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Sustainable Local Development and Environmental Governance: A Strategic Planning Experience

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Abstract: The emphasis on learning and adaptation among different actors at various political administrative levels and on various geographic scales has become a precondition for the emergence of sustainable development. It is possible to find the essential form of collaborative management by using a Strategic Plan, designed to determine a local model of sustainable competitiveness in economic, social and environmental terms. The adoption of a Strategic Plan stimulates a process of shared knowledge, through which it is possible to generate a new environmental governance (EG) that is truly representative of a local system. This paper presents, as a case study representative of the Italian context, the Strategic Plan of the Nebrodi area (SP), and assesses the structure of a new form of public and private environmental governance focused on sustainable concern. Finally, the SP could be considered a guideline for managing the local territorial and environmental system from a long-term perspective.

Keywords: environmental governance; environmental planning; environmental management; participatory model; sustainable competitiveness

1. Introduction

The Italian Republic is composed of Municipalities, Provinces, Metropolitan Cities, Regions and the State (art. 114 of the Constitution of the Italian Republic). Municipalities are the general form of local government, and have administrative powers (Art. 118 of the Constitution of the Italian Republic) [1].

Municipalities, as local authorities, in the European region, are encouraged to establish networks of cooperation and integrated planning (for example, the ICLEI program, Local Governmental for Sustainability [2]. Following the recent decentralization of functions from the regions to local authorities, the planning competencies and management of Municipalities have increased, creating a new institutional setting. Municipalities have multiple development opportunities but sometimes erect cultural, economic, financial, administrative and policy barriers that do not allow the territory to trigger circuit development, thus losing the ability to participate in EU funding.

Negotiated community planning, while indicating stringent rules for multiannual institutional and social partnership programming, monitoring and evaluation of interventions, offers development policies and instruments based on the principles of integrated and concerted bottom up development.

In this context, the EU introduces, in terms of innovation, governance with the aim of providing municipal systems with visibility and the ability to integrate resources into territories, raising the

quality of life, providing alternative income for populations, within a framework of sustainability at the local, national and EU level.

Particularly, focusing on the territorial planning role of governance, this paper uses, as a key study, the experience of the Nebrodi Strategic Plan (SP) as a starting point for exploring and identifying the useful steps to be taken and the topics to be addressed in order to define an environmental governance (EG, from here on) model at a local level for the Italian system. The paper shows that, in order to adopt a successful EG, such a program has to be founded on the concepts of the participatory approach and in a shared SP [3]. Thus, EG, beyond the sole role of manager of natural resources, assumes the role of planner of environmental goals, defining the rules for reaching the established goals and, finally, producing tangible policy outcomes using these rules [4–8]. The Nebrodi SP is a successful participatory decision-making process for territorial planning and represents a unique and innovative experience in Italy. The process involved an area covering 40 Municipalities, three Provinces and the Nebrodi National Environmental Park, the so-called Nebrodi Region. The purpose of the program was to build a new EG model, at a sub-regional level, aimed at local development and at local natural resource management. The model developed has been further applied in practice and has resulted in an unprecedented success for a participatory plan in this local context (particularly in the Sicily region and south of Italy).

As outlined in Benn *et al.* [9], the approach described in this paper can be considered an innovative practice in problem identification, decision-making and action planning, representing tried and tested strategies to be integrated into an evolving set of participative processes for decision-making in the sub-political arena. Moreover, by working on environmental topics, by sharing their importance, and by negotiating the ranking of each environmental aspect with the related problem in a participatory way, it is possible to establish a voluntary aggregation of local and external actors (e.g., policy makers, stakeholders, citizens). This proves to be a new form of EG that moves beyond the sole SP, and which uses the direct results of an SP strategy to create a new cohesive and strong subject representing local interests.

The paper presents the process of development of a new form of consensus and highlights several essential principles, which constitute a supra-regional SP, focusing on the description of the process that led to the set-up and start of the Nebrodi SP. This process-methodology shows that a voluntary action improved the territorial system cultural, and SP definitely represents a support decision tool that introduced the principles and method of dialogue in an area at the beginning divided and then joined.

The remainder of the paper is organized as follows: Section 2 defines the meaning of EG adopted from the authors; Section 3 provides a summary of the SP structure (planning areas and activities), discussing, within the theories and principles that are fundamental to building EG in a local context, how the SP supports the process of EG definition. In Section 4, we present the new institutional EG subject, highlighting the role and capacity of the local integrated system and expanding the results obtained in the Nebrodi region to potentially any other similar context in the European panorama. Section 5 closes the paper and discusses the strategic factors needed to ensure durability of the framework in a stable pattern of social relations and touches upon several critical aspects. The future application and implementation of the methodology in the field are underlined.

2. Scientific Background

Over the last two decades, the concept of governance has become one of the key models in political science, political geography and public administration [10–12]. In these contexts, the search for a compromise through stakeholder participation and negotiation is strongly advocated in order to facilitate the integration of shared interests, knowledge and values.

