Public Participation Project for the Sustainability of the Greek Island Gavdos

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Abstract. The "Public Participation Planning Project for the Sustainability of Greek Island Gavdos" is a multidisciplinary approach designed for a small island located under Crete, in Greece. This work seeks to deal with the decreasing population, lack of job/social opportunities, and inadequate infrastructure through public involvement. The sustainable development plan aims to create communities by including inhabitants, actors, and agents interested in participating in the Cultural, Local, Energy, Production, Research, and Visitors' Communities. The implemented toolkit includes interactive and participatory workshops, digital applications, tailor-made questionnaires, and innovative handcrafted models (such as the spatial SWOT analysis). The participation is surprisingly vivid by any relevant actor during the workshops, the mapping events, and brainstorming meetings. This paper is focused on the methodology, phases, and step-by-step knowledge to organize and implement participatory planning processes in sustainable development projects of the island, mountainous and isolated municipalities. At the same time, it can be used as a methodological guide for practitioners and institution that plan public space, development opportunities, measures, and actions, to promote participation and engagement in public projects.

Keywords: Participatory planning · community building · public participation · local communities · Gavdos island · participatory workshops · participatory tools · sustainability · local development

1 Introduction

The southernmost European point is a small island facing double insularity, geographically and politically isolated [1], dependent on and located under Crete island (Greece) (Fig. 1).

Gavdos island is a top-rated alternative touristic destination with a magnificent natural environment facing threats of depopulation and degradation of the natural environment. In 2017, the Municipality of Gavdos[1], in collaboration with the Management

[1] https://gavdos.gr/.

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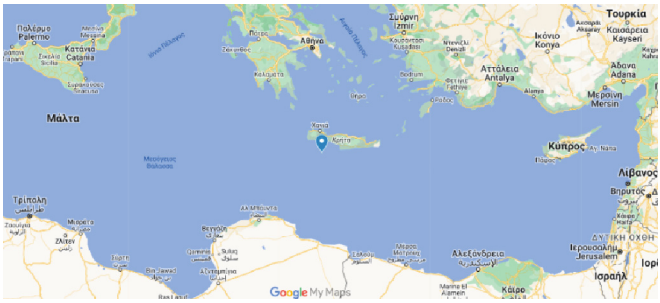

Fig. 1. The location of Gavdos island, the southernmost point of Europe.

Organization Unit for Development Programs (MOU),[2] took the initiative to set the goals for the first "Public Participation Planning Project for the Sustainability of Greek Island Gavdos", an ambitious project innovative for Greek standards. Our team[3] works as an expert group in participatory planning and community engagement. Our role is to support the drafting of the development plan like an expert at the required participatory planning methods, tools, and techniques; the final scheme of the development plan and the funding are carried out by a state organization (MOU). Through experience and expertise, we concluded that the starting line and the most crucial prerequirement for elaborating the suggested plan is adopting democratic and open processes. We seek the participation of the local community in the co-production of public policy from the beginning of the planning process. Therefore, the aim of the project is the formation and development of an integrated, holistic, and inclusive approach, the growth of knowledge and abilities of the locals and other stakeholders, the coordination and support of the local community, and in general, the development of a local-oriented activity and participation plan. The essential innovation -and at the same time, the challenge- of the plan is the interrelation between local, regional, and national development goals for an isolated, small, and island community such as Gavdos.

Remote small island and mountainous areas, characterized by difficulties of accessibility and transport encountering geographical isolation, often prove advantageous for implementing integrated sustainable development programs and for applying participatory planning methods and procedures, which small-scale favors. However, practitioners and public authorities need more comprehensive, place-based, topic-related methodological steps.

This paper illustrates the concept of participatory planning and distinguishes it from typical consultation processes. It describes the methodological steps of participatory planning, which is multifaceted and not limited to the inhabitants of each study area, nor just to the public in general. The paper highlights the process of identifying the subject of the participatory actions as a necessary step, and by no means self-evident, for the organization and implementation of participatory planning for sustainable development. In addition, participatory planning methods, techniques, and tools are developed in detail

[2] https://www.mou.gr/en/pages/default.aspx.
[3] COMMONSPACE (CS), https://en.commonspace.gr/gavdos-communities.

and in phases to include all its dimensions. This paper is also a toolkit for participatory research in remote areas and covers the broadest range of possible uses.

2 Methodology of Participatory Planning and Community Building Procedure

In this paper, the main focus is on the methodological approach established for this project and the different steps followed. The proposed methodology is place-based and community-based, whereas the Landscape Democracy approach is adopted [2].

