

1 - CONTEXTE

"Viticulture de pente où les conditions de montagne sont particulièrement importants."

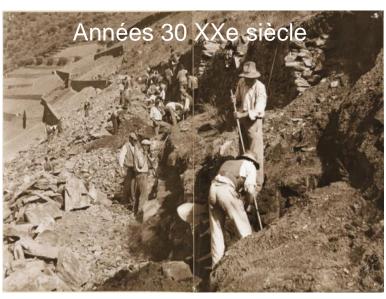


1 - CONTEXTE

VIGNOBLES EN TERRASSES

- Réduction de la pente
- Murs de schiste
- Lignes d'écoulement des eaux pluviales







1 - CONTEXTE

- Changement Climatique Douro (Jones, 2012):
 - ✓ trois scénarios d'émissions futures (B2, A1B, A2) pour 3 périodes (2020, 2050, 2080)
 - ✓ <u>augmentation de la température</u> (saison de croissance)
 - 0.8-1.8°C (2020)
 - 1.8-4.3°C (2050)
 - 2.5-6.6°C (2080)
 - ✓ <u>diminution précipitations annuelles</u> (en particulier pendant la saison de croissance)
 - 0-7% (2020)
 - 0-15% (2050)
 - 0-22% (2080)



- REAL COMPANHIA VELHA (fondé 1756)
 - > 1000 hectares de terrain au Douro dont 530 hectares de vignes: 5 Quintas
 - Développe des travaux de recherche en coopération avec différentes entités (ex. ADVID, PORVID, UTAD...)

2 - ACTIVITÉS

Trouver synergies entre deux aspects des changements climatiques – l'atténuation et l'adaptation

ATTÉNUATION

(objectifs réduire les émissions et promouvoir la séquestration du carbone)

- ✓ Utilisation de modes de production plus durables (production intégrée, agriculture biologique)
- ✓ Meilleure gestion des déchets
- ✓ Labour du sol minimum
- ✓ Promotion de couverture verte entre rangs de vigne

✓ Application de kaolin (argile blanche) contre le stress hydrique et

thermique



2 - ACTIVITÉS

ADAPTATION

(développement de résistance aux conditions climatiques changeantes)

✓ Variétés peu répandues (autochtones), mieux adaptés aux scénarios futurs – champ expérimental



Tinta Francisca



Rufete



Malvasia Preta

Gestion de l'eau – impact de l'irrigation déficitaire sur raisin et vin

3.1 - Labour minimum et couverture verte du sol



- Travail réduit du sol (3 en 3 ans)
- Promotion de couverture verte en vignoble
- Réduction des problèmes d'érosion en vignobles mécanisé
- Augmentation de la biodiversité





3.2 – Gestion d'eau du vignoble

 Vignoble culture largement non irrigué, mais avec fort stress sont bien connus les effets négatifs sur la qualité





- Depuis 2002 test d'irrigation vignoble (accompagné par ADVID)
 - ✓ 3 niveaux (60% ETc, 30% ETc, 0% ETc)
 - ✓ Résultats importants sur paramètres du raisin et vin
 - ✓ Information pour le moment et l'avenir, capable d'anticiper les futures variations interannuelles (température, precipitations)

3.3 – Diversification de cépages

- Portugal riche patrimoine cépages autochtones (> 250)
- Douro:
 - 1920-1980 cultivé 120 cépages en mélange de champ ("field blend")
 - 1980-1990 reconversion de vignobles avec réduction de variétés (5 rouge et 5 blanc), planté individuellement





3.3 – Diversification de cépages

- -Real Companhia Velha champ expérimental de cépages (21 blanc, 15 rouge): diversification et adaptation aux scénarios futurs, avec vinification individuelle
- -Certains vins sont déjà disponibles sur le marché





4 - CONCLUSIONS

-Viticulture durable au Douro, capable d'améliorer la qualité de l'environnement et des moyens; qualité de vie des agriculteurs et société





-Mobiliser ressources internes et externes; coopération avec centres de recherche et universités

4 - CONCLUSIONS

Fondamental:

- Travail en partenariat
- Résilience (facteur temps est essentiel)

"La production de vin est relativement simple, seuls les deux cents premières années sont difficiles" (Baronne Philippine de Rothschild, 1933-2014)





Merci!

Thank You!





TERRES d'aVENIR

Adaptation des Pratiques Culturales au Changement Climatique

(AP3C) Projet 2015-2019



Xèmes Assises Européennes de la Montagne - Bragança (Portugal) 04/10/2016







Scientifique :

Evolution climatique observée

AP3C : le contexte

• Evolution climatique simulée (incompatibilités...)

