

Strategies for the implementation of the sustainable development in protected areas: the case study of the Regional Park of Monti Lattari (Italy)

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Abstract Protected areas today cover about 17% of the territory. They aim to preserving environmental quality, ecosystem balance and biodiversity. Although in Italy protected areas are around 10%, in Campania it's very high and is about 25%. In the last 10 years the number of protected sites has increased by 42% worldwide. Today the general approach to safeguarding is strongly conservative. Due to phenomena such as climate change, deforestation and urbanization, it has emerged that crystallizing the environmental state is impossible. Targeted and effective policies are necessary from the systemic perspective introduced with the Natura 2000 network. Environmental protection must be active to enable sustainable development, to respect the environment and to enhance strategic sectors such as agriculture, tourism and sport. This paper illustrates the sustainable development strategies for the management of protected areas to control environmental pressures and enhance natural ecosystems and biodiversity. The case study of the Monti Lattari Regional Park in southern Italy will be examined. It is characterized by a vast and complex territory that includes mountain and sea areas of high environmental and landscape value. This protected site is interesting to analyze because recently actions for the environmental safeguard have been taken.

Keywords: Protected area, Natura 2000 Network, Conservation, Ecosystem, Environmental Strategies

1. Introduction

International Union for Conservation of Nature (IUCN) defines a protected area as “a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Dudley et al., 2008).

Today, in the world, 17% of land areas and about 7% of coastal and marine areas are subject to conservation constraints (UNEP-WCMC and IUCN, 2021). For the terrestrial areas the percentage reached satisfies the target 11 of the Aichi Biodiversity Targets for the strategic goal C that aims to improve the state of the biodiversity safeguarding the ecosystems, the species and the genetic diversity (Biosafety Unit, 2020). For the coastal and marine areas, the goal of 10% is not yet reached even if the increment in the last decade has been of approximately 18,8 million km². In the decade from 2010 to 2020, more than 21 million km² of terrestrial ecosystems and inland waters were placed within protected areas accounting for 42% of the total (UNEP-WCMC and IUCN, 2021).

The system of protected areas in has recently been able to expand worldwide overcoming several challenges of the recent past. Estimates indicate that global percentages will continue to increase due to the strategic role of protected areas for the conservation and protection of ecosystems and their specificities (Rodríguez-Darias & Díaz-Rodríguez, 2023). The process is not always easy: phenomena of downgrading, scaling and degazettement of protected areas are widespread (Golden Kroner et al., 2019). Estimates show that, on average, 1.1 million km² of land and sea were removed from the global real estate complex protected annually between 2006 and 2018 resulting in significantly negative social and environmental effects (Lewis et al., 2019).

Although the expansion of the protected areas is showing increasing attention to their importance, it must be accompanied by actions regulating their control and management. Strategies for the creation of a global network of communication between the individual protected areas that allows the conservation of ecosystems but at the same time the territorial, social and economic sustainable development are necessary.

In the next paragraphs, the case study of the Regional Park of Monti Lattari in Italy will be examined.

2. Strategic role of Protected Areas

Natural ecosystems are changing rapidly in response to phenomena such as climate change, deforestation and desertification. Unfortunately, in many cases today, scarce resources and poor management efficiency contribute to reducing and slowing down the response capacities of protected areas for the conservation of ecosystems (Maxwell et al., 2020). In addition, climate change threatens biodiversity and affect carbon storage worldwide, as well as changing global food production (Malhi et al., 2020). There is very little opportunity to effectively address these negative current trends because we are approaching the critical point (Dinerstein et al., 2019). In order to avoid the approaching crisis, it is necessary to maintain and restore at least 50% of the Earth's surface as intact natural ecosystems, in combination with energy transition measures (Tallis et al., 2018).

In the present, protected areas contribute to the persistence of biodiversity and for many of the world's leading species they represent the only remaining stronghold (Joppa et al., 2016). It should be stressed that ecosystems can be one of the main sources of human resilience and support the adaptation of human societies to rapid environmental change when managed sustainably and effectively.

Changing ecosystems and the degradation of the natural environment also affects the quality of life and threatens public health (Watson et al., 2018). In this context, protected areas are key elements because they act as attractors of policies that promote human welfare and economic development (Bonet-García et al., 2015).

Ecosystems are vulnerable to climate change, but they have the potential to be significant allies in the challenges of climate change adaptation and mitigation (Malhi et al., 2020). Spatial planning in protected areas is a key element in ensuring a sustainable future for the environment and living species.

3. Purpose of modern management of protected areas

Classically the development and the environmental protection are perceived as conflicting values. In fact, until the 80's of 1900 protected areas were seen as different places, made of uncontaminated nature where the anthropization was almost absent.

Today the conception has changed: nature is considered as a set of processes, within which man has always participated. It is difficult to isolate worldwide some ecosystem that can be said to be fully natural (Barile & Saviano, 2015). The crystallization of the state of environmental quality is unrealistic and cannot guarantee the protection of the territory and ecosystems in the modern society. Careful strategic planning based on an

integrated vision of the areas that comprise the national and international ecological network is necessary for sustainable development.

Protected areas must offer real benefits in terms of conservation of populations and wild habitats, protecting them from human pressures on the surrounding environment (Geldmann et al., 2019). The management of protected areas is a central factor in the development of local systems because in addition to ecological and environmental objectives must also pursue those of a socio-cultural and economic nature (Saviano et al., 2018).

For a virtuous planning process, decision makers need to consider that biodiversity conservation strategies that neglect the interests of local people tend to create conflict. The different figures have different perceptions of priorities and needs in spatial and ecosystem management (García-Llorente et al., 2018). Planning must necessarily involve citizens and stakeholders who have interests in the territory to have good results. The biggest challenge for governance is to align the different objectives that emerge from the different perspectives involved in development issues (Saviano et al., 2018).

4. Protected areas in Italy

In Italy, the recognized national protected area has reached 10.50% of the territory for a total of about 3'163'590.71 hectares on land and about 2'853'033.93 hectares of marine areas. The official list includes a total of 871 protected areas divided as follows (Ministry of Environment and Energy Security, 1997):

- 24 national parks;
- 147 state nature reserves;
- 27 protected marine areas (plus two underwater parks and the international marine mammal sanctuary);
- 134 regional nature parks;
- 365 regional nature reserves;
- 171 other protected areas of different classification and designation;
- 3 other state protected natural areas.

The Campania Region is the first for percentage of protected areas reaching 11% of the total national protected areas. In Campania 25% of the regional territory is covered by areas subject to environmental protection constraints (Ministry of Environment and Energy Security, 1997).

5. Case Study: Monti Lattari Regional Park

Among all the national and regional parks in the Campania Region, the Regional Park of Monti Lattari is one of the most interesting thanks to the remarkable territorial value of the places that comprises. The Regional Park was recognised as a protected area in 2003, 20 years ago (UNEP-WCMC, 2023). The Regional Park of Monti Lattari extends from the Amalfi Coast, passing through the Agro-Nocerino up to go along the Sorrento Peninsula. Nature blends harmoniously with the results of human activity while maintaining its pristine character. The

landscape is characterized by rocky areas, woods and scrub, but also by citrus groves and vineyards (UNESCO World Heritage Centre, 2023). The park extends from the mountains to the sea embracing places of inestimable beauty and landscape value.

In the past, agriculture and the production of quality food internationally recognized were the main economic activities. Along the Amalfi Coast the landscape is characterized by terraces that date back to very ancient times and represent typical examples of natural systems in which human activity is inserted with respect and attention to ecosystems and the territory (Savo et al., 2014). In recent years, tourism has developed very rapidly and today is the first economic source for the area.

Despite the environmental importance, the indications on the management of these areas are still incomplete and poorly updated (Cancellieri et al., 2017). In this situation, in addition to ensuring the protection of ecosystems, policy strategies must focus on landscape conservation. The Authority that manages the Regional Park of Monti Lattari has recognized the importance of having a Park Plan to formalize and start a strategic territorial planning for environmental protection based on the sustainable development.

The Authority that manages the Regional Park through the advice of the Department of Civil Engineering of the University of Salerno is preparing the documents to undertake the administrative technical process to equip itself with the Park plan. It will contain all the indications of strategic planning for the protection of biodiversity and for the economic and social development of the vast territory of the Regional Park. The process of writing and drafting the Park Plan will be participatory and will involve all citizens and environmental stakeholders to achieve the

best possible results. In particular, given the inestimable landscape value of some places of the Regional Park, the planning aims to preserve and give importance to the landscape, the history and culture of these elements.

6. Conclusions

Globally, protected areas are key elements for the protection and conservation of ecosystems and biodiversity. Today, protection is essential to territorial policies of sustainable development at the environmental, social and economic levels. The instruments of strategic planning must allow the growth of the economic activities of protected areas that today are mainly food production and tourism.

The Regional Park of the Monti Lattari has been selected as a case study for its peculiar characteristics. In addition to the environmental value linked to the large number of protected sites within it, it is characterized by a high biodiversity that must be protected. In addition, some places belonging to the Regional Park, located along the Amalfi coast and the Sorrento Peninsula have an invaluable landscape value. For these reasons, planning in this area must respond to environmental needs without neglecting the protection of landscape components that significantly affect tourism and the local economy. The Authority that manages the Regional Park has recognized the importance of having a Park Plan to provide guidelines to be followed with a view to sustainable development. An area so dense with protected areas characterized by high ecosystem value and great biodiversity is an excellence of the Italian territory and an example to follow for other Regional Parks.

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