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Imagine coastal sustainability

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ABSTRACT

Since 2000 Coastal Area Management Programmes (CAMPs) supported by UNEP Mediterranean Action Plan (MAP) and the Priority Actions Programme Regional Activity Centre (PAP/RAC) have been engaging local communities in assessment of their coastal sustainability. The Methods used since 2000 have been based upon an evolving methodology which is now called Imagine.

In 2010 The CAMP Levante de Almeria began. "Imagine the future of our coast" is the slogan selected for this project which is intended to turn this area of southern Spain into a sustainability laboratory. The CAMP Levante de Almeria project is a test and a practical demonstration of how to implement Integrated Coastal Zone Management (ICZM) concepts in Spain in compliance with the ICZM Protocol (the seventh protocol in the framework of the Barcelona Convention). CAMP acts technically, environmentally and socially as a means to design and implement new practices, relating these to vertical and horizontal coordination between local and regional administration and public participation in decision-making processes related to the coastal zone. The fundamental objective of the project is to achieve wide scale agreement on the sustainable development of the coast.

Drawing upon the history of the various CAMP projects, this paper explores progress made so far in the application of the Imagine methodology in CAMP Levante de Almeria and, by contrasting it with summary observations emerging from earlier Imagine applications in Malta, Lebanon, Algeria, Slovenia and Cyprus draws conclusions on the value of engaging coastal communities in sustainability self-assessment.

1. Introduction to sustainability in the Mediterranean

Conceived in 1976 and amended in 1995 the Barcelona Convention (UNEP, 1976) drew up the protocols for the protection and improvement of the Mediterranean. The protection of the Mediterranean sea against pollution was agreed and this was subsequently expanded to:

> "include planning and the integrated management of the coastal region". (UNEP, 1976).

The main aims of the Convention were to assess and control pollution, carry out sustainable management of natural marine and coastal resources, integrate the environment with economic and social development, protect the marine environment and coastal regions through action aimed at preventing and reducing pollution and, as far as possible, eliminating it, whether it is due to activities on land or at sea, protect natural and cultural heritage, strengthen solidarity between countries bordering the Mediterranean; and contribute to improving the quality of life. (Ibid – paraphrased from the web page).

1.1. Participation in the Convention

The Convention not only established the injunction to protect the Mediterranean coastal region, the 1995 amendment also established the concepts of information access and public participation in the process.

A key concept of the Convention related to the manner in which sustainable development could occur. A Mediterranean Strategy for Sustainable Development (MSSD) was required, and this was set out subsequently in the 2005 Report by the United Nations Environment Programme and the Mediterranean Action Plan (MAP) (Mediterranean Commission on Sustainable Development, 2005). In this document, the UNEP and MAP commented:

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> "The challenge for all Mediterranean countries is to use the Strategy as an opportunity to make coordinated and joint progress in the fields of human and economic development, environmental protection and cultural advancement." (Ibid, page 6).

However, social participation in environmental issues is not only included in the Mediterranean Action Plan, it is a requirement that has been included in international, European and National normative frameworks. In short, participation is a right[1] and an important tool to address conflict and to encourage legitimate decision making.

The focus on participation in both the MSSD and the wider articles demonstrates the manner in which the broad aims of the Convention have grown beyond a relatively straightforward environmental protection exercise and now merged with a range of physical, economic and cultural filaments. Greater and more complex coastal management analysis was bound to follow this development.

1.2. Participation via CAMP

The Coastal Area Management Programme (CAMP) emerged as a processes for addressing on-going and chronic issues in the Mediterranean at the local level:

> "By 2025 the number of people permanently living in the Mediterranean coastal regions is set to increase by 1.4% per annum to the South and East, reaching 108 million, whilst stabilising at about 68 million to the North of the basin. The marked linear spread of coastal urbanisation is coming about apace. Whereas it was estimated that in 2000 more than 40% of the Mediterranean coasts were built up, it is forecast that on average a further 200 km per year of coastline will be built over by 2025, in other words an additional 5000 km or so. " (Coudert and Larid, 2011 page 6).

Such bleak portrayals of the current situation, amply supported by other authoritative studies (Abul-Azm et al., 2003; Benoit and Comeau, 2005), indicated a requirement for systemic action. Policy and Strategy needed operational measures to draw upon to ensure that they are evidence based. The means by which chronic sustainability issues at the Mediterranean level were to be confronted was by a sequence of agencies and related methods of engagement. At the highest level, these have been innovated and included in the work of the Mediterranean Action Plan (MAP):

> "The Mediterranean Action Plan supports the Coastal Area Management Programme (CAMP) as a means for addressing these general trends, the aim being to assist Mediterranean countries in developing strategies and procedures for the sustainable management of their coastal zones, identifying and implementing the relevant methods and tools, and contributing to capacity building at local, national and regional level. One of the CAMP's main aims is to create an Integrated Coastal Zone Management (ICZM) process." (Coudert and Larid, 2011 page 6).

[1] See, for example: Declaration of Rio 1992 (towards a new kind of governance, principles 10, 20, 21, and 22) http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm. 1998, enter into force on 2001, Aarhus Convention article 7 and 8 (UE Decision, 2005/370, Spanish Act 27/2006). UE Directive 2003/35/CE Public participation in Environmental Decisions, Water Framework Directive 2000/60/CE, art. 14 which make mandatory the participation within those decisions related with Water Management.

2. Methods: Imagine methodology in coastal management programmes

This methods section deals with the relationship between three major elements: CAMP, ICZM and Imagine.

CAMP projects emerge as a primary means to explore issue of sustainability in the Mediterranean region. CAMPs are expected to contain and include the major features of ICZM, these two can be seen as inseparably linked. In this sense, CAMP could be argued to operate as a vehicle for the local roll-out of ICZM. In order to achieve an assessment of Coastal Area Management, which meets the complexities of the Mediterranean basin against the structures of the Barcelona Convention and contained in the general strategy of the Mediterranean Action Plan a wide ranging and systemic approach was required. These were the necessary characteristics of the ICZM although they remain points of aspiration which are not always achieved in the main in many European contexts of ICZM (Ballinger et al., 2010).

CAMP projects including ICZM processes have been project managed by the Priority Actions Programme Regional Activity Centre (PAP/RAC) based in Split, Croatia. The PAP/RAC acts as one of the component Regional Activity Centres of the Mediterranean Action Plan. Its mission is to provide assistance to the Mediterranean countries in the implementation of Article 4(i) of the Barcelona Convention, the Mediterranean Strategy for Sustainable Development (MSSD) and, more recently, of the Protocol on Integrated Coastal Zone Management (the "ICZM Protocol"), which entered into force in March 2011. The Article 27-2c requires the technical assistance of PAP/RAC in carrying out activities of common interest, such as demonstration projects of ICZM. The CAMP projects represent the type of local level initiatives which were approved by the Contracting Parties to the Barcelona Convention in 1989, with the objective to:

- facilitate the implementation of ICZM at the local level;
- develop strategies and procedures for sustainable development in project areas;
- contribute to the capacity building at local, national and regional levels;
- strengthen the interaction and co-operation of MAP components; and
- secure a wider use in the region of the results achieved.

CAMP projects were intended to deliver ICZM as a way of ensuring sustainable use of coastal resources, economic prosperity and social welfare of coastal populations. In delivering the CAMP projects PAP/RAC focuses its project management efforts on providing technical assistance, guidelines and methodologies for the practical implementation of ICZM in selected Mediterranean coastal regions.

Individual CAMP projects are identified and selected according to pre-defined selection criteria, and approved by the Conferences of the Contracting Parties to the Barcelona Convention. Among the selection criteria, the following ones might be emphasised: project sustainability, representativity, regional interest in the problems to be dealt with, political commitment of the host authorities, institutional capability in the host country and in the selected area to carry out the project, "integratability"' of the project results into local and national development policies, and replicability in other areas.

Each local CAMP project includes a number of cross-cutting activities such as: project co-coordination, participatory programme, database and GIS, Systemic Sustainability Analysis, and a limited number of specific sectoral or multi-sectoral activities, according to the project objectives and issues dominant in the project area.

