REGIONE DEL VENETO

recharge green

BALANCING ALPINE ENERGY AND NATURE

Report about round tables for the pilot areas Mis and Maè Valley

WP6 Activities,
Veneto Region – Section Economy and Development in Mountain Areas

Alpine SPACE
EUROPEAN TERRITORIAL COOPERATION
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Introduction and purposes

A huge expansion of new facilities and infrastructure related to the use of renewable energies determines changes in the landscape, goods and services that a territory guarantees to communities.

At the same time, some of these changes can also enhance the production of goods, services and biodiversity in a positive way: for example, the management of open areas for biomass production may determine an increase of biodiversity and a greater diversification of the rural economy. However, the effects cannot always be considered as positive: the use of water for hydroelectric purposes reduce the amount available for other purposes, with direct impacts on the aquatic environment; while wind turbines and solar panels on open areas can affect the visual aspects of landscape.

It is therefore important to evaluate impacts on landscape, when considering effects determined by the use of renewable energies on a territory, especially in the Alps. In this case, landscape is considered in a broad sense. In fact, cultural heritage is included too as a result of the “daily life” of mountain communities: as for centuries, thanks to efforts and commitment, they ensured what we can now observe and enjoy.

The implementation of the use of renewable resources in the Alps, following a purely technocratic top-down planning approach, seems to be less and less possible, since it is showing limits in terms of increased conflicts and an obstacle to development. On the other hand, it is necessary to move towards an open and inclusive bottom-up decision system, that takes into account the multiple opinions, knowledge and local expertise of the communities.

The approach tested in the two pilot areas - Mis and Maè Valleys – deeply fostered the participation of local communities and stakeholders. The process can be defined as: 1) voluntary: each stakeholder can decide if participating or not 2) inclusive: local actors interested in the project were involved, 3) transparent, thanks to the information given at various levels 4) efficient: as time schedule was well defined with respect to the planning stages.

Results from the DSS “r.green” were shown to people who live in the two valleys: such results consisted in the first hypothesis of use of water and wood resources, analyzed by the DSS in a scientific and objective way.

Furthermore, the collaboration of the participants revealed to be helpful in the evaluation process of some services related to the use of water and wood. In fact, the process of communication of knowledge and self-experience resulted in a more realistic cartographic information, previously built on institutional and scientific base.

Finally, participants suggested a ranking in order to prioritie a series of "values", basing on their knowledge and personal experience, while answering to a questionnaire (see Appendix below, in Italian).

In addition to technical and cognitive information, it was also possible to collect more general and "political" suggestions regarding the use of resources in the two pilot areas, thanks to a conscious, critical and animated discussion.

Methodology

The participatory approach was developed through the "focus group" technique. This is based on a group of discussion led by one or more facilitators who help the participants to focus critically on certain subjects - in this case the use of water and wood for energy purposes, to express their point of view, collect critical elements and analyze the shared opinions regarding central questions on the actions of the project.

The method bases on the idea that you can get a larger amount of information through discussion among the participants of a group, compared to conducting individual interviews, since the exchange generates new ideas. Generally, teamwork involves a limited number of people and can last about two hours.

Focus groups were organized in two parts with a time interval of 4-5 weeks. Such period of time between the first and the second meeting was very useful as people had the possibility to process the raw information received, and to develop a possible debate from the reflections made by citizens/administration within their family/social contacts.

Table 1: categories and participants of the focus groups, for each pilot area

Focus Group	Category	Participants
Mis valley (Total = 30 people)	Local administration	Major, deputy major, council member, representative from hamlet
	Environmental associations	WWF, Acqua Bene Comune,
	Local Associations	Proloco, Study centre S. Barbara, local Committees
	Sport and recreational associations	Italian Alpine Club (CAI), Per Altre Strade
	Other associations	Civil protection, Consumerism association, Committee for the river requalification
Maè valley (Total = 38 people)	Local administration	Major, council member
	Collective ownership "Regole"	Regola Grande di Mareson, di Coi, Regola di Bragarezza, Comitato ricostituzione regole di Forno di Zoldo
	Environmental associations	Acqua Bene Comune,
	Sport/recreational associations	Italian Alpine Club (CAI)
	Citizens	Teacher of primary school, farmer, beekeper, retireds