Governance may be defined as a stable pattern of social relations between actors, who deliberately interact and attempt to structuralize these interactions with organizations and rules [13,14]. Governance, however, also acts as an unplanned model, which is the result of coincidental interactions and strategies and previously created rules [15,16]. In its broadest interpretation, governance also concerns the many ways in which public and private actors from the state, the market and civil society, govern public issues on multiple levels, autonomously or in mutual

interaction [17]. In the European context, according to the "White Paper on Governance", participation is, indeed, one of the five principles of good governance, together with openness, accountability, effectiveness and coherence [18–20]. Moreover, it is participation through multi-stakeholder knowledge that significantly contributes to improved understanding and increased transparency in the decision-making process [21].

Furthermore, governance could also be considered an ethical operational method of adaptive management [22,23], which investigates how flexible public and private structures and institutions may be fostered [24–29]. In this sense, governance is the result of a collaborative management process [30,31], which also needs to broaden the abovementioned ideas from the level of single interventions to that of entire social-ecological systems [32]. Hence, governance should also aim to deal with environmental problems, increasing the resilience of ecological systems in the face of an uncertain future characterized by disturbances and uncertain non-linear change [33–35]. In this paper, governance, enriched with explicit environmental goals, overcomes the mounting complexity and multilayered nature of environmental problems that are not adequately addressed by local and national governments [36,37]. Thus, we refer here to the broader and encompassing connotation of EG.

Keeping in mind the necessity to incorporate all the above concepts in the definition of EG, this paper aims to present a direct example of how to realize a model of governance in the Italian local context that achieves a compromise between different positions, and that is able to define a common strategy for territorial development. The experience of SP represents a valid tool that put in practice way how build a new form of governance, environmental oriented.

3. Methods: The Nebrodi Region SP and Its Development

3.1. Definition and Elaboration of the Strategic Plan

The municipality of Sant'Agata di Militello in the Nebrodi region and nine other partner Municipalities, with the support of consultants and experts from Academia, promoted the idea of a shared SP for the Nebrodi region, an area of approximately 1800 km^2. Following a voluntary protocol agreement, the participatory system grew to include 40 Municipalities, three Provinces (Messina, Enna, and Catania) and the Nebrodi Environmental National Park, an entity already active within the area. The SP involved a total population of 143,763 inhabitants, with an average density of 79.9 inhabitants per km^2 as indicated by data gathered by municipal statistical offices. The size of the Municipalities is mostly below 5000 inhabitants (as is the case for 72% of Italian Municipalities), with the population mainly clustered on the coast in the North-Eastern portion of the Plan area (see Table 1 and Figure 1 for more details on the territorial system).

Table 1. The territorial system involved in the Strategic Plan, grouped by population size.

Numbers of Inhabitants	Number of Municipalities	Name of Municipalities
Inhabitants > 10,000	3	Capo D'Orlando (ME), Sant'Agata Militello (ME) and Troina (EN).
5000 < Inhabitants < 10,000	5	Acquedolci, Brolo, Gioiosa Marea, Mistretta, Tortorici (All in the Province of Messina)
1000 < Inhabitants < 5000	28	Alcara li Fusi (ME), Caronia (ME), Caprileone (ME), Castel Di Lucio (ME), Capizzi (ME), Castell'Umberto (ME), Cerami (EN), Cesarò (ME), Ficarra (ME), Galati Mamertino (ME), Longi (ME), Militello Rosmarino (ME), Maniace (CT), Mirto (ME), Pettineo (ME), Naso (ME), Piraino (ME), Raccuja (ME), Sant'Angelo di Brolo (ME), Santa Domenica Vittoria (ME), San Fratello (ME), San Marco D'Alunzio (ME), San Teodoro (ME), San Salvatore di Fitalia (ME), Santo Stefano di Camastra (ME), Torrenova (ME), Tusa (ME), Ucria (ME).
Inhabitants < 1000	4	Floresta (ME), Frazzanò (ME), Motta D'Affermo (ME), Reitano (ME).

Source: municipal statistics offices and Studio FC&RR Associati s.r.l.