• Technique :

- Peu d'outils en adaptation au Changement Climatique
- Peu d'outils vers le proche futur (0 à +30ans)

Opportunités :

- Sensibilisation accrue de la profession agricole aux impacts des aléas climatiques
- Volonté politique : Chambres d'agriculture, CGET
- Existence d'un projet pionnier en Creuse (2012-2015)

Changement climatique observé, simulé

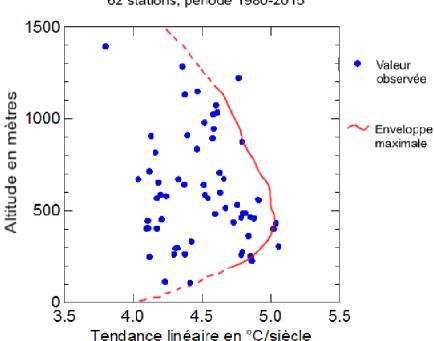


Exemple de l'élévation de la température maximale quotidienne

Observation/Altitude

Réseau Massif Central

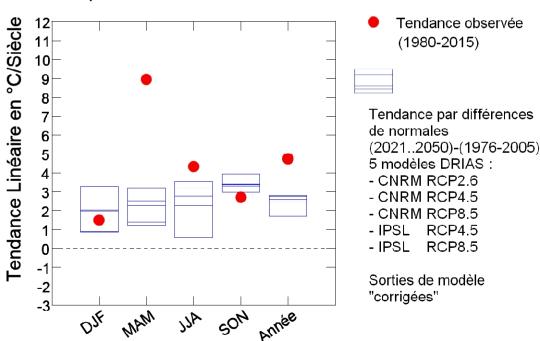
62 stations, période 1980-2015



Observation/Simulations

La Courtine (Creuse, altitude 765m)

moyennes saisonnières et annuelles







AP3C : le projet

- Pilotage : SIDAM (Chambres d'agriculture départementales du Massif Central)
- Budget :
 - 1,6M€ sur 4 ans (2015-2019)
 - Régions administratives, CGET, Chambres d'agriculture
- Déroulement synthétique :
 - Projections climatiques (température, précipitations, ETP 2015-2040(2050))
 en compatibilité avec les évolutions climatiques déjà engagées
 - Production d'indicateurs agro-climatiques projetés
 - Expertise des indicateurs (conseillers agricoles)
 - Impacts, adaptation
 - Formation des conseillers et des agriculteurs

Impacts agronomiques (projet Creuse)



• Herbe :

- Démarrage plus précoce
- Raccourcissement des cycles de production
- Concentration de production au printemps
- Allongement de végétation en automne (plus d'arrêt hivernal dans les zones favorables)

• Cultures:

- Stress thermiques et hydriques accrus
- Levée des contraintes thermiques
- Démarrages potentiels plus précoces



AP3C : réplicabilité



- Une expertise scientifique et technique poussée :
 - Homogénéisation de données météorologiques quotidiennes
 - Modélisation climatique statistique (SWG)
- Une volonté politique
- Une recevabilité sociétale (négation du Changement Climatique)
- Une construction concertée de l'expertise aval
- Une auto-limitation de la quantité d'indicateurs produits :
 - Plus beaucoup de limite informatique!
 - Définition d'un périmètre...
- Une politique de diffusion des connaissances produites





Merci de votre attention

vincent.cailliez@creuse.chambagri.fr

Site Web du projet AP3C: http://www.sidam-massifcentral.fr/projets/climat/ap3c























Green Processing of Wild Berries Social Enterprise



WE PLANNED AND ACCOMPLISHED:

- A photovoltaic plant with 27.5 kW of installed power (fitting radiant surface, mounted photovoltaic panels, mounted inverters & enclosures, rebuilt installations, technical connection approval, connection contract, contract to supply, supply timesheets, measurement agreement, certificate of supply)
- A berries processing unit (organize the processing space)
- We have created a new brand "AROMA MUNTELUI" "MOUNTAIN FLAVOR"

WE PLANNED AND ACCOMPLISHED:

- A best practice guide,
- Training and hiring of 3 persons that will work in the processing unit (80 hours of theoretical and practical training)
- An initiation training for a number of 435 project beneficiaries
- An exchange visit in Norway
- A study by NIBIO NORWAY

WE PLANNED AND ACCOMPLISHED:

- An innovative component,
- Use of green energy for berries' processing,
- Design of a new brand "mountain product",
- To give added value to berry products from the small farms of our members,
- To use a manufacturing unit for processing,
- Established a "Social Enterprise".

WE PLANNED AND ACCOMPLISHED A 27.5 Kw PHOTOVOLTAIC PLANT



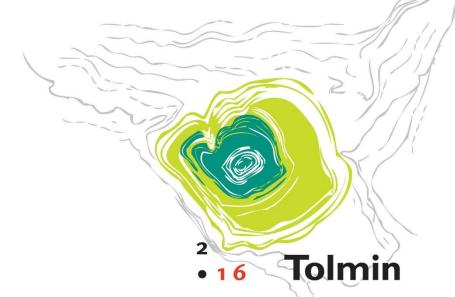
WE PLANNED AND A ACCOMPLISHED A BERRIES PROCESSING UNIT



WE PLANNED AND ACCOMPLISHED A NEW BRAND



THANKS YOU FOR YOUR ATTENTION!



