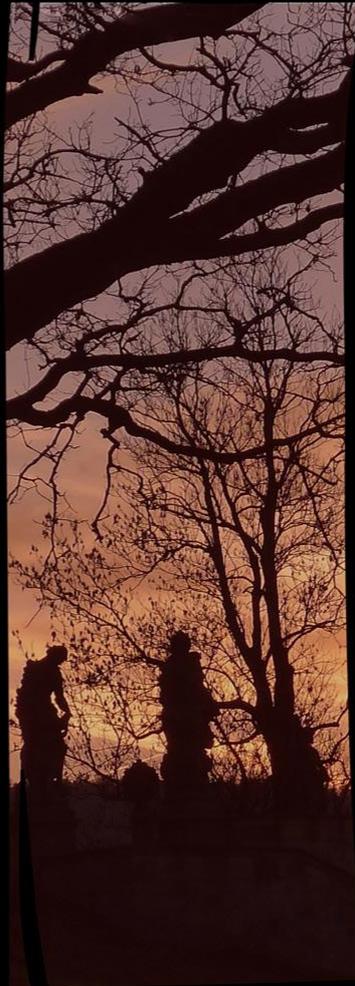


Nature



Culture

Towards an approach to integrate culture and nature for better conservation outcomes

Nicholas M. Georgiadis, Mediterranean Institute for Nature and Anthropos (MedINA), Athens, Greece, nicosg@med-ina.org

Giorgos Dimitropoulos, Mediterranean Institute for Nature and Anthropos (MedINA), Athens, Greece, dimitropoulosg@tpa.gr

Stefanos Dodouras, Mediterranean Institute for Nature and Anthropos (MedINA), Athens, Greece, sdodouras@med-ina.org

Aggeliki Foutri, Mediterranean Institute for Nature and Anthropos (MedINA), Athens, Greece, afoutri@med-ina.org

Irini Lyratzaki, Mediterranean Institute for Nature and Anthropos (MedINA), Athens, Greece, ilyratzaki@med-ina.org

Yorgos Melissourgos, Mediterranean Institute for Nature and Anthropos (MedINA), Athens, Greece, yormel@med-ina.org

Thymio Papayannis, Mediterranean Institute for Nature and Anthropos (MedINA), Athens, Greece, thymiop@med-ina.org

ABSTRACT

As nature conservation expanded globally during the second half of the 20th century, it was made clear that it levied costs on indigenous people and local communities. Conservationists, on the other hand, have realised that community support and action were key requirements for sustainable conservation. This paper argues that most of the approaches which place only monetary values on nature in order to overcome the conservation problems, do not appear to have resonated with many rural resource users, and have often failed and, as a response, proposes an efficient, participatory and culturally inclusive approach to integrate culture and nature for better conservation outcomes. This approach has as the main objective to guide users on how to design and implement more successful and efficient conservation programmes by working on issues relating to culture and participation. In addition, it provides the option to integrate such issues in conservation programmes that are already active. In other words, it does not present a "take it or leave it" approach but rather a set of tools that allows end-users to be selective and adaptive, in order to serve different needs of their projects, as well as effectively respond to diversified contexts. For the development of this approach, two distinct phases took place: Phase 1 set the basic principles and the framework of the approach following a thorough literature review; and Phase 2 created a Management Standard, which if followed (comprehensively or selectively) leads to the main goal.

KEYWORDS

Culture, nature, conservation, participation, standards, integrated approach

INTRODUCTION

Why integrating Culture into Nature?

The 1980s and 1990s saw a proliferation of interventions that cast natural resources and protected areas as engines of development in order to engage local communities in their conservation mainly by placing monetary values on nature. Nevertheless, conservation approaches designed to share benefits with rural communities, for example via ecotourism, payment for ecosystem services or other similar incentives, do not appear to have resonated with many rural resource users, and have often failed. Most conservation projects have endeavoured to convince local communities to conserve biodiversity deemed important by outsiders, without taking into account local communities perceptions and needs by and for their surrounding nature. More extreme voices, such as this of Alcorn (2008), argue that many traditional conservation initiatives create "conservation refugees" by forcing indigenous and

local people to remove from their traditional relationship with the Earth, in order to create parks, certified logging concessions, or concession areas for ecological service payments that directly benefit conservation agencies. Alcorn also argues that there will be global transformation and harmony only if conservation agencies love the culturally-diverse people who live with biodiversity and the people in turn love the conservation agencies.