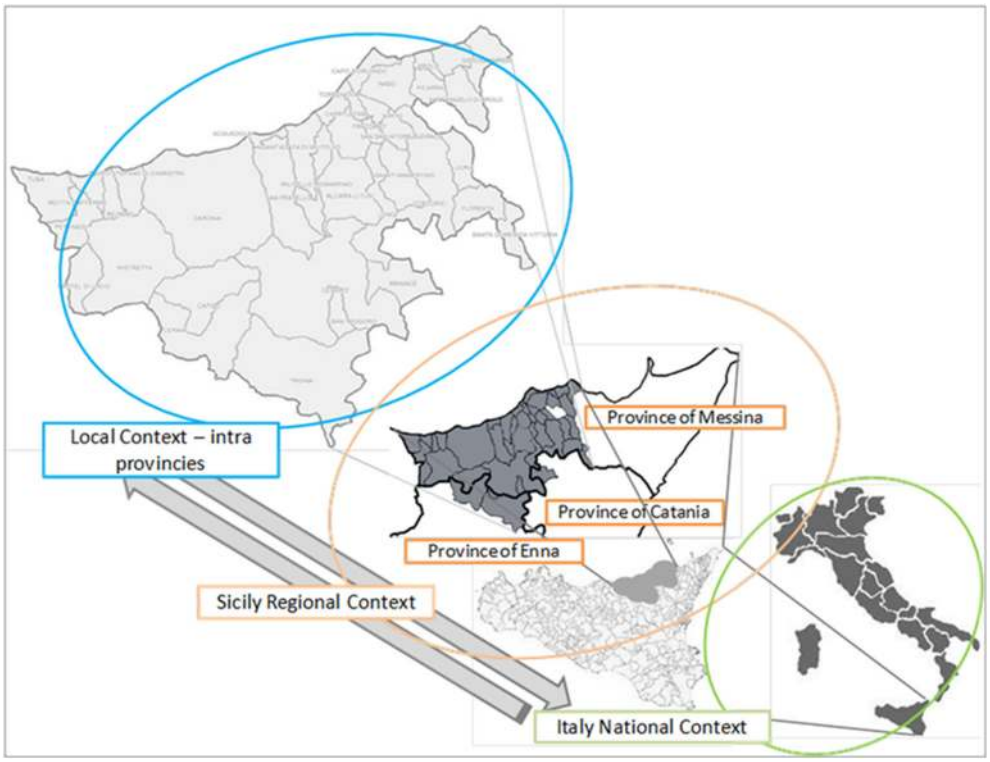

Figure 1. The geographic boundaries of the Strategic Plan area (Municipalities in grey), inserted in the territorial system in order to highlight the relationships from local to national system. Source: elaboration on technical professional team data information (Studio FC&RR Associati s.r.l.).

The above-mentioned promoters and partners, with the support of a professional scientific and technical team were part of the steering group. The steering group adopted the following strict requirements for the SP, following the indications of Stratigea and Giaoutzi [38]:

(1) The need to measure and communicate all environmental and territorial phenomena to the social system.
(2) The connection of phenomena to cause-and-effect relationships.
(3) The building of a comprehensible system, designed for a multidimensional approach.
(4) The introduction of a form of environmental governance able to manage the continuous flow of system information.
(5) The definition of a pathway towards territorial development that is both sustainable and shared.

The SP can be summarized in four phases: project launch, environmental assessment, territorial assessment, and negotiation on territorial perspectives for sustainable development—using a top-down mixed with a bottom-up approach with joint shared decisions for durable integrated local development. Over a period of three years between 2007 and 2009, the SP realized a new territorial vision involving, in a stable way, public and private actors and stakeholders, as recommended in the multi-phase plan by Healy; see Figure 2) [39]. In the following, the application of the SP is described for the Nebrodi region, but general considerations are applicable to other contexts.

Following the process detailed in Figure 2, Phase 0 regarded the launch of the project in which the first ten Municipalities, as partners and promoters of the project (*i.e.*, Sant'Agata Militello, as chief promoter of the project, Acquedolci, Brolo, Capo d'Orlando, Caprileone, Frazzanò, Mirto, Naso, Piraino, and Torrenova—all Municipalities in the Province of Messina), held a conference to launch the project idea, goals and expectations. In Phase 1, an in-depth analysis was made of each territorial theme by the professional technical team. The SP uses an ecosystem service-based approach to support policy makers, through the incorporation of ecosystem service principles in

line with the Strategic Environmental Assessment process. The sub-phases of Screening, Scoping, Reporting, Monitoring and Consultation [40] were identified, as required by projects and plans in the EU zone [41]. Subsequently, the community involved in the SP forum produced a summary document on the state of the environment in relation to the strategically important aspects towards a perspective of sustainable local development. Phase 2 regarded the analysis of dimensional data provided by the Italian national statistical agency [42] and by each municipal statistics office in the Nebrodi region, and of urban data obtained by urban regulatory tools. These data were enriched with other themes related to natural and environmental components. The territorial analysis phase (*i.e.*, the top-down approach) further identified the development priorities. The analysis was completed using a spatial index aggregating nine indicators (*i.e.*, accommodation, architectural-cultural heritage, statement, leisure facilities, socio-cultural activities, healthcare, security, environmental goods, and accessibility), allowing the construction of a map of the Municipalities that play a fundamental role in the SP, namely urban centers (See Table 2). Finally the feasibility of all the projects ideas identified is evaluated under different perspectives (financial, administrative, political, economic, technical, *etc.*).