A new governance approach: how a local community has developed an energy policy to deal with climate change

Miro Kristan, EMC Braganca 2016





Context of the initiative

- Climate change is here what now?
- Who should take action?
- Energy...
- Mountain areas more affected Alpine space as a case study, role model.
- Bottom up Alpstar project connecting ambitious regions.
- NW Slovenia as the pilot (5 municipalities)

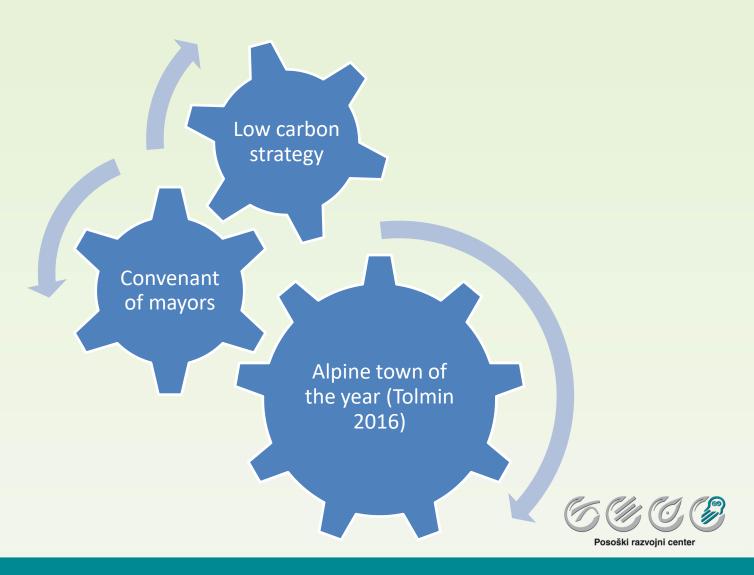








The process ...







Examples of results (Tolmin municipality)

- Bohinj railway car train, multimodality
- Cycling as transport in rural areas
- E-mobility
- Refurbishment of public buildings
- Public lighting
- Mapping of RES potential (GIS)
- ... (user behavior)







Innovative points

- Not a project but a process
- Public participation, bottom up
- Commitment of single stakeholder
- Energy is hidden in all sectors, importance of cross sectorial approach
- Regional approach for tangible results







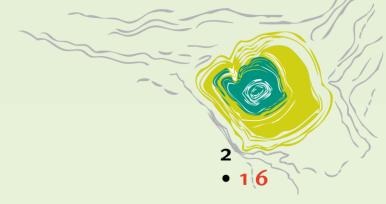
Key elements for transferability

- Motivation of decision makers
- Make it an opportunity
- Work on simple measures
- Don't start/stop with financing issue









Self – initiative & participation

What is my contribution?







Lessons from population reintroductions in mountain ecosystems and the importance of feasibility assessment

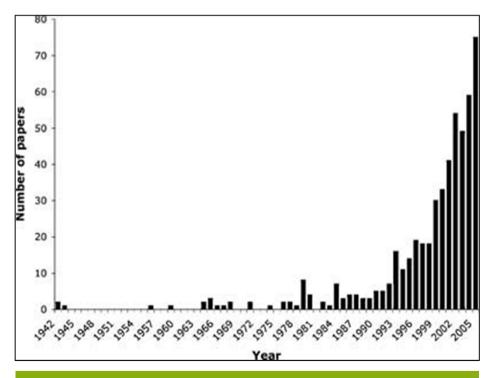
José María Fernández-García¹, Ana Gracianteparaluceta¹, Eukene Rueda, Joseba Carreras², Marta Olalde², Jabier Sesma² & David Campión³



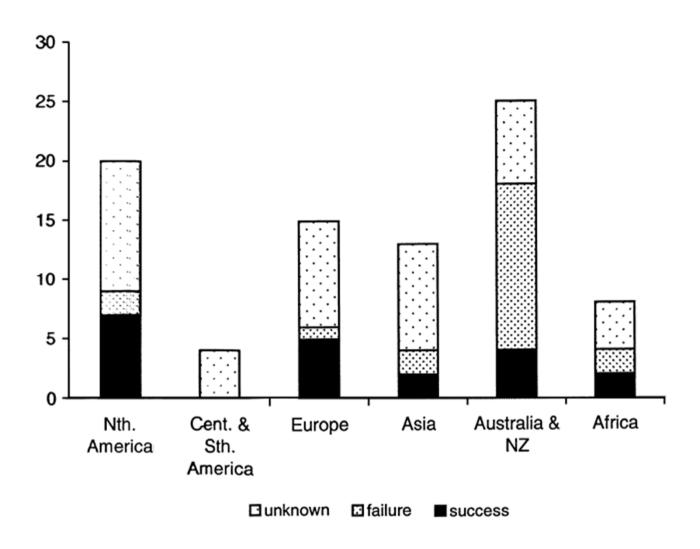
Hazi Foundation
 Provincial Council of Álava

 Postión Ambiental de Navarra





Number of reintroduction-related papers published in peer-reviewed journals per year (Seddon *et al.*, 2007).



Reintroduction success throughout the world (Fischer & Lindenmayer, 2000).

Level	Criteria
Ist Necessity of the translocation	(1) Is the species or population under threat? (2) Have the threatening factors been removed or controlled, or were they absent in the release area? (3) Are translocations the best tool to mitigate conservation conflicts?
	(4) Are risks for the target species acceptable?
2nd	
Risk evaluation	(5) Are risks for other species or the ecosystem acceptable?
	(6) Are the possible effects of the translocation acceptable to local people?
	(7) Does the project maximize the likelihood of establishing a viable population?
3rd Technical and logistical suitability	(8) Does the project include clear goals and monitoring?
	(9) Do enough economic and human resources exist?
	(10) Do scientific, governmental, and stakeholder groups support the translocation?

Criteria to
assess
feasibility of
translocation
projects (Pérez
et al., 2012).



















