

Embedded in the park: the Vanoi Ecomuseum as a lever for sustainable landscape management in the Italian Alps

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Abstract

The Paneveggio-Pale di San Martino Nature Park (*Parcopan*) is one of two nature parks in Trentino (Italy) and hosts several sites of the Vanoi Ecomuseum, a non-bounded and participative form of museum that also includes unprotected areas. In this paper we explore the integration of ecomuseums into protected areas through the case of the *Parcopan*. We focus especially on the role of the Vanoi Ecomuseum in preserving and enhancing the natural and cultural heritage of this area, in particular vertical land use and mobility within the historical landscape. We provide an overview of the Vanoi Ecomuseum's activities, and highlight the use of 'cylinders of mobility' as an effective method to visualize and understand the vertical land use and seasonal movements of people that have historically characterized the Alpine economy. We argue that the integration of ecomuseums into nature parks represents a valuable approach to sustainable landscape management and tourism, especially when natural parks seek to draw on the endogenous potential of their cultural and natural heritage as well as on modern adaptations of traditional land use.

Profile

Protected area

Paneveggio-Pale di San

Martino Nature Park

Mountain range

Alps, Italy

Introduction

Although the ecomuseum movement was initiated in France in the late 1960s, the word *ecomuseum* itself was formally introduced by Hugues de Varine in 1971 (quoted in Hubert 1985, and Davis 1999) for community initiatives that offered the opportunity to be creative or even audacious, develop new ideas, or adopt new approaches (de Varine 1985 and 1988; see also Rivière 1985). Early definitions of *ecomuseum* include the one by René Rivard (1985), who provided a comparison between traditional museums (building + collections + experts + public) and ecomuseums (territory + heritage + memory + population). Since then, ecomuseums have evolved further to include a wide range of community-heritage projects that foster a sense of place and community empowerment by integrating cultural heritage, community participation and sustainable development (Borrelli & Davis 2012). Because of their holistic and participative approach to natural and cultural heritage management, ecomuseums have gained significant traction worldwide, with notable growth in Europe, North America and Asia, where several cases demonstrate how they can be catalysts for community engagement, sustainable tourism and local economic development, while promoting environmental awareness and cultural preservation.

The connection between the natural and the cultural dimensions is proper to ecomuseums. As Pavlis (2024, 3) points out, *“the term ‘ecomuseum’ derives from the Greek word ‘oikos’ (eco) meaning the ‘natural environment’ and ‘museum’ which is the place or temple dedicated to the 9 Muses of Greek Mythology (goddesses of the arts). The Muses, origi-*

nally, were goddesses of mountains and lakes”. Unlike traditional museums, ecomuseums extend beyond physical buildings to encompass entire landscapes, emphasizing the interconnectedness of people, their environment and their cultural practices (Corsane et al. 2007). The aim of ecomuseums is to preserve, interpret and enhance the natural and cultural heritage of a specific geographical area – for instance, a protected area – and involve local communities in identifying, conserving and showcasing it. The holistic approach to heritage management aligns well with contemporary concerns about sustainability, community empowerment and resilience, and cultural diversity (Davis 1999).

The Vanoi Ecomuseum: foundation, activities and aims

According to the ecomuseum DROPS platform (<https://sites.google.com/view/drops-platform/home>), in Italy there are more than 263 ecomuseums, yet only 155 are officially recognized and supported financially by the public sector. The Vanoi Ecomuseum (only the second ecomuseum to be protected by a provincial law, issued by the Autonomous Province of Trento [Provincial law nr. 13/2000], the first being in the Piedmont [Regional law nr. 31/1995]) is part of the *Rete degli Ecomusei del Trentino* (Network of Trentino Ecomuseums). Established in 2011 and currently including nine ecomuseums, this network aims to provide a platform for mutual support, direct communication, and shared goals and actions.