The first focus group was held in four distinguished meetings during the afternoon at the municipalities of Gosaldo and Sospirolo for the Mis Valley, Zoldo Alto and Forno di Zoldo for the Maè Valley. People involved were primarily selected from the categories of stakeholders suggested by the experts during the interview. Participants of the first informative meetings -

organized in the valley in the previous months - were also invited. Finally other local potential stakeholders were also intercepted through a distribution of posters and postcards in the information points and aggregation centres (town halls, offices of Mountain Unions, libraries, bars etc.). The organization and management of the meetings was followed by the company Sprinter[1] Ltd. (Codroipo – Udine).

During the first meeting the project was briefly explained, to ensure an homogeneous mind-set among the participants, especially for those who had not been involved in the project yet. Then the results processed by the DSS about potential energy production from forest biomass and water have been shown. Afterwards, participants were asked to give their opinion about the energy scenarios and the opportunity to use or not these resources. In particular, suggestions regarding additional surfaces to be used for biomass or new lines/points for power plants were collected. In the same way, suggestions were collected about streams and typologies of power plant to be implemented for the use of water.

During this meeting, we explained the findings about the interaction between ecosystem services and the use of water/wood. The University of Padova[2] elaborated maps related to some services, such as recreational activities (hunting, mushroom picking, fishing), ecological quality of water, sports opportunities, woodlands and meadows, and explained how they were generated.

Participants were then provided of some material, consisting of A3 format maps, and were asked to contribute, starting from their personal knowledge, adding or revising information. Furthermore, we gave the possibility to send material, request further information or expose criticism, doubts, suggestions, to a specific mail address, before the second meeting.

The second round table, carried out in a single meeting, was focused on ensuring a "synthesis of the valley": for the Mis Valley it was held in Sospirolo and for the Maè Valley in Zoldo Alto.

Many feedbacks on general aspects were collected. In confirmation of the importance that the anthropological dimension assumes in the assessment of ecosystem services, participants were asked to rank in order of importance (1 = extremely important and 7 = least important) the values present in their valley, referring to their own experience, perceptions and preferences through a questionnaire (see Annex).

The categories of ecosystem services were expressed as values of the territory in relation to the activities and interaction between the community and the territory itself. Seven values were finally identified:

- Environmental
- Economic
- Touristic and recreational
- Social
- Emotional-sentimental (“Family”)
- Historical and cultural
- Aesthetic and landscape

[1] Regional Decree of appointment n°108/ 13.10.2014 for Sprinter srl (Codroipo – UD).
[2] Regional Decree of appointment n°108/ 12.09.2013 for Università di Padova, collaboration with prof. Davide Pettenella and dr. Alessia Portaccio.

Participants shared their ranking with the group, justifying and commenting their own choices and, when possible, drawing the different categories of maps on big blank maps: in this way they could provide new elements to be considered for the analysis of ecosystem services in the valley.

This participatory process was very useful for the project: in fact, it was possible to get a ranking of ecosystem services for the two valleys, that shows the opinion of local stakeholders and collect information on several social aspects.