The following diagram[4] (see Fig. 2) shows the main methodological steps of the Participatory Planning & Community Building Procedure. The participatory process consists of three phases:

- Phase 1 (2017) - Preliminary work: Agenda setting, framing the problem, mapping the terrain, gathering input and ideas, drafting the pillars of sustainable development vision
- Phase 2 (2018) - Participatory plan and initial steps: State goals and objectives, start stakeholder analysis, create working groups and teams, draft participation plan and communication strategy, and branding. Online questionnaire/SWOT to update preliminary input.
- Phase 3 (2019) - Participatory workshops: Organize and implement participatory processes. Evaluate and update. Disseminate results and raise awareness.

Essential Elements of the Project. To achieve a sustainable development plan for Gavdos based on the visions, interests, and needs of its residents, current, and future, the critical elements are:

- Recognition and understanding of place, landscape, and history. Recording current problems and future opportunities. Using complementary digital tools, like the Public Participacion WebGIS platform (ppGIS, ppWebGIS).
- Extensive stakeholder analysis: residents, agents, visitors, researchers, producers, and potential new residents.
- Develop a strategic communication, public awareness campaign, and participatory plan.
- Perform participatory workshops producing an action plan for the sustainable development model of Gavdos.
- Ongoing assessment and consultation of the evolution of the process. A process parallels the overall plan.

[4] Created with Miro app – Mind map.

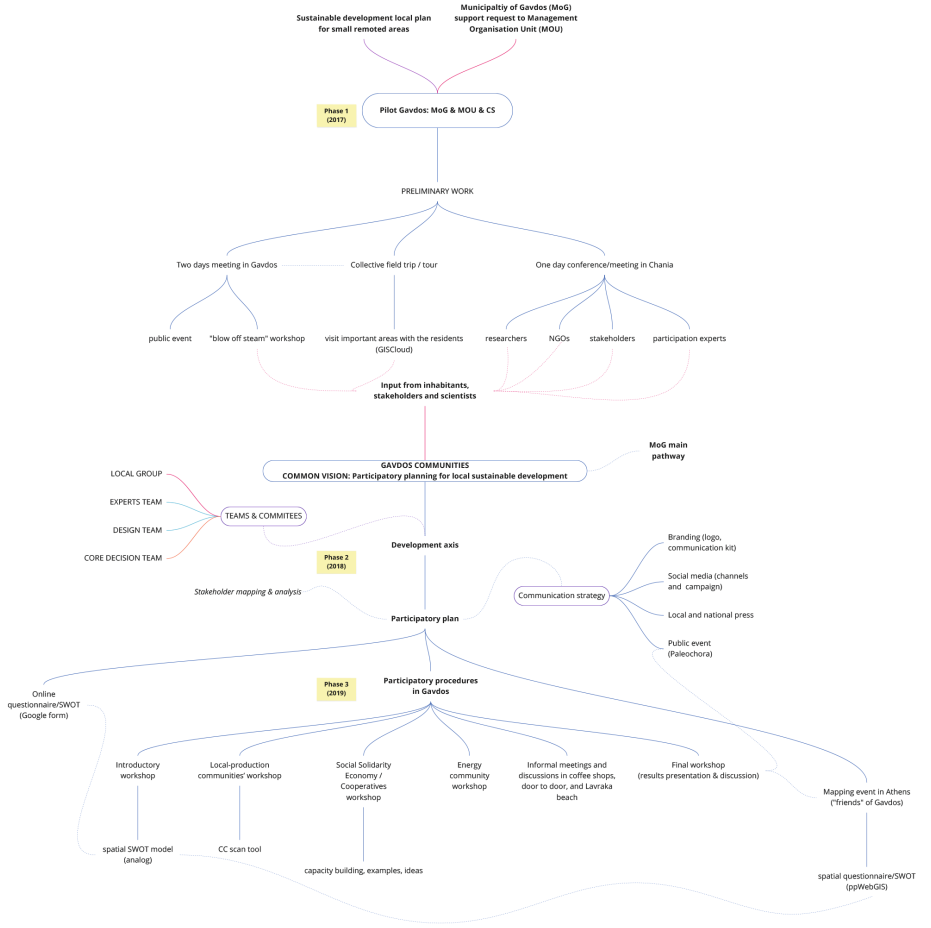

Fig. 2. The methodological scheme of participatory procedures for sustainable development of small remote areas.