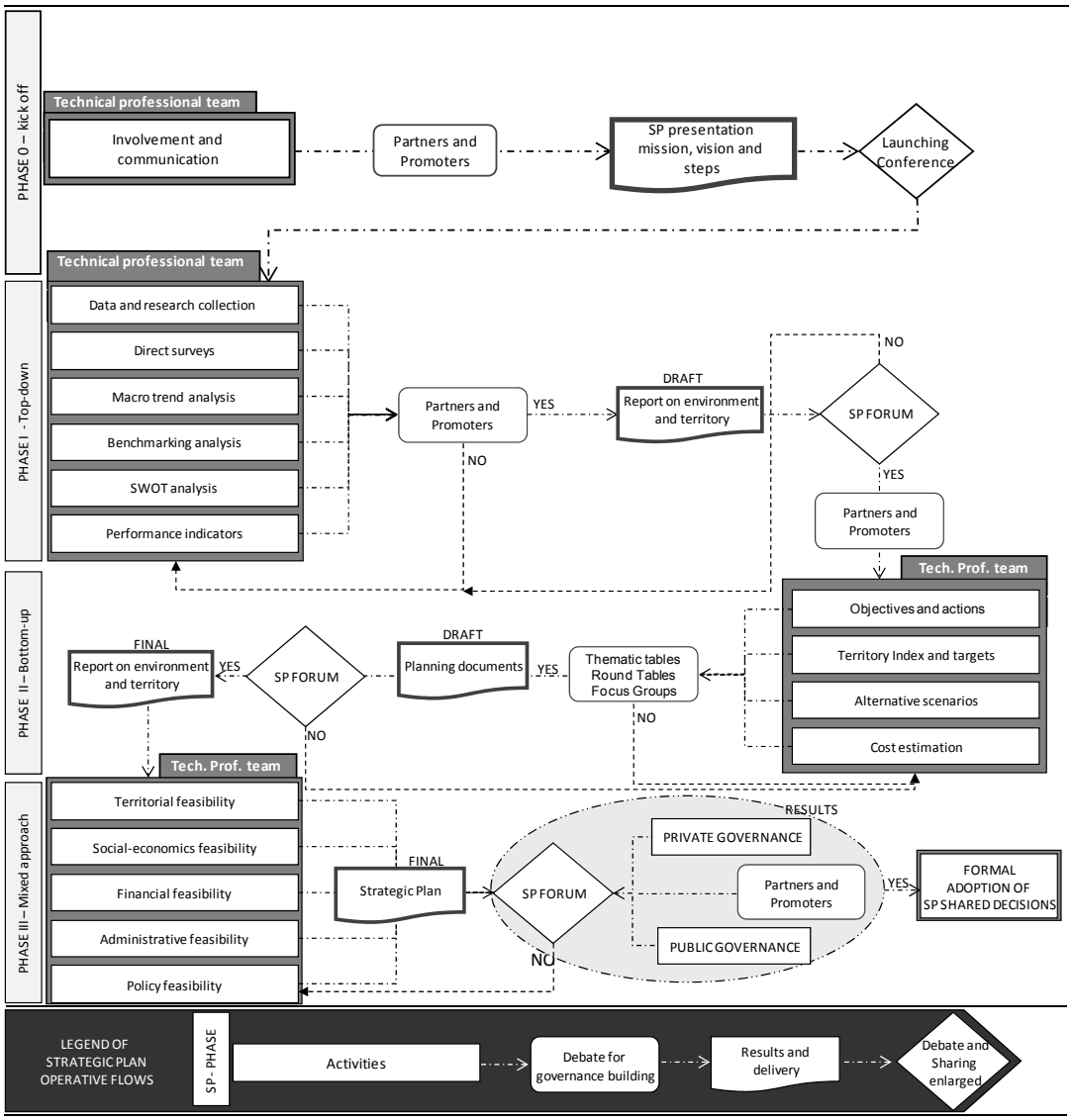

Figure 2. The phases and processes of the Nebrodi Strategic Plan, identifying roles, results and the steps needed to build a new form of oriented environmental governance. Source: elaboration on technical professional team data information (Studio FC&RR Associati s.r.l.).

Table 2. Territorial index for Municipalities of the Nebrodi Area with the best score (the urban centres).

Municipality	Indicators									
	Accommodation	**Architectural Cultural Heritage**	**Statement**	**Facilities for Leisure**	**Socio Cultural Activities**	**Healthcare**	**Security**	**Environmental goods**	**Accessibility**	**Total score**
	Score from 0 to 5	**Score from 0 to 6**	**Score from 0 to 4**	**Score from 0 to 4**	**Score from 0 to 3**	**Score from 1 to 14**	**Score from 0 to 7**	**Score from 0 to 2**	**Score from 0 to 9**	**Score from 0 to 48**
SANT'AGATA DI MILITELLO	3	6	3	1	3	14	7	2	9	48
CAPO D'ORLANDO	5	6	3	4	3	3	5	2	9	40
MISTRETTA	1	6	1	2	2	14	6	1	3	36
SANTO STEFANO DI CAMASTRA	1	6	1	1	1	3	5	0	9	27
BROLO	2	4	1	3	3	3	1	1	7	25
GIOIOSA MAREA	5	6	2	0	1	3	2	1	4	24
TROINA	3	6	2	1	2	3	4	1	2	24
TUSA	2	6	1	1	1	1	2	1	6	21
Indicators	**Scoring table**									
Accommodation	0 = number of beds =1; 1 = number of beds < 100; 2 = 100 < number of beds < 200; 3 = 200 < number of beds < 500; 4 = 500 < number of beds < 1000; 5 = number of beds > 1000									
Architectural cultural heritage	0 = monuments to visit = 0; 1 = 1 < monuments to visit = 2; 2 = 2<monuments to visit = 4; 3 = 4 < monuments to visit = 6; 4 = 6<monuments to visit = 8; 5 = 8< monuments to visit = 10; 6 = monuments to visit > 10									
Statement	0 = structures $\leqslant$ 5; 1 = 5 < monuments to visit $\leqslant$ 10; 2 = 10 < structures $\leqslant$ 20; 3 = structures < 20; 1 plus point for each university structures.									
Facilities for leisure	1 point for each structures for leisure time									
Socio cultural activities	0 = celebration-exhibitions fairs = 1; 1 = 0 < celebration-exhibitions fairs = 3; 2 = 3 < celebration-exhibitions fairs = 5; 3 = celebration-exhibitions fairs > 5									
Healthcare	1 point for each presence of emergency medical centre; 2 points for each presence of counseling; 5 for each presence of hospital; 6 if the municipality is place of health district									
Security	1 point for each place of Civil Protection and Carabineers; 2 points for each Secondment Court, Police or Financial force, Fireman station									
Environmental goods	1 point for each environmental good (lake, rural landscape, wildlife, environmental relevant plase, ...)									
Accessibility	1 point for each bus service; 2 points if there is railway station; 3 point if there is the highway direct access									

Source: elaboration on technical professional team data information (Studio FC&RR Associati s.r.l.).