Since 1989, several cycles or generations of CAMP projects have been implemented and completed

a. In the 1990–1998 period, two CAMP cycles took place; consisting of projects in Albania, Croatia, Greece, Syria, Tunisia and Turkey. The project in Egypt was completed in 1999, and the project in Israel in June 2000.
b. The third cycle started in 1997 with the preparation of projects in Algeria (completed in 2005), Cyprus (completed in 2008), Lebanon (completed in 2004), Malta (completed in 2002), Morocco (completed in 2010) and Slovenia (completed in 2007).
c. Currently, CAMP Spain is in its full swing and should be completed this year, whereas CAMP Montenegro has just started for a duration of two years. Two new projects are being negotiated, namely CAMP France and CAMP Italy. All these projects can be considered as a new generation of CAMPs seen as ICZM Protocol implementation projects at the local level, i.e. as prototype interventions to assist countries to implement the Protocol.

A CAMP project is considered to have successfully been completed if certain outputs are achieved such as the establishment of ICZM strategy for an area, the development of a Sustainable Development Reference Framework or Marine Spatial Planning. The issues relating to successful completion have been addressed in a variety of documents which are summarised and referenced at http://www.pap-thecoastcentre.org/about.php?blob_id=22&lang=en. The map below shows the approximate location of the projects.

On the basis of its longevity and reproducibility alone the CAMP idea has proved to be a successful initiative. It is the only programme of MAP that has extensive continuity and which allows for the involvement of all MAP components (these are the various Regional Activity Centres bases around the Mediterranean of which PAP RAC is only one) to deal with major issues in coastal zones in the various countries of the region. Changes to the programme have occurred, particularly in terms of the on-going adaptation to thinking about ICZM and to participatory inclusion (Fig. 1).

After the adoption by Mediterranean countries of the ICZM Protocol in 2008, but already during the process of negotiations of the text, CAMP has developed into an instrument for the implementation of this legal instrument. Components and various Protocol elements were gradually incorporated as activities of CAMP as it has evolved. With the entering into force of the Protocol in 2011, CAMP became its programme for implementation. The major strengths of CAMPs are in its ability to bring different stakeholders and institutions together to communicate and look for integration of various policies and plans in an integrated manner. Creation of an open communication atmosphere for consensus building on decisions for the future life of human communities in a harmonised way with their natural resources and environment is one of the main achievements of these projects. Participatory programmes were developed in a structured way so to deliver proposals that have clear ownership and therefore better chances for implementation.

Similar to the relationship between CAMP and ICZM is the relationship between ICZM and the Imagine methodology. In order to achieve the focus on participatory input which was presented as being such a critical part of the Barcelona Convention, ICZM in turn contains and, to some extent is moderated by Imagine as a means to engage and sustain the engagement of the local community. This in turn has implications for developing capacity in local practitioner communities in order to realise the potential which ICZM offers (Le Tissier and Hills, 2010).

As Coudert and Larid put it

> "The Imagine approach was thus designed with a view to helping to establish an integrated coastal zone management process in the Mediterranean through engaging relevant stakeholders in the prospective consideration of their area's future sustainability. The description of what would be a desirable future and the tasks to be implemented in order to achieve it are just some of the expected outcomes, along with a set of sustainability indicators comprising a dashboard to monitor the area's progress towards sustainable development" Ibid page 6.

To some extent this deliberate inclusion of stakeholders and local information challenges some of the issues noted with this component of ICZM (for example noted by Ballinger et al., 2010 page 743) and, participation at the local level remains an issue with both technical and legal implications (Cliquet et al., 2010). Alternatives to the participatory model are noted (technologies abound in this context – see: Green, 2010) and other systemic approaches to stakeholder participation are also noted (see, for example, the similar work undertaken in Japan and Mexico on

Fig. 1. CAMP and ICZM in the Mediterranean.

ICZM and ICZM related interventions in: Masera et al., 1999; Shikida, 2006, 2008; Arceo and Granados-Barba, 2010) but, despite this range of issues the participatory/stakeholder facing Imagine approach has been applied in a number of CAMPs around the Mediterranean: Malta 2000–2002, Lebanon 2002–2003, Algeria 2004, Slovenia 2005, Cyprus 2007 and most recently, Spain in 2011–2012.

The relationship of CAMP to ICZM and to Imagine is shown in Fig. 2.

In Fig. 2 CAMP can be seen as the specific and local process and model for the ICZM intervention. It contains ICZM (which is a greater and wider concept) as the main means to express a localized interdisciplinary analysis of the coastal environment balancing social participation and institutional coordination. Running alongside ICZM, in part as a directing part of it is Imagine. Imagine can be seen as a central process for integrating local social, economic, cultural and political concerns with the work of the scientific studies.

Imagine itself has been thoroughly described elsewhere as an idea (Bell and Morse, 1999, 2001), as a procedure for practical implementation (Bell and Coudert, 2005), in action (Bell and Morse, 2003a,b; Coudert and Larid, 2011) and in reflection of ten years of active engagement (Bell, 2011), Imagine is most fundamentally a learning cycle. It has been developed as a means by which a community can engage, step by step, over a series of half day workshops, in the self-analysis and self-realisation of their own sustainability (Otsuki, 2012). Another way of putting this is it is the means by which the objective (ICZM) can be realised by results – improved coastal sustainability by the means of community engagement. Imagine, as a process is best envisaged as an infinity symbol, containing five nodes or points of engagement. This is set out in Fig. 3.

Behind the Imagine process and sustaining the local organisation of CAMP Levante de Almeria is a detailed and extended organisation. The governance structure of the CAMP/ICZM Process, has three levels: Coastal Council, Coastal Commission and Coastal Forum. The latter is a platform that involves all citizens or associations in order to catalyse debate on the issues addressed during the development of the project through its website www.camplevantedealmeria.com.

The form of Imagine is constructed as part of a learning cycle (Kolb, 1984) and can be briefly described as follows:

Stakeholders are gathered by local project staff who know the value of the project process and the diversity of the local community. These stakeholders are brought together to represent local

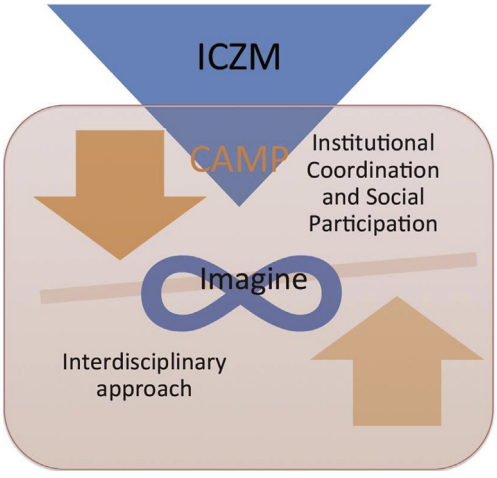

Fig. 2. Imagine, ICZM and CAMP in the Almeria context.

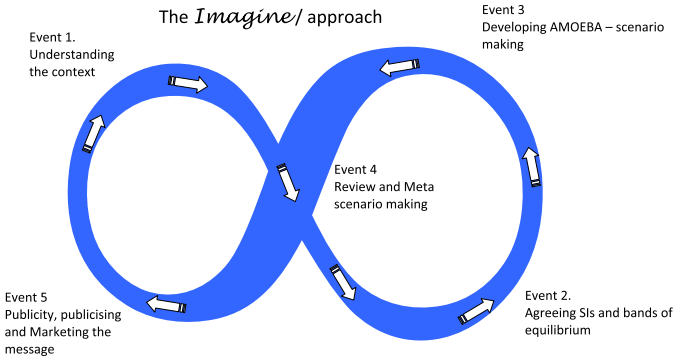

Fig. 3. The Imagine methodology.

community interest, project technical consultants and project staff. The idea of the 'mix' of stakeholders is to provide the necessary and sufficient range of perceptions to include the concerns of the community (those who the project defines as the local 'experts') and those with a knowledge of the available data and means by which data can be assessed and measured (technical and indicator 'experts'). From this blend, in the workshop format, it is intended that measurable but locally relevant indicators of sustainability will emerge.