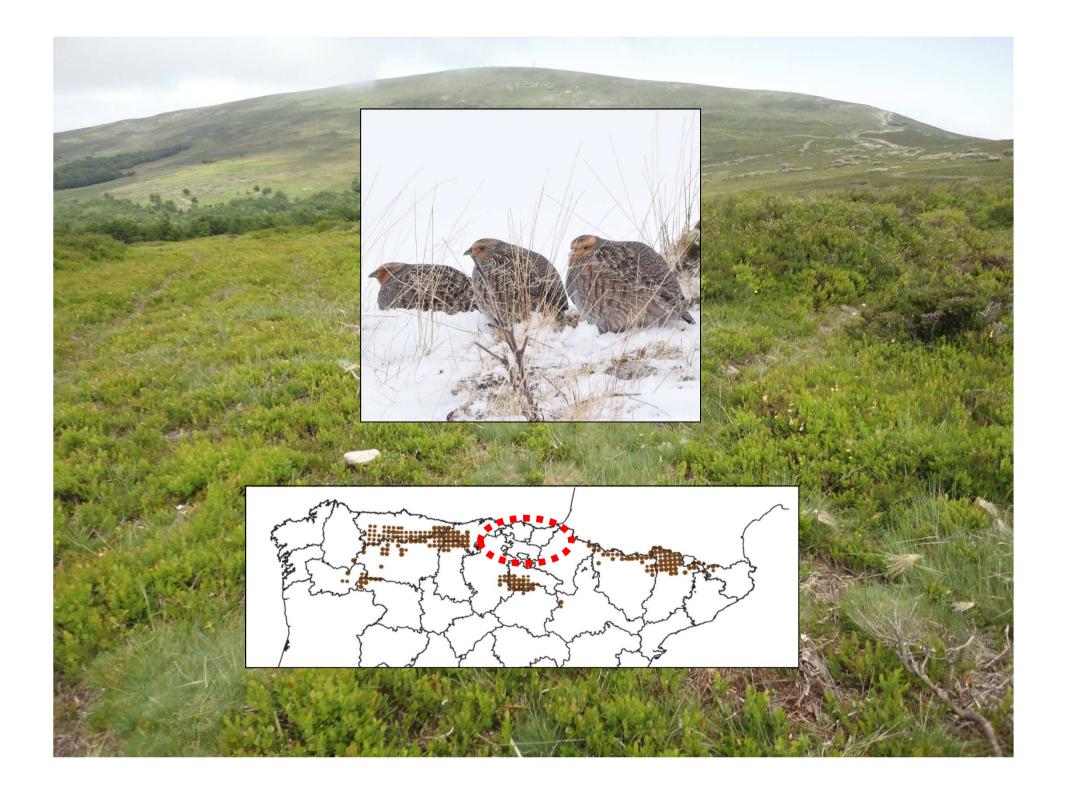


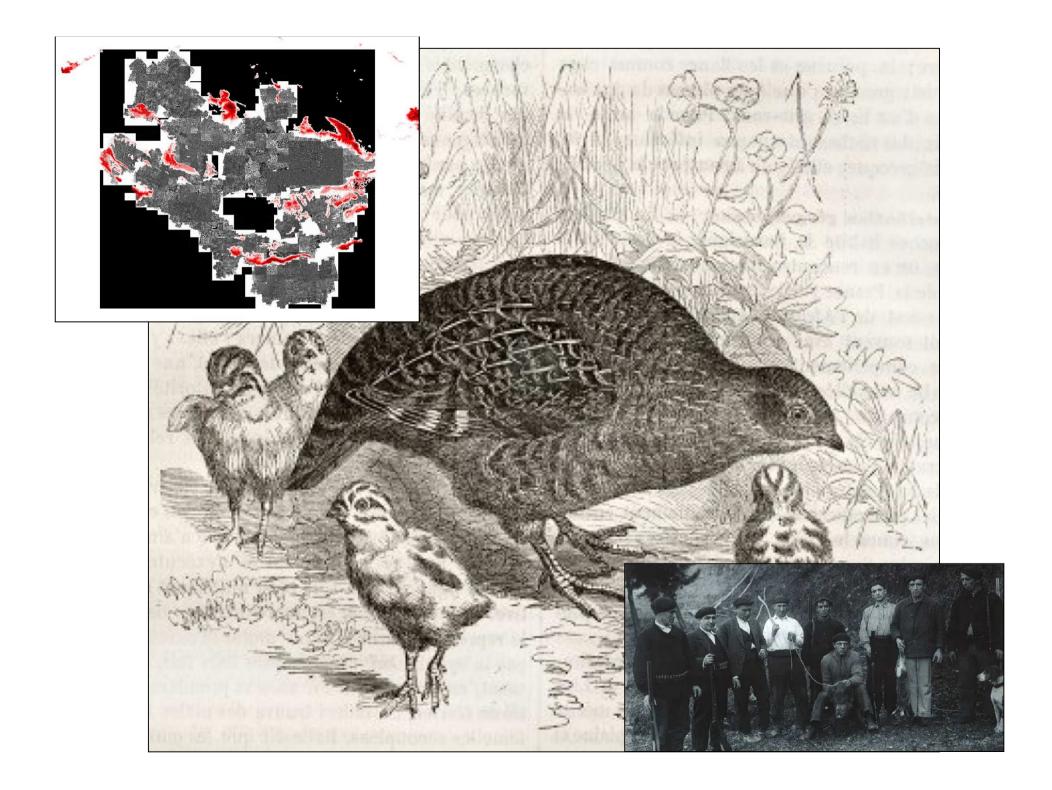


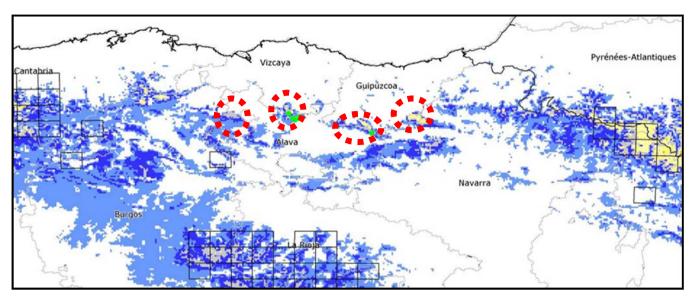




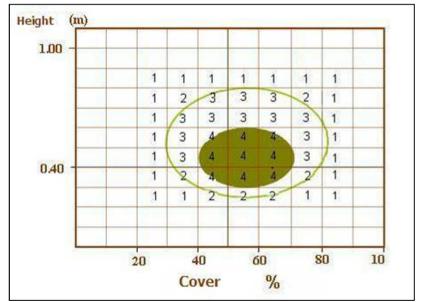






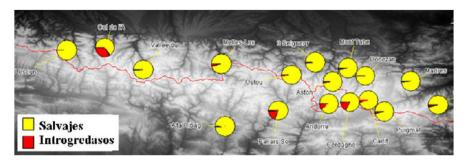


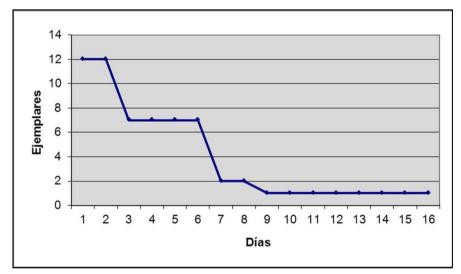




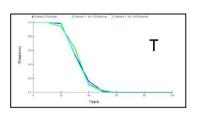


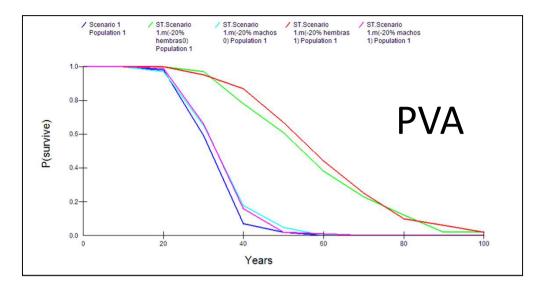


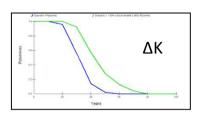


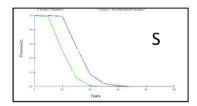


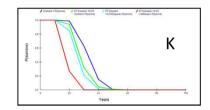


















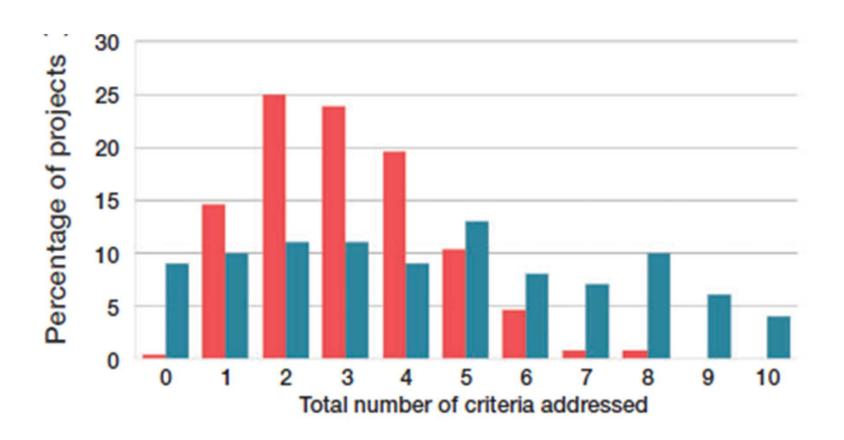


Lessons learned

- (1) Survival of translocated, captive-reared birds was too low.
- (2) Changes in rearing protocols and stimulation of anti-predation behaviour are desirable.
- (3) Translocation of wild birds should be attempted and assessed.
- (4) Long-term political and financial support needs to be secured.

Key messages

- (1) Restoration/reintroduction techniques are complex, demanding solutions with uncertain outcome.
- (2) From a cost-effectiveness perspective, the conservation of threatened populations should be addressed before their decline is irreversible.
- (3) Reintroduction attempts, either successful or failed, should be documented and published.
- (4) Pre-project feasibility assessments should always be conducted.



Percentage of translocation projects that adressed the number of criteria proposed to assess feasibility (Pérez *et al.*, 2012).









Thanks to...