In this phase, in order to aggregate different positions and points of view (*i.e.*, using a bottom-up approach), round tables and focus groups involving the local community were organised, with opinions being gathered through the use of questionnaires produced by the professional technical team. The SP addressed in this phase the construction of a new level of EG using stakeholder analysis, which, in policy research, is seen as a way of generating information on the relevant actors in order to understand their behavior, interests, agendas, and influence on decision-making processes [43]. Such an approach oriented the SP towards the introduction of deliberative democracy in the project area, in the form of equitable involvement of all local actors [44–46].

In Phase 3 the SP, using wide participatory action, develops a special form of dialogue in which all affected parties have equal rights and duties to present their viewpoints and test their validity in a context free of social or political domination [47]. Participatory action is focused on consensus building and power relations through information, consultation, collaboration, co-decision and empowerment. It achieves these targets with different environmental negotiation techniques, such as focus groups, consensus conferences, stakeholders' workshops, participatory expert workshops, thematic forums, policy simulation exercises and consultative forums [48]. The outcome is an aggregate study by cluster point of view. During all phases, the professional technical team, together with the partners and promoters, hosted four events/conferences in order to develop a forum of all possible stakeholders (*i.e.*, local population, Nebrodi National Environmental Park, NGOs, firms, banks, investors) in the local system, thereby increasing participation. Finally, in phase 3, there is the adoption of the SP, in which the new form of local governance, environmentally oriented, identifies and prioritizes all the projects that are strategic for the environmental and competitive development of the area, and this is the basis of linking the environmental dimension to local economic development.

3.2. Evaluation of the Strategic Plan and Link to the Environmental Governance of the Local Area

The SP identifies, assesses and prioritizes environmental variables and, through participatory action, encourages the local system to revise the project area in a uniform manner, linking the goals of economic and social growth, within the principles of natural protection and sustainable development. Consequently, the SP assesses carrying capacity, defined as the level of human activity (*i.e.*, including population dynamics and economic activity) that a region can sustain maintaining acceptable quality of life levels in a comprehensive way, without losing evaluation complexity [49]. Such was the experience also for the SP developed for the Nebrodi region.

Analyzing the key data on the territorial system provided by local authorities, Municipalities, regional offices, and directly gathered with specific questionnaires in phase 1 and 2, the steering committee concluded that the area boasts remarkable ecosystem quality and a unique heritage of biodiversity, characterized by rare endemic species and the presence of a wide range of habitats (this aspect is highlighted by the presence of the Nebrodi National Park). The SP also highlighted the importance of safeguarding these resources and, at the same time, the importance of creating a synergic system to work with the other assets of the SP area.

The setting up of an SP allowed fostering of the EG process to share and achieve concrete sustainable planning activity. The SP and EG are strictly connected and the SP represents the starting point for developing good governance. EG is matched by a new territorial subject that can exploit the opportunities offered by the SP, in order to compete on a national and international level. Indeed, EG is implemented as an integrated task, linked to and aimed at improvement of socio-economic conditions within the territory. Each municipality, with its local system and its specific settlement area, was considered to be a resource for all members of the plan, including public and private stakeholders, and, as such, was considered in an overview. In this perspective, environmental and territorial values were integrated, weighted and compared in order to obtain a territorial index. Bottom-up enhanced participation is based on this shared environmental and territorial analysis of the area.

Starting from the established SP the wide involved community contributed to defining the EG. All participants, phase by phase, studying and understanding the quality level of their local

systems, were involved in confronting territorial environmental problems in the following five steps: problem identification, problem comprehension, and problem analysis, treatment of sub-areas and their integration in order to achieve overlapping results [50], and, finally, exchange of ideas. As Renn [51] concludes, the goals of the definition of these steps are multifold. In particular, the community managed to:

- seek a consensus on the procedure that they want to employ in order to reach a final decision or compromise (such as voting, sorting of positions, consensual decision making or the involvement of a mediator or arbitrator);
- articulate and criticize factual claims on the basis of the "state of the art" of scientific knowledge and other forms of problem-adequate knowledge (in the case of dissent, all relevant camps have the right to be represented);
- interpret factual evidence in accordance with the laws of formal logic and analytical reasoning;
- disclose their relevant values and preferences, thus avoiding hidden agendas and strategic game playing;
- process data, arguments and evaluations in a structured format (for example a decision-analytic procedure) so that norms of procedural rationality are met and transparency can be created.

Hence, the SP process-methodology was used as a guideline in order to push the system to re-organize itself in a new form of interface between socio-political mandates and dynamics, within the framework of sustainable resource and environmental management. The resulting EG provides an operational mechanism allowing key local stakeholders, community members, resource users and private sector groups to become a single subject that incorporates public preferences, integrates public input into the management process and assigns appropriate roles to technical experts [52,53].