Workshop 1 is the opportunity for stakeholders to gain a group understanding of the nature of the context in question. In this case the coastal zone of Almeria. Mixed groups of 5–10 (formed from technical experts, local citizen, political leaders, etc.) are formed and these remain in place until the end of the process. The expectation is that different stakeholders will have markedly different appreciations of the context and will need to explain this to colleagues whilst they explore alternative views. At this stage the stakeholders work together to develop a short list of agreed 'tasks' and 'issues' – or, things that need to be done to improve sustainability and problems or impediments to the achievement of these tasks.

Workshop 2. In the second Imagine engagement stakeholders from the context agree on ways in which the tasks and issues set out in Workshop 1 could be measured. The first workshop will have identified tasks and issues which relate to the groups view of sustainability. It follows that the indicators developed to measure these things are sustainability indicators (SIs) which the group agree to be important. These indicators are derived from the interest of the group and are therefore reflective of the communities concerns. Some of the indicators will therefore be the interests of local people (e.g. may be the details of local fish catch); whereas some will be provided by technical experts in the group and represent indicators of more general interest (e.g. faecal quality of sea water). A short list of indictors is agreed and the group begins to agree, for each SI, what would constitute a 'sustainable' value for it. The value is expressed as a band (termed within Imagine as the Band of Equilibrium or BoE). The end of the Workshop should result in the agreement of around ten SIs and related sustainability bands. In short the group agrees what needs to be known to measure sustainability and what sustainability would look like if it were achieved. The decisions are informed by a blend of local interest and passion and specialist knowledge of indicators and data availability.

Between each workshop the group is expected to spend some time gaining access to good data and this is absolutely key for the period between Workshop 2 and Workshop 3. Because CAMP processes always contain both lay persons from the local community and specialists representing the various scientific studies to be undertaken, there is usually access to local data to help the group develop their understanding of the locality.

Fig. 4. The CAMP Levante de Almeria area.

In Workshop 3 the group re-convenes with the necessary data to model the sustainability of the locality. The devise used to explore this is called an amoeba diagram. Examples of this are shown in the next section but the format, resembling radar or kite graphs can be dated back to 1991 and the work of Ten Brink, Hosper and Collins. Diagrams are developed (based on available data) from three points on a timeline: 1990s, 2000s and the current situation. This means that the group will explore the sustainability situation for the locality (as determined by their own judgement) over the past thirty years or so. The group also begins at this time to project forward. If the data of the past shows a pattern, they are asked to consider how this may look (given explicit changes in certain variables – e.g. population, climatic conditions, etc.) in twenty years time. The main aim of this part of the process is to bring together informed local opinion and technical views with an overarching focus on valuable forecasting. Godet has affirmed that there are no statistics for the future but, in this negotiation and conversation valuable insights are gained into the potential for unsustainable and sustainable practices. Our key point is that this process may be inexact but it has value in creating vibrant conditions for important conversations about sustainability based on blended data – some of necessity being more reliable than other.

At Workshop 4 the groups combine, each provides one or two indicators in a meta exercise whereby the total group of stakeholders share a collective view of past, present and future.

In some uses of Imagine there is a fifth Workshop where the group collectively decides what to do about the situation which has emerged from the Imagine analysis. If this is not the case, the CAMP project offices will attempt to draw out from the stakeholders the main messages emerging from Imagine, publicise these widely throughout the CAMP project and decide how this information is to be communicated to the wider community.

Prior to CAMP Almeria, the Imagine methodology has been applied in some but not all CAMPs: Malta, Lebanon, Algeria, Slovenia and Cyprus. The inclusion of the Imagine process is negotiable by the contracting parties at the instigation of each CAMP and, dependent upon the level of public engagement deemed necessary, it is included and applied or not. The impact and value of Imagine is variously described in the working reports of the previous CAMPs (all available for download from http://www.planbleu.org/publications/littoralUk.html) and in a recent research paper (Bell, 2011). With each iteration of the methodology it has been adapted and adjusted to meet the needs of the locality. This series of adjustments can be seen in Table 1.

Table 1 demonstrates the evolution of Imagine, via various labels (e.g. Systemic Sustainability Analysis, Systemic Prospective Sustainability Analysis) in various locals in order to meet the sustainability needs of various agencies and contexts. Following the exposition of the latest version of Imagine set out in this paper, the Discussion section will compare and contrast the various uses of the methodology and review its evolution.

In CAMP Almeria Imagine was experienced as five workshops in May, September and November of 2011 and in February and November of 2012. However, participation is a difficult process to

Table 1
The changing shape of Imagine.

Methodology name	Main characteristics	Stimulus for development	Main applications
Systemic Sustainability Analysis – SSA (Bell and Morse, 1999)	A five stage approach which allowed a group to map its sustainability	Literature and projects in the sustainability indicator arena	Evolved from an evaluatory tool applied in Pakistan (Bell, 1996). Adopted for CAMP Malta
Systemic Prospective Sustainability Analysis – SPSA (Bell and Morse, 2003a,b)	Evolved model of SSA but now with explicit development of a scenario making aspect – building off the work of Godet (1997, 2001), Godet, et al. (2004)	Evolving use of SSI in the Mediterranean and response to the requirement of Plan Bleu	CAMPs in Malta, Lebanon and Algeria
Imagine (Bell and Coudert, 2005)	A process model of SPSA – the approach is now produced as a systematic and teachable set of techniques	Continuing development of SPSA in the CAMP context	CAMPs in Slovenia and Cyprus
Creating Sustainable Communities (Bell, 2008; Bell and Morse, 2008)	Imagine now completely transferred to a teachable version – face to face and virtual	Academy for Sustainable Communities/ Homes and Communities Agency project to develop a teaching version	20 UK Higher Education Institutions and numerous Masterclasses around the UK.
Imagine	Adapted and changing process version	Evolving use in CAMP Almeria	CAMP in Spain

Adapted from Bell (2011).

achieve and even harder to sustain – for this reason the project team were delighted that the workshops usually attracted over 60 delegates. Imagine depends upon participation and therefore must both attract engagement from local people and sustain this engagement. The hope of the process, which ties it back to the ambitions of the Barcelona Convention itself, is to be sustainable within the community in which it is placed. As Bell and Morse, key authors in the development of Imagine put it:

> "We argue that the approach is organic and people focused and can be sustained into second and even third iterations, each building upon and developing the previous one. In this way the approach itself is sustainable" (Bell and Morse, 2008 page 191–192).

2.1. CAMP Levante de Almeria: the latest application of Imagine

To understand the work done with Imagine and CAMP, it is necessary to gain a deeper understanding of the history of the territory. Initially it needs to be pointed out that the Levante de Almería (the east of Almeria) contrasts climatically and environmentally to bordering provinces. This is a semi arid area with an average precipitation of 200 mm/year.

The scarcity of water resources has conditioned the development of the area until recently. Juan Goytisolo, a writer from Barcelona and considered to be one of the most important regional authors from the mid-century wrote "*Fields of Níjar*" in the beginning of the 60's. In this he writes "I can remember very well the deep impression of violence and poverty that Almeria caused me when, some years ago, I visited it for first time". (Goytisolo, 1996). In his works about this area it is easy to find testimonies which reflect the difficulties of local population and their down-beat perception of their territory, at the same time he describes an awesome landscape of *African beauty*. It is an area of contrast and paradox (Fig. 4).

The technical improvements in water management in recent years has allowed an impressive change in the development of the area, especially since the 1980's – most particularly regarding intensive fruit and vegetable agriculture (in the last 20 years the area under greenhouses has increased tenfold in the municipalities of Almeria and Níjar).[2]

As with the rest of the Mediterranean region, the east of Almeria is undergoing a process of coastalisation which means that the population, resources, infrastructures and economic activities are gradually being concentrated in the areas that are closest to the sea border.