The creation of ecomuseums within protected areas is currently being attempted in several of Italy's

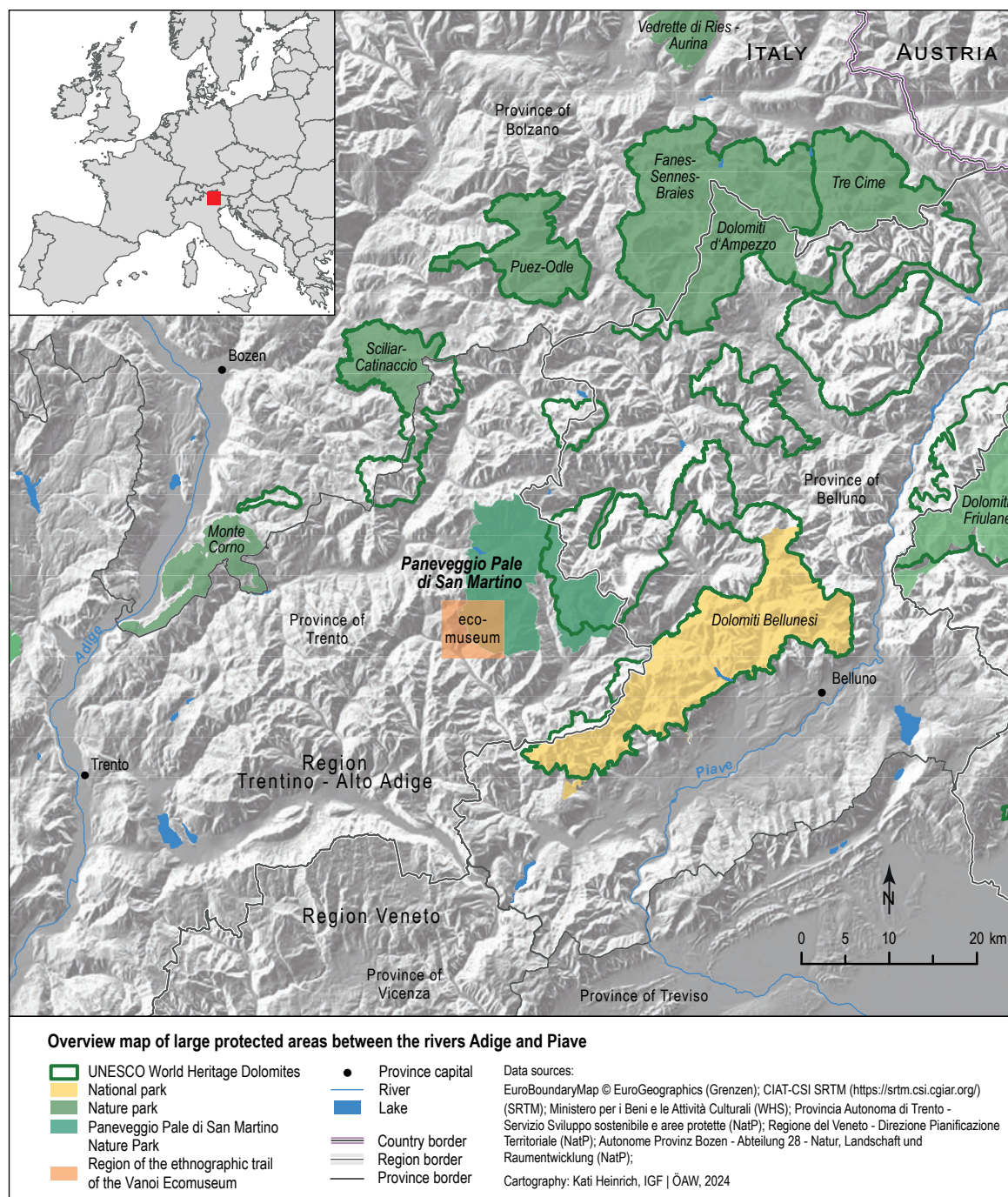


Figure 1 – General map of the large protected areas between the Adige and Piave rivers (with the ParcoPan in the centre of the map).

mountainous regions. Examples include the Capanne di Marcarolo Regional Nature Park (Apennines), Alpi Marittime Regional Nature Park (Alps), Alpi Cozie Regional Nature Park (Alps), Adamello Brenta Nature Park (Alps), and the Paneveggio-Pale di San Martino Nature Park (*ParcoPan*, Alps), which is discussed in this paper (see Figure 1).