As a result, a –relatively limited– part of the scientific community has begun to develop new ideas, which put culture at the heart of conservation programmes. According to Infield and Mugisha (2013), a focus on culture and a cultural values approach to conservation affords a rallying point for targeted, sustained and more effective conservation action. Adoption of cultural approaches provides an opportunity to forge new types of partnerships for conservation by making conservation more relevant and meaningful to more people. Papayannis (2008) proposes the use of “real bottom up conservation approaches” with deep respect to local specificities and presents some successful case studies where the joint management of both cultural and natural wealth was at the centre of their approaches.

By no means, however, are all cultural aspects, ideas and practices good for nature, thus the integration of cultural perspectives into mainstream conservation practices will require opportunities to be assessed on a case-by-case basis and always by espousing participative and transdisciplinary practices. Some cultural aspects can easily be integrated into conservation initiatives, others cannot.

What about Culture?

Raymond Williams, back in 1976, stated that, “culture” is one of the two or three most complicated words in English usage. One of the first descriptive definitions of culture was given by Franz Boas in 1911. In his book “The mind of Primitive Man”, Boas argued that culture is “...a system of shared beliefs, values, customs, behaviours, and artefacts that the members of society use to cope with their world and with one another, and that are transmitted from generation to generation through learning...”. As Infield and Mugisha (2013) cleverly stated, “culture resists definition”. Culture relates to why human beings differ in their forms of life (Ingold, 1994), confers identity, meaning, worth, aspirations and a sense of place in the universe and comprises relationships between individuals, groups, ideas and perspectives (Goulet, 1993). In 1952 Kroeber and Kluckhohn listed 164 different definitions of culture and the number is increasing since then. For sure, the difficulty to restrict and fully clarify the meaning and definition of culture derived by the fact that culture is not static. As Papayannis and Prichard (2008) mentioned “...culture evolves and is being created, in one form or another, on a continuous basis...”. According to Dessen *et al* (2015), there have been, and will continue to be, many attempts to list all the things the word embraces. Whilst used in different ways in several distinct intellectual disciplines and systems of thought, culture is also an everyday concept; it has “public” meanings and understandings, and is used in many different ways and contexts. Its meaning has changed through time as well, from early ideas of culture as action in real life-worlds and its interaction with nature, which are essential aspects for anthropological use of the concept even today, to culture as the cultivation of the human mind and behaviour.

Many conventions, declarations and policy documents define culture in a broad way, but in politics and in public discourse culture is often treated in a narrower sense. Culture is formulated by two distinct sets of elements or resources, namely tangible and intangible. Briefly, tangible cultural resources include monuments, buildings and sites, while intangible cultural resources include practices, representations, expressions, knowledge, skills as well as the instruments, objects, artefacts and cultural spaces.

Since the word “culture” became increasingly used during the second half of the 20th century, it became clear that, beyond any concept may include the elements (resources) which constitute it, are inherited from generation to generation. Thus, the phrase “cultural heritage” gradually prevailed and was also adopted by UNESCO in the WHC of 1972. Following this, “cultural sustainability” was introduced in 1995, when the World Commission on Culture and Development, building on the Sustainable Development discourse, defined cultural sustainability as “inter- and intra-generational access to culture” (cultural resources) (WCCD, 1995). This definition established culture as the “fourth pillar” of sustainability.

In the years that followed the 1972 WHC, the intangible cultural resources started to be included in the general meaning and use of the “cultural heritage” notion and had been also embraced by UNESCO in

Article 2 of the Convention for the Safeguarding of the “Intangible Cultural Heritage” which was adopted by UNESCO’s General Conference at its 33rd session in Paris on 17 October 2003. After the 2003 ICHC, “cultural heritage” increasingly appears in the literature in its broad sense. During the last few years, many definitions given for culture and cultural heritage are similar. One of the most simplistic, but at the same time descriptive, definition is the one given by Bradshaw and Bryant (2011) who, based on one of the Oxford dictionary definition for culture, argue that cultural heritage is “the collective social manifestation of a community, generally handed down by tradition or with some historical association. The manifestations can be tangible, such as buildings, industrial structures and technology, landscapes and artefacts; and intangible, such as language, visual art, music, performance and customary practice”.