Tourism and agriculture[3] are nowadays the most important economic activities in the project area. These, along-side intensive agriculture from the province (which includes the project area) combine to form what is locally named "*the miracle of Almeria*". Furthermore, this recent economic 'miracle' has had an important economic impact at the regional level, and this is reflected in the Andalusian GDP.

Both tourism and agriculture need land resource as well as water. It is useful to understand a little more about the *African beauty* that Goytisolo described.

The historical isolation of this territory means that the CAMP area is one of the best preserved coastal and marine zones in the Mediterranean and is home to a considerable natural landscape and cultural heritage. Two interesting statistics: 55.35% of the terrestrial CAMP Area[4] has a botanical rating catalogued as "Priority Interest", "General Interest" or both at the same time according to the Habitat Directive and, with the National and Regional normative framework. This means that the region contains a huge protected marine and terrestrial area, 46.59% of the CAMP area is catalogued and included in the Regional Network of Protected Areas or in NATURA 2000.

The value of local biodiversity has imposed an important responsibility on the different administrative levels of government, which has rapidly developed a huge normative and administrative framework in order to protect this biodiversity. On the other hand, if local farmers are asked about the value of the Almeria Landscape they will tend to see unproductive bushes without any value. The farmer view collides diametrically with the view of visitors like Goytisolo, who describe it as "an unique landscape". Unproductive landscape has a wilderness value which has no attraction to local agriculture. This is an increasingly important point as the population in Almeria has grown with the development of the Territory. Historically the migratory balance in Almeria was negative. This was the case until the 1980's when the inward flow became positive.

The ICZM Protocol defines ICZM as "*a dynamic process for the management and sustainable use of coastal zones, simultaneously taking into account the fragility of the ecosystems and coastal landscapes, the diversity of activities and uses, their interactions, the marine orientation of some uses and specific activities and their*

[2] Information in the Territorial Development Plan for the Urban Area of Almeria.

[3] Futher information at CAMP Levante de Almeria Coastalisation Diagnosis, Agricultural Diagnosis and Socioeconomic Diagnosis.

[4] CAMP Levante de Almeria Coastalization diagnosis.

repercussions on both the sea and land" and CAMP Levante de Almeria is designed to implement as a pilot project this Protocol through two main tools institutional coordination and social participation.

So, what is the expected added value of CAMP to eastern Almeria?

From a technical point-of-view an integrated approach is very important given the share of responsibilities between different levels of administration. But, a more telling added value could be the opportunity to gain a clearer understanding, through a participatory method, of the contrast between what is referred to by local technical staff as the "new fashion European view" of the territory which displays the fruit of rapid socio-economic and related technical change with the more traditional: "local historical view", the result of decades of isolation and poverty.

To engage with this comparison the CAMP project structure was designed to answer the following question:

> "How can multi-sectoral, integrated sustainability proposals from civil society be generated and then taken on board by a wide variety of administrations which hold responsibilities on this stretch of the coastal area?"

Imagine was applied in order to discuss and share views and agree common priorities and solutions with the aim to obtain a Sustainable Development Reference Framework (SDRF), a medium to long-term strategy defined by agreement by the stakeholders in the territory to guide the steps to be taken to ensure the sustainability of this stretch of coastal area.

CAMP Almeria is, therefore, a territorial project that includes proposals that are to be taken on board by various levels of administration in order to improve territorial management from an integrated perspective. This is to be complemented by a portfolio of priority investments, a programme for the mobilisation of resources and a monitoring programme. All of this is intended to contribute to the dynamism or feedback that defines ICZM.

3. Results of the use of Imagine in CAMP Almeria

The CAMP planned and implemented in Almeria had the slogan: "*Imagine the future of our coast*", and this sets the tone for the resulting work.

As has been presented, from the outset 'Imagine' was to be a key part of CAMP Almeria. Noted by Correa Peña, the project General Coordinator, as being both 'Fundamental' and that the main purpose of the CAMP being 'participation' (Correa Peña, 2011), Imagine became the focal point of the project.

What follows is a brief description of the CAMP Almeria process followed by a discussion concerning the main outcomes.

3.1. Imagine stage 1: context

On 27th and 28th of May 2011 the first Workshop took place. The first workshop in Imagine is all about capturing the conscious and unconscious reflections of the participants by means of a method and technique known as a Rich Picture. Rich Pictures have been widely applied over many years and are well described in the literature (Avison et al., 1992; Lewis, 1992; Campbell Williams, 1999; Ballard, 2007; Fougner and Habib, 2008; Bell and Morse, 2013).

By getting the CAMP Almeria participants to draw their thinking we intended to both bring mixed groups of stakeholders together and to allow them to share ideas. Over 60 participants took part and worked in six groups of mixed interests (from local farmers to government employees, from political appointments to technical experts in marine ecology). The participants were organised into six groups and were asked to capture their understanding of the local context vis a vie sustainable coastal development and then to draw out their vision of the main problems and issues which concerned them. An example of a Rich Picture with tasks and issues indicated by postit notes is shown in Fig. 5.

In Rich Picture drawing, the groups are encouraged to use as few words as possible. A much accepted feature and assumption of Rich Pictures is the key observation arising from experience that people will draw things which they will not necessarily write about or talk about. The picture provides a medium for 'optimal indiscretion'. In sharing the drawing participants are indiscrete together and begin to share ideas and thoughts which would, under normal circumstances, remain hidden. By this means the picture opens up opportunities to get below the surface of understandings about sustainability.

It needs to be emphasised that the six groups in workshop 1 had to make their own sense of the context, draw out their own ideas and suggest their own conception of what is a problem to be addressed or a task which needs to be undertaken in order to improve matters. They were not lectured to or told what to think. This stage is vital. It allows the groups of mixed participants to talk together and share ideas (often for the first time) and to freely and openly think together about the sustainability of their context. Throughout the workshop the six groups share their thinking and feedback their progress to the group as a whole.

Clearly there emerges a range of risk issues in this kind of open process. For example, there are issues of coherence (e.g. groups providing contradictory indicators and/or data), democratic representation (e.g. people dominating deliberations) and objective science (e.g. the unsupported 'views' of a group majority winning out over the more scientific assessments of a minority of technical stakeholders). Part of the structure of an Imagine process is to allow views and opinions to be expressed and balanced in the light of the whole group process. This is not a risk-free exercise but, as processes of deliberation, exposition and comparison occurs across the various groups within an Imagine Workshop, there is a tendency for extreme and groundless tasks and issues to be jettisoned and for evidence-based indicators to be selected. This process usually

Fig. 5. A rich picture with tasks and issues on postit notes.

Table 2
Indicators by Group C.

Item/task	Indicators
Natural resources	N° solar plants % Energy consumed/produced % Of reutilized water consumed + % of rainfall water consumed + % of desalinated water consumed Aquifer monitoring
Education on values	Number of professional capacity building and training schools in relation to the number of unemployed. School failure.
Recycling Waste management	Number of recycling plants of various types and its volume Tonnes of recycled material Reuse – number of recycled packages
Sectorization/fragmentation	Number of initiatives Number of projects and measures agreed upon by municipalities associations and the number of agreements.
Economical and political manipulation	Index of economic traceability % Final value that remains in the production area
Conversion of productive activities	% Production of agricultural organic products/ conventional products % Traditional fishing – trawling and sportive fishing % Surface of traditional irrigation in relation to surface irrigated through dripping.
Training and values	Number of community centres and recreational spaces in relation to its inhabitants and their distribution.

means that not all indicators are those which would be preferred by statistical experts but, on the other hand, most indicators are evidence-based and have a high level of meaning and engagement to the local community (Masera et al., 1999; Arceo and Granados-Barba, 2010).

Following the identification of tasks and issues as emergent from the Rich Picture, each of the six groups were asked to suggest indicators or means by which the tasks and issues could be measured and assessed. The thinking here is fundamental to Imagine. Sustainability Indicators or SIs are widely used and imposed across the globe. The literature about them is intense with the technical precision of their development and the means by which they can be applied with rigour (to demonstrate the variety see: UNEP/MAP/BluePlan, 1999; Acton et al., 2003; Gundmundsson, 2003; Mickwitz et al., 2006; Antona et al., 2007; Commission of the European Communities, 2009) although there are voices which dissent from the claims for precision and alternative views have been expressed as to how indicators could be engineered to make more sense (de Jonge and Turner, 2012). Quantitative indicators have a contested contemporary track record, the community development of indicators is much less well developed (although an active literature still exists. see: Ackermann, 1996; Acton et al., 2003; Abdullaev et al., 2009). The six groups were asked to produce examples of possible indicators, one such set, developed by group C is shown at Table 2.