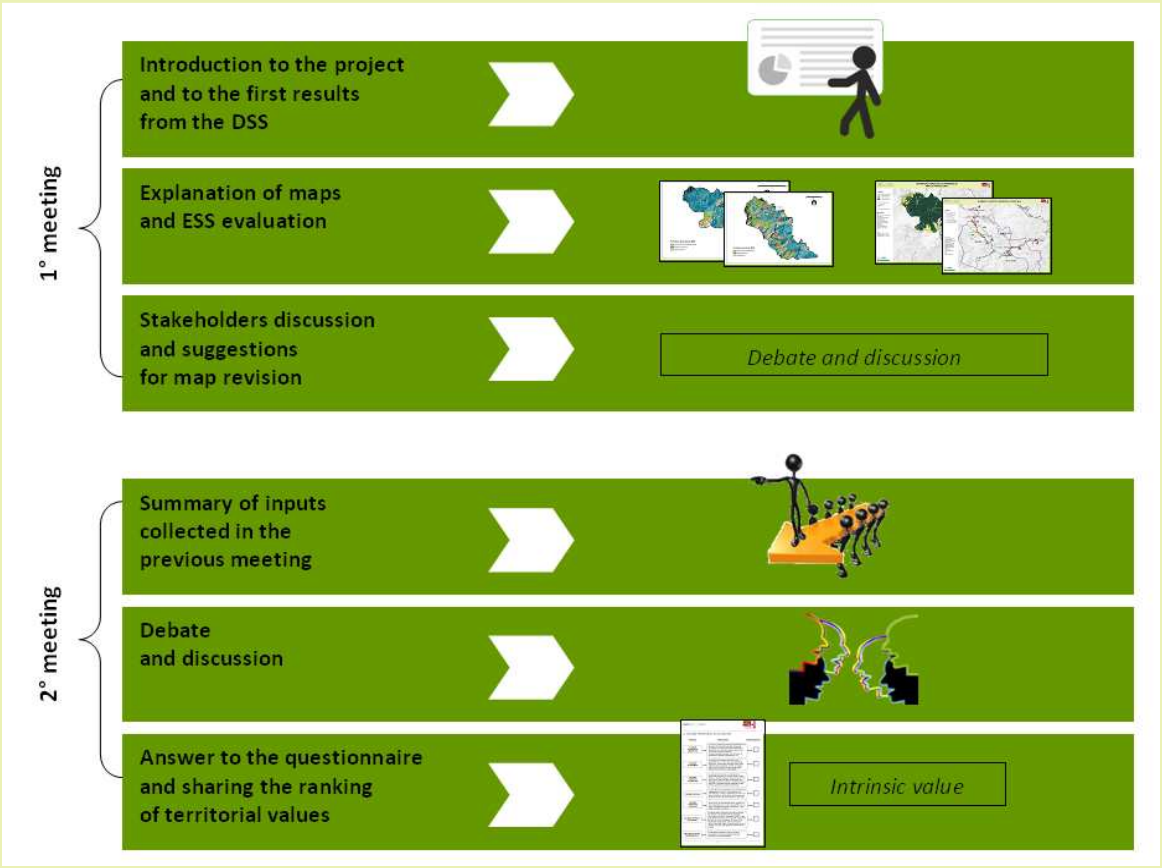

Figure 1: summary scheme regarding focus groups methodology.

Results

General inputs

In general, participants' suggestions were addressed to the improvement of the energy process at the valley scale; in particular, it was underlined the need to guarantee some aspects, as the following:

1) involvement of local communities in decision process should be guaranteed from the first steps of the process itself;

2) energy efficiency and saving should be considered first of all the other aspects, both for existing structures (old and to be restored) and hydropower plants;

3) the actual energy consumption should be evaluated - starting from this point, energy resources should be used only for self-consumption;

4) participants were disapproving subsidies especially in the hydroelectric field. They make convenient big investments, causing the exploitation of streams and heavy consequences on consumers.

Inputs regarding forest biomass

Concerning forest biomass, both for Mis and Maè valleys, the stakeholders underlined the need to use more forest area with respect to what is now subjected to planning. At the same time, they stated the difficulties to do it, especially for the division of forest area managed by private ownership, as well as the need to update the present laws on this topic.

In particular, in the Maè Valley there is the need to use only processing residues for biomass purposes to safeguard the market and the chain of structural products with higher added value.

Furthermore, on one hand, some stakeholders underlined the importance of a proper evaluation of costs and benefits for new biomass power plants in small mountain valleys. On the other hand, it was recognized that these investments have important effects both for economy and environment. In fact, they represent a driving force for companies belonging to the forest sector, their activities favours the maintenance of open spaces and the use of the material in the river bed, and that reduce the risk of fire due to a greater contribution of green plant material.

For Mis Valley, some suggestions were provided on forest areas recently developed, that could represent an additional source of biomass. For example, such areas have been identified in the lower part of the basin, along roads and power lines, and in some former grassland areas.

Potentially negative effects, identified by the stakeholders, refer to air quality and the potential concentration of pollutants in the Alpine valleys. In some cases, due to the wintry

climate, poor ventilation and thermal inversion phenomena, local weather conditions are unfavourable to the location of these installations.