- Claude Novoa (ONCFS), Joan Curia, Paco Pociello and Aïda Tarragó (Generalitat de Catalunya), Marc Mossols and Landry Riba (Govern d'Andorra).
- Asociación de Cotos de Caza de Álava, Asociación Ehiza, Centro de Recuperación de Fauna de Mártioda and Fedération Regionale des Chasseurs de Midi-Pyrénées.
- Pelayo Acevedo, Josefina Barreiro, Carlos Cabanas, Fernando Carasa, Jesús Enjuto, Eloy Fernández de Montoya, Jesús de la Fuente, Manuel Antonio González, Jesús Iniesta, Tomás Izaga, Celestino Mendía, Leonardo Muro, Unai Oscoz, Nerea Ruiz de Azua, Fran Silván, Ibon Telletxea and Javier Villasante.







Payments for Ecosystem Services in Natura 2000 sites in Lombardy

Bruna Comini - Enrico Calvo ERSAF







Life+ Making Good Natura Making public Goods provision the core business of N2000 **LIFE11 ENV/IT/000168**

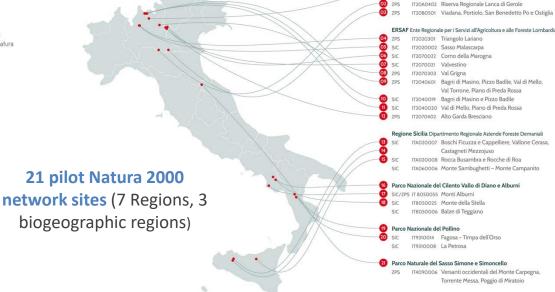








9 pilot Natura 2000 network sites belonging to the Regional Public Forests managed by ERSAF



CURSA - University Consortium for Socioeconomic and Environmental Research WWFRP EURAC European Academy of Bolzano

SASSO SIMONE AND SIMONCELLO NATURAL REGIONAL PARK
POLLINO NATIONAL PARK
REGIONE SICILIA DRARFD – Forestry Agency
REGIONE LOMBARDIA
CILENTO AND VALLO DI DIANO NATIONAL PARK
ERSAF LOMBARDIA - Regional Agency for Agriculture and Forestry

MIPAAF - Ministry of Agriculture and Forestry MATTM - Ministry of Environment

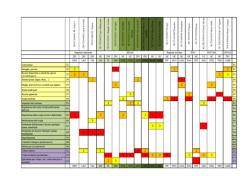


1T2O4O401 Parco Regionale Orobie Valtellinesi

ECOSYSTEM SERVICES and PAYMENT FOR ECOSYSTEM SERVICES

ES Mapping and qualitative assessment (provisioning regulating cultural ES)





ES Biophysical quantification and monetary valuation (Offer assessment – Demand assessment – Monetary evaluation)



GIS analysis e stakeholders involvement and surveys

Maintenance of ES



PES SCHEMES DEFINITION (beneficiaries/providers/mediators)



ES producer/ INT provider

INTERMEDIARY

ES beneficiary

Contribution to the actions of ES preservation and restoration



RESULTS

n. 8 PES agreements were defined in the Lombardy Regional public Forests PES signed for provisioning services (wood, pasture and nowood products) and cultural services (recreation)

rests and

ES provision "Fodder /pasture" PES Contract ERSAF/farmers for Alp concession



ES provision "wood" PES Contract ERSAF/Forest enterprises wooded lot sales







ES cultural "Recreative service" microPES ERSAF / hikers and tourists



INNOVATIVE POINTS

- Assessment and valuation of the ES
- Identification of PES SCHEMES (first experience in Italy)
- Direct involvement of management authorities and local communities in a participatory process: in highlighting the key ES and in PES SCHEMES definition
- New opportunities to self-financing the preservation and management of natural resources

TRASFERABILITY AND LESSON LEARNED

- These results can be a model of management of natural resources for several other Natura 2000 sites
- In Lombardy LIFE14 IPE/IT/018 GESTIRE 2020 to improve the application of PES Scheme in N2000 site, potentially in 260 sites, in the next 8 years
- Difficulties in ES awareness by management authorities and local communities
- Important rule of Intermediaries in ES awareness and PES scheme definition

Communication & Dissemination

• ES evaluation different methodologies not clearly defined or standardized especially for ES without market

Continue testing

THANK YOU





bruna.comini@ersaf.lombardia.it

www.ersaf.lombardia.it

www.lifemgn-serviziecosistemici.eu





ACTION PLANS FOR RECOVERING ALPINE PASTURES AND ALPINE FOOD PRODUCTS AS AN ALTERNATIVE TO WINTER TOURISM

dr. Tanja Lesnik Stuhec₁ and dr. Andreja Borec₂

¹ ProVital d.o.o.

² University of Maribor; Faculty of Agriculture and Life Sciences





"Rogla" ski resort

- Slovenian ski resorts are extremely sensitive to climate change due to their low altitudes.
- "Rogla" is a ski resort only 1517 m high, where tourism was limited to traditional ski activities.
- In last decades, with many green winters and little snow many attempts for new tourism possibilities/activities emerge.
- Although on "Rogla" some summer activities like biking and hiking start to develop also due to many existing lodgings capacities, new innovative actions where discussed to attract more tourists.