This first stage of Imagine provides the agreed and shared understanding of the current situation and some ideas as to how that situation can be expressed as either a task to be undertaken or an issue to be faced and addressed. From this, each group develops and shares a set of indicators, these tend to be far reaching (as in the case of group C), from environmental waste monitoring, to marine pollution, from tourist numbers to population density. This leads to the second step.

3.2. Imagine stage 2: sustainability indicators

On the 30th September and 1st October 2011 the participants came together again to undertake the next step of Imagine. In this step the participants are intended to develop clarity about what can be measured to understand sustainability, what would constitute a sustainable response and how could such measurement be achieved. The indicators specified in Workshop 1 are now more deeply organised. They can be set out in 'classic' DPSIR (Drivers, Pressures, State, Impact and Response – the model for sustainability indicators developed by the European Environment Agency (or so claimed by Kristensen, 2004)) format or under headings agreed by the group (for example, in CAMP Slovenia the indicators were set out in four areas: Social, Economic, Tourist, and Environment). Some indicators will be jettisoned by the group at this stage as being considered to be unworkable by the group (it should be noted that the group is never instructed to jettison its indicators). Similarly, new, more manageable indicators may be included. Feasibility and knowability are now key and this process is captured in the development of a 'band' for each potential indicator. Each group is asked to provide an upper and lower sustainability limit for each indicator which they identified in the first workshop. The purpose of this exercise is primarily to encourage groups to think about and agree sustainable levels within a band for each of the things they are concerned with. This allows the group to have a range of sustainable values for any one indicator and this can act as a reference condition to compare the actual data against. The deeper focus is to encourage the groups to consider the region holistically, allowing them to gain a rounded view of the sustainability of the region by a number of separate but interlinked criteria. One such set of indicators and bands is set out in Table 3.

The band is labelled the 'Band of Equilibrium' or BoE. The BoE represents the sustainable band for each indicator as agreed by the members of the group. A powerful outcome of this stage is the establishment of agreement among the participants, not just in what is important to the group but in taking a group level view of what is important. No single view can dominate. In a sense the sustainability expressed is the group level view and this, as James Surowiecki would put it expresses the necessary cognitive diversity which underlines the 'wisdom of crowds' (Surowiecki, 2005). Of course this does mean that indicator bands can be set without

Table 3
Band of equilibrium by group D.

D	Metro cúbico de agua tratada/metro cúbico de agua depurada	Cube metre of water treated/cubic metre of treated waste water	60	100
D	% de municipios con Plan de Optimización Energética	% Of municipalities with an Energy Optimisation Plan	80	100
D	% de cumplimiento de los Planes de Optimización Energéitca	% Implementation of Energy Optimisation Plans	60	100
D	% de población que solicita información o visita webs institucionales para interesarse por la planificación urbanística	% Of population requesting information or visiting institutional websites about urban planning	5	20
D	Superficie de agricultura ecológica- integrada/Superficie total (%)	Crop area of ecological-integrated agriculture/total crop area (%)	60	85
D	Kw energia renovable/Totales (%)	Kw of renewable energy/total (%)	40	80
D	Tasa incremento de las capturas de las especies clave	Rate of increase of capture of key species	5	25
D	Reonnversión de la flota de la pesca industrial a artesanal (%)	Conversion of industrial fishing fleet to artisan fishing (%)	5	20

Fig. 6. Amoeba diagrams.

access to all possible data or that non-scientific criteria may lead the establishment of the band. This is a necessary issue at this stage. An important aspect of Imagine is its value in bringing together diverse groups and making evident underlying issues, concerns and problems. One price that is balanced against this inclusion is a risk of non-scientific views impacting the analysis. Our argument is that this is a price worth paying as no output of the analysis is public or fixed at this point and will be further modified by comparison and discussion and that sometimes, a less than orthodox view from a non-specialist can provide an excellent opportunity to question existing assumptions.

The second workshop provides the basis for this development of collective and assessable measurement of sustainability in the groups own terms, but the fruit of this work is shown in the third workshop.

3.3. Imagine stage 3: amoeba diagrams

On the 11th and 12th November 2011 the third Imagine Workshop took place. At this workshop the six groups engage in a process of combining the indicators agreed in a holistic diagram called an amoeba. Amoeba diagrams were originally devised as technical means to capture a collective of indicators in one format (Ten Brink et al., 1991) but in Imagine the intention is to allow time snap shots of the collection of indicators to be shown set against the BoE thus demonstrating quickly and in a readily comparable manner the past and present sustainability of the local area. One such set of amoeba diagrams are shown in Fig. 6.

The Figure shows a number of themes.

1. The data for Levante de Almeria has been collected for 8 indicators for three periods: 1990, 2000 and 2011. (This data has been found in a variety of places by members of the CAMP project team and the wider stakeholder group. A benefit of Imagine is the diversity of knowing minds with access to data who can be involved in the discovery of useful numbers).
2. The BoE in each case is shown as the ring around the centre point
3. The indicators are presented in four quadrants. Each group decided the theme for the quadrants, some of the issues detected by the groups were Agriculture, Urbanization, Economic, Education, Energy, Social, Water or Participation.
4. The amoeba shape can be seen to be deeply un-sustainable in all cases. A perfectly sustainable amoeba would be a circle in the middle of the BoE ring. In each case, although there are sustainable indicators shown, most are well within or outside the BoE indicating unsustainability by deficit or excess.
5. Although the amoeba shape 'moves' and changes over time the key problems of unsustainability – in all quadrants – remains.

As a final stage in the workshop, the participants of each group are asked to produce an amoeba of Almeria at some future point and to justify it. Group F produced a diagram shown in computer enhanced form in Fig. 7.

A remarkable and obvious observation to make is that the group is optimistic. The amoeba is much more closely aligned to the BoE (it occupies a close correlation to the position of the band in the image). This represents a belief in the group that the future for the Levante de Almeria is bright – however, this needs to be explained and explored in more detail. How can sustainability be realised? How can the negative issues expressed in such a chronic fashion in the previous amoeba be avoided. This information is developed in the fourth and final workshop.

3.4. Imagine stage 4: meta scenario and action planning

The Fourth Imagine Workshop took place on the 3rd and 4th February 2012. Impressively, this was probably the best attended workshop of the four and the six groups provided some thought provoking inputs. The fourth workshop is intended to provide an opportunity for the stakeholders to focus on the 'agreed' key or

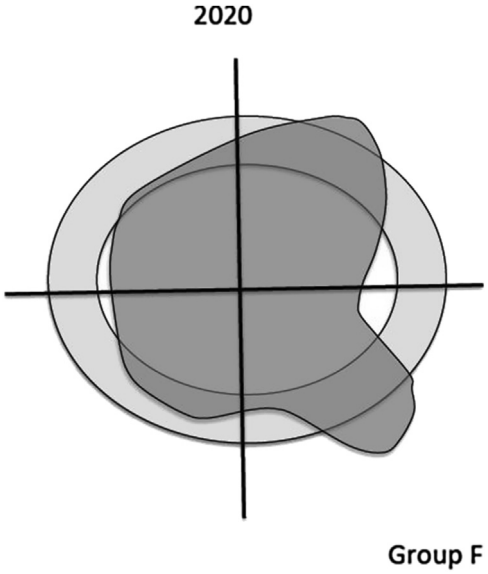

Fig. 7. Computer enhanced amoeba diagram of the 2020 context.

'signature' issues for the workshop as a whole. If the intention behind the previous workshops has been to allow six groups to work in a concentrated form on major elements of joint concern, the key to the fourth workshop was to gain some sense of unity around key themes. In this workshop the results of the previous gatherings are reviewed and the most scientifically robust and most keenly felt indicators are included for a final analysis.