Inputs regarding water

Considering the use of water, many participants did not consider as possible any further exploitation of this resource. In particular, in the case of Mis Valley, because of the recent court case[3], the “zero implementation option” should be taken into account.

However, in both valleys participants were favourable to systems of off-grid micro-generation according to specific situations. For example, for the Mis Valley, they suggested the use of hydropower for an information point and a small village in the Park area.

The negative effects referred to "competition" with other uses of the water resource of the Alpine valleys. For instance, parts of streams have been already derived to provide water for snow making, or the objectives of maintaining the quality of rivers, especially in relation to the lack of purification systems for wastewater.

Some participants underlined how the withdrawal of water for hydroelectric purposes and low values of Minimum Environmental Flow is changing the ecology of rivers. For example, some effects on birds were noticed, as the recent penetration in the valleys of unusual species such as herons, that find food in water with lower flow rate.

It has also been recognized by the majority of present people that there are now very few parts of untouched streams: they represent a unique environmental and intrinsic value which should be absolutely preserved. This situation was caused by an historical exploitation of this resource in the Province of Belluno, especially in the second half of the twentieth century.

Moreover, concerning hydropower, the local government representatives stressed the need and urgency of a reform of the State regulations and the procedures at the regional level, in order to guarantee the preservation of the mountain environment and the economies of the valley.

In particular:

- A reform of laws at the national level is necessary in the frame of the authorizations for water derivation, for constructing and operations on hydroelectric plants, for taking into account environmental protection, landscape and local communities as priority parameters of evaluation that cannot be conditional to the criterion of greater energy production;

- A reform of laws and administrative procedure is necessary at the regional level, related to the authorization process for the granting of derivation and for the construction and operation of hydroelectric plants, so that the jurisdiction would be concentrated at the provincial level, at least for the Province of Belluno;

[3] The judgment 19389/2012, in relation to the National Framework Law on Protected Areas L. 394/1991, establishes that within the Reserve Areas is forbidden to modify the hydrological regime as this could compromise the safeguarding of landscapes and natural environments. The judgement blocked the construction of hydropower plant in Mis Valley, that was authorized through EIA procedure.

- Local authorities should have the opportunity to express a binding opinion in granting the authorization for construction and operation concerning streams where a request of water derivation is in progress;

- Areas of particular environmental, historical and cultural importance, has to be identified in order to forbidden granting additional authorization for water derivation and consequent construction of new facilities;

- A certain amount, calculated on the actual production of the plant, should be given by law to local authorities;

- The presence of specific equipment to certify during all the day the respect of the MEF should be mandatory, no matter if the managing authority is private or the local authority itself.

Inputs regarding values

The results obtained by the questionnaires delivered to the stakeholders correspond to ordinal values, and not to cardinal numbers, in fact, the score expresses an order of preference/importance. In order to sort the ecosystem values of the two valleys, the correct method would refer to the values of mode and median[4]. However, because of the available population of respondents is restricted, there could be matching values for different values or it could not be possible to achieve, for example, a value for each class. To overcome these problems, it was decided to calculate the percentage of people who have attributed a certain class to each value, pondering the classification on the number of people who have expressed these values.