"Rogla" in winter time



Alpine pastures on Rogla

ALPA project (case study "Rogla")



- ALPA project (EU Territorial cooperation Operational program Slovenia-Austria 2007-2013).
- Aim: Sustainable management of Alpine pastures on protected areas. One of case studies: "Rogla".
- ALPA project proposed many innovative actions and development opportunities for case studies.
- "Rogla" Action plan: Recover of Alpine pastures with offer of quality alpine food





ALPA project : http://www.projektalpa.si/

Alpine pastures in the past and today

Action plan activities

Action plan for quality food from alpine pastures

On the area of the case study, many farmers are active on alpine pastures. With those farmers 20 different development plans for their alpine products (crop products, food products, services...) where elaborated. At the same time, but independent of ALPA project a collective brand "Tastes of Rogla" was created. "Tastes of Rogla" products are already offered on local market, in local restaurants, hotels and wellness centres. For retaining the quality of the brand, a special working group was established. They are very active in communication of the "Tastes of Rogla" and are responsible for expansion of the brand.



Action plan for linking alpine pastures, alpine pastures food products and tourism

Tourist packages already offering guided tours on protected alpine pastures and alpine wetlands with the visits on nearby farms where "Tastes of Rogla" products are grown. In summer time, each weekend in June and July different events are performed, many of them already use the brand "Tastes of Rogla". In this period between 2.000 -4.000 visitors are recorded. Special educational workshops for future destination guides are expected. The guiders will be able to implement different specific themes tours and will communicate the brand "Tastes of Rogla". For tourism expand in the region also Quality Centre "Tastes of Rogla" was established and due to their activities also neighbouring mountain municipalities are interested for collaboration.



Action plan results

- Increase of tourist and tourist offer in summer time. Due to different Action plan activities already more summer tourists on Rogla area are recognized.
- Maintaining alpine pastures with active in situ conservation and increasing of different alpine farm activities (food production, use of brand "Tastes of Rogla", soft and nature protected farm tourism...).
- Increase of farmers income. Because of good networking of alpine farmers, their common vision and successful supporting services, the farmers response is very positive. No integrated analysis of their income was done so far.

Acton plans/ development plans for alpine food products are second order output of ALPA project and therefore significant added value to the project!









Where is Geilo?

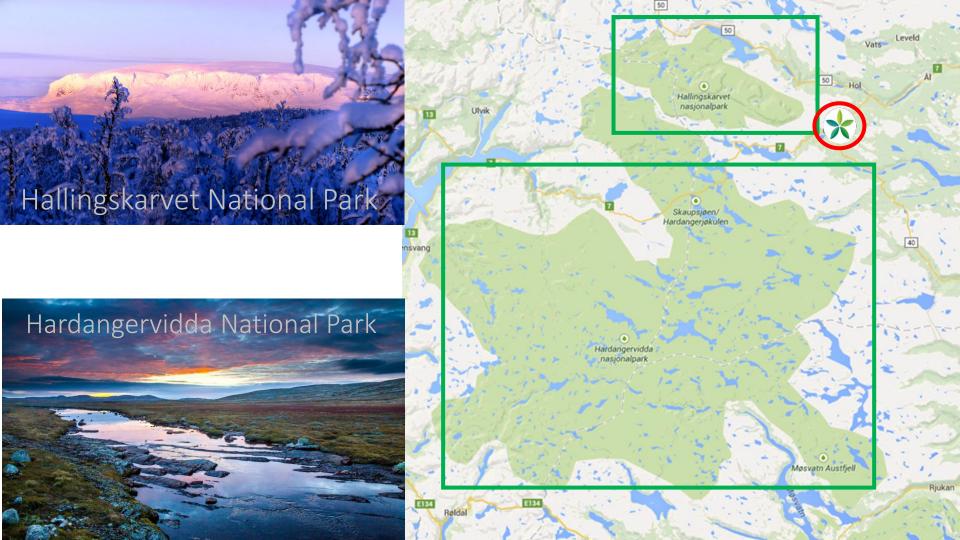
By train:

- 4 daily departure from both Bergen and Oslo.
- Train station in the city centre.
- Drive the RV 7 og Fv 40 from the east, and Rv 7 og fv 50 from west

By car:

- Under 3 h. from Oslo
- 3 h. from Bergen
- 3,5 h from Larvik
- 3 h. from OSL Gardermoen
- Drive the RV 7







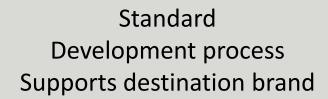




SUSTAINABLE DESTINATION









- Continous process towards sustainability
- Assisted by tools and surveys
- Provide common platform for development
- Demands cooperation between public/ private stakeholders
- Built on international standards







Standard «Sustainable tourism»

A: Political commitment

B: Industry commitment

C: Environment, nature and culture

D: Social values and viability

E: Economic viability



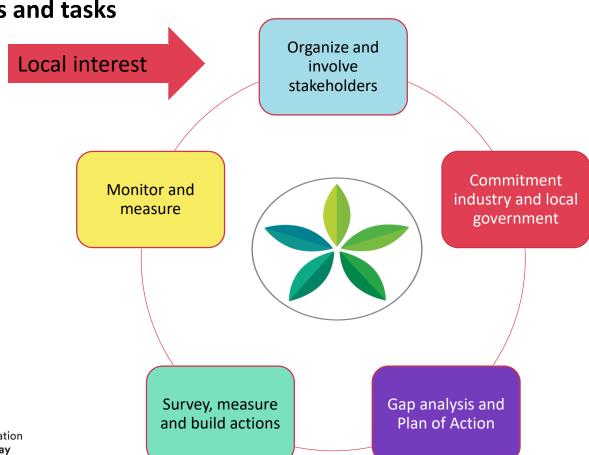
















- Owns and run project
- Ensures funding
- Involve stakeholders
- Run surveys
- Communicates progress and results
- Ensures continous focus and deliveries