Over the course of the two days the stakeholders at the event agreed on a set of 12 key indicators related to 11 critical or, as we note them here: 'signature' issues. The indicators are represented in Table 4 and the computer enhanced Amoeba diagrams for the indicators, as agreed for the workshop as a whole are shown in Fig. 8.

Following the workshop the Imagine team engaged in a thought experiment, applying the European Environment Agency indicator framework – DPSIR (Svarstad et al., 2008; Ness et al., 2010; Atkins et al., 2011) or Drivers, Pressures, State, Impact and Response – to the list of 12 indicators. This was undertaken as a means to assess the concern of the group and to see if there was a meaningful clustering of indictors around one or several of the five DPSIR criteria. Interestingly, none of the indicators was defined as a Driver or D. At the time we assumed that this was purely an accidental result of taking a small sample from what was a much larger set and not an indication that no D Indicators are evident in this region of Spain. The lack of D indicators may also reflect the various groups focus on reacting within the context and therefore looking for responses and impacts rather than Drivers. This is conjecture.

Some observations can be made for the Table and the amoeba.

1. The 12 indicators set out in Table 4 cover a wide area of interest, from waste to urbanization, from energy to renewables, from agricultural production to water.
2. The 12 indicators show that the assembled stakeholders had a considered and systemic appreciation of the main issues at work in the region.
3. This range of appreciation of issues is however confined to Impact State and Response type indicators. This could be seen to be indicative of a reactive quality in the group? Certainly the concern with Response indicators suggests a core concern with doing something about the present situation (compare for example to the outcomes of DPSIR in previous CAMP projects in: Bell, 2012).
4. The amoeba show a marked tendency towards greater sustainability.
5. Most markedly, despite all misgivings, the stakeholders took the view that the future for Almeria was positive, given certain conditions/actions.

The tendency towards a view of sustainability is most intriguing and was pursued in the meeting. The twelve indicators can be reduced down to 11 key issues which are as follows:

- Renewable power in the region
- Active public engagement in proposals for sustainable development
- Waste recycling
- Urbanization
- Education of young people
- Green house control
- Energy optimisation
- Planning of agriculture and fisheries
- Water treatment plants
- Urban beach regeneration
- Integrated agriculture

Table 4
Table of agreed indicators for the entire workshop.

Group	Indicator	Indicador	Minimum value	Maximum value	Past	Present	Future	DPSIR
A	RENEWABLE GROSS POWER PRODUCED AND CONSUMED WITHIN CAMP AREA/GROSS TOTAL DEMAND	POTENCIA BRUTA RENOVABLE PRODUCIDA Y CONSUMIDA EL EL AREA CAMP/DEMANDA BRUTA TOTAL	40	60	3.7%	18.5%	60%	R
A	N° OF CALLS FOR PROPOSALS FROM DIFFERENT ASSOCIATIONS AND N° OF PROPOSALS RECEIVED AND ACCEPTED BY THE PUBLIC ADMINISTRATION	NÚMERO DE CONVOCATORIAS DE DISTINTAS ASOCIACIONES Y PROPUESTAS ASUMIDAS POR LAS ADMINISTRACIONES PÚBLICAS	45	80	10%	20%	50%	S
B	% WASTE RECYCLED/Tm WASTE COLLECTED	% BASURA RECICLADA/Tm BASURA RECOGIDA	50	100	10%	37%	80%	R
B	% URBANIZED SURFACE IN THE FIRST 10 KILOMETRES OF COASTLINE	% SUPERFICIE URBANIZADA EN 10 Km DE COSTA	20	30	10%	19%	30%	I
C	% STUDENT LEAVING SCHOOL AFTER OBLIGATORY EDUCATION	ABANDONO ESCOLAR (%)	5	18	21.4%	21.3%	10%	S
C	GREENHOUSES SURFACE (hectares for the province of Almería)	SUPERFICIE DE INVERNADEROS (hectáreas de la provincial de Almería)	20.000	32.000	5.000	27.000	32.000	S
D	% IMPLEMENTATION OF ENERGY OPTIMISATION PLAN	% IMPLEMENTACIÓN DE LOS PLANES DE OPTIMIZACIÓN ENERGÉTICA	60	90	0	50	70	R
D	PLANNING OF AGRICULTURAL AND FISHERING ACTIVITIES	ACTIVIDAD AGRÍCOLA Y PESQUERA ORDENADA	10	35	0	5	25	R
E	POPULATION WITH A WATER TREATMENT PLANT IN THE COASTLINE	(N° habitantes) POBLACIÓN CON EDAR (ESTACIÓN DEPURADORA DE AGUAS RESIDUALES) EN EL LITORAL	343.154	619.130	172.025	343.154	500.000	R
E	% OF INSTALLED RENEWABLE ENERGY/TOTAL POWER	PORCENTAJE DE ENERGÍA RENOVABLE INSTALADA/POTENCIA TOTAL	10	50	6.3	10.6	18	R
F	DEGRADED URBAN BEACHES/URBAN BEACHES REGENERATED	PLAYA URBANA DEGRADADA/PLAYA URBANA REGENERADA	40%	60%	60	50	45	S
F	PRODUCTION FROM INTEGRATED AGRICULTURE/TOTAL	PRODUCCIÓN DE AGRICULTURA INTEGRADA/TOTAL	60	70	31	43	60	S

DPSIR = Drivers, Pressure, State, Impact and Response.

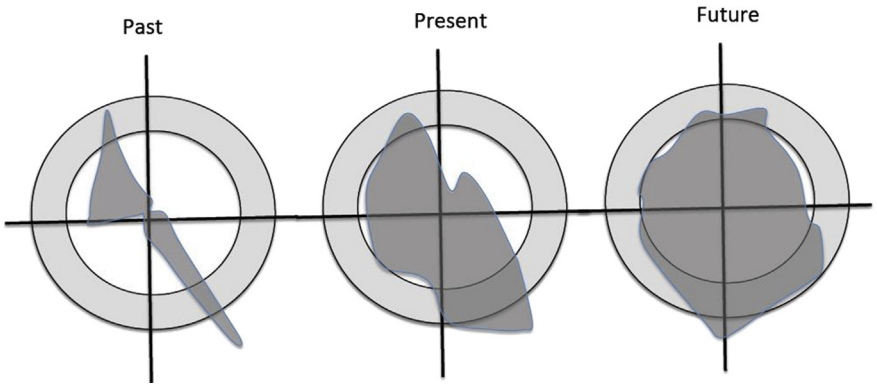

Fig. 8. Computer enhanced amoeba diagrams for past present and future sustainability for the workshop as a whole.

It should be emphasised, following four workshops over nine months the sixty or so participants could find common ground on these eleven ideas.

It should also be noted that these 11 ideas are seen as being key to a sustainable future and that the participants suggested means by which the 11 can be measured.

The 11 signatory ideas are linked to a number of suggestions for change in a more sustainable direction. The main suggestions were:

- There should be the formation of a Levante de Almeria trademark for subsidised production of organic crops from the region linked to recycling for renewable energy.
- Greater control of waste and enforcement of town planning to control un-sustainable urbanization would be valuable.
- More occupational training needs to be provided to assist sustainable production sectors linked to energy diversification and tax benefits for sustainable development.
- Sustainable use of water should be encouraged – this relates to aquifer control and desalinization.
- Setting up incentives to stimulate renewable energy use should be looked into.
- Diversity of sustainable agricultural production could be explored.

Overall, emerging from these six suggestions for change, the main issues for the stakeholders were un-sustainable water cycle exploitation and unplanned urbanization.

3.5. *Imagine stage 5: the final workshop*

On November 15th 2012 the final and the last meeting during the implementation phase of the Coastal Council, was held. At the meeting the Sustainable Development Reference Framework (SDRF), which had been circulated 15 days earlier, was accepted by the Coastal Council. There are 4 objectives to achieve with the development of the SDRF. These are to:

- Implement a sustainable management of water resources;
- Improve the integration between uses in the territory and the productive activities;
- Promote the adoption of sustainable practices in the productive activities;
- Enforce a participative and transparent governance model based in the institutional coordination and social participation.

