve connections between different actors.

Fig. 6 Pertuis Charentais

The transparency and sharing of information among actors involved in the same issue are here important factors in the success of the policy instruments. The transparency and an open attitude to environmental reporting makes it easy to adopt environmental management systems.

The Institutional Map developed by Work Package 1 (Policy Interface) in the first year of SPICOSA has proved to be a constructive tool to achieve the knowledge on Policy Instruments for the given Issue, both primary Policy Instrument and alternative or complementary Policy Instruments.

Evaluating the Policy Instruments chosen from the selected SSAs, it has been highlighted as one of the specific characteristics necessary for these instruments: to be applicable over a wide variety of coasts.
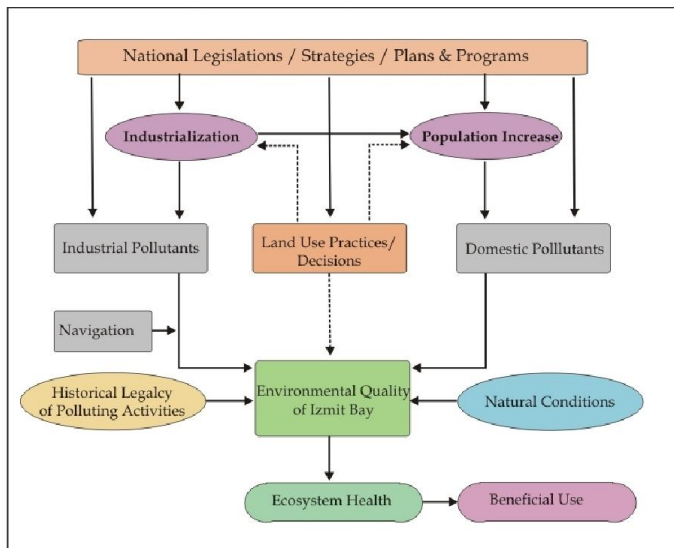

Fig 7 Mare Piccolo di Taranto Policy Instruments
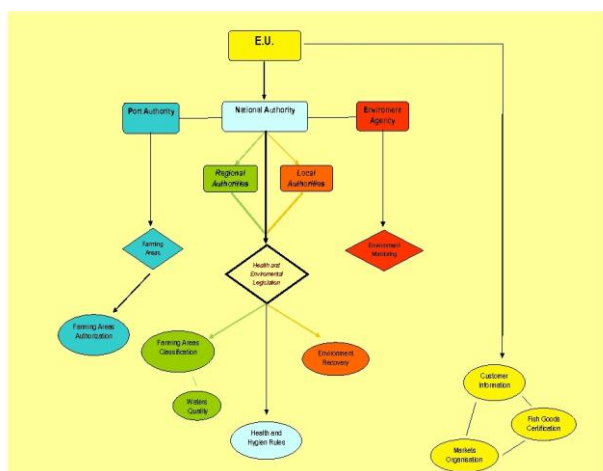
Fig. 8: Izmit Bay Poliocy Issues and Instruments

The complexity of consequences and the uncertainties with respect to causes and effects mean that studies aiming at evaluating the overall worth and merit of an environmental policy instrument should never be structured from a single point of view and using only one method. Multiple criteria should be used. The multidisciplinary is a necessary condition for developing an informed view of the functioning and effects of environmental policy instruments.

During the process a large number of documents, such as environmental reports, general statics data, acts, committee proposals should be analysed. The conclusions must not be based on findings from a single viewpoint or data source, but on the combination of results using different methods and data.

Legislative Decree n. 530, of 30/12/1992	Up-to-date text of Legislative Decree 30/12/1992 n. 530, that explicates "implementation of Directive 91/4912/CEE that establishes the sanitary laws that enforces to the production and the marketing of the living shellfishes "
Ministerial Decree of 31/07/1995	Methods for the determination of fecal colyforms of Escherichia coli, of the salmonellas, of the seewides bitoxines PSP (Paralytic Shellfish Poison), of the toxins DSP (Diarretic Shellfish Poison), o the mercury and of the cherns
Circulars of Sanity Department n. 703/3164/1647 of 20/03/1996	Classification of the production and stabulation shellfishes zones according to DL 30/12/1992 n. 530, and following modifications and integrations
Legislative Decree n. 249 of 15/03/1996	Modifications according to legislative decree 30/12/1992 n. 530 that implements the directive 91/492/CEE that establishes sanitary laws for the production and the marketing of the living shellfishes
Decree of President of Regional Committee n. 343 of 25/07/1996	Legoislative decree 30/12/1992 n. 530 and following modifications - Sanitary higienic laws for the production, the marketing and the selling of the living shellfishes- Decree of implementation
Circulars of Sanity Department - Department of Food, Nutrition and Public Veterinary Sanity. Office IX n. 600.9/3183/4338 of 04/11/1997	Acknowledgement of qualification of the shipment and depuration centers of the living shellfishes
Note of Sanity Department. Veterinary Sanity Direction n. 600.9/31.85/1248 of 09/04/1998	Legislative Degree 30/12/1992 n. 530, sanitary vigilance of the depuration plants
Decree of Republic President n. 395 of 20/10/1998	Regulation that explicates laws of implementation of the directive 95/70/CE about minimum measure against some illnesses of shellfishes