Public Interest and Public Involvement. The scheme that describes the extent of the Public Participation Spectrum [3] to plan actions appropriately is studied. As an outcome, the five levels of participation for this project are:

1. Public information
2. Feedback from the public
3. Inclusion of the public
4. Cooperation with the public
5. Empowering the public, wherein the case of Development Plans for isolated areas is the implementation stage after planning.

The following paragraphs describe the participatory methods and tools and highlight the main results.

2.1 Development Goals and Participation Objectives

The next step is to set the public participation objectives concerning each development goal (Table 1). The goals of the sustainable development plan emerged from the results of all the preliminary participatory procedures and were refined at the first meetings of the core team. Each goal of the sustainable development plan corresponds to a set of public participation procedures' objectives.

Table 1. Goals of the sustainable development plan and the objectives of public participation.

Sustainable development plan goals	Public participation objectives
Goal 1: Retention of Existing Population	• Involve residents in development planning • Inform them at every step of decision making • Formulate alternatives • Build the communities
Goal 2. Population growth, attraction of new residents	• Identify potential new residents • Map their skills and desires • Keep up to date on the development plan procedures • Participate in the final consultation
Goal 3. Energy autonomy, creation of energy communities	• Map the energy needs of residents, infrastructure, visitors, and businesses • Jointly envision energy autonomy • Design the energy agenda together and keep everyone informed of developments • Build energy communities and develop synergies with other productive activities
Goal 4. Protection of the landscape and the environment	• Map the social values of the landscape and the environment • Increase awareness and awareness of the island's protection, both for residents and businesses and for visitors • Provide continuous and thorough information on protection zones, legislation, forestry, etc
Goal 5. Increase cooperation, collectivity, co-management, the feeling that the development plan is public ownership	• The enduring goal of the sustainable development plan and the participatory processes

2.2 Selection of Methods and Techniques

The aim is to create a methodology with interconnected tools that provide information relevant to all aspects of sustainable development [4]. Qualitative and quantitative [5] information is collected through digital questionnaires (GETSDI platform, Google forms, GIS-CLOUD spatial form). The required tools [6, 7] used to support the abovementioned goals are shown in the following table (Table 2).

Table 2. Required tools for the accomplishment of the goals.

Goals 1–5	Social media Fieldwork Newsletter Press release Online questionnaires
Goals 1,3,5	Public hearing Focus Groups Questionnaires and interviews Spatial questionnaires (interactive maps)
Goals 1–5	Thematic workshops Design workshops Citizens' Advisory Committee
Goals 1–5	Coordination Committee Committee of experts

2.3 Analysis of Involved Actors, Their Contribution, and Their Responsibility

People and agents can be involved, receive information, and participate in consultations and planning processes in different ways. Four groups of actors have been selected in order to target and then input a Stakeholder Plan:

- The inhabitants of Gavdos
- The municipality, the prefecture, and other public agencies
- The scientists and the academic community in general
- The island's 'friends' and visitors

The Stakeholder Plan [8], adapted to the local needs, is a double input matrix that contains information about the degree of influence and impact of each stakeholder and the engagement and tracking strategy for who is involved and therefore called upon, contributing to the efficient implementation and communication of the campaign.

2.4 Program and Communication

During this process, the detailed timetable and programming, the communication campaign, and the evaluation of the work done are designed. The timetable had to determine the exact steps assigned to specific dates, which had undoubtedly been modified during the project. The communication campaign was conducted through the Media (Newspapers, TV), Facebook, Instagram, Twitter, mailing lists, Facebook events, posters on the island, meetings, and phone calls to inform, attract and empower the potential participants.

3 The Toolkit

Given the particularities of the case, we have selected from a palette of options some general techniques that could help us understand the broad context of participatory planning. The most important are dialogue techniques, exercises, case studies, role-playing, brainstorming, and field trip.

3.1 Determination of the Issue

During the first field trip, a visit was made to all the island's main areas. This tour was the first stage of participatory planning, referring to study area identification and brainstorming. This method is essential for the experts, study and research teams, and residents. The residents re-identify their place and spatially identify problems and challenges through this process. For this tour, a digital tool (giscloud) was used to record collective narratives. The working group members could record geotagged notes, photographs, recordings, and sounds from the points of interest during the tour. These geotagged data were collected through a cloud-form, organized by sector (Primary, Secondary, Services, Natural Environment), and flagged as Positive / Negative or as Idea / Problem.