These four objectives are not just rhetorical labels or wishful thinking. They are developed in the SDRF in 10 programmes, 35 measure and over 129 actions – all of which came directly or indirectly from the Imagine workshops. Furthermore, following the agreed success of the participatory process used within the Imagine workshops, it was agreed by the Coastal Council and approved by the Coastal Commission to seek for funding for a new phase to CAMP Almeria. It was also agreed that the system of governance between the Coastal Council, the Coastal Forum and the Coastal Commission should be sustained – this in turn can be argued to be a valuable civic outcome from the project.

4. Discussion

CAMP Levante de Almeria concludes in February 2013 and, at the time of writing, there remains some considerable work to finalise however, the Imagine Workshops have now finished and they can be assessed in isolation. To return to the key question for CAMP Levante de Almeria: "how can multi-sectoral, integrated sustainability proposals from civil society be generated and then taken on board by a wide variety of administrations which hold responsibilities on this stretch of the coastal area?"

Although the latter part of this question remains outside the scope of Imagine and the stakeholder group which engaged in the analysis process, a number of observations can be made concerning process and in particular with the aspect: Multi-sectoral, integrated sustainability proposals.

The Coastal Commission dimension brings together public authorities from 19 administrations with responsibilities for coastal management in the project area. These are the eight municipalities in the CAMP Area, the Association of Municipalities of the Levante Almeriense area, the Provincial Council of Almeria, the five provincial Offices of the Regional Ministries of the Andalusian Regional Government and four organisations belonging to the Central Government. Within the Coastal Commission, two different segments can be identified. Obviously, there are the decision-makers, the political representatives. However, from an operational point of view it was essential to include the technical segment of the administration identified as a key element in this process. These are the Technical Delegates that form part of the expert groups of the individual projects and are responsible for advising and offering a multi-sectoral viewpoint to the technical consultants running the individual projects. In this way the process facilitates the exchange of experiences and knowledge between managers and scientists which, in turn, provides backing and scientific rigour to the process itself. They represent a link between public authorities and the civil society.

The Coastal Council represents the interested parties, or public stakeholders, that come from social collectives, environmental

organisations or business sectors. They are closely connected with the problems of the individual projects, i.e. issues related to water resources, landscape management, natural and cultural heritage, public domain, marine resources and the main productive activities in the area (agriculture, tourism, urban development).

The participatory Imagine workshops (supported by the Coastal Forum web platform), as a tool for scenarios building and indicators, are a fundamental node where everybody within this organisation meets. The overall process is managed on a periodical basis by the project Steering Committee.

Therefore, It can be argued that the composition of the Imagine workshops represents a multi-sectoral attendance and the potential for buy-in to the sustainability outcomes by diverse groups at the event (all those represented by the various bodies noted above). Each of the six groups which operated over the nine months of the project contained representation of technical experts from the authorities which deal with sustainability issues on a daily basis, consultants, researchers, and local NGOs, politicians, and representatives of local economic and institutional concerns. Even with this diversity, the groups managed to arrive at consensus outcomes of sustainability and intelligible and coherent overall integration of a key subset of signature issues. It needs to be noted that the methodology does not claim to provide perfect and balanced consensus in all cases, nor do we claim to produce indicators which are un-contested or the single perception of the stakeholders gathered. Rather, the experience of CAMP Almeria is that Imagine provides a robust and resilient form (evidenced by the longevity of the approach in various countries since 2000) for stakeholder engagement which resulted in viable consensus around key issues to face and indicators which could be used to assess these issues over time. Also, Imagine has delivered agreed bands which are accepted to indicate sustainable returns for each of the indicators. So far so good. What Imagine does not produce is uncontested data for the various indicators or single view assessment of the meaning of these indicators in single or collective interpretation. Imagine could be said to be evidentially successful in developing the forums for discussion and outcomes from these forums. What it does not do is guarantee consensus in interpretation or resulting policy guidance.

In these terms the experience of CAMP Almeria is consistent with the experience of earlier CAMPs an observation which is further developed in this section.

In terms of the range of contemporary issues facing this region of Spain, and which have been alluded to earlier, the Imagine process clearly did provide the sympathetic space in which diverse and complex conversations could take place over issues which have a common resonance but no common solution.

If this outcome is compared to the outcomes of the previous CAMPs where Imagine has been used then a number of tentative observations can be made:

1. Ownership. By implementing a CAMP in such a way that the involvement of stakeholders is essential and guaranteed throughout the process there are many more chances for the Action Plan to be implemented once adopted. Creating an atmosphere of open dialogue and discussions which do not include only technical expertise but from the very beginning of the project also the end users is the most that can be achieved by a CAMP, i.e. to create local ownership of the results at the end.
2. The participatory requirement of CAMP would seem to be improved by the central position of Imagine within the CAMP structure. From the first use of Imagine (then called Systemic Sustainability Analysis) in CAMP Malta, the intention was for the participatory methodology to fulfil what was referred to as a 'lateral' objective within the projects, bringing the various elements together in an information sharing and stakeholder directing manner. In Malta this was the nature of the development of the CAMP and this can also be said of CAMP Algeria and Slovenia. In CAMPs Cyprus and Lebanon this was not so much the case (for a variety of logistic and organisational reasons), Imagine was more peripheral to the technical components and the CAMPs were less participatory (in terms of the inclusion of the wide ranging stakeholders involved in CAMP and the capacity of these stakeholders to influence the CAMP process).
3. Participation seems to have the potential to improve project coherence. All large projects with diverse groupings of various technical, social and lay constituencies (such as CAMP) have difficulties in maintaining coherence across the complexity of the project. If there is no or little opportunity for teams and groups within projects to meet and discuss in a meaningful manner, share ideas and direct activity (rather than, for example, for team leaders to feedback on progress to a Project Board) then the understood coherence of what the project is attempting to achieve can be reduced. In CAMP Almeria the level of coherence of the project seemed to be established and built on by the central nature of Imagine and the impact which it had in terms of bringing the various groups together. Again, this appeared to be the case in the CAMPs in Malta, Algeria and Slovenia where Imagine had this central role but less so where is was more peripheral in Cyprus and Lebanon.
4. Coherence could have the effect of improving democratic accountability and project legitimacy. In CAMP Almeria, as in the CAMP projects in Malta and Slovenia in particular, the stakeholder agreed indicators appeared resilient in part because of their origin in participatory process. The indicators were not the outcome purely of technical groups and therefore the expression of the understanding of those groups. Although informed by technical experts, the indicators and the emerging signatory ideas were the output of the groups as a whole and this seemed to provide the project with a democratic mandate to present these indicators and issues as the legitimate sustainability reference points of the project.

5. Conclusions

CAMP Almeria is the most recent example of the Imagine process in action. Although at the time of writing the overall project is yet to conclude it is possible to say at this point:

- The Imagine process in CAMP provided a valuable space for discussion,
- This discussion resulted in local agreement on both the shape and measure of sustainability,
- Sustainability was agreed in terms of past, present and future visions,
- An action plan of items needing further attention was agreed and presented
- The action plan has been approved by the Coastal Commission and the Coastal Council and it will have an active post project phase.

It can also be noted here that a major benefit of the participatory process which Imagine provided to CAMP Almeria arose from the sharing of very different views among those attending. The opening up to conflictual views and deep questioning of existing structures, including the project structures themselves proved to have a value which was at times unforeseen and surprising.

References

Abdullaev, I., Kazbekov, J., et al., 2009. Participatory water management at the main canal: a case from South Ferghana canal in Uzbekistan 96, 317.

Abul-Azm, A.G., Ibrahim, A.-G., et al., 2003. Integrated coastal zone management in Egypt: The Fuka-Matrouh Project 9, 5–12.

Ackermann, F., 1996. Participant's perceptions on the role of facilitators using group decision support systems. Group Decision and Negotiation 5 (1), 93–112.