Funded part-time projectleader, supported by trained advisers, tools, database and takes part in a national network





NTO

National Branding & Profiling

Regional DMO

Regional Branding & Marketing

Local DMO

Destination marketing and development





Lærdak 🌣



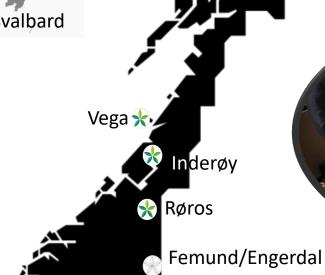




Trysil







Geilo

Setesdal



- Lysefjorden
- Geiranger
- Lillehammer
- Sälen, Sverige
- Idre, Sverige



International Tour Operators views

- Value to have a visible tool for sustainability (60%)
- Sustainability a holistic and common responsibility (DMO + business)
- The importance of a visible certification will increase the next 5 years (71%)







Overall effects

Supports cooperation

- Strengthens competence
- Create a common theme for cooperation
- Sustainable tourism into local Masterplan
- Points out unique assets
- Makes progress systematic
- Makes sustainability more operational





Photo: Øyvind Heen – Visitnorway.no





Generation Geilo

Nestled between two of Norway's majestic national parks, Geilo attracts adventurers from all over the world. But its beauty is more than skin-deep: Geilo isn't just a thriving town, but the civic embodiment of a different mode of being.











Strained by the seemingly inexorable global trend of populations gravitating from the countryside to the city, Geilo has pioneered a model of sustainable tourism, one aimed at sustaining not just the precious local ecology, but the local community too.



















Constructed and formed exclusively from naturally harvested ice and snow, the Festival is a tribute to art, the environment and one's of the world's most vital resources - water. Frozen water.

Conceived and developed in 2006 by ice music pioneer Terje Isungset and Pål K Medhus, the Ice Music Festival is an annual celebration of collaborative music and expression performed by specially invited artists, curated by Terje.











Route 50 – «The Hidden Road»

From an 'outsider' perspective, the road has a forgotten feel about it, but that word 'forgotten' is a positive / benefit here. I see the traveller(s) who want to find somewhere that they can discover nature, food and accommodation without the glitz of commercial... «slamming hammer»

Emile Holba, Photographer UK













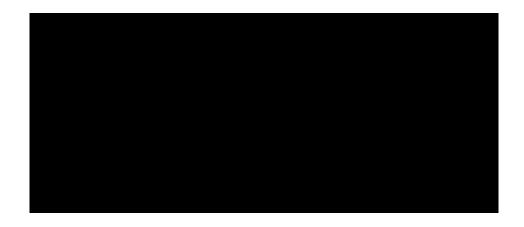
Pål K. Medhus Chief Of Tourism

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Skype: palmedhus

Smart work centres in rural europe









A Typology of Rural Smart Work Centres

3 examples:

- le Télécentre des Portes du Morvan (France)
- Vivero de Empresas
 Camara de Comercio De Jaen (Spain)
- Van Gend & Loos Loods (Netherlands)

3 examples:

- Berwick Workspace (UK)
- Kolga Smart Work Centre (Estonia)
- Business Incubator (Italy)



octobre 2016

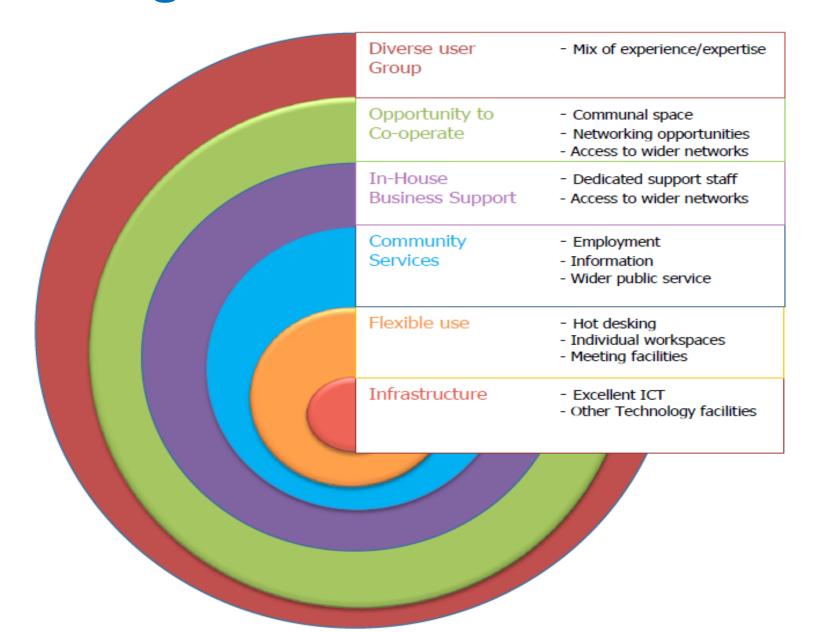
2 Examples:

- Télécentre du Pays de Murat (France)
- Wooler Cheviot Centre (UK)