3.2 Spatial SWOT

The spatial SWOT [9, 10] is an interdisciplinary new tool that was applied/used during the introductive workshop. We introduced two different spatialized SWOT models handcrafted by the workshop participants. After they cogitated on maps and exchanged ideas, they altogether created two models. The first was a spatial SWOT analysis model that concerned critical economic sectors (Fishery, Agriculture, Livestock, Tourism, and Culture). The second model concerned the environment: Energy, Infrastructure, and Natural Environment/Landscape. This tool's main principle was allocating every remark to its specific location. This mechanism provides detailed information, such as the opportunity for touristic development on a beach or the inadequate infrastructure facilities in a particular island settlement. We chose sticks in four colors representing each category of SWOT and papers in different colors representing each economic sector and environment subdivision. Then the stick and the paper were attached as a flag to flag the remarks of the participants, who were impressively creative and enthusiastic during the operation. The following picture (Fig. 3) is the outcome.

All analog data were digitized on GIS and integrated into the spatial questionnaire/digital spatial SWOT results. Those integrated data resulted in helpful information used in the Islandscape Character Assessment study, which is contacted in parallel and collaboration with the main participatory procedures [11].

3.3 Participatory Workshops

In thematic participatory workshops, the goal is to outline the functional space for those involved through design, brainstorming, and information and transfer of expert knowledge. These are in-depth designing workshops (on maps or text, depending on the



Fig. 3. The (analog) spatial SWOT model.

subject) of the individual themes. In order to have meaningful participation of people, some insight for each topic of discussion and through presentations of the necessary information is provided.

Between March 28 and April 1, 2019, Gavdos' residents actively participated in workshops taking place at the primary school of the island. The high participation and the vivid interest in recording the island's issues, problems, and opportunities led to the successful completion of the third phase (see Fig. 2) of the Sustainable Development Plan based on Participatory Planning techniques. The locals reflected their ideas, opinions, and concerns regarding the future of the island following (and constructing) a democratic process and productive dialogue. Five participatory workshops are organized: the introductive one, one about local production communities; one about social solidarity economy; one about energy communities; and the concluding (final) one gathering all results.

The Introductory Workshop. The introductory workshop initiated the procedure with presentations from the facilitators, the mayor, and representatives from the state organization. The workshop aimed to discuss in groups the strengths and weaknesses, opportunities and threats, and through group work, to rig the (analog) spatial SWOT of the island, as described above. The involvement of the locals was very dynamic not only in terms of their number but also regarding the participation of each individual. For four whole hours, people of all ages and backgrounds were divided into groups and sat around tables to capture their opinions, concerns, and ideas about the future of their island. By prolonging the foreseen time of the workshop, they went beyond what was required, laying the foundations for an entirely democratic process and a constructive dialogue that offered organizers and designing team of the development program information that could not otherwise be obtained. Through the introductory workshop, the locals noted the strong points of the island to be the natural environment and the serenity that the island offers; as weak points, the isolation and the problems with waste management and water supply; as opportunities, the restoration of the old settlements and alternative

tourism. Finally, as threats emerged - among others - hydrocarbon mines, the conversion of farmland into forests, and free grazing.

The Local-Production Communities' Workshop. In the Local-production communities' workshop, all participants assessed the production opportunities using a tool oriented toward Community Capital assessment (Community Capital Scan-tool) [12]. Additionally, they wrote and presented their suggestions about the potential productive plans for Gavdos and their involvement in them. This process created the basis for identifying possible synergies between different sectors and actors locally and regionally (Fig. 4).



Fig. 4. Participants discussing and assessing on Community Capital Scan-tool.

The Workshop for the Social Solidarity Economy (SSE). The workshop for the Social Solidarity Economy (SSE) consisted of two presentations. The first presentation explained SSE and cooperatives, while the second gave examples of good practices in Greece and abroad. It was mainly focused on agriculture, tourism, and energy.

The Workshop for the Energy Community. The workshop for the energy community started with an introductory presentation regarding the content and the core of energy communities and the new legal framework for them. The main discussion concerned the possibility of founding such a community in Gavdos, with the participation of the local authorities and several local agents. The pros and cons, as well as the opportunities and

constraints, were analyzed in detail with the help of free dialogue and brainstorming technics.

The Final Workshop. During the final workshop, locals attended a presentation summarizing all the information the previous workshops produced. They had the opportunity to be informed about all the results from the analysis, along with some essential themes and ideas that emerged throughout all the workshops. At the same time, there was space and time for synthesis and collective brainstorming regarding future steps. Furthermore, as shown in Fig. 5, the local citizens filled out the Stakeholders' matrix diagram [13] and assessed some of the final proposals for the sustainable development plan.