Acton, C., Savage, O., Higginson, S., 2003. Community Indicators for Sustainability: a European Perspective. Environ Trust, Leicester.

Antona, M., David, G., et al., 2007. Scientists dealing with stakeholders' demand for coral reef management indicators: methodological approach and issues 10, 46.

Arceo, P., Granados-Barba, A., 2010. Evaluating sustainability criteria for a marine protected area in Veracruz, Mexico. Ocean & Coastal Management 53 (9), 535–543.

Atkins, J., Burdon, D., et al., 2011. Management of the marine environment: integrating ecosystem services and societal benefits with the DPSIR framework in a systems approach. Marine Pollution Bulletin 62, 215–226.

Avison, D.E., Golder, P., et al., 1992. Towards an SSM Toolkit: rich picture diagramming. European Journal of Information Systems 1 (6), 397–408.

Ballard, E., 2007. Improving the discharge planning process: a systems study. Journal of Research in Nursing 12 (6), 687–688.

Ballinger, R., Pickaver, A., et al., 2010. An evaluation of the implementation of the European ICZM principles. Ocean & Coastal Management 53 (12), 738–749.

Bell, S., 1996. Approaches to participatory monitoring and evaluation in Dir District, North West Frontier Province, Pakistan. Systems Practice 9 (2), 129–150.

Bell, S., 2008. Creating Sustainable Communities: Student Workbook. Academy for Sustainable Communities, Leeds.

Bell, S., 2011. From Sustainable Community to Big Society: ten years learning with the Imagine approach. International Research in Geographical and Environmental Education 20 (3), 247–267.

Bell, S., 2012. DPSIR = a problem structuring method? An exploration form the 'Imagine' approach. European Journal of Operational Research. http://dx.doi.org/10.1016/j.ejor.2012.04.029(222): 350–360. Online.

Bell, S., Coudert, E., 2005. Guide d'Utilisation pour "IMAGINE": l'Analyse de Durabilité Systémique et Prospective (A Practioner's Guide to "IMAGINE": the Systemic and Prospective Sustainability Analysis). Blue Plan, Sophia Antipolis.

Bell, S., Morse, S., 1999. Sustainability Indicators: Measuring the Immeasurable. Earthscan, London.

Bell, S., Morse, S., 2001. Breaking through the glass ceiling: who really cares about sustainability indicators? Local Environment 6 (3), 291–309.

Bell, S., Morse, S., 2003a. Learning from experience in sustainability. In: The 2003 International Sustainable Development Research Conference. University of Nottingham, UK.

Bell, S., Morse, S., 2003b. Measuring Sustainability: Learning from Doing. Earthscan, London.

Bell, S., Morse, S., 2008. Sustainability Indicators: Measuring the Immeasurable. Earthscan, London.

Bell, S., Morse, S., 2013. Rich pictures: a means to explore the 'Sustainable Mind'? Sustainable Development 21 (1), 30–47.

Benoit, G., Comeau, A., 2005. A Sustainable Future for the Mediterranean: the Blue Plan's Environment and Development Outlook. Routledge, London.

Campbell Williams, M., 1999. Rich pictures on the path towards systemic being. Systems Research and Behavioural Science 16 (4), 369.

Cliquet, A., Kervarec, F., et al., 2010. Legitimacy issues in public participation in coastal decision making processes: case studies from Belgium and France. Ocean & Coastal Management 53 (12), 760–768.

Commission of the European Communities, 2009. Communication from the Commission to the Council and the European Parliament: GDP and Beyond – Measuring Progress in a Changing World. E. Commission. Commission of the European Communities, Brussels.

Correa Peña, A., 2011. CAMP Levante de Almeria: an experience on ICZM.

Coudert, E., Larid, M., 2011. ImagineMAGINE: a Set of Tools and Methods to Assist Integrated Coastal Zone Management in the Mediterranean. Blue Plan UNEP/MAP Regional Activity Centre, Sophia Antipolis.

de Jonge, V.P.,R., Turner, R.K., 2012. Integrating ecological, economic and social aspects to generate useful management information under the EU Directives' 'ecosystem approach'. Ocean & Coastal Management 68, 169–188.

Fougner, M., Habib, L., 2008. If I had a rich picture: insights into the use of "soft" methodological tools to support the development of interprofessional education. Journal of Interprofessional Care 22 (5), 488.

Godet, M., 1997. Manuel de Prospective Strategique. Tome 1: Une Indiscipline intellectuelle. Tome 2: L'art et la methode. Dunod, Paris.

Godet, M., 2001. Creating Futures: Scenario Planning as a Strategic Management Tool. Economica, London and Paris.

Godet, M., Monti, R., et al., 2004. Scenarios and Strategies: a Toolbox for Problem Solving. LIPSOR Working Papers. Laboratoire d'Investigation en Prospective, Strategie et Organisation, Paris.

Goytisolo, J., 1996. Campos De Nijar. Editorial Seix Barral, Madrid SA.

Green, D.R., 2010. The role of Public Participatory Geographical Information Systems (PPGIS) in coastal decision-making processes: an example from Scotland, UK. Ocean & Coastal Management 53 (12), 816–821.

Gundmundsson, H., 2003. The policy use of environmental indicators. Learning from evaluation research. The Journal of Transdisciplinary Environmental Studies 2 (2), 1–12.

Kolb, D., 1984. Experiential Learning: Experience as the Source of Learning and Development. Prentice-Hall, London.

Kristensen, P., 2004. The DPSIR Framework. Comprehensive Assessment of the Vulnerability of Water Resources to Environmental Change in Africa Using River Basin Approach. European Environment Agency, Nairobi, Kenya.

Le Tissier, M.D.A.A., Hills, J.M., 2010. Practitioner training for building capacity in ICZM. Ocean & Coastal Management 53 (12), 787–795.

Lewis, P.J., 1992. Rich picture building in the soft systems methodology. European Journal of Information Systems 1 (5), 351–360.

Masera, O., Astier, M., et al., 1999. Sustentabilidad y Manejo de Recursos Naturales. El Marco de Evaluación MESMIS. Grupo Interdiciplinario de Tecnología Rural Apropiada GIRA A.C. y Mundi Prensa de México, Mexico, Instituto de Ecología-UNAM.

Mediterranean Commission on Sustainable Development, 2005. Mediterranean Strategy for Sustainable Development: a Framework for Environmental Sustainability and Shared Prosperity. Mediterranean Action Plan, Athens. Annex 1: 41.

Mickwitz, P., Melanen, M., et al., 2006. Regional eco-efficiency indicators – a participatory approach 14, 1603–1611.

Ness, B., Anderberg, S., et al., 2010. Structuring problems in sustainability science: the multi-level DPSIR framework. Geoforum 41 (3), 479–488.

Otsuki, K., 2012. Reflexivity in participatory development: framing community-based natural resource management on the Amazon Frontier. Human Organization 71 (2), 200–210.

Shikida, A., 2006. Autonomy and the participation of users in Local CZM: a knowledge science based approach with a circuit model. In: Charting a New Course: Shaping Solutions for the Coasts – Proceedings of the Twentieth International Conference.

Shikida, A., 2008. Coastal management in urban areas. In: Mimura, N. (Ed.), Asia-Pacific Coasts and Their Management. Springer, London.

Surowiecki, J., 2005. The Wisdom of Crowds: Why the Many Are Smarter than the Few, new ed. Abacus, London.

Svarstad, H., Petersen, L., et al., 2008. Discursive biases of the environmental research framework DPSIR. Land Use Policy 25, 116–125.

Ten Brink, B., Hosper, S., et al., 1991. A quantitative method for description and assessment of ecosystems: the AMOEBA approach. Marine Pollution Bulletin 23, 265–270.

UNEP, 1976. Convention for the Protection of the Marine Environment and the Coastal Regions of the Mediterranean. from. http://europa.eu/legislation_summaries/environment/water_protection_management/l28084_en.htm.

UNEP/MAP/BluePlan, 1999. Indicators for the Sustainable Development in the Mediterranean Region. Blue Plan Regional Activity Centre, Sophia Antipolis.