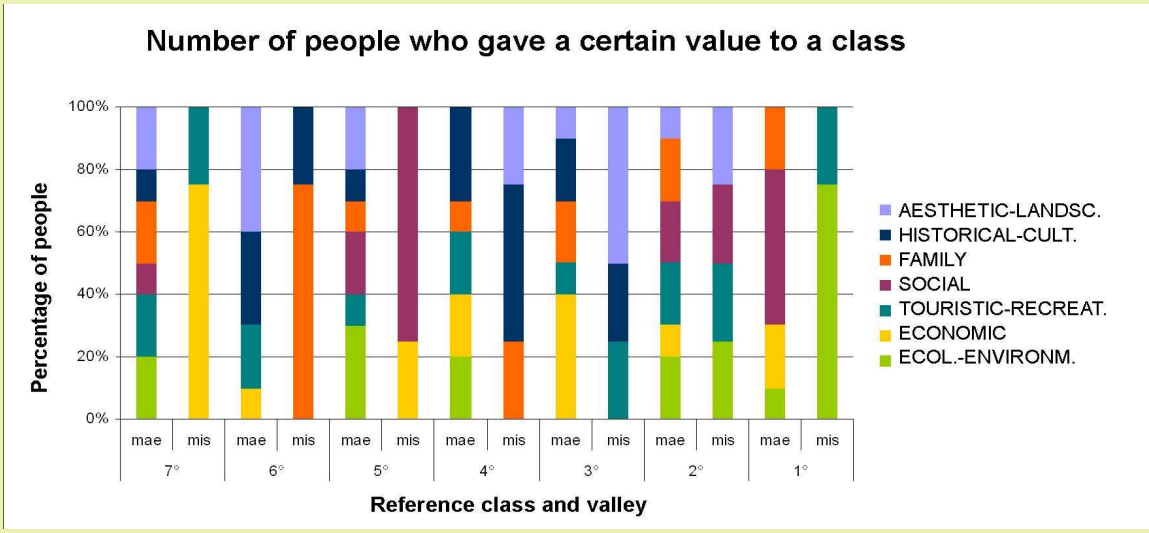

Figure 2: number of people (in percentage) who gave a certain value to a class. Every single element composing the histogram (the different colour represent a specific value) represents the % of people that gave a certain value to that class.

[4] Given a set of data, the **mode** is the value that appears most often. The **median** is the number that occupies the central position in an ordered set of data. The **mean** is the sum of a list of values divided by the number of values in the list.

The calculation sorted the values in descending order, starting with the most important ones: we considered which values were indicated by most of the respondents in the first three classes, then in the first two and then in the first class (excellence). Comparing these rankings with those resulting from the analysis of mode, median and average for each type of value, it was possible to obtain the final results for the valley. This method considers separately two terms having apparently the same value, and then compares them referring to other variables for determining the priority/weight.

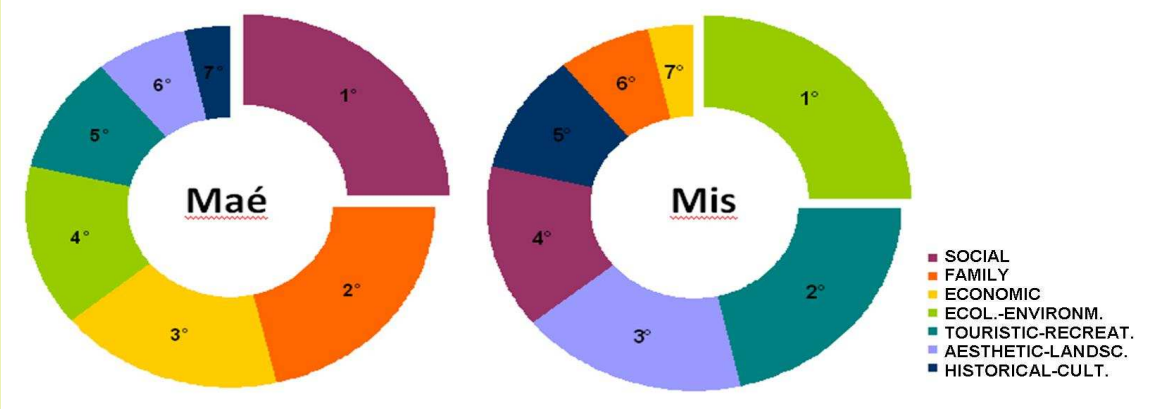

Figure 3: classification of values. The two graphs show the rankings of the values for Mis and Maè valleys. The areas have different colours depending on the value represented and sizes depending of the importance of the second stakeholders

As shown in Figure 2, the social value is at the first place in Maè Valley: in fact, stakeholders argued that the territory was subjected to depopulation in the recent decades. Therefore, occasions for aggregation are now rare although this value is perceived as one of the most deeply present in their valley. In confirmation, the second position is occupied by emotional-sentimental valence, closely related to the social value. The third place is occupied by the economic value, identified with the tourism sector, which is considered the key to the potential recovery for valley.

Some participants underlined that, in addition to the preservation of "ecological networks", the availability of infrastructural and technological networks should be ensured, so that the active components of the population, especially young people, could maintain their activities in the valley.