4. Results: From the SP to the EG, Generalizing the Experience of the Nebrodi Region

The shared SP allowed for an EG characterized by a long life operative capacity. A critical assessment of the proposed SP experience shows that this tool is designed to overcome one of the most critical elements of territorial groupings, and in particular to overcome the difficulty of ensuring continuity and administrative progress to the decisions taken during meetings of the representatives of the local authorities (*i.e.*, the mayors).

These difficulties arise from the detachment of Municipal Councils from the processes that trigger local development initiatives promoted by the authorities, but also and above all, from different timelines of municipal administrations with respect to the advancement of territorial initiatives in the national context.

These are generally longer, leading to continuous rotations of political actors and the consequent need for training activity in order to progress to further developments. Therefore, it is understandable that mayors, who need to give immediate answers to the problems of their community, sometimes have difficulty maintaining a consistent focus on and in-depth involvement in a program aimed at general and longer-term objectives. Indeed, as evident from the questionnaires and the reports produced by all the round tables (Phase 2 in Figure 2), the highest-priority problems to be solved require the creation of a representative local structure operative in the long term.

The SP allows a new form of cohesion, the EG, to be reached. The result is an operating platform for the negotiation process of consultation. Using the proposed method of SP, the empowered community of stakeholders can play a strategic role in enhancing understanding, generating new options, decreasing hostility and aggressive attitudes among participants, exploring new problem framing, enlightening policy makers, and producing competent, fair and optimized solution packages that also facilitate consensus. The SP allows definition of an EG that stimulates a participative and deliberative dialogue able to trace political and territorial development programs, in line with an integration and sustainability idea (see Figure 3).

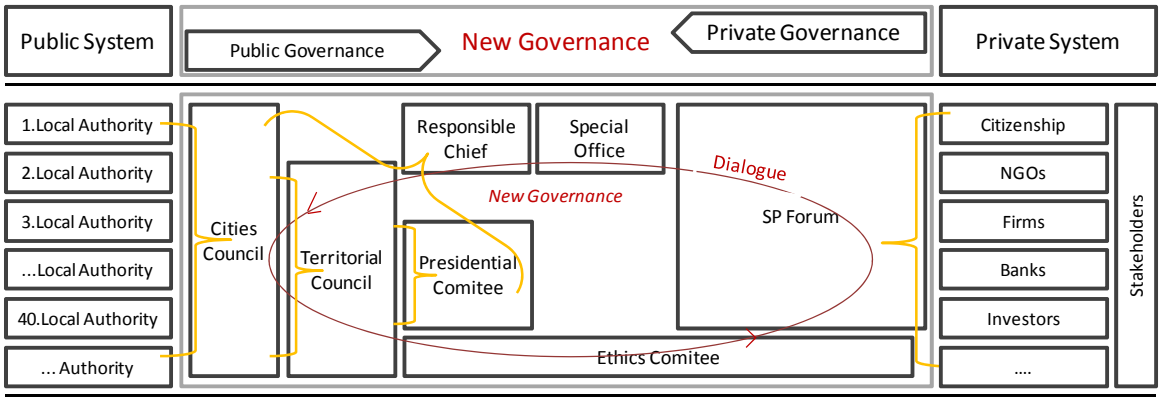

Figure 3. The local cycle of dialogue realized by the new governance in the Nebrodi Area (the structure is only an exemplification not exhaustive).

This mission, highlighted in the above sections, is substantial, because the model is designed to ensure that the management capacity of the area must be the first step towards achieving a stable network of relationships [54,55]. Moreover, overcoming Liu *et al.* [56], this structure is an inclusive model for the centralization of the decision making process, valid in the local context [57]. These aims are more evident in a local context in which a wide gap still exists between local governance and higher government levels, and citizens are often excluded from the decision-making process, even if they suffer the consequences of such a process.

As can be seen from the considerations above, the meeting of different positions and points of view, public and private, has made it possible to design a new model of governance that is in line with the SP choices. The new EG assesses, interprets, forecasts and manages a compatible future for the entire territorial system, throughout its structures, summarized in Table 3. This new voluntary form of aggregation overcomes the traditional mandatory system, redefining the identity and role of each actor/participant [58].

Table 3. The structure and roles of the proposed Environmental Governance within the Nebrodi Strategic Plan.

Name	Composition	Role
Territorial Council (also called *Assembly of SP mayors*)	Composed of the mayors and the President of the Nebrodi National Environmental Park. At this stage, it is the central organ of the whole governance.	Deliberative decision-making role in the formulation of Assembly policies, approval of operational phases and definition of negotiated agreements.
Chief Promoter	Representative of the territorial aggregation and its interests.	Acts as chairman of the Presidential Committee, responsible for advancement of management objectives and also, with respect to loans granted by the Region for implementation of the SP, responsible for the success of development projects
Presidential Committee	This Committee, given the complexity of the spatial clustering of the municipalities and based on the urban structure described in the SP, is formed by the mayors of the municipalities identified as urban centres, according to recent guidelines for the programming of Structural Funds 2007/2013 (these are S. Agata Militello, Capo d'Orlando, Mistretta and Troina, a mountain village in the province of Enna), along with representatives of the "Halaesa" and "Saracen Coast local systems".	Chaired by the Chief Promoter, who is supported by the President of the Nebrodi Environmental Park

Table 3. *Cont.*

Name	Composition	Role
Municipal Councils	The group of Municipalities that take part in the SP.	They carry out all formalities required under the laws of local authorities, in an independent but coordinated manner, in accordance with the steps taken above the municipal level.
General Partnership Table—GPT (also called the *SP Forum*)	Composed of all public and private stakeholders; meets at least twice a year.	The GPT is responsible for verification of the Plan in relation to the implementation of private projects and makes suggestions during the operational phase.
Ethics Committee	Committee of five experts, chaired by the President of the Oasis Foundation. It meets at least once a year	Carries out the monitoring functions of the process and has powers of reprimand.
Territorial Office (also known as *Strategic Planning Office*)	Office that supports the entire process, both in administrative and operational terms. The Strategic Planning Office is supported by the technical coordination table	Develops the SP and supports local system governance.