The *ParcoPan* was established in 1967 and formally regulated by a provincial law (L.P. 18/1988; on the Park's management bodies, see Infobox). It covers 19,726 hectares in the western part of the limestone massif of the Pale di San Martino, a mountain range in the Dolomites that is part of a UNESCO Heritage

Site, and the eastern part of the Lagorai chain, which comprises mainly volcanic rocks. In 1993/94, the *ParcoPan* and the *Museo Etnografico Trentino San Michele* (in San Michele all'Adige, Trento) aimed to create an ethnographic trail to save and make known the local historical and cultural heritage, especially around the village of Caoria in the Vanoi valley. This project was co-financed by the Autonomous Province of Trento and the European Community (EEC Regulation 2081 of 20 July 1993, Objective 5b, ERDF sub-programme, measure no. 5). The idea of establishing an *ecomuseum* covering the entire Vanoi valley emerged in 1997 in the frame of the close collaboration between the *Parco-*

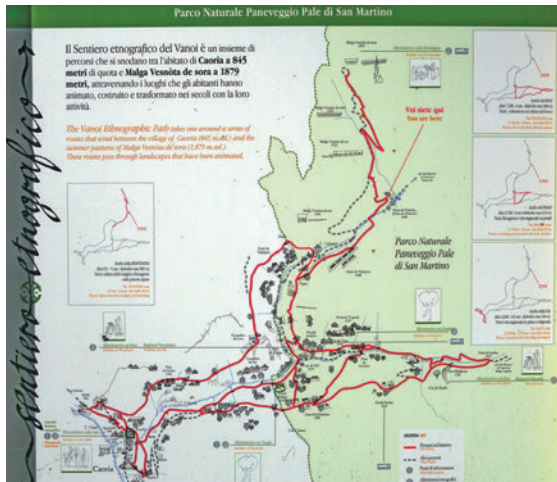


Figure 2 – Information board showing the loops of the ethnographic trail. © Oliver Bender

pan and the municipality of Canal San Bovo, leading to its foundation in 1999 (Bortolotti 2004). The Vanoi Ecomuseum is the first ecomuseum, and one of the largest and best-equipped, in Trentino, and played a pioneering role in establishing the *Rete degli Ecomusei del Trentino*. While it was officially recognized by the Autonomous Province of Trento in 2002, it was founded by the *Associazione Ecomuseo del Vanoi*, an association originally comprising 35 members (currently 133), including corporations, organizations and private individuals. The association, which is still in charge of the management and planning of the ecomuseum, is formally appointed by the municipality of Canal San Bovo every three years; it is directed by an Executive Board of five people nominated from among the members of the association. The Vanoi Ecomuseum benefits from partnerships with local, provincial and regional institutions, and relies on one full-time employee, several experts (e.g. cultural anthropologists and cultural mediators), seasonal employees, mountain guides, *Pro loco* (local grassroots) organizations, and volunteers. Importantly, the local community participate actively as first-hand sources of information for the conceptualization, contextualization and operationalization of activities.

The aim of the Vanoi Ecomuseum is to preserve, research and present the area's cultural landscape and cultural assets as a reminder of traditional life in the valley. More specifically, it aims to address the dimensions of *space, time, community and their knowledge* through seven key themes related to the history of the area: mobility, grass, wood, water, the spiritual dimension, stone and war. Visitors can explore these themes by following the *sentiero etnografico* (ethnographic trail) in the area of Caoria. In terms of the general maintenance of the paths, and of the structures which can be visited or booked for accommodation, the trail is managed by the Parcopan authority (Bortolotti 2004), in the frame of a three-year agreement with the municipality of Canal San Bovo. Stretching along the valleys



Figure 3 – Reconstructed channels for transporting logs (Forest loop of the ethnographic trail). © Oliver Bender

of both the Valzanca and the Valsorda for a total of 20 km, in the western part of the Parcopan, and with a 1000 m difference in altitude, the trail is divided into four different loops: the *anello della val* (valley loop), *anello dei prati* (meadow loop), *anello del bosc* (wood / forest loop), and *anello della montagna* (mountain pastures loop) (see Figure 2). The thematic loops were created with the support of the European Pathways to Cultural Landscape project and are core elements of the Vanoi Ecomuseum, preserving places and paths of the former Alpine economy both materially and in people's consciousness (Bortolotti 2004, 4). Several sites can be visited along the trail, such as the sawmill, and the channels for transporting logs (see Figure 3) to the creeks and rivers, on which they were then drifted and

Infobox

The management of the Paneveggio-Pale di San Martino Nature Park (Parcopan) and its connection with the Vanoi Ecomuseum

Parcopan's management bodies are the President, the Management Committee, the Executive Council, the Director and the Board of Auditors. The Management Committee is the largest body of the park: it decides the political-administrative guidelines and monitors their implementation. The Committee consists of 21 members nominated by the Provincial Council from among representatives of the public administrations (including the municipality of Canal San Bovo) and local stakeholders with cultural, social, economic and environmental competences.