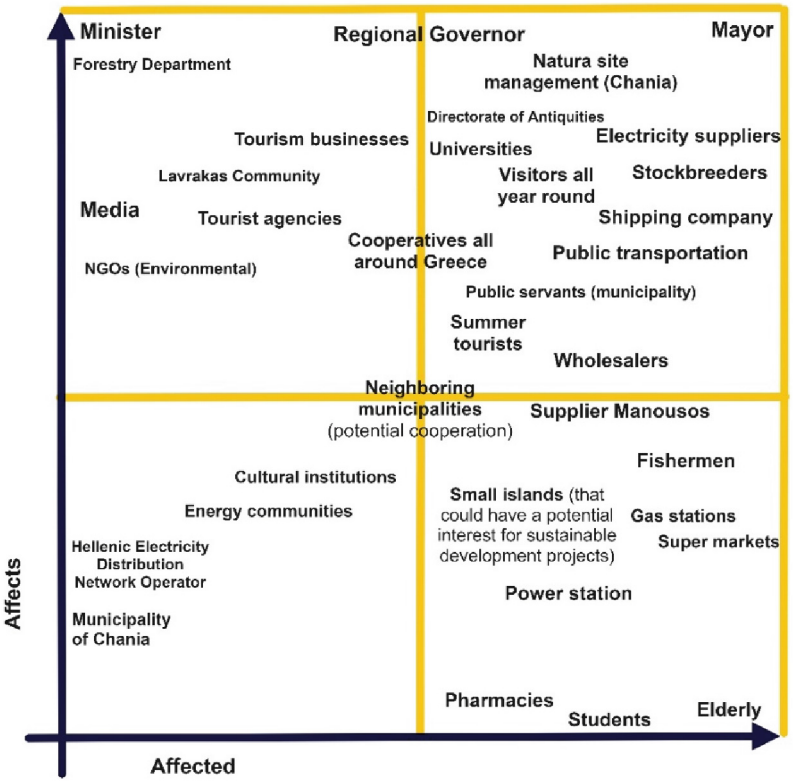

Fig. 5. Stakeholders' matrix completed by the inhabitants of Gavdos island.

3.4 Digital Tools

A crucial step is gathering the people's opinions, both locals and visitors, through interactive maps and digital questionnaires.

Collective Field Trip and Data Collection Form. A collaborative field trip/tour was organized preliminary (2017) with the residents. An online spatial form was created,[5] capturing geotagged notes, photos, and audio. The input concerned the main sectors (production of goods and services, nature, culture, etc.), and the information was categorized as "positive/negative" and "Idea/Challenge."

Online Questionnaire/SWOT. Following (2018), appropriate questionnaires were distributed online during the initial steps (Google form) of the second phase (see Fig. 2).[6] Their answers provided us with helpful material about the characteristics of the island, together with the threats it faces. A similar questionnaire is distributed to the Experts Group. The results of the online SWOT are used as an opening presentation to the inhabitants of Gavdos during the Introductory Workshop. That is a good starting point to frame the discussion.

Spatial Questionnaire/ppGIS. An innovative participatory technique based on a GET-SDI[7] portal is also created (digital spatial SWOT). The participants are invited to follow four simple steps to provide input through a user-friendly software application. Each participant visits the application webpage[8] and logs-in[9], giving their name and e-mail. Then is invited to define the island's important or interesting points[10], routes[11], and areas[12] on an interactive map accompanied by comments or any other data/file (upload function) (Fig. 6).

3.5 Mapping Event - Brainstorming Meetings

Besides digital tools, public consultation is achieved through participatory events. Informative presentations and digital tools are promoted through mapping events organized in central venues of Athens, where inhabitants and 'friends' of Gavdos island came and participated in the spatial questionnaires. This way, they get informed, share ideas and thoughts, and help others to participate online after the gathering.

During the visit to the island, two brainstorming sessions were organized at the cafe and bakery, where people came and talked with the design team about their concerns and additional ideas through freestyle conversations. After the visit to the island, a

[5] GISCloud data collection form.

[6] Preliminary online questionnaire: https://docs.google.com/forms/d/1sZxRryPtjVPgNn2Kh3vRlwPlln4HCmMz-Fm93MqO_YU/viewform?edit_requested=true&fbclid=IwAR2kHSlF7kEllKaO30lEQqtHulZjiSZ9hKG-U2kipepuHkSkSE6d0BJROBw.