Source: elaboration on technical professional team data information (Studio FC&RR Associati s.r.l.).

Table 3 shows that, operating through its *Territorial Office*, the SP attempts to achieve the necessary technical involvement of all local authorities, as well as the various participating forces, in order to increase the level of representation.

Starting with a top-down approach, the SP developed the first level of governance, focused on meeting current environmental needs. Assessment of the structure of the proposed EG and the composition and role of a new form of *Assembly* (*i.e.*, *Territorial Council*), consisting of all the mayors of the local authorities, are of great importance in order to achieve this goal. The *Territorial Council* has a deliberative role, as well as a joint responsibility for all programmatic activities and operates independently, guaranteeing the administrative process. The *Territorial Council* successfully avoids restrictions in terms of representation for complex organizations; it overcomes the problem of delegation and transfer functions, thus allowing discussion and development of all operational decisions in order to achieve a democratic and participatory approach.

The role of the *Chief Promoter* is of fundamental importance. In our case, the mayor of the municipality of Sant'Agata Militello, in his role as chief promoter of the SP, performed executive functions, supported by a specific office. The *Chief Promoter* was supported by a *Presidential Committee*, which takes on the functions of the executive branch with a role of exchanging information. This fundamental activity aims to confront the particularly non-homogenous territorial complexity (e.g., in terms of land shape, production system, transport system and related accessibility), as well as maintaining widespread public involvement. Regarding the composition of the *Presidential Committee*, it can be seen that the various territorial systems are gathered into territorial clusters, with the economic system developing around the urban centers. The mayors of these centers, and those of the other main centers in the local context, sit on the Committee. With regard to *Municipal Councils*, it is evident that involvement has been gradual. It was necessary, at first, to provide basic training in order to be able to approach problems with such diverse spatial profiles. This may be also the case for other contexts in which an SP is used to reach a shared view on EG.

The form of public EG that is reached through the development of an SP, as outlined above, involves all categories of stakeholders, and acts directly as a mediating interlocutor. The representative groups are collected together in the *General Partnership Table*, the *SP Forum*, which follows a bottom-up approach and achieves widespread participative action in the local decision making process [59]. The *Ethics Committee* is introduced by the SP. This innovation is recommended as a best practice and is totally independent in overseeing all procedures. The committee must ensure and verify compliance with commitments, as well as the adherence of each initiative to the founding principles of aggregation, and can occasionally use its power to reprimand.

This model of EG does not work with a form of discussion to identify a common interest and to reach consensus, but rather with the negotiation of a compromise approach, in which each party strives to conciliate individual and diverging interests [60,61]. Such a mode of action often shows how participatory processes progressively bring out dissent and conflict. In this way, a key role is played by the dialogue facilitator, who acts in order to achieve a conscious consensus. The facilitator actions, which are developed by the *Territorial Office*, are addressed to supporting the negotiation process. This can be achieved by organizing information sharing events, framing issues, orienting analysis, understanding the structure of the problem, identifying options, making trade-offs more explicit, structuring the decision-making process, exploring possible compromises, or creating value [62,63].

Finally, in order to avoid overlaps and crossovers, which could slow down the immediate SP process, the new level of governance embeds existing relational systems through the establishment of a completely new actor. For the Nebrodi area, this represented a strong result for innovation in local development.

The principles, methods, and outcomes show that the validity of this case study reaches beyond its geographic boundaries, making it a valid guideline for local development. Analysis of the SP results, focused on the new form of EG, shows how this experience helped to overcome deep differences within the partnership, such as:

- varying planning capacity (as seen in the absence of homogeneity in local urban planning tools);
- population density (much higher on the coast than inland, reflecting a tendency towards congestion, thus lowering the quality of life and depleting natural resources);
- profoundly different economic activities in inland towns and coastal resorts; urban services, administration and research & development mainly localized in certain areas of the territory.

The validity of the result is its reproducibility for many other networks of Municipalities that share common characters, whether they are geographical proximity, vocation of the territory, economic drivers or simply size. The model is then ready to be translated into other contexts.

5. Discussion and Future Outlook

Efforts to achieve effective local-scale cooperation for management of common environmental resources can be elusive and often require prolonged resource investment in order to build social capital and facilitate learning and adaptation.

The results of the Nebrodi case and the generalization thereof show that the main strategic factor for achieving competitive medium/long-term local territorial development is the building of a new form of EG, grounded in the establishment of a clear shared SP. The baseline for achieving this result is concrete and continuative dialogue in order to reach consensus, thus oriented at identifying the widely shared directives on which to build and develop scenarios compatible with the territorial system (as in the example of the Nebrodi area). The Nebrodi SP fulfils this vision through a model conceived to organize a territorial system, aimed at increasing levels of cohesion among local authorities in order to recover identity, history, local culture and traditions linked to the Nebrodi area. The model must benefit from the aggregative experience gained in the area in order to reconfigure a system suited to the enhancement of an innovative sustainable project.