In Mis Valley the first class is attributed to the ecological and environmental value: there are many important sites for nature conservation and the preservation of biodiversity (as the Belluno Dolomiti National Park). At the second place, priority is given to the touristic-recreational value: the participants underlined that the territory needs an economic recovery and not-impacting kind of tourism could be the answer to this need. Aesthetic and landscape value is evaluated as third for order of importance, in direct connection with touristic aspects.

Considering the importance revelead to the social and environmental values, while for the two valleys the ranking is different, this analysis shows how involvement of local stakeholders in decision-making process is really important, since they can provide valuable information for the evaluation of the territory.

Starting from the list of personal priorities, each participant was asked to specify important places and events, especially in relation to the environmental and landscape, as well as emotional and sentimental value. and the indicated features were directly reported on a blank map in A0 format. This activity allowed to an abstract perception into a real valley dimension.

Questionnaire on values

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Alpine Space

QUESTIONARIO
Focus Group – Zoldo Alto 12 Marzo 2015

Le molteplici caratteristiche e i diversi aspetti dell'ambiente della vostra valle assumono per ciascuno una valenza diversa in base alla propria esperienza e percezione. Sulla base di questo, vi chiediamo di classificare le valenze individuate per la Val di Zoldo per ordine di importanza.
Si precisa che i dati raccolti saranno elaborati e resi noti esclusivamente in forma aggregata, ai sensi del D. Lgs. 196/2003.

1. INFORMAZIONI GENERALI

- Genere:

  Maschio Femmina

- Età:

  < 30 anni 31-40 anni 41-50 anni 51-60 anni > 60 anni

- Rappresentante di/appartenente a:

Ente pubblico/Ente privato/ Associazione/Comitato

Denominazione _____

Altro (es. privato cittadino): _____

- 1 -

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2. VALENZE TERRITORIALI IN VAL DI ZOLDO

Valenza	Descrizione	Classificazione
VALENZA ECOLOGICA-AMBIENTALE	Una buona qualità degli ambienti naturali/*habitat* sta alla base del buon funzionamento di qualsiasi ecosistema. Il mantenimento della biodiversità è essenziale per il benessere umano, oltre che per l'economia dell'intera collettività. Pensate a qualità dell'acqua, ruolo dei boschi di protezione da dissesto idrogeologico, ecc.	☐
VALENZA ECONOMICA	Le valli alpine da sempre garantiscono alle popolazioni che ci vivono una certa sostenibilità economica, sia derivante dall'utilizzo delle risorse materiali (legno e legname, prodotti non legnosi, acqua, ecc.) sia perché fornisce opportunità di impiego tramite il turismo o altre attività.	☐
VALENZA TURISTICO-RICREATIVA	Le valli alpine forniscono una molteplicità di opportunità ricreative. Le persone (turisti, visitatori, sportivi e residenti) scelgono dove trascorrere il loro tempo libero sulla base delle caratteristiche del paesaggio naturale o coltivato. L'ambiente, infatti, in base alla sua qualità/servizi/accessibilità, fornisce diverse opportunità di godimento del luogo.	☐
VALENZA SOCIALE	Le valli alpine sono tipicamente zone che agevolano l'aggregazione sociale. Il vivere quotidiano, la permanenza in condizioni ambientali "scomode" e lo sforzo di gestire e conservare le risorse disponibili, favorisce un senso di comunità tipico di ogni valle.	☐
VALENZA AFFETTIVA-FAMILIARE	Alcuni luoghi, più in particolare di altri, rivestono un ruolo importante da un punto di vista affettivo: il loro valore è strettamente legato all'esperienza e alla storia personale di ciascuno.	☐
VALENZA STORICO-CULTURALE	La valenza storico culturale di una valle si esprime, per esempio, nel mantenimento dei paesaggi storicamente importanti ("paesaggi culturali"). Inoltre, gli ecosistemi forniscono una ricca fonte di ispirazione per l'arte, la cultura, la religione, il folklore. Alcuni aspetti della cultura locale (pratiche, credenze, racconti tramandati, lingua, comportamento, senso di identità) sono legati agli oggetti fisici dell'ambiente e ai luoghi.	☐
VALENZA ESTETICO-PAESAGGISTICA	Le valli alpine presentano luoghi di interesse paesaggistico, associati ad aspetti ambientali riconosciuti e di grande bellezza.	☐