[7] https://www.getmap.eu/products/open-source/get-sdi-portal/.

[8] https://gavdos.commonspace.gr/.

[9] Tutorial for log-in: https://www.youtube.com/watch?v=v983Ga1ERUQ.

[10] Tutorial for inserting an interesting point: https://www.youtube.com/watch?v=HulA56dnaXE.

[11] Tutorial for inserting an important route: https://www.youtube.com/watch?v=81qg7J9q7xE.

[12] Tutorial for inserting a challenging area: https://www.youtube.com/watch?v=HVFrASvzqGg.

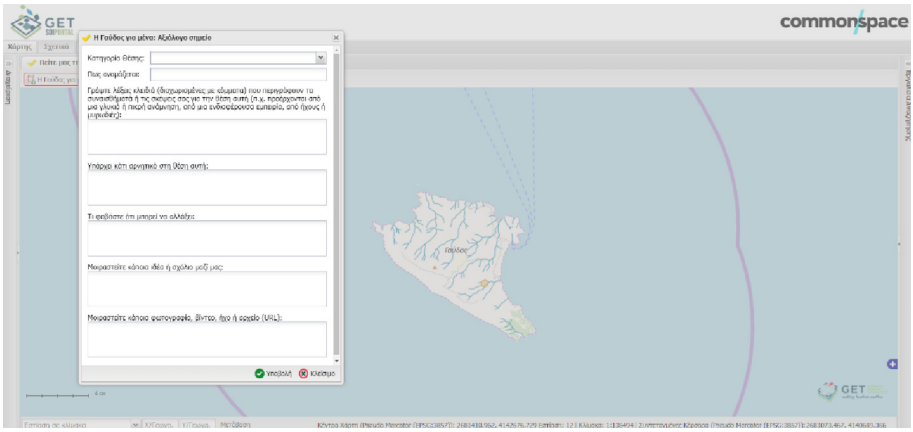

Fig. 6. Screen-shot of the spatial questionnaire.

presentation was held in Paleochora (Crete) informing the citizens of South Crete (in fact, the villages of the southern part of the Chania region) about the process of "Public Participation Planning Project for the Sustainability of Greek Island Gavdos." The aim of informing the neighboring and interested municipalities is their active inclusion and involvement in the development of the sustainability plan.

4 Conclusions

Participatory processes are essential for sustainable development plans following a well-constructed methodology by using a specific toolkit coming from participatory planning and Integrated Spatial Development approaches. Instead of being ostensibly performed, participatory processes should contribute to the abilities and knowledge growth of the citizens and the local actors and empower the locals' active involvement in the decision and policymaking. For that reason, visits were also conducted in the inhabitants' houses who could not join the workshops, also at the remote beach of Lavrakas, where we discussed with the community living there the problems they face and their needs.

The main challenges of small remoted islands include limited access to resources, high costs of goods and services due to dependence on imports, limited economic opportunities, and a small population which can lead to social and cultural isolation. Other challenges include vulnerability to natural disasters, difficulty accessing healthcare and education, and limited political representation [1]. As a permanent characteristic of remote and small islands, the island particularity should be encountered through a tailor-made strategy for local development [13]. The unique characteristics of this small community consisted of 80–100 inhabitants on a very remote island facing transportation difficulties that affected this project a fruitful experience.

We were setting the conditions for emerging cooperation and networks and cultivating a 'participatory culture' for the common benefit [14]. The methodological steps and tools are successful, but the procedure proved more time-consuming than other projects due to remoteness and brutal weather conditions. Significant gaps between the different

phases are a negative factor in the participants' creativity and enthusiasm and should be avoided in future projects. The islanders were not exposed to such a previous process; however, they participated actively and passionately, overcoming issues and conflicts among themselves.

Unfortunately, the subsequent phases, the consultation and the implementation of the final sustainable development plan, are postponed due to changes to the political agenda (local and national elections of 2019). This fact can be demoralizing and counterproductive to future participatory procedures.

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Authors' Contributions. Mougiakou E. devised the main conceptual ideas of the participatory project, conceived the methodological framework and steps, and made the final selection of methods and tools. In collaboration with Karimali E. they designed and organized the participatory procedures of the project. Karimali E. drafted the first version of the manuscript. Mougiakou E. prepared the final document and the figures included in this publication. All authors provided feedback and reviewed the final manuscript.

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