The experience of the Nebrodi case shows that EG must be flexible, but it must also be able to understand and make use of the available environmental datasets. In addition, EG has to be capable of planning sustainable prospects while identifying the dependencies between sectors, assessing multiple aspects of sustainability and being able to generate alternative scenarios and strategy building for implementation [64]. SP can be considered the support tool for the strategic decision-making activity responsible for the achievement of a new form of EG on a local scale. In the SP, all environmental aspects are considered central to local development.

Only through widespread debate among the various actors who took part in the process plan was it possible to build a shared vision. The inherent differences between local, regional and supra-regional

scales of operation are evident, but the analysis of the case study also argues that greater collaboration is required for these three levels to effectively meet their goals [65].

The elements set out above are fundamental in light of the strategies that will be identified for the development of the area. The community, through knowledge and experience, becomes conscious of the quality of natural environments, which must necessarily be considered as the principal cornerstones of the identified projects. These drivers, in line with ISO 14001 [66,67], also induce local governments (as well as firms) to take considerable progressive environmental actions that translate into pollution reduction and better compliance with government regulations. Consequently, competitive market economies can compel firms to differentiate themselves on a variety of counts, including environmental stewardship [68,69].

In this way, private governance has become a reality in global environmental politics and it has become an important instrument in the political toolbox of global civil society in its efforts to promote environmental sustainability. This experience highlights how EG represents a mosaic of actors (public and private), whose integration is often uneasy. However, the SP, through spatial analysis, allows clear and quantitative identification of critical success factors for the entire area, for which it is developed. This proves the need to achieve a strategic overview. The decomposition and aggregation process of interests and expectations gradually favors the clustering of homogeneous territorial specificities and then allows the creation of synergies and virtuous circles between different systems of the same area, as clearly seen in the Nebrodi area. The key role, in terms of territorial proximity and efficiency for collaborative environmental governance, is played by local governments [70,71]. Hence, the form of EG achieved supports the hypothesis that the representatives of local authorities involved in partnerships possess the resources needed to reduce the pitfalls of traditional sustainable governance, facilitate coordination, and contribute to the success of shared policy-making. Moreover, by working on environmental problems and implementing the outcomes of a deliberative, multi-stakeholder process establishing a vision for the future, the participatory action managed by the SP promotes EG [72].

The SP and EG that are presented in this paper for the case of the Nebrodi region are not only a successful example of process development, but also the results of a continuous cycle of improvement that the Nebrodi system has implemented. Five years from the development of the SP results are clearly visible in the area. Indeed, EG has achieved a strong partnership with institutional unity, and has been capable of regaining credibility in Sicily through various initiatives otherwise previously disconnected from the local reality. The enhancement of the Nebrodi cultural identity and the building of a human-centered social network, based on principles of solidarity and respect for nature, have proven to be the strategies to be pursued in order to ensure welfare conditions for the entire population of the Nebrodi area. A homogenous area has been created in the form of a Territorial System with local governance represented by a permanent EG, and all actors involved expressing themselves as a collective actor, as theorized by Bekkers *et al.* [73].

This permanent form of EG represents an environmental policy target of fundamental importance for local sustainable development. The community and the respective stakeholders are increasingly becoming the operative base for identifying and interpreting broad environmental issues interlinked with economic and social aspects, and is increasingly supporting decision making for long lasting development solutions within the capacities of the local community [74]. More work still has to be done in the quest to explain links between collaborative processes and environmental outcomes [75], but this case study demonstrates that linking the environmental dimension in local economic development is useful for attracting the interest of various actors and stakeholders.

The role of EG is also important because the social benefits can be estimated by analyzing the effects of the organization on stakeholders at local, national and global levels [76]. The SP represents a highly important experience of the voluntary construction of a shared path. In the Nebrodi area this has been achieved through the establishment of a new virtuous model of EG, based on the cultural and environmental uniqueness of the territory, and consistent with the sustainable development tools and policies active at the local level.

The complexity of sustainable development on a regional scale requires both an understanding of the dynamics of local development and of its compatible transformations, and of the level of management aimed at maintaining and protecting the excellence and specificity of the territorial system. These principles, now accepted and shared, are not easily achievable and need a great deal of financial support. Experiences of territorial government have fully demonstrated that a major critical success factor of such local development initiatives, in the Italian system, is the presence of a governance system that has sufficient authority and time to plan, program and implement a policy for sustainable territorial development.

The experience of the Nebrodi area could represent a baseline for future deepening and widening of environmental and territorial performance, of both the public and private production system, using an ad hoc tool for benchmarking intra/inter territorial systems [77,78]. It is the use of an SP framework and the tailoring structure of the new form of governance, in line with the context under study (both Italian and European), which allows the creation of a new form of adaptive management oriented towards local competitiveness. The greatest success factor in transforming the SP tool into a guideline for managing the local territorial and environmental system in a long-term perspective is that of having thought about environmental issues on a local scale and having defined future strategies for sustainable development, thus leading to the definition of a new EG model.

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