The collaboration between the Parcopan and the Vanoi Ecomuseum is mediated by the municipality of Canal San Bovo with regards to financing and management. There is a formal agreement between the nature park and the municipality, designed specifically to ensure collaboration in the ecomuseum's management. Two municipal councillors are members of the park's Management Committee; one of them, along with the park's President, informally attends the Vanoi Ecomuseum's Executive Board meetings.



Figure 4 – Representation of the traditional agrarian Caoria community (up to mid-20th century), between the village (840 m) and the mountain pasture (*malga Miesnotta*, 1,880 m), beneath the peaks of the Lagorai chain. Painting by Roswitha Asche. © ParcoPan

rafted to Venice (Occhi 2006; Asche et al. 2010), and a typical hay barn (discussed below). The production of butter as a high-quality regional product, which was already part of the local economy in early modern times, has recently started again on one of the farms in the mountain pastures (the *malga Fossernica di fuori*) in collaboration with the Primo cheese cooperative and the Slowfood organization.

The Vanoi Ecomuseum also manages several collections of objects, mainly donated by inhabitants, in a small museum in Caoria (*Museo contadino del Vanoi*), and organizes diverse workshops in the *Home of the Ecomuseum* (*Casa dell'ecomuseo*) in Canal San Boivo, which is owned by the ParcoPan and can be used free of charge. The workshops mainly concern traditional knowledge and practices linked to the use of local natural resources and the cultural landscape. Furthermore, the

Ecomuseum collaborates with the ParcoPan and local schools, providing pupils with the opportunity to find out more about the valley's history, land use, and the traditional vertical mobility (explained below) of those working the land.

Vertical circulation mobility in the frame of traditional Alpine economy

Traditionally, the Alpine farming economy “was mainly based on four pillars: arable land, meadows, [...] forest and Alpine pastures” (Bundi 1989, 9; authors’ translation) – i. e. *la val, i prati, el bosc, la montagna* (Figures 4–8), as formulated in the regional dialect and used along the ethnographic trail. However, the Vanoi Ecomuseum is of outstanding importance for the demonstration of seasonally and vertically arranged land use, and the associated mobility of the local people, who covered countless metres of altitude change over the year. The peasant families had to visit the various farmlands at different altitudes again and again to carry out sowing and harvesting, fertilizing, mowing and grazing, milking, making cheese, and many other essential activities. This required long hikes on foot, and accommodation separated from the farmstead in the valley and other family members often for weeks. Zelinsky (1971, 226) refers to these former periodically (here: seasonally) recurring population movements as *circulation*, as also today’s everyday commuting. This traditional way of life existed in similar forms almost everywhere in the Southern European Alps. It can thus be regarded as the defining characteristic of Alpine peasant agriculture (Bender 2023, 6). Philippe Arbos (1922) called this type of *familial* mountain farming and the associated circulation of the local people *petite montagne*, in contrast to the shepherd’s economy of the *grande montagne*. He regarded it as a *genre de vie*, according to the well-known cultural-ecological concept of Paul Vidal de la Blache (1911), which deals with the *possibilistic* adaptations of specific cultures and peoples to their respective natural environments (see Mouthon 2018).

Evidence of Alpine pasture farming above the tree line dating from pre-Roman times is discussed by Grass (1980), and the practice is considered to have become widespread by the Early Middle Ages at the latest. In contrast, in the intermediate, naturally wooded, zone between permanent settlements and alpine pastures, called in the different Alpine Germanic and Romance languages *Maiensässe / Asten / Voralmen / maggenghi / montagne / monti* etc., the beginning of hay-making is of more recent origin, and due to increased population pressure in the mid- to late Middle Ages and early modern period (see Mathieu 2001, 18). For the Poschiavo valley (Grisons), haymaking in the intermediate, naturally wooded zone between permanent settlements and alpine pastures is documented as being introduced during the 12th to 14th centuries (see Simmen 1949, 34; Bundi 1989, 154ff.), and in Tyrol not earlier than the 14th century (see Wopfner 1997,

392). In the Primiero valley, which neighbours the Vanoi valley, it is thought to date from the 13th–15th centuries, with a gradual transition from sheep to cattle farming (Pistoia 2017, 13ff.). Finally, in Caoria (in the Vanoi valley), which has been documented as a settlement only since the 16th century, haymaking started quite late, in the 18th century (Bortolotti 2004, 15 and 33), when the peasant population here began to keep cows in order to produce butter to sell at market (Bettega 2017).

The typical settlement and production unit in the utilization of this altitudinal zone was the *prá*, with two separate buildings – the *tabia* (hay barn), and the *casèra* (for making and storing cheese, and human accommodation) – surrounded by hay meadows, cultivated fields and small vegetable gardens. Because of their mid-altitude location, the buildings functioned as *summer residences*, in an intermediate spot between the Alpine pastures and the villages. The prevailing law of succession meant that plots of land and buildings were divided equally among the heirs, which over the centuries contributed to their lack of viability. Zimpel (1962) gives an impressively detailed description of the extent of these divisions in the case of Soglio (Grisons). In addition to the unfavourable climatic and topographical conditions in the high mountains, the sub-division of farms and plots into unworkably small units was a major reason for the extensive decline of land use, especially in the Italian Alps (Tappeiner et al. 2008, 216–217).

Due to the end of subsistence farming and the creation of roads leading to the alpine pastures, buildings such as *tabia* and *casèra* and meadows at mid-altitudes were abandoned, and have progressively disappeared or been given new functions. In the case of the Parcopan, some of these buildings have been restored and allocated to the Vanoi Ecomuseum. Examples of *tabia* and *casèra* can be observed all along the ethnographic trail, especially in the settlement Pradi de Tognola (1,256 m), along the *anello dei prati*.

Cylinders of mobility as a means of visualization

The classic form of visualization for the Alpine system of vertical land use is the mobility diagram, i.e. the visual representation of patterns of movement of people and livestock at different altitudes throughout the year (Arbos 1922 and 1923) (Figure 9). This type of visualization was adopted by Frödin, who conducted research mainly in the French Alps, to describe Alpine pasture farming (Frödin 1940, 336; 1941, 198, 279). It then spread further in the German-language literature (e.g. Zimpel 1962; Groier 1990; Bender 2023).

The mobility diagram was adopted by the Vanoi Ecomuseum and developed in the form of *cylinders of mobility* (*cilindri della mobilità*) (see Figure 10). Since the main focus of the Vanoi Ecomuseum is to preserve and enhance the natural and cultural heritage con-



Figure 5 – Mountain pastures of Malga Miesnotta beneath the peaks of Cima Cece, 2,754 m, in the Lagorai chain. © Oliver Bender



Figure 6 – Valcanza sawmill (1,200 m), reconstructed by Parcopan. © Oliver Bender



Figure 7 – An example of *tabia* (right) and *casèra* (left) in the Parcopan, with Cima d'Asta (2,847 m) in the background. © Oliver Bender



Figure 8 – Val Vanoi, a glacial U-shaped valley, seen from the south, with the village of Caoria, 840 m, in the central background, beneath the peaks of the Lagorai chain. © O. Bender

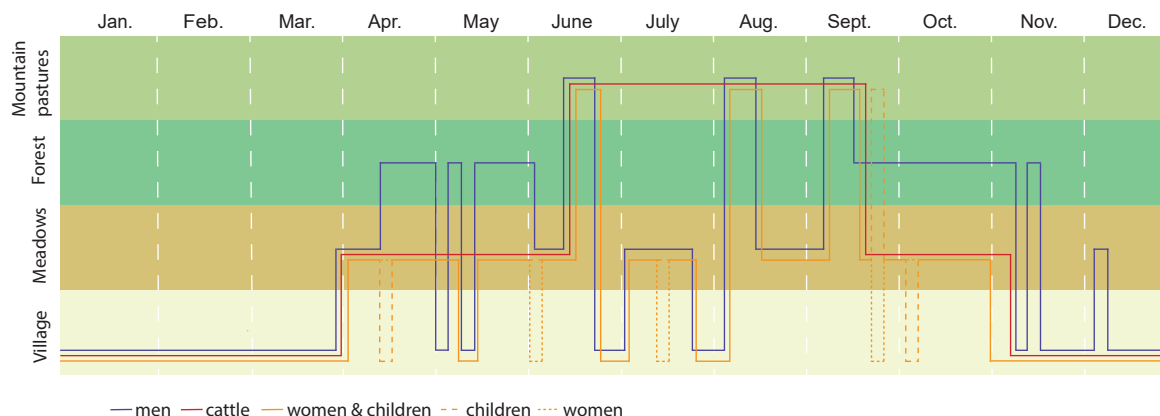


Figure 9 – Vertical circulation mobility diagram of the traditionally agrarian Caoria community (up to mid-20th century), following the scheme of Arbos (1923), with information from Bortolotti (2004). Design: Oliver Bender

nected to the traditional vertical mobility and land use, *mobility signage* (*segnali della mobilità*) is found along the ethnographic trail in the form of information boards, towers and cylinders. Two cylinders are located in significant places: one is at the start of the trail, next to the visitor centre, and introduces visitors to the topic of vertical mobility and land use; the other is located in Pradi de Tognola and shows the daily distribution of work among men, women and children in each season. By rotating the cylinder, visitors can visually follow the seasonal and daily movements of people and livestock: movements are shown using different colours and symbols, depending on the direction of movement and the activity to be carried out.

By combining information about distances, activities and distribution of work within families, cylinders are effective means not only to visualize the vertical nature of economic relations and land use, but also to understand the social and cultural dynamics within the valley's community. As well as learning that every year men used to walk at least 35,000 m in terms of difference in altitude, women at least 11,000 m, young people at least 15,000 m and livestock at least 3,700 m, one can grasp the changing rhythm and liveliness of the landscape at different altitudes and times of the year. In line with the ecomuseum approach (Tuan 1977), the local community and visitors can indeed understand and experience why people settled in this area, their history, way of life and values, as well as their local economy and the shaping of their cultural landscape.

Conclusions

The traditional farming life in the mountains of the Southern European Alps – characterized by mid-altitude centres in the *maggenghi / montagne / monti* zone and by the constant vertical movement of people and livestock – was abandoned in the course of the 20th century, but it is still part of the tangible and intangible heritage of many valleys. Integrating ecomuseums

with nature parks can be a valuable approach to preserve such heritage and enhance the cultural landscape, while developing sustainable adaptations of traditional land use and future trajectories for local communities (Bortolotti 2004).

The Vanoi Ecomuseum plays a key role in managing and enhancing the regional cultural landscape by preserving and partially reconstructing historic artefacts, buildings and paths, and by managing the continuation or partial resumption of traditional land use practices and production methods (e.g. alpine pasture farming with butter production). The ecomuseum also preserves and transmits memory and knowledge connected to the former peasant way of life and the related vertical circulation mobility in the valley, which for centuries were typical of the Southern European Alps. The ethnographic trail allows people to engage with the landscape and walk to places that have been significant to the local community and to the traditional Alpine economy. In particular, visitors get to learn more about the movements of humans, livestock and other resources throughout the year thanks to the *mobility signage* and the *cylinders of mobility*, as effective tools to visualize the verticality of the traditional mountain economy.

It must be acknowledged that the Vanoi Ecomuseum, like any other ecomuseum, does not address all the environmental, social and cultural concerns in the valley; nor does it solve the long-standing tension between conservation and development. However, thanks to close and long-lasting collaboration with several institutional (e.g. the tourism consortium, municipality and Parcopan) and non-institutional actors (e.g. community members, craftspeople, local organizations), it plays a fundamental role in strengthening the territorial network (Reina 2014). While the ecomuseum benefits from the support of the Parcopan, in terms of finance, human resources and knowledge of the territory, synergies between it and the nature park can be observed in the fields of sustainability education, cultural heritage and tourism. In fact, the

nature park can count on the ecomuseum's expertise in fulfilling sustainable tourism goals in accordance with the European Charter for Sustainable Tourism in Protected Areas (EUROPARC Federation), which was formally endorsed by the Parcopan in 2015.

The implementation of the Charter through the Sustainable Development Strategy (approved in December 2022) is based on 5 axes and 20 goals, aiming at strengthening the park's holistic, participative and long-term approach to landscape and resource management, and tackling socio-ecological changes appropriately. The Vanoi Ecomuseum was involved in the identification and implementation of various axes and goals, in particular those related to cultural tourism (axis no. 2). Because of its role as a repository of site-specific knowledge and know-how, it is responsible for projects and activities contributing to the conservation of natural and cultural heritage, introducing visitors to the social and cultural history of the region, and fostering mindful forms of tourism.

Within the local community, the Ecomuseum works as a shared and safe space where community-centred and place-specific trajectories for sustainable local development are envisioned and pursued by the local community and stakeholders. The Vanoi Ecomuseum is actively engaged with networking around the shared aim of using and enhancing existing natural and cultural resources, while promoting participation, co-creativity and social innovation, in the form of shared knowledge and deep learning, which ultimately contribute to sustainability (Borén & Schmitt 2022).

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Figure 10 – An example of cylinder of mobility showing the traditional vertical mobility and land use in the Vanoi valley. © Oliver Bender

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