Fig. 9: List of policy instruments regulating the mussel culture in Europe, Italy and Mar Piccolo di Taranto

Pertuis Charentais

HA/TO	avoidance/mitigation	remedies	Design features	Cost components	Achievements	Comments	Ref.
Water scarcity	*Scenario 1* *Development of innovative water resources* -Rainwater harvesting,	Creation of retention basins	Different conceptions (total retention basin or complementary reserves	???	See reference	Farmer associations; public authorities	http://www.poitou-charentes.fr/fr/envir onnement/eau/doc/ p-i-annexes.pdf
	-Segregation of domestic WW into gray, black, yellow water, separate treatment, gray water reuse,	Collection/eliminati on of separated products	Equipments/I nformation/ documentation	????	See reference One realization inside the concerned area	Only reference found	Schéma directeur de la gestion des déchets du port de plaisance de la Rochelle
	- Promoting decentralized management, reuse/recycle Advanced treatment and reuse of effluents from WWTPs for irrigation	Use of water to irrigate maize and sunflower	Different types of equipment (basins, pumps, pipes	No info	Six realizations in the watershed	Few implementation in the Charente watershed	Panorama général de l'utilisation agricole des eaux usées en France : bilan
	- use of water saving equipment for domestic purposes, toilet alternatives for decentralized areas, compost toilets, waterless urinals, urine separation toilets etc.	No Info/data found					http://ruisseau.oiea u.fr/eaudoc/integral /reuinter.htm: Besoins en eau potable pour la consommation domestique en Poitou-Charentes,sont de 140 litres d'eau/hab./j

Fig. 10 Pertuis Charentais, collection of data and information regarding the Policy Issue chosen

These figures show that in order to have a complete vision of authorities involved and legislation adopted, a top-down model have been employed by the selected SSAs. In the first step, European Directives have been considered, followed by National, Regional and local legislation. The Institutional Map has pursued the same method.Realization of the Institutional Map and research on Legislation and Policy Instruments implemented in the policy issue chosen has proven useful to the SSAs in order to understand the social and economic system of the area and how it works. In this way the interaction between science and policy can be more productive and efficient, focalizing on the same task and on the best way to reach it.

Apart from the selection of the policy instruments to be adopted and the authorities involved, it is evident from the SSAs selected, that the significant effort has been employed in a meticulous selection of the Human Activities and related Impacts on the system.

Based on the reporting in Deliverable 7.3 SSA Result of the Formulation Step, in order to figure out the feasibility and achievement of the best applicable European Directive to the Coastal Zone Management, it is evident that the mostly significant Policy Instruments in these three SSAs have been:

- Birds Directive (79/409/EC)
- Habitat Directive – Conservation of natural habitats and of wild fauna and flora (1992/43/EC)
- Water Framework Directive (2000/60/EC)
- Integrated Coastal Zone Management (2002/413/EC)
- Maritime Spatial Planning (2007/575/EC)
- Integrated Marine Strategy (2008/56/EC)

Alternative Policy Instruments at European level that can be considered should include also International Convvnctions such as:

-       HELCOM, Baltic Sea Action Plan
-       OSPAR and NORDEN
-       IPCC reports
and European Projects (ENDECO, INCOFISH, IMAGE).

In concert with European and International instruments, in any single area it is significant and relevant to act in accordance with national and local Alternative Policy Instruments: Good examples are here: Territorial Management Plan, Water Policy of local authorities, Shellfish farming policy, Municipality Action Plan.

Ideally, at the end of a decision making process relevant evaluations of policy instruments should be adopted. Such an evaluation approach suitable for the environmental policy instruments is Vedung's model for "*side effects evaluation*" (Vedung 1997). It offers possibilities for dealing with both the complexity and uncertainty of many environmental policy problems and the instruments that are used to solve them.

In the side-effects evaluation approach the effects of the studied instruments are conceptually divided, into anticipated and unanticipated effects, as shown in Fig. 10. The next level examines whether such effects occur inside or outside the target area. The upper level is a qualitative categorisation of the effects. The main value of this categorisation is that it helps in the identification of different kind of effects of the examined policy instruments. It provides a broader frame of reference than a conventional evaluation which would focus only on some well defined objectives of the policy instruments.

