A CALL FOR A TRANS-BOUNDARY MARINE PROTECTED AREA FOR THE NORTHERN ADRIATIC: CAN CONSERVATION SUCCEED WHERE POLITICS FAILED?

POZIV ZA ČEZMEJNO MORSKO ZAVAROVANO OBMOČJE V SEVERNEM JADRANU: ALI LAHKO NARAVOVARSTVU USPE TAM, KJER JE SPODLETELO POLITIKI?

Peter MACKELWORTH

Key Words: Peace Park; Marine Protected Area, Piran Bay, Adriatic Sea

Ključne besede: "park miru", morsko zavarovano območje, Piranski zaliv, Jadransko morje

ABSTRACT

Increasingly, protected areas are being developed for biodiversity, but with social, economic and political objectives. Provided these alternative inter-disciplinary objectives do not undermine biological aims, conservation professionals should support their development. Trans-boundary conservation areas (TBCAs) are normally implemented to coordinate two or more States to conserve a straddling ecosystem or protect migratory species. However, they may also serve to aid regional development and promote cooperation between countries. Specifically one category of TBCA, the 'peace park', has the explicit purpose of promoting peace and cooperation between opposing States.

The Northern Adriatic has been a region of conflict for millennia. This region is an inherently European space, where previously fluid boundaries have been fused and divided on numerous occasions with associated human population redistribution. The most recent border dispute in the region has been between Croatia and Slovenia over Piran Bay. The forthcoming arbitration process will be time consuming and expensive, with an outcome likely to fuel the dispute, given past performances. Yet, in the near future the two States will be partners in the European Union, with harmonised law and integrated economics. Bearing this in mind, the development of a trans-boundary marine protected area, utilising the Habitats Directive, could provide an opportunity to protect the disputed area and bring harmony to the region. In addition it would contribute to both countries commitments to the Natura 2000 network, improve the tarnished international image of the region and protect a representative site of the Northern Adriatic Sea utilised by internationally important migratory species.

IZVLEČEK

Zavarovana območja se v vse večji meri ustanavljajo za zaščito njihove biotske pestrosti, vendar z določenimi družbenimi, ekonomskimi in političnimi cilji. Pod pogojem, da ti alternativni interdisciplinarni cilji ne spodkopavajo bioloških ciljev, bi morali naravovarstveni strokovnjaki njihov razvoj vsekakor podpreti. Čezmejna naravovarstvena območja se navadno ustanavljajo z namenom usklajevanja dveh ali več držav pri varstvu čezconskega ekosistema ali zaščite selivskih vrst. Po drugi strani pa lahko tudi pripomorejo k regionalnemu razvoju in pospeševanju sodelovanja med državami. Prav poseben namen ene izmed kategorij čezmejnih naravovarstvenih območij, tako imenovanega "parka miru", pa je pospeševanje miru in sodelovanja med nasprotujočimi si državami.

Severni Jadran je območje konfliktov že nekaj tisoč let. Po naravi je del evropskega prostora, v katerem so bile predtem spremenljive meje ob neštetih priložnostih združevane in ločevane s prerazdelitvijo človeške populacije. Najnovejši mejni spor v območju zadeva Hrvaško in Slovenijo glede Piranskega zaliva. Bližajoči se arbitražni proces bo brez dvoma dolgotrajen in drag, izid glede na pretekle "predstave" pa po vsej verjetnosti takšen, da bo samo še prilil olja na ogenj. Toda v bližnji prihodnosti bosta državi vendarle partnerki v Evropski uniji, z vsemi usklajenimi zakoni in integriranim gospodarstvom vred. S tem v mislih bi razvoj čezmejnega morskega zavarovanega območja ob uveljavitvi Habitatne direktive lahko bil priložnost, da se zaščiti sporno območje in da v tem delu sveta zavlada složnost. Poleg tega bi v obeh državah prispeval k njuni zavezanosti do mreže Natura 2000, izboljšal omadeževano mednarodno podobo te regije in zaščitil to reprezentativno lokaliteto severnega Jadranskega morja, mednarodno pomembno za migratorne vrste.

'Love thy Neighbour; yet don't pull down your Hedge'
(Benjamin Franklin, 1754)

1. INTRODUCTION

In recent years, the concept of transboundary conservation areas (TBCAs) has been widely debated (Sandwith et al. 2001, Phillips 1998). The United Nations (UN) now recognises over 227 TBCAs, covering over 4.5 million square kilometres (Fig. 1) (Lysenko et al. 2007). Whilst there are numerous terms used in the literature to describe TBCAs, this paper specifically refers to the 'peace park' concept where both the political and environmental criteria are equally important (Westing 1998)[1]. The World Conservation Union (IUCN) defines peace parks as: 'transboundary protected areas that are formally dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources, and to the promotion of peace and cooperation'.

Peace parks have the possibility to affect human relations at all levels, of particular importance are local and institutional relationships. Local borderland communities often live their day to day life with little regard to border issues, in many cases identifying more with related communities across the border than with distant State capitals (Kaplan 2000). However, the politicisation of a border issue can create tensions where previously there was tolerance. The designation of a peace park may help to diffuse local tensions, mend communities, or maintain cultural integrity, by 'eliminating' the formal border between nations (Odegaard 1990, Wolmer 2003). Conversely, the top down imposition of a protected area (PA), or creation of the multiple borders related to the definition of a peace park, may cause local tension or add to the division of communities (Jones 2001, Fall 2002). However, what is fundamental is that the long-term sustainability of a peace park is largely determined by local participation (Conca et al. 2005).

[1] The term 'Peace Park' will be used throughout this paper where political cooperation is recognised as equally important to environmental protection. In other cases the term Transboundary Conservation Area (TBCA) will be used.

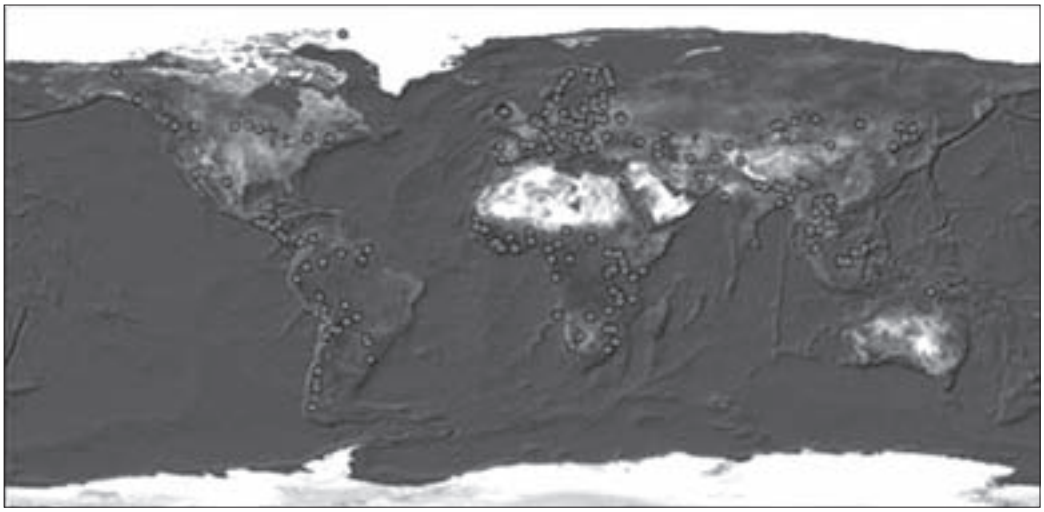

Figure 1: Transboundary Conservation Areas Worldwide
Slika 1: Čezmejna naravovarstvena območja sveta

Institutions evolve though the experiences of their constituent individuals. Officials working together with colleagues from neighbouring States, resolving issues of low political priority such as nature conservation, can help to develop institutional trust (Westing 1993). This trust can then be built upon to find other areas of cooperation and agreement, fostering understanding of other cultures, good relations and reinforcing confidence between States (Odegaard 1990). In some cases, where countries have been in active border conflicts, TBCAs have been used to concentrate attention on the concept of co-operation over a shared resource rather than identifying the border as a symbol of separation (Sandwith et Besançon 2007). This is important in areas such as fluid environments like semi-enclosed seas, lakes or river systems where cooperation among parties is even more vital. However, the form and the context of cooperation are critical, particularly where there may be an imbalance of power between the parties. Where conflict is fresh, the presence of an independent third party may help to facilitate negotiations (Akçali et Antonsich 2009). Cooperation may also be developed in international forums, particularly where States are signatories to the same agreements (Blake 1998, Westing 1998).

From a conservation perspective, the primary purpose of most TBCAs is either for the management of straddling natural systems or protection of habitats important for migratory species (Phillips 1998). The existence of international or regional environmental agreements is fundamental to provide a legal foundation for protection. The two global conventions of particular importance are the Convention on Biological Diversity (CBD) (1992) and the Convention on the Conservation of Migratory Species of Wild Animals (CMS) (1979). The importance of TBCAs is highlighted in goal 1.3 of the CBD protected areas programme of work which seeks to establish and strengthen by 2010/2012 TBCAs (Anonymous 2010). The CMS fulfils its obligations in two manners. Species identified as being in danger of extinction, under Appendix I, are protected directly by imposition of strict conservation objectives on

party States. Species that have an unfavourable conservation status or would benefit from international cooperation, listed under Appendix II, are protected by regional agreements convened under the convention (Lyster 1985).

2. MARINE CONTEXT

The designation of marine protected areas (MPAs) has lagged behind the development of the terrestrial PA system. In 2008, only 5.9% of territorial seas were protected by nationally designated PAs, and only 0.5% of the high seas (Coad et al. 2009). Multiple use MPAs are increasingly being used to assert some form of management over the multiple users and multiple jurisdictions of the coastal and marine zone. Over 54% of the total protected marine area is under the IUCN categories V and VI, compared to 30% for the total PA worldwide (Mulongoy et Chape 2004). Balancing conservation and sustainable use is a continuing problem, although the integrated multiple-use method can help to simplify management by developing a single coordinating institution (Kelleher et Kenchington 1991).

The CBD set ambitious targets for the establishment and management of PAs. For the oceans, the overall aim is to establish, by 2012, an effectively managed, representative, global system of MPAs covering 10% of all marine ecological regions (Coad et al. 2009). The dilatory development of MPAs was identified as a problem at the 2003 World Parks Congress. Delegates recognised the need to develop new methods to improve MPA coverage to the proposed target within the next decade (Wells et al. 2007). The increasing pressure to reach these targets has resulted in the development of innovative approaches. Whilst conservation shortcuts may be criticised, the cryptic and uncertain nature of the marine environment lends itself to creative conservation. For instance the use of 'flag-ship' species for habitat conservation may be better suited to the marine environment (Zacharias et Roff 2001).

3. EUROPEAN AND MEDITERRANEAN CONTEXT

Despite boasting the first formal peace park, Europe has only approximately 4% of the global coverage of TBCAs (Lysenko et al. 2007)[2]. The conclusion of the Second World War led to the development of new States, Federations and Unions many with borders defined with little historical, ecological or ethnic basis. Of particular importance was the divide of political philosophies along the Iron Curtain. The separation of the continent during the 'cold war' led to the creation of an ad hoc nature area in 'no man's land'. This area is now promoted as the European green belt an almost unbroken section of natural landscapes and habitats representing all the European bio-geographic regions (Fig. 2). Although the end of the cold war reunited some regions, others were divided. Associated with this break up has been an increase in nation-states in the region, many of whom possess ill defined and disputed borders (Arnaut 2002).

[2] Within Europe there is 188,153km^2 of TBCAs. Globally the figure is 4,626,601.85km^2

Figure 2: European Green Belt
Slika 2: Evropski zeleni pas

The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention, 1979) is the primary agreement to conserve biodiversity in the region. The main objectives of the Convention are to ensure conservation and protection of wild plant and animal species and their natural habitats, to increase cooperation between contracting parties, and to regulate the exploitation of those species, including migratory species. Although the Convention does not expressly refer to TBCAs, Article 1 highlights the need to protect those species and habitats whose conservation requires the cooperation of several States with particular emphasis on endangered and vulnerable migratory species. Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive, 1979) and Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive, 1992) transpose the Bern Convention into EU policy. These directives have been important in the development of consistent national policies in EU Member States and encouraging partnership with accession countries and other partners in the region. In the marine environment, the importance of the trans-border dimension is highlighted due to issues of connectivity (CEC 2007a).

Marine conservation in the Mediterranean is facilitated by the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona, 1976). Originally devised to monitor and control pollution, in recent years one of the major priorities has been to protect marine and coastal habitats and threatened species. The 1995 Specially Protected Areas (SPA) protocol of the convention provides the basis for the development of the Specially Protected Area of Mediterranean Importance (SPAMI) list. The SPAMI list constitutes the core of a protected area network aimed at the conservation of Mediterranean heritage. To fulfil this objective, Parties to the Convention are required to develop cooperation on bilateral and multilateral levels, notably through the establishment of transboundary SPAMIs (Lopez-Ornat 2006).

Until recently, the Mediterranean was considered an oligotrophic sea, low in nutrients and productivity. However, areas of high productivity have been identified in the Aegean, the coasts of Spain and France, and the Northern Adriatic (Fig. 3) (Notarbartolo di Sciara et al. 2008). Whilst these areas provide for the possibility of hotspots of biodiversity, they tend to be related to the terrestrial runoff of the major rivers of the region, thereby having the potential for high levels of contamination (European Environment Agency (EEA) 1999). The Northern Adriatic is one such area of threatened high productivity in the Mediterranean with a high profile ongoing border dispute.

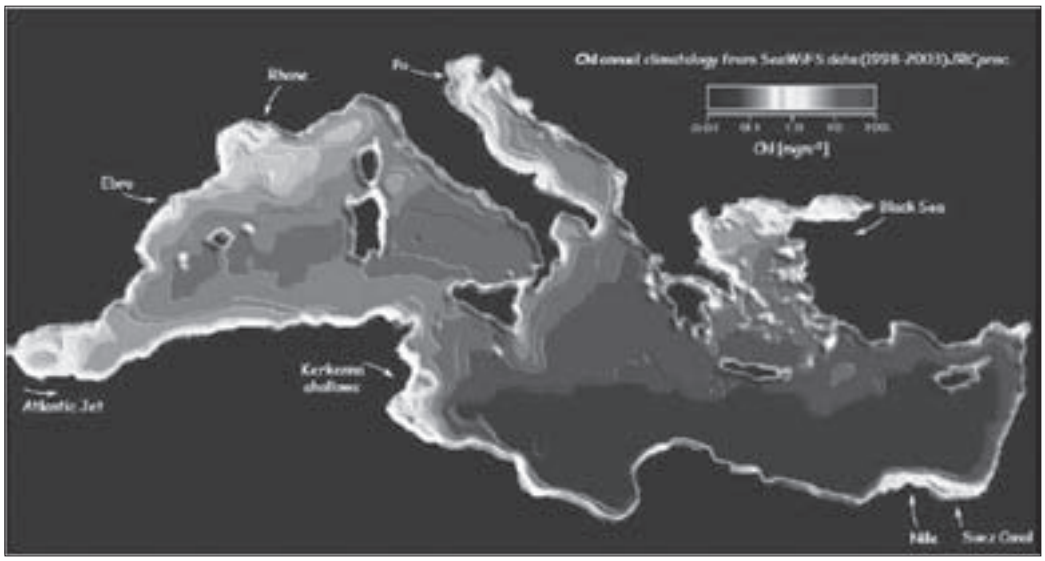

Figure 3: Areas of High Productivity in the Mediterranean (after Notarbartolo di Sciara et al. 2008)
Slika 3: Območja visoke produktivnosti v Sredozemlju (po Notarbartolu di Sciari et al. 2008)

4. THE NORTHERN ADRIATIC

The contested area lies in the Gulf of Trieste adjacent to the Istrian peninsula, a supranational region with Italian, Slovenian and Croatian territories (Fig. 2). Like many

borderland areas it is significantly influenced by regional identity. The region, regardless of State, is orientated to the sea and shares a common heritage. This paper focuses on the disputed marine border between Croatia and Slovenia initiating in the Bay of Piran. The absence of a solution to the border dispute has become a significant issue in the Croatian EU accession process (CEC 2006, 2007b). The development of a Northern Adriatic Peace Park is an initiative to relieve tensions in the political arena whilst conserving a representative area of the regional environment.

Figure 4: The disputed region in and around Piran Bay
Slika 4: Sporno ozemlje v Piranskem zalivu in okrog njega

5. POLITICAL CRITERIA

In 1965, Yugoslavia declared the Bay as part of the internal waters of the State, thus no federal boundary was defined between Croatia and Slovenia (Arnaut 2002, Klemenčić et Schofield 1996). Twenty-six years later, shortly after both countries declared independence, the centre line of the Bay was proposed as the border, with the initiation point being the current mouth of the river Dragonja. However, in 1992 Slovenia claimed sovereignty over the entire bay based on historic use. In 2001, the Prime Ministers of the two countries attempted to define the entire Croatia-Slovenia border including the marine boundary (Arnaut 2002). In

the region of Piran Bay the Drnovšek-Račan agreement proposed that Croatia would receive the disputed terrestrial area south of the Dragonja River, but concede the majority of the Bay to Slovenia (Pipan 2008). According to the agreement, Slovenia would receive approximately eighty percent of the Bay of Piran and a substantial portion of waters outside the Bay, an area of approximately 150 square kilometres (Fig. 4).

Whilst the Drnovšek-Račan agreement was adopted by the Slovenian Parliament, it was rejected by the Croatian Parliament. The absence of agreement on the border led Slovenia to veto Croatian accession to the EU. This was based on the argument that Croatia was using documents in negotiations that were prejudicial to the territorial dispute between the two countries (Mackelworth et al. in press). Whilst Slovenia blocked the accession process, from December 2008 to October 2009, the Croatian position was to take the issue to arbitration based on international law. Resolving this issue became a priority for the rotating Presidency of the Council of the European Union. The T2 Presidency trio of France, the Czech Republic and Sweden, from July 2008 to December 2009, sought to find a resolution between Croatia and Slovenia, including chaired negotiations by the Commissioner for EU enlargement. However, these were unsuccessful; it was only through a variety of undefined actions, including the appointment of a new Croatian Prime Minister and international pressure, that Slovenia agreed to the arbitration process in November 2009.

6. ENVIRONMENTAL CRITERIA

The Northern Adriatic is one of the largest continent shelf areas in the Mediterranean. It is also known to be frequented by straddling stocks of fish, cetaceans and sea turtles, of which the latter two are listed as species of conservation interest under numerous conventions and agreements. However, the Gulf of Trieste is also considered to be one of the most polluted areas in the Mediterranean Sea (Horvat et al. 1999). Productivity and pollution are related to terrestrial runoff (EEA 1999). This region is specific due to these bio-geographic features.

Nine cetacean species have been recorded in the shallow Northern Adriatic Sea, although the Bottlenose Dolphin (*Tursiops truncatus*) is now considered to be the only regularly sighted cetacean in the region (Bearzi et al. 2004). In recent years, there have been reports of a Fin Whale (*Balaenoptera physalus*) (Bearzi et al. 2009), Striped Dolphins (*Stenella coeruleoalba*) in the Gulf of Trieste (Francese et al. 2007), and a Humpback Whale (*Megaptera novaeangliae*) in the Bay of Piran (Genov et al. 2009). Since 2002, researchers have been working in and around the Bay of Piran, in Slovenian, Croatian and Italian waters, including the disputed border area (Genov et al. 2008). Although the study has not specifically targeted the disputed area sightings have been recorded over several years suggesting that this area is regionally representative. Dolphin distribution in the region is suggested to be negatively affected by the presence of recreational boats, whilst there is a positive correlation with industrial fishing practises suggesting an overlap of prey species of dolphins with target species for fishers (Genov et al. 2008). Problems of interactions between humans and dolphins suggest the need for the development of conservation actions. This is especially important considering that

Bottlenose Dolphins are listed as vulnerable in the Mediterranean with low density fragmented population units (Reeves et Notarbartolo di Sciara 2006).

In addition to cetaceans, Loggerhead Sea Turtles (*Caretta caretta*) are considered as resident in the Northern Adriatic region (Lazar 2010). The Mediterranean basin contains one of the largest populations of the endangered Loggerhead Sea Turtle, with Greece accounting for the largest nesting population in the region (Lazar et al. 2004, Margaritoulis et al. 2003). Although information on Loggerhead Turtles in the Mediterranean, beyond the nesting beaches, is sparse, tag recoveries and preliminary satellite tracking suggest the Northern Adriatic to be an important foraging area (Zbinden et al. 2008, AdriaWatch 2006 unpublished data, Lazar et al. 2004). Currently, conservation efforts have concentrated on nesting beaches, however incidental catch, boat strikes and pollution are major threats to sea turtles whilst at sea (Casale et Margaritoulis 2010). It is estimated that in the Adriatic over 6,000 turtles are caught in trawling nets each year, while there are no estimates available for catches related to long-lines and gill nets (Lazar et al. 2004). There is an urgent requirement for the development of MPAs to mitigate threats at sea for turtles (Casale et Margaritoulis 2010).

Croatia and Slovenia are both signatories to all the major international environmental agreements. Under the CMS, sea turtles are listed in Appendix I and cetaceans are protected at a regional level through the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS). In addition, at the regional level both the Barcelona Convention (1976) and the Bern Convention (1979) list cetaceans and sea turtles as species for conservation in their appendices. However, more important to EU Member States and accession countries is the Habitats Directive. This calls for Member States to encourage transboundary cooperative research, and to identify areas essential to the life, migration and reproduction of aquatic species which range over large areas[3]. This is particularly pertinent as when Croatia joins the EU both States should be utilising national nature protection legislation that is harmonised with the Directive. This would then enable both States to work together in harmony to protect this region.

7. DISCUSSION

In an ideal world, biological diversity would be a high political priority and conservationists would not need to seek short cuts to protect the common heritage of the Earth. However, rarely does conservation trump economics or politics (Carawardine et al. 2008). The ongoing border dispute between these two States provides an opportunity for conservationists to propose a solution to the problem removing the need for time consuming and expensive arbitration. The Bay of Piran dispute is an example where politics has taken a relatively minor regional dispute and made it into an international issue. It is important to place the dispute in context. Throughout the period of the Federation of Yugoslavia, the inter-related border populations of the two Republics cohabitated with little conflict. Even in the height of the Balkan wars of the 1990s, there was no direct conflict between the two States. Finally, in the near future when

[3] Habitats Directive: articles 4.1, 10, 18.2

both States will be part of the EU there is the potential that the border between them will cease to exist except on the map. The EU has the potential to play a fundamental role in the development of this concept. Institutionally, both States have a contractual commitment with the EU to protection species of international importance. In addition, the Union has finance available through one of its regional cooperative programmes to provide baseline scientific data and develop MPA management. But, perhaps most significant, is the potential role of the Committee of the Regions which has the right to insist on the principle of subsidiarity. Promoting the regional as the level through which management could be founded. Regionalism is a core concept in breaking down the role of the nation-state and the consolidation of the supranational EU (Urbanc 2007). The Istrian peninsula has always been one of the more regionally orientated areas of Croatia.

Ecologically, although this area is small compared to other TBCA or peace parks, the development of a local or regional management institution could bypass some of the complexity seen in the management of other TBCAs, such as the Pelagos Sanctuary. The development of a multiple use MPA could provide the opportunity to create internal bylaws for the definition of marine traffic, and the management of tourism and fishery. For the local communities on both sides of the border, these bylaws could be devised to allow equal use rights regardless of nationality. For the target species it provides the opportunity to test environmental mitigation techniques, such as speed limits to reduce the possibility of turtle strikes and cetacean disturbance, and turtle excluder devices on trawling nets. If successful, it could be expanded to include other areas of the important shallow waters of the Northern Adriatic building on the trust developed in this initial process.

8. CONCLUSIONS

Whilst many biologists may recoil at the idea of developing a PA based on a political void, the uncertainty that is inherent in marine research and conservation requires the application of precaution beyond that which is applied in terrestrial situations. PAs have been designated around prisons, military sites and demilitarised zones where there has been little biological research undertaken, but an opportunity has arisen to do something positive for the common good. As Ray (2004) points out, MPA establishment has been based on varying rationales including science, pragmatism, serendipity, and even without any clear reason. Furthermore, target-based conservation requires that experts be guided by socio-ecological context and stakeholder engagement provided good judgment is not over-ridden (Cowling et al. 2003). PAs have been declared on much less certainty than the current available biological knowledge of this region. Ultimately, it may be better to establish a PA than broaden the goals of management to incorporate entire ecosystems, rather than vainly attempt to create the 'perfect MPA' (Agardy 1994, Kelleher et Recchia 1998).

9. ACKNOWLEDGEMENTS

The author would like to thank colleagues working in various institutions and NGOs from around the Mediterranean who made comments upon this article in previous drafts. In particular Tilen Genov, Bojan Lazar, Kester Eddy, Nikolina Rako, Draško Holcer, Caterina Fortuna, Goranka Dabić and Hrvoje Carić. Parts of this project were financed by The National Foundation for Civil Society Development of the Republic of Croatia. The opinions expressed here are the sole responsibility of the author and can in no way be taken to reflect the views of the funding organisation.

10. REFERENCES

1. AdriaWatch (2006): Satellite Tracking of Marine Turtles in the Adriatic Sea. Islameta Group, Department of Biology, University of Pisa. http://www.seaturtle.org/tracking/index.shtml?project_id=161. (10th October 2010)
2. Agardy, T. (1994): Advances in marine conservation: the role of marine protected areas. Trends in Ecology and Evolution 9(7): 267-270
3. Akçali, E., M. Antonsich (2009): Nature Knows No Boundaries: A Critical Reading of UNDP Environmental Peacemaking in Cyprus. Annals of the Association of American Geographers 99(5): 1–8
4. Anonymous (2010): Goal 1.3: To establish and strengthen regional networks, transboundary protected areas (TBPAs) and collaboration between neighbouring protected areas across national boundaries. http://www.cbd.int/protected/pow/learnmore/goal13/. (20th September 2010)
5. Arnaut, D. (2002): Stormy Waters on the Way to the High Seas: The Case of the Territorial Sea Delimitation between Croatia and Slovenia. Ocean and Coastal Law Journal 21: 1-39
6. Bearzi, G., M. Costa, E. Politi, S. Agazzi, N. Pierantonio, D. Tonini, M. Bastianni (2009): Cetacean records and encounter rates in the Northern Adriatic during the years 1988-2007. Annales, Series Historia Naturalis 19: 45-150
7. Bearzi, G., D. Holcer, G. Notarbartolo di Sciara (2004): The role of historical dolphin takes and habitat degradation in shaping the present status of northern Adriatic cetaceans. Aquatic Conservation: Marine and Freshwater Ecosystems 14: 363-379
8. Blake, G. (1998): The Geopolitics of Transboundary Cooperation: An Overview. In: Phillips, A. (Ed.). Parks for Peace. Proceedings of the International Conference on Transboundary Protected Areas as a Vehicle for International Co-operation. September 1997, Somerset West, South Africa. 273 pp.
9. Carwardine, J., C. Klein, K. Wilson, R. Pressey, H. Possingham (2008): Hitting the target and missing the point: target-based conservation planning in context. Conservation Letters 2 (2009): 3–10
10. Casale, P. D. Margaritoulis (Eds) (2010): Sea turtles in the Mediterranean: Distribution, threats and conservation priorities. Gland, Switzerland: IUCN. 294 pp.
11. Coad, L., N. Burgess, B. Bomhard, C. Besancon (2009): Progress Towards the Convention on Biological Diversity's 2010 and 2012 Targets for Protected Area Coverage. A technical report for the IUCN international workshop "Looking to the Future of the CBD Programme of Work on Protected Areas", Jeju Island, Republic of Korea, 14-17 September 2009. UNEP-WCMC, Cambridge, UK. 33 pp.
12. Commission of the European Communities (CEC) (2006): Commission staff working document: Croatia 2006 Progress Report. SEC (2006) 1385: 70 pp.

13. Commission of the European Communities (CEC) (2007a): Guidelines for the establishment of the Natura 2000 network in the marine environment. Application of the Habitats and Birds Directives. 112 pp.
14. Commission of the European Communities (CEC) (2007b): Commission staff working document: Croatia 2007 Progress Report. SEC (2007) 1431: 70 pp.
15. Conca, K., A. Carius, G. Dabelko (2005): Building Peace Through Environmental Cooperation. In: World Watch Institute (Ed.): State of the World 2005: Redefining Global Security. W.N. Norton. New York: 144–157
16. Cowling, R.M., R.L. Pressey, R. Sims-Castley (2003): The expert or the algorithm? Comparison of priority conservation areas in the cape floristic region identified by park managers and reserve selection software. Biological Conservation 112: 147–167
17. European Environment Agency (1999): State and pressures of the marine and coastal Mediterranean environment. Environmental Issues Series 5: 137pp.
18. Fall, J. (2002): Divide and Rule: Constructing Human Boundaries in 'Boundless Nature'. GeoJournal 58 (2002): 243-51
19. Francese, M., M. Picciulin, M. Tempesta, F. Zuppa, E. Merson, A. Intini, A. Mazzatente, T. Genov (2007): Occurrence of Striped dolphins (*Stenella coeruleoalba*) in the Gulf of Trieste. Annales, Series Historia Naturalis 17: 185-190
20. Genov, T., P. Kotnjek, L. Lipej (2009): New Record of the Humpback Whale (*Megaptera novaeangliae*) in the Adriatic Sea. Annales, Series Historia Naturalis 19: 25-30
21. Genov, T., P. Kotnjek, J. Lesjak, A. Hace, C. Fortuna, (2008): Bottlenose dolphins (*Tursiops truncatus*) in Slovenian and adjacent waters (northern Adriatic Sea). Annales, Series Historia Naturalis 18(2): 227-244
22. Horvat, M., S. Covelli, J. Faganeli, M. Logar, V. Mandić, R. Rajar, A. Sirca, D. Zagar (1999): Mercury in contaminated coastal environments; a case study: the Gulf of Trieste. The Science of the Total Environment 237-238: 43-56
23. Jones, P.J.S. (2001): Marine Protected Area Strategies: Issues, Divergences and the Search for Middle Ground. Reviews in Fish Biology and Fisheries 11(3): 197- 216
24. Kaplan, D. (2000): Conflict and Compromise among Borderland Identities in Northern Italy. Tijdschift voor Economiische en Sociale Geografie 91(1): 44-60
25. Kelleher, G., R. Kenchington (1991): Guidelines for Establishing Marine Protected Areas. A Marine Conservation & Development Report. IUCN, Gland, Switzerland. 79 pp.
26. Kelleher, G., C. Recchia (1998): Editorial - Lessons from Marine Protected Areas Around the World. Parks 8(2): 1-4
27. Klemenčić, M., C. Schofield (1996): Croatia and Slovenia: The 'Four Hamlets' Case. Maritime Briefings 1(8): 19-33
28. Lazar, B. (2010): Croatia Report. In: Casale, P., D. Margaritoulis (Eds): Sea turtles in the Mediterranean: Distribution, threats and conservation priorities. Gland, Switzerland: IUCN. 294pp.
29. Lazar, B., D. Margaritoulis, N. Tvrtković (2004): Tag Recoveries of the Loggerhead Sea Turtle (*Caretta caretta*), in the Eastern Adriatic Sea and Implications for Conservation. Journal of Marine Biological Association U.K. 84: 1-5
30. Lopez-Ornat, A. (Ed.) (2006): Guidelines for the Establishment and Management of Mediterranean Marine and Coastal Protected Areas. MedMPA project. Tunis. UNEP-MAP RAC/SPA. 82 pp.
31. Lysenko, I., C. Besançon, C. Savy (2007): 2007 UNEP-WCMC Global List of Transboundary Protected Areas. 78 pp.
32. Lyster, S. (1985): International Wildlife Law: An Analysis of International Treaties Concerned with the Conservation of Wildlife. Cambridge University Press. 470 pp.
33. Mackelworth, P., D. Holcer, J. Jovanovic, C. Fortuna (in press). Marine conservation and accession, the future for the Croatian Adriatic. Environmental Management (IF:1.1), Special issue on Marine

Governance. http://www.springerlink.com/content/l5037u55746738w6/?p=e3afbb74596b41889680772ba3c43e37&pi=0 (11th March 2010).
34. Margaritoulis, D., R. Argano, I. Baran, F. Bentivegna, M.N. Bradai, J.A. Cami as, P. Casale, G. De Metrio, A. Demetropoulos, G. Gerosa, B.J. Godley, D.A. Haddoud, J. Houghton, L. Laurent, B. Lazar (2003): Loggerhead turtles in the Mediterranean: present knowledge and conservation perspectives. In: Bolten, A., B. Witherington (Eds): Ecology and Conservation of Loggerhead Sea Turtles. Smithsonian Institution Press, Washington and London: 175-198
35. Mulongoy, K., S. Chape (2004): Protected Areas & Biodiversity: An overview of key issues. UNEP-WCMC Biodiversity Series No. 21. 52 pp.
36. Notarbartolo di Sciara, G., T. Agardy, D. Hyrenbach, T. Scovazzi, P. Van Klaveren (2008): The Pelagos Sanctuary for Mediterranean marine mammals. Aquatic Conservation: Marine and Freshwater Ecosystems 18(4): 367–391
37. Odegaard, C. (1990): Parks for Peace. In: Thorsell, J. (ed): Parks on the Borderline: Experience in Transfrontier Conservation. Piggott Printers. Cambridge, UK: 89-94
38. Phillips, A. (ed). (1998): Parks for Peace. Proceedings of the International Conference on Transboundary Protected Areas as a Vehicle for International Co-operation. September 1997, Somerset West, South Africa. 273 pp.
39. Pipan, P. (2008): Border dispute between Croatia and Slovenia along the lower reaches of the Dragonja River. Acta geographica Slovenica 48(2): 331-356
40. Ray, G.C. (2004): Reconsidering 'dangerous targets' for marine protected areas. Aquatic Conservation: Marine and Freshwater Ecosystems 14(2): 211-215
41. Reeves, R., G. Notarbartolo di Sciara (Eds) (2006): The status and distribution of cetaceans in the Black Sea and Mediterranean Sea. IUCN Centre for Mediterranean Cooperation, Malaga, Spain. 137 pp.
42. Sandwith, T., C. Besançon, (2007): Political Benefits: contributing to conflict resolution. Report for Equilibrium Consulting. 9 pp.
43. Sandwith, T., C. Shine, L. Hamilton, D. Sheppard (2001): Transboundary Protected Areas for Peace and Co-operation. IUCN Gland, Switzerland and Cambridge, UK. Xi +111pp.
44. Urbanc, M. (2007): Contested Slovene Istria: A socially constructed region struggling for its own regional identity. In: Roca, Z., T. Spek, T. Terkenli, T. Plieninger, F. Höchtl (Eds) (2007): European Landscapes and Lifestyles: The Mediterranean and Beyond. Edições Universitárias Lusófonas. Lisbon: 1-15
45. Wells, S., N. Burgess, A. Ngusaru (2007): Towards the 2012 marine protected area targets in Eastern Africa. Ocean and Coastal Management 50: 67-83
46. Westing, A. (1993): Biodiversity and the challenge of national borders. Environmental Conservation 20:5-6
47. Westing, A. (1998): Establishment and management of transfrontier reserves for conflict prevention and confidence building. Environmental Conservation 25(2):91-94
48. Wolmer, W. (2003): Transboundary Conservation: The Politics of Ecological Integrity in the Great Limpopo Transfrontier Park." Journal of Southern African Studies 29(1): 261-278
49. Zacharias, M.A., J.C. Roff (2001): Use of Focal Species in Marine Conservation and Management: A Review and Critique. Aquatic Conservation: Marine and Freshwater Ecosystems 11: 59-76
50. Zbinden, J., A. Aebischer, D. Margaritoulis, R. Arlettaz (2008): Important areas at sea for adult loggerhead sea turtles in the Mediterranean Sea: satellite tracking corroborates findings from potentially biased sources. Marine Biology 153: 899-906

Peter Mackelworth
Blue World Institute of Marine Research and Conservation
51551 Veli Lošinj, Croatia
peter.mackelworth@gmail.com