

ACCESSIBILITY AND FACILITY OF THE DISABLED: THE CONSORZIO DI BONIFICA MONTANA DEL GARGANO AND PARCO NAZIONALE DEL GARGANO CASE STUDIES

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Abstract: *Numerous cases of protected areas have used a range of measures to provide autonomous access to visitors with special needs during their visits. This paper aims to illustrate the interventions at the Parco Nazionale del Gargano (Gargano National Park) and the Consorzio per la Bonifica Montana del Gargano (Consortium of Reclamation Gargano) to make accessible visits possible for people with special needs.*

Keywords: *accessibility, disability, natural protected area.*

1. INTRODUCTION

Naturalistic tourism, understood as guided tours within protected natural areas, is an important factor in the economic development of a protected natural area.

A document of the International Union for Conservation of Nature (IUCN) has defined protected areas as “a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” [1, 2].

It follows, therefore, the need for access to facilities and services for all people who have special needs, that is, those with physical and/or cognitive disabilities, without encountering any difficulties regarding their autonomy while ensuring their safety, comfort and ability to eat any food (for example, people with celiac disease, allergies etc.) [3].

Laws and technical standards have been established to delineate the requirements and actions necessary to ensure the accessibility of a public place. The United Nations has published various documents: the Universal Declaration of Human Rights of 1948 [4], the Declaration on the Rights of Mentally Retarded Persons of 1971 [5], the Declaration on the Rights of Disabled Persons of 1975 [6], the Declaration on the Rights of Deaf-Blind Persons of 1979 [7], the Resolution 37/52 of 1982 called the World Program of Action Concerning Disabled Persons [8], the Standard Rules on the Equalization of Opportunities for Persons with Disabilities of 1994 [9], and the Global Disability Action Plan 2014-2021 [10].

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The European Union has issued numerous documents, among the most important being the one released on 26 November 1993 on the accessibility of transport [11] and the resolution published on 20 December 1996 on equal opportunities for disabled people in all fields [12], including leisure time. Even Italy has very detailed regulations on accessibility and social inclusion, both at the state level and at the level of the individual regions [13].

Following these rules, several Italian parks have adopted guidelines to make their areas accessible and offer all the services that people with disabilities need.

2. BEST PRACTICES ADOPTED IN ITALIAN PARKS

The accessibility of a protected area is measured by the degree of accessibility of places and structures connected to it; that usability should also be seen as a possibility for people with special needs to access a structure or open space to fully enjoy services and activities connected to it or related to it [14, 15].

Italy has 24 national parks, and some of them have adopted practices to facilitate access to people with disabilities [16, 17].

- The La Maddalena Archipelago National Park has installed parking spaces for people with disabilities and walkways to allow access to some beaches [18].
- The Cinque Terre National Park has an underwater course for those with disabilities [19].
- In the Circeo National Park, a walkway was built for people with mobility difficulties. [20].
- The Dolomiti Bellunesi Park proposed, in collaboration with the Italian Association of People with Down Syndrome, a program of guided excursions and environmental interpretation laboratories in areas of the park that are accessible to those with disabilities. Some examples of various activities are workshops on flower scents, tactile recognition of natural objects for blind people, recognition of the sounds of the forest and of the sounds of animals etc. The Park has built accessible parking areas and organizes events to promote participation in naturalistic excursions for people with disabilities (e.g., blind people, those with reduced mobility or other difficulties) [21].
- The Gran Paradiso National Park has made some facilities accessible, such as visitor centers, accessible trails, hotels, shelters, and chalets [22].
- The Gran Sasso and Monti della Laga National Park lend a special wheelchair free of charge with the help of two people, to walk paths and mule tracks [23].
- In the National Park of the Sibillini Mountains, there is a path that can be walked with wheels strollers, and chairs [24].
- The Sila Park uses a special wheelchair to walk the paths and distributes information brochures in braille to blind visitors. In a visitor center of the above park, paths in the botanical garden have been made accessible both for blind people, thanks to the presence of audio file panels explaining the various essences present, and for people with walking difficulties. In another visitor center of the above park, there is a path dedicated to people with motor disabilities. Another path, equipped with tactile signaling systems for ground orientation and handrails, was created for those with visually impairment or blindness [25].