16   *Mikael Hildén et al.*   *Monographs of the Boreal Environment Research No. 21*
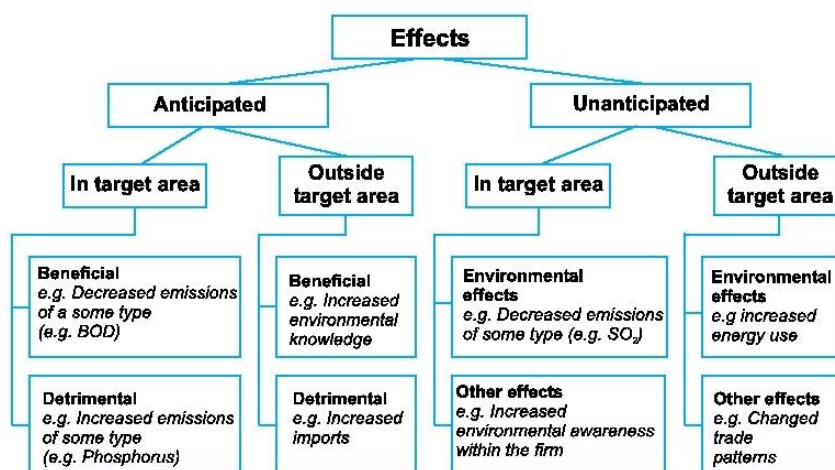
Fig.1. Different types of effects; summary of the classification used. Strictly speaking side-effects are those effects occurring outside the target area.

Fig 11: Side Effect Evaluation Approach

In sum, the purpose of evaluation criteria that can be used in an evaluation of the feasibility of alternative policy instruments in selected SSAs, is to enable us to specify the dimensions or aspects of the policy instruments which will be studied in order to assess their merits.

The criteria that can be used would be:

- <u>Relevance:</u> do the goals of the instruments cover the key problems of environmental policy?

- <u>Impact:</u> it is possible to identify impacts that are clearly do to the policy instruments and its implementation?

- <u>Effectiveness:</u> to what degree do the achieved outcomes correspond to the intended goals of the policy instrument?

- <u>Efficiency (cost-effectiveness):</u> do the results justify the resources used? Could the results be achieved with fewer resources?

- <u>Acceptability:</u> to what degree do individuals and organizations accept the environmental policy instrument?

- <u>Transparency and participatory rights:</u> to what degree are the outputs and outcomes of the policy instruments , as well as the processes used in the implementation, observable for outsiders? Who can participate?

- <u>Equity:</u> how are the outcomes and costs of the policy instrument distributed?

- <u>Flexibility:</u> can the policy instrument cope with changing conditions?

- <u>Predictability:</u> is it possible to predict the administration, outputs and outcomes of the policy instrument?

- <u>Sustain-ability:</u> are the effects sustained in such way that they have a lasting effect on the state of the environment? Through this criterion the effects outside the target area and the unintended effects that may create new problems can also be considered. (sustainability in this context does not refer to "sustainable development").

6. Conclusions - the role of SSAs

This deliverable has documented the source and the structure of the prototype database *SPICOSATEST*. This database is now available on the internal SPICOSA website in MS Access format for testing within the SPICOSA community. It is simultaneously being transformed by the Work Package 9 team into an on-line searchable resource aimed at a larger ICZM community.

But in order to make it useful for a larger audience, the WP10 team needs input from as many as possible of the 18 Study Sites in SPICOSA.

From the prototype database - as it is explained in section 4 of the this report - it is possible to find information on different policy instruments and policy implementation schemes. These are all entries that have been made available through the work with the deliverables D10.1 , D10.4 and D10.7. However, at this point the database prototype is still not complete, but it has to be supplemented and improved from now on and untill the end of the project, in order to be easily understandable and useful, not only to SPICOSA community, but also to stakeholders, policy makers and end-users throughout Europe engaged in Integrated Coastal Zone Management and Planning.

We therefore ask the study sites to test the prototype database and judge the following points:

- Whether the current contents are of any help in analyzing the Policy Instrument options in their particular cases.

- Whether the search structure of the database is understandable and convenient to work with for the tasks at hand for the SSA's - both in the Output phase of the SAF and in the tasks of presenting this to stakeholders, end-users and policy-makers.

- Whether there are additional research material, pertaining to national, regional and local rules, regulations and planning provisions that would be helpful to include in the database in order to make it more comprehensive and user-friendly for a larger ICZM community.

- Whether there are additional research material pertaining to a certain type of coastal ecosystem (estuary, delta, lagoon, archipelago etc) that that would be helpful to include in the database to make it more comprehensive and user-friendly for a larger ICZM community.

The Work Pack 10 team will provide a separate *reporting template* in order to collect this information from the SSAs. On the basis of this the SPICOSA Policy Instruments Database will be upgraded and enriched through the experience and collaboration of the SSAs running and testing the prototype database.

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