In the literature, one may also locate concepts such as “cultural patrimony”, “cultural asset”, “cultural wealth” or “cultural property” (e.g. TNC, 2007; Papayannis, 2008; World Bank, 2009) which are used for describing cultural heritage, while many other authors, like Pretty *et al* (2009), also use the phrase “cultural capital”. Furthermore, as culture entails a broad spectrum of elements, such notions are often framed under broader conceptualisations like “cultural diversity” or “cultural systems” in the literature (e.g. Rapport, 2006; Papayannis and Prichard, 2008; UNESCO, 2008; Pretty *et al*, 2009). Other authors, embracing the links between nature and culture, use the phrase “bio-cultural diversity”, defined by Harmon *et al* (2010) as “...the diversity of life in all its manifestations (biological and cultural forms) which are all inter-related within a complex socio-ecological adaptive system...”. Dessein *et al* (2015) argue that bio-cultural diversity emphasises the adaptive connections between nature and people and thus the significance of hybrid landscapes. Maffi and Woodley (2010) describe 45 bio-cultural diversity conservation initiatives that, in response to conservation needs, have separately evolved mechanisms that integrate efforts to conserve biodiversity, culture and language.

METHODS AND APPROACH OF THE STUDY

The MedINA approach

Since its establishment in 2003, the Mediterranean Institute for Nature and Anthropos (MedINA) deals extensively with issues concerning the relationship between humankind and nature. Through this involvement, it became clear that there is an important gap in most international efforts to protect the natural environment. Among other factors, this gap is arguably associated with lack of integrating cultural aspects into conservation programmes. Culture, as the fourth pillar of sustainability, is an important parameter for successful and efficient conservation.

In this context, MedINA launched an ambitious three-year MAVA funded project (hereinafter, the “INCREAte project”) aiming, *inter alia*, to create an efficient, participatory and culturally inclusive approach to integrate culture and nature for better conservation outcomes (hereinafter, the “approach”). The focus of the approach is to guide users to design and implement more successful and efficient conservation programmes by working on issues relating to culture, including stakeholders’ participation. Such issues may also be integrated in conservation programmes that are already active. In that sense, the approach is not a “take it or leave it” one, but rather a set of tools that allow end-users to be selective and flexible so as to fulfil the distinct varied objectives of their projects, as well as to effectively respond to diversified contexts or specific requirements.

For the development of the approach, two distinct phases were designed. Phase 1 was about the development of the key methodological objectives of the approach. “Setting the Framework” (*Main Steps*) is an increasingly salient topic of professional practice. In conjunction with this, most of the relevant tools that are available in the literature have been identified, analysed and assessed. In order to examine their relevance to the key methodological objectives of the approach, this assessment was based on six criteria: data collection; data handling and interpretation; apprehension and communication of results; correlation with the approach; adaptability; and participatory nature.

The –still ongoing– Phase 2 deals with the development of a *Management Standard (MS)*. If followed, either comprehensively or selectively, the *MS* can assist in the accomplishment of the project’s main goal, i.e. the development of an effective, participatory and culturally inclusive approach to integrate culture and nature for better conservation outcomes. The *MS* follows the hierarchy of *Principles* and *Criteria*.

The INCREAte approach aims at fulfilling a set of key methodological objectives. These are: promote integration of culture into nature conservation; rely on bottom-up and participatory processes; ensure adaptability and replicability; be easy to work with and to communicate results; and be effective and efficient. In order for these key objectives to be achieved, the project team designed an initial number of the necessary –but not exclusive– *Main Steps*, which can be summarised as follows:

1. Assessment and evaluation of the natural heritage (identification and status).
2. Assessment and evaluation of the cultural aspects (identification and status).
3. Identification and evaluation of linkages and interdependencies between the natural heritage and cultural aspects.
4. Identification and evaluation of all relevant stakeholders, alliances and consensus building.
5. Planning and monitoring of a concise conservation plan with the participation of the most important (key) stakeholders (bottom up participatory approach).

These *Main Steps* constitute the “basic framework” of the INCREAte methodological approach. They are set in a linear mode for simplicity reasons; but actually, as in most management cycles, the sequence of steps is an iterative cycle. This is due to a number of reasons: a) there is an unavoidable back-and-forth movement between steps in every project design and implementation, especially when adaptive management principles are adequately taken into consideration; b) different projects may have quite different objectives and, in addition, are designed within highly diversified contexts; c) availability of resources significantly impacts on prioritising strategies and selecting appropriate tools; d) a project team may place different focus on specific steps, depending on its expertise, objectives or project life-cycle; and e) the approach can be adopted by a project that is already in progress and aims to respond to specific challenges.

RESULTS

Review and evaluation of the available methodological tools (Phase 1)

Given the nature of the *Main Steps* described above, an extensive literature review had to be carried out in order to, first, identify and evaluate existing tools that respond to the needs of each step, and then assess whether they can be used to guide the step-by-step process of developing the INCREAte approach. The literature review revealed 89 relevant methodological tools. In terms of *scope*, they were divided into two broad categories: guidelines and methodologies. Given the fairly large number of tools, a rapid assessment method was chosen in order to identify –in accordance to the INCREAte objectives– the most suitable ones. Initially, a broad brush review was carried out to determine which tools are irrelevant to the project’s scope or lack a basic logical and systematic approach. Those qualified for further review were subsequently examined in depth and evaluated using the rapid assessment method described below.

The main parameters used during the evaluation process can be grouped into two main categories, responding to “effectiveness-efficiency” and “relevance” of each tool respectively. Assessing the effectiveness and efficiency of each tool was partly related –but not limited– to its *cost-effectiveness*, which in turn can be evaluated by the type and quantity of data needed (*data collection*), as well as the means and time required to analyse them (*data handling and interpretation*). As for their relevance to the project’s needs, all tools were examined for evaluating whether they suit the needs of each methodological step (*correlation*), or whether they can easily be modified to suit these needs (*adaptability*). Given that one of the main requirements of the INCREAte project is to ensure and enhance broad public participation in each of the five *Main Steps* of the approach, all tools were evaluated with regard to their *participatory nature*. In other words, they have been scrutinised in order to ascertain whether their application: (i) involves somehow all important stakeholders; (ii) can be driven by participants; (iii) is collaborative at every stage; (iv) involves discussion, pooling skills and “working together”; and (v) advances shared ownership of outcomes.

Weighting of the parameters, the scoring method and the cut-off point

The assessment method developed assumes equal weights for each parameter. This may very well be an unwarranted assumption. However, it was considered as the easiest way to simplify the scoring

technique. In the example of Table 1, the six main parameters and some of the qualified tools are listed in the left-hand column and top row, respectively.

Toolboxes Parameters	IUCN Category V	SCS	University of Jyväskylä	UK NEAF O	FFI- UW A	FFI- Batwa	PCR Guidebook	NCHRP
Data collection	3	3	2	1	3	3	3	2
Data handling/interpretation	2	3	2	2	2	2	2	1
Communication of results	2	3	2	2	1	1	2	3
Correlation	1	2	1	1	1	1	2	2
Adaptability	2	2	2	2	1	1	1	1
Participatory nature	1	2	1	2	2	2	2	2
Mean value	1.8	2.5	1.6	1.6	1.6	1.6	2.0	1.8

Table 1: Example of matrix for the assessment of the tools

The 1-3 scoring system (1-low relevance/fit the needs, 2-medium relevance/fit the needs and 3-high relevance/fit the needs), based on the degree to which each tool fulfils the needs of the methodological step in question, helps to evaluate the tools quickly and easily. A reasonable cut-off point to select the tools most suitable for further analysis was set at the score of a mean value of at least 2.

INCREAte Principles and Criteria MS (Phase 2)

The primary step of phase 2 of the approach was to develop an initial set of Principles and Criteria (P&C), using data and information derived by the tools qualified in Phase 1 and also by the project's team inputs.

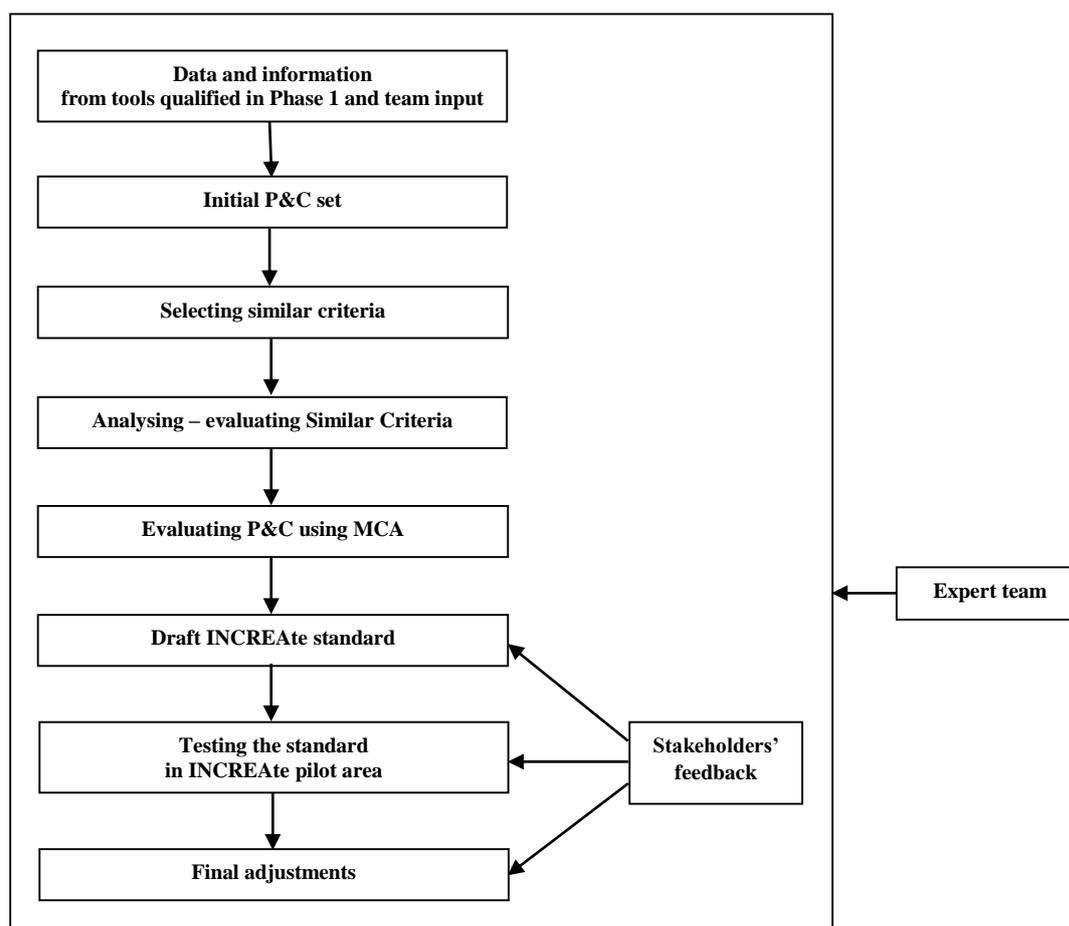


Figure 1: Framework for the development and testing of the INCREAte standard.

After the development of the initial set of P&C, there was first a need to identify and evaluate any similar Criteria, and then to apply a Multi-Criteria Analysis (MCA) to the initial set of P&C in order to derive a draft Management Standard. Evaluating the set of P&C relied heavily on input from an assessment team which, in case of the INCREAte project, consisted of the authors, representing the different disciplines included in the P&C set. The focus of the team was on: (1) adapting and modifying the initial set of P&C to fit the needs of the INCREAte approach; and (2) estimating the relative importance of each element in the set (i.e. P&C) with regard to the INCREAte key methodological objectives and the elements which are represented (e.g. is a specific criterion important or descriptive for the principle that it represents and/or describes?). The logical framework for the creation of the INCREAte MS is shown in Figure 1.

Creating the initial set of P&C

During Phase 1 of creating the INCREAte approach, 89 relevant tools were evaluated. Out of these, 55 qualified for a more detailed evaluation, as most relevant to the needs of the approach, while eventually 44 out of these have been used as the main sources for the creation of the approach's first initial set of Principles and Criteria in the form of a Management Standard.

Following this, the project team reviewed and discussed the plentitude and adequacy of the created table and added some more additional statements (P&C). By the end of this exercise a table which included 9 Principles and 75 Criteria was created.

Analysing the initial set

The methods adopted in this part of the process were developed partly by Georgiadis and Cooper (2007) and partly by CIFOR's "toolbox series" for developing, testing and selecting Criteria for Sustainable Forest Management (Prabhu *et al*, 1999; Mendoza *et al*, 1999). These methods give the opportunity for developing new or substituting P&C in case gaps exist, or if existing P&C are not suitable. The evaluation process during the meetings of the team was separated in two parts, discussion and then ranking/rating the P&C. While discussions were open, ranking and rating were done individually. Each team member filled out response forms for each MCA stage and level of analysis, and the decision elements within the P&C hierarchy. The main levels of the analysis were:

Evaluation of the 'Similar Criteria' and selection or creation of those which were most relevant to the INCREAte approach.

During the development of the initial set of Principles and Criteria, there were some strong similarities in some of the Criteria derived from different sources. For evaluating the similar Criteria, form 1 was used by the team panel (Figure 2). Form 1 gave the expert team the opportunity to clarify the importance of each pair of elements according to their beliefs, but also provided the opportunity to decide whether a new or combined statement for each pair of Criteria was needed. Each team member filled in the response form 1 but the final decision was made after discussion with the team.

The interest groups participate completely in all aspects of the management plan and decision-making of the area (source: <i>PROARCA Tool</i>)	The planning process allows adequate opportunity for key stakeholders to influence the management plan (source: <i>METT Tool</i>)
9 8 7 6 5 4 3 2 1	2 3 4 5 6 7 8 9
Please give your own suggestion/combination (if any) on the above statements:	
The planning process allows adequate opportunity for key stakeholders to influence the management plan via a well organised consultation process	

Figure 2: Example of Form 1 for comparing similar Criteria.

In the above case, the team felt that the statement derived by the METT tool was "Moderately more important/better stated" than the statement derived by the PROARCA tool; but in order for the created criterion to be more comprehensive, the team suggested the inclusion of the phrase "via a well organised consultation process". Fourteen pairs of criteria were considered to be similar. After the "Similar Criteria Evaluation" the number of remaining Criteria was reduced from 75 to 61.

Assessment (adoption, modification, or rejection) of the remaining Criteria regarding to the INCREAtE objectives.

Rating

After the Similar Criteria Evaluation, the team rated all the remaining Criteria. The team members did this individually using the following 9-point scale to measure (rank) the level of importance of a Criterion.

1	3	5	7	9
Unimportant	Weakly important	Moderately important	Very important	Extremely important

Example: Consider the 4 Criteria of the Principle “**All important cultural aspects of the area should be clearly identified and appropriately reported**”. The team judged the importance of each Criterion relative to the Principle in particular and overall in relation to INCREAtE key objectives.

This Principle initially included the following Criteria:

1. The types and status of tangible cultural aspects (including Sacred Natural Sites) should be clearly identified and reported.
2. The types and status of intangible cultural aspects should be clearly identified and reported.
3. Management of cultural aspects should be based on the customs and values of the society concerned, and suit its needs.
4. All relevant values, services, functions, benefits and practices derived by the cultural aspects of the area should be clearly identified, recorded and taken into account in planning and management.

Using the rating procedure mentioned above, one member of the team responded as follows:

Criterion	Rate	Meaning
3.1	8	Very important
3.2	8	Very important
3.3	6	Moderately Important
3.4	9	Extremely Important

Percentage Rating

Percentage rating is a technique where each team member gave each decision element a rate, or percentage score, between 0 and 100. The scores for all the elements being compared must add up to 100. In percentage rating the importance of each Criterion is also assigned having in mind the rest of the Principle’s Criteria and not just the importance and relevance of each Criterion in relation to the Principle that represents. In other words, percentage rating is also a comparison of the importance between the Criteria of each Principle. Thus, the advantage of percentage rating is that it provides both an ordinal and a cardinal measure of importance for each element. Ranking, on the other hand, only provides a measure of ordinal importance.

Example: for the same Principle used in the example above, the same team member assigned the following ratings to the Criteria:

Criterion	Rating
3.1	25
3.2	25
3.3	15
3.4	35
Total	100

Calculating the relative weight

The goal of this analysis is to calculate the relative weight, or importance, of each Criterion based on a synthesis of the different responses provided for both techniques (ranking and percentage rating). The steps which were followed include:

Step 1: After the team has filled out their forms; the data entered onto a spreadsheet similar to Table 2. This table contains data from ranking and rating of the Criteria related to Principle 5 concerning the identification and evaluation of all stakeholders.

Criteria	Team member 1		Team member 2		Team member 3		Team member 4	
	Rank	Rating	Rank	Rating	Rank	Rating	Rank	Rating
5.1	9	20	9	30	9	25	9	30
5.2	9	25	9	30	9	25	8	25
5.3	8	15	9	20	9	25	8	20
5.4	9	40	9	20	9	25	9	25
Total	100		100		100		100	

Table 2: Ranks and Ratings of Criteria relevant to Principle 5

The above example explains why two different systems of voting (ranking and rating) were used. From team member's 1 voting form, it can be seen that although he individually found all Criteria to be "very important" and "extremely important" (ranking technique), he believes that Criterion 5.4 is the most important in total, thus, he scored it with a 40 out of a 100 rate (rating technique).

Step 2: for both ranking and rating, the sums of the team member's votes were calculated for each Criterion. This showed the total weight allocated to each Criterion by these two different techniques (Table 3).

Criteria	Sum of Ranking Votes		Sum of Rating Votes	
	Calculation	Ranking	Calculation	Rating
5.1	9+9+9+9	36	20+30+25+30	105
5.2	9+9+9+8	35	25+30+25+25	105
5.3	8+9+9+8	34	15+20+25+20	80
5.4	9+9+9+9	36	40+20+25+25	110
Total	141		400	

Table 3: Sum of votes for each Criterion.

Step 3: In order to combine the results of the ranking and rating techniques in Step 2, the relative weight of each Criterion was calculated for both techniques. The relative weight of each Criterion was calculated for each technique by dividing its actual weight by the total of all actual weights and multiplying by 100 (Table 4).

Criteria	Relative Weight		Relative Weight	
	Calculation	Ranking	Calculation	Rating
5.1	$36/141*100$	26	$105/400*100$	26
5.2	$35/141*100$	24	$105/400*100$	26
5.3	$34/141*100$	24	$80/400*100$	20
5.4	$36/141*100$	26	$110/400*100$	28
Total	100		100	

Table 4: Calculated Relative Weights for Ranking and Rating Techniques.

Once the relative weights have been calculated for both the ranking and rating results, the two were then compared.

Step 4: To calculate a final combined weight for each Criterion, the relative weights calculated for both the ranking and rating techniques were averaged (Table 5).

Criteria	Calculation	Ranking
5.1	$(26+26)/2$	26
5.2	$(24+26)/2$	25
5.3	$(24+20)/2$	22
5.4	$(26+28)/2$	27
Total		100

Table 5: Calculating the Combined Weight for each Criterion.

The calculation of the combined weights of each Criterion for the example above illustrated that Criteria 5.1 and 5.4 are deemed relatively more important than Criteria 5.2 and 5.3. Finally, after the use of both techniques (ranking and rating) and the first analysis, the team discussed the low-scored Criteria and decided whether to modify or reject them.

Finally, the team discussed whether to include new Principles and/or Criteria in cases where available information, in order to cover the five methodological steps, was inadequate. The final INCREAtE MS includes 9 Principles and 32 Criteria, as shown in Table 6.

Steps	Principles	Criteria
1. Baseline design	1. Baseline work for comprehensive and adaptive management is designed	1.1 Management's purpose, team, scope and vision are defined 1.2 A preliminary situation analysis is carried out 1.3 All potential stakeholders are identified
2. Identification and assessment of the natural environment	2. All important elements of the area's natural environment are appropriately reported	2.1 The ecological character of the area is described 2.2 Critical species, their habitats and relevant ecological processes are identified 2.3 Indicators species are identified 2.4 Species and natural areas of high social, cultural and economic importance are identified
3. Identification and assessment of the cultural environment	3. All important elements of the area's cultural environment are appropriately reported	3.1 The cultural character of the area is described 3.2 Main cultural practices are identified 3.3 Main cultural assets are identified 3.4 Cultural flagships of high ecological, social and economic importance are identified
4. Identification and assessment of nature-culture linkages	4. Interrelationships between natural and cultural environment are appropriately reported	4.1 Nature-culture links (including spatial links) are identified, and benefits from the nature-culture interactions are reported 4.2 The ecological, social, cultural and economic significance (values) of identified links and benefits are reported
5. Stakeholder analysis and engagement	5. All stakeholders of the area are identified and assessed according to their relevance and significance to management process	5.1 Stakeholders' attitudes towards management are recorded and existing relationships between stakeholders are mapped 5.2 The influence and importance of each stakeholder is evaluated and key stakeholders (including marginalised groups) are identified
	6. All key stakeholders are actively engaged throughout the management process	6.1 Key stakeholders' consent, participation, inclusion and collaboration is promoted 6.2 Local communities are actively engaged in the identification and assessment of the natural and cultural environment 6.3 Key stakeholders' engagement ensures capacity building 6.4 The participation strategy promotes the development of stakeholder networks
6. Management design and planning	7. Social welfare and awareness raising are promoted	7.1 Local communities are given opportunities for employment, training, and other services

		7.2 A volunteer programme that responds to the management needs of the area is established 7.3 Public education and media campaigns are developed and implemented to raise awareness for natural and cultural heritage
	8. Plans and strategies that affect the area are taken into account and synergies are promoted	8.1 All relevant plans and strategies (e.g. on land use, conservation, resource management etc.) inform management design 8.2 Land tenure and customary use rights inform management design 8.3 Threats and opportunities related to tourism inform management design
	9. Comprehensive and adaptive management is in place	9.1 Management planning is properly conceptualised (targets, threats and opportunities, enhanced situation analysis) 9.2 Ecological and cultural significance of the area is linked to the management objectives and desired outcomes 9.3 Action plans are in place (goals, strategies, result chains and objectives) 9.4 Monitoring, operational and work plans are in place 9.5 The management provides a process of review and adjustment during its life-cycle through management effectiveness assessments 9.6 Staff training and skills are appropriate for the management needs of the site, and for anticipated future needs 9.7 A long-term financing plan provides sufficient resources for the management of the area

Table 6: Draft INCREAtE Management Standard.

CONTINUATION OF THE PROJECT AND FURTHER RESEARCH

At the time this paper was written, the Management Standard was refined -by implementing it (and assessing its effectiveness) in the pilot area of Kythera island (Greece). In parallel, the development of a *Manual* with indicators, guidelines and tools for the full implementation of the *MS* will take place as the final phase (3) of this work. Phase 3 is in progress and is expected to be finalised during 2017. The *Manual* will be then freely available through MedINA's website at: <http://med-ina.org/> It is hoped that it shall also be used, tested and evaluated in a considerable number of pilot sites, mainly in the Mediterranean.

REFERENCES

- Alcorn, J.B., 2008, Beauty and the Beast: Human Rights and Biocultural Diversity, *Resurgence Magazine*, September 2008.
- Boas, F., 1911 (1938), *The Mind of Primitive Man*, The Macmillan Company, New York (revised edition in 1938).
- Bradshaw, E., Bryant, K., 2011, *Why Cultural Heritage Matters: A Resource Guide for Integrating Cultural Heritage Management into Communities Work at Rio Tinto*, Rio Tinto and Centre for Social Responsibility in Mining, University of Queensland, Australia.
- Dessein, J., Soini, K., Fairclough, G., Horlings, L., 2015, Culture in, for and as Sustainable Development, *COST Action IS1007*, University of Jyväskylä, Finland.
- Georgiadis, N. M., Cooper, R. J., 2007, Development of a Forest Certification Standard Compatible with PEFC and FSC's Management Requirements: A case study from Greece, *Forestry* **80** (2): 113-135.

- Goulet, D., 1993, Biological diversity and ethical development, in: *Ethics, Religion and Biodiversity; Relations between Conservation and Cultural Values* (L. S. Hamilto, ed.), White Horse Press, Cambridge.
- Harmon, D., Woodley, E., Loh, J., 2010, Measuring Status and Trends in Biological and Cultural Diversity, in: *Nature and Culture: Rebuilding a Lost Connection* (S. Pilgrim, J. N. Pretty, eds), Earthscan, New York.
- Infield, A., Mugisha, A., 2013, Culture, Values and Conservation: A Review of Perspectives, Policies and Practices for the Integration of Cultural and Ethical Values into Conservation, Fauna & Flora International, Cambridge, UK.
- Ingold, T., 1994, Introduction to Culture, in: *Companion Encyclopaedia of Anthropology: Humanity, Culture and Social Life* (T. Ingold, ed.), Routledge, London, New York.
- Kroeber, A. L., Kluckhohn, C., 1952, Culture: A Critical Review of Concepts and Definitions, *Papers of the Peabody Museum of Archaeology and Ethnology* 47(1): 1-223.
- Maffi, L., Woodley, E., 2010, Biocultural Diversity Conservation, Earthscan, London, UK.
- Mendoza, G. A., Macoun, P., Prabhu, R., Sukadri, D., Purnomo, H., Hartanto, H., 1999, Guidelines for Applying Multi-Criteria Analysis to the Assessment of Criteria and Indicators, C&I Toolbox Series, CIFOR.
- Papayannis, T., Pritchard, D. E., 2008, Culture and Wetlands: A Ramsar Guidance Document, Ramsar Convention, Gland, Switzerland.
- Papayannis, T., 2008, Action for Culture in Mediterranean Wetlands, Med-INA, Athens, Greece.
- Prabhu, R., Colfer, C. J. P., Dudley, R. G., 1999, Guidelines for Developing, Testing and Selecting Criteria and Indicators for Sustainable Forest Management, C&I Toolbox Series, CIFOR.
- Pretty, J., Adams, B., Berkes, F., Ferreira de Athayde, S., Dudley, N., Hunn, E., Maffi, L., Milton, K., Rapprt, D., Robbins, P., Sterling, E., Stolton, S., Tsing, A., Vintinner, E., Pilgrim, S., 2009, The Intersections of Biological Diversity and Cultural Diversity: Towards Integration, *Conservation and Society* 7(2): 100-112.
- Rapport, D. J., 2006, Sustainability Science: An Ecohealth Perspective, *Sustainability Science* 2(1): 77-84.
- TNC, 2007, Conservation Action Planning (CAP): Developing Strategies, Taking Action and Measuring Success at Any Scale, The Nature Conservancy, Arlington VA, USA.
- UNESCO, 2008, Links Between Biological and Cultural Diversity: Concepts, Methods and Experiences, *Report of an International Workshop*, Paris, France.
- WCCD, 1995, Our Creative Diversity, Paris: UNESCO World Commission on Culture and Development.
- Williams, R., 1976, Key-words: A Vocabulary of Culture and Society, Routledge Revivals. Fontana/Groom Helm.
- World Bank, 2009, Physical and Cultural Resources (PCR) Safeguard Policy Guidebook, World Bank, Washington DC, USA.