3. THE CONSORZIO DI BONIFICA MONTANA DEL GARGANO AND PARCO NAZIONALE DEL GARGANO CASE STUDIES

In this context, the Consorzio di Bonifica Montana del Gargano (Land Reclamation Consortium of the Gargano) [26] and the Parco Nazionale del Gargano (Gargano National Park) have implemented good practices [27] because these institutions have almost coincidental territorial competence. The objective of these two institutions, in the last decade, has been to provide accessibility in a mountain area that cannot be accessible to all visitors. In particular, within the Gargano National Park, some of the most significant protected areas have been made accessible to people with reduced mobility.

3.1. Consorzio di Bonifica Montana del Gargano

In this case, some interventions sufficiently made the areas of the Gargano Reclamation Consortium accessible to the public. Between 2012 and 2013, 1,092 meters of wooden walkway were completed, complete with signage, a fence (1,577 meters) with parapet function, footboard, and, in some cases, specific tables (two complete tables of benches) for those with motor disabilities. From a technical point of view, the gangway was characterized by the following specifications: wooden walkway, treated in an autoclave, with a width of 1.80 m, consisting of two longitudinal beams of a minimum length of 3.00 m and section of 6 x 12.5 cm; 3 square murals, made from wooden boards treated in autoclave, comprising a section of 9 x 9 cm and length of 0.80 m; and complete with anti-slip knurling with a minimum length of 1.50 m and section of 11.5 x 4.5 cm, as shown in figure 1.

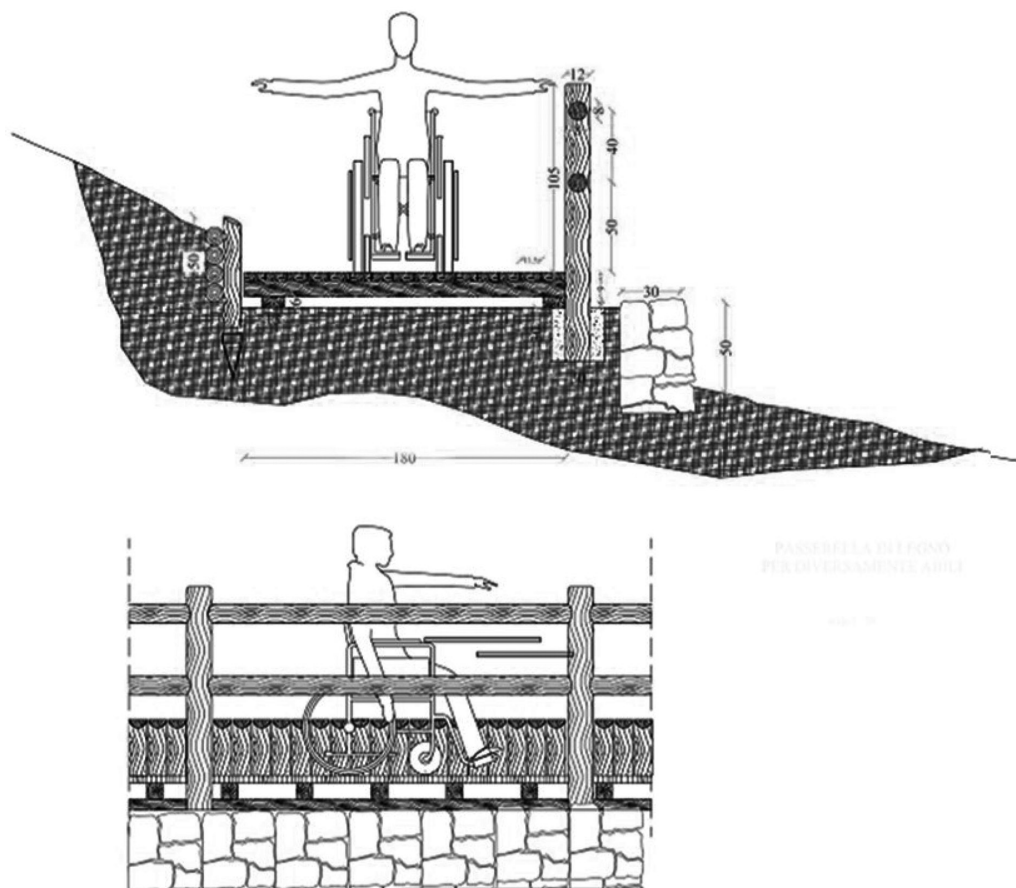


Figure 1: Technical drawing of the wooden walkway

The interventions, walkway, and tables with specific benches are indicated in figures 2, 3, 4, 5, 6 and 7 in detail.

Furthermore, the Consortium has eliminated all the architectural barriers of the Educational Forest's Nursery of Forest Biodiversity of the Gargano by creating an access ramp and a specific bathroom for individuals with disabilities.



Figure 2:
“Cross of the III millennium”, Municipality of Apricena

Figure 3:
Walkway and recreation area
“La Madonnina”, Municipality of Cagnano Varano.



Figure 4: Walkway and tables with specific benches in the “Bosco d’Incerto”,
Municipality of San Giovanni Rotondo



Figure 5: Walkway and tables with specific benches in “Difesa San Matteo” forest,
Municipality of San Marco in Lamis



Figure 6: Walkway in “Spinapulci” forest,
Municipality of San Nicandro Garganico



Figure 7: Walkway in “Manatecco” forest,
Municipality of Peschici

From a financial point of view, the intervention is summarized in the following table:

Table 1: Walkways for people with disabilities

Financing source: OP Funds ERDF 2007/2013 - Axis 4 - Line of action 4.4 - Action 4.4.1 - Activity B - Adoption of public notice for the selection of projects concerning the first “Interventions on the network of paths in order to promote development of hiking trails”.

| | Municipality | Length (m) | Walkway (€) | Fence (€) | Tables (€) | Total costs (€) |
|--------------|------------------------|--------------|----------------|----------------|--------------|-----------------|
| 1 | Apricena | 266 | 55,159 | 18,612 | | 73,771 |
| 2 | Cagnano Varano | 85 | 16,662 | 11,220 | | 27,882 |
| 3 | Peschici | 200 | 39,120 | 26,400 | | 65,520 |
| 4 | San Giovanni Rotondo | 200 | 39,120 | 13,200 | 759 | 53,079 |
| 5 | San Marco in Lamis | 115 | 24,450 | 8,250 | 759 | 33,459 |
| 6 | San Nicandro Garganico | 200 | 39,120 | 26,400 | | 65,520 |
| Total | | 1,066 | 213,631 | 104,082 | 1,519 | 319,232 |

3.2. Parco Nazionale del Gargano

Between 2015 and 2018, about 1000 meters of paths (500 meters for two paths each) for the visually impaired were completed, complete with signs with Braille characters, handrails with a guide and parapet function (1,577 meters), pile drivers, and two specific tables for people with motor disabilities complete with benches. From a technical point of view, the route is characterized by the following specifications: a path using an ecological stabilizing material type, “Terra solida”™, integrated, when necessary, with wooden walkways with a width of 1.50-1.80 meters; complete with a pile driver and tactile pavement, fence or cord, or jute strap; and equipped with tactile signals. The paths have braille signs and tables with specific benches for those with disabilities. A printed *Guide to the Park* was written using the international braille blind writing system.

In detail, the interventions are indicated below and accompanied by photographic documentation:



Figure 8: Access ramps in “San Domino” (Tremiti Islands)

1) Adjustment path for disabled in “Cutino di Umbra” and “San Domino” (Tremi Islands)

Table 2: Economic framework for “Cutino di Umbra” and “San Domino” (Tremi Islands)

| | Cutino di Umbra | San Domino |
|--|-----------------|---------------|
| A1) Cost of work | 110,230 | 63,770 |
| A2) Safety charges (2,97% of A1) | 3,374 | 1,275 |
| A Direct costs | 113,604 | 65,045 |
| B) Amounts available to the Administration | | |
| B1) Overheads (2% of A) | 2,272 | 738 |
| B2) Communication tools | 8,800 | 0 |
| B3) Equipment Joelette wheelchair park | 4,800 | 0 |
| B4) Unexpected expenses | 3,046 | 2,605 |
| B5) VAT 4% of A2 + B2 + B3 | 5,089 | 2,250 |
| Overall amount of the intervention | 137,611 | 79,393 |



Figure 9: Adaptation path for people with disabilities “Cutino di Umbra”

- 2) The following are details of the adaptation work on making the beach accessible for people with disabilities in “Isola di Varano” (a work in progress):
 - Cost of work: €100,746 + €4,029 (VAT)
 - Fund financing: Budget of the Park Authority
 - Length: 230 meters of stabilized path + 64 meters of wooden walkway
- 3) Park guide for blind people
 - A paper guide on the value of the Park was created using the international braille blind writing system.
- 4) Underwater for blind people
 - Within the framework of facilitating accessibility for people with disabilities in the protected sea area of the Tremi Islands, various initiatives have been implemented:
 - 2012 Diving course to guide blind people employ four diving instructors/guides (Funds: €4,000 - Park Authority of the Tremi Islands Protected Sea Area management);
 - 2013 Diving course aimed at facilitating underwater use for four visually impaired visitors (Funds: €3,120 - Park Authority of the Tremi Islands Protected Sea Area management);
 - 2016 Diving course, with a guide, for blind people employ four diving instructors/guides (Funds: €3,500 - Ecosee project funded by the European Commission Directorate for Maritime Affairs and Fisheries, as part of the initiatives of the Guardians of the Sea program MARE/2013/09).

In the light of the interventions described so far, we can provide some useful considerations for classifying the type of actions carried out in favor of people with special needs and their accounting effects on the balance sheet of the Parco Nazionale del Gargano (Gargano National Park).

The first type of intervention concerns the development of instrumental equipment available to the national park's management and municipalities included in the protected natural area. In the years examined, investments were made for a total amount of about € 641,000.

Considering the total cost and the length of the pathways resulting from the interventions, the average cost per meter is about €200-300, but it depends on the materials adopted for paving walkways and on possible additional infrastructural interventions needed to make pathways accessible for people with special needs.

From the experiences described, these are interventions aimed at creating dedicated paths with equipment that increases the value of the real estate assets of the park. These are public goods that usually become part of the so-called "unavailable assets" and must be specifically recorded for accounting purposes when updating the inventory.

It should be noted that these assets are subject to a depreciation accounting procedure, in the sense that the total cost incurred must be split (usually on a straight-line basis) between several financial years, for a medium to long period of time (usually 20 years). In this way, the park that acquires the assets registers in the income statement, a (non-monetary) cost called depreciation charge, which takes into account, among other things, the physical wear and tear to which the asset is subject in the years of use. It should be emphasized that the depreciation charges have a negative impact on the "surplus/deficit of the period"; therefore, the company's own resources (net assets/equity) decrease. However, because the investments in question were also made with third-party funds (EU loans), at the accounting level, the depreciation rates only negatively affect the part of the investments that were not financed by third-party funds. Capital grants received to make investments are proportionately considered in the income statement among revenues to "neutralize" the corresponding depreciation charges.

The second type of intervention does not determine an increase in the park's assets, as it translates into sustained current expenses aimed at improving the quality of services dedicated to people with special needs. In this regard, the experiences described relate to the creation of guides/pamphlets and special training courses that are integrated with the previous interventions, in the sense that they favor a better use of the same interventions or can stimulate the arrival of new visitors in the area interested by the interventions. The total sustained expenditure related to this second type of intervention is much lower than the first type of initiative (about €15,000).

From an accounting point of view, this second type of expense determines the recording of annual operating costs in the income statement, which are covered by any contribution received on behalf of the period and/or by the park's own revenues.

4. CONCLUSION

Sensitivity to people with disabilities has recently increased, and more attention is being paid to their problems. In response, many laws have been issued to improve the accessibility of public places and inclusion in social activities. Attention is also being paid to leisure time and,

consequently, to sustainable and accessible forms of tourism. Making a protected natural area accessible certainly contributes to the psychophysical well-being of people with special needs; therefore, greater attention and awareness on this issue are needed. However, it is necessary to guarantee full social inclusion of people with specific needs while taking into account respect for the natural environment and the principles of environmental protection.

Some parks have implemented best practices with encouraging results, considering the increase in visitors with disabilities, their caretakers, and their families. Furthermore, the increase in the accessibility of spaces and structures offers an opportunity for a more significant and incisive sensory experience, even for the able-bodied.

This paper examined the case studies of the Consorzio di Bonifica Montana del Gargano (Land Reclamation Consortium of the Gargano) and the Parco Nazionale del Gargano (Gargano National Park). It found that the implemented interventions have made many areas accessible and have allowed a significant number of people with disabilities to access the park, both those with motor disabilities and those with sensory disabilities. Compared to modest economic investments, the increasing number of disabled visitors encourages the continuation of existing activities and other initiatives. One of these is the adhesion to the Interreg E-Parks project, which is currently underway. It calls for further interventions to improve accessibility in the Parco Nazionale del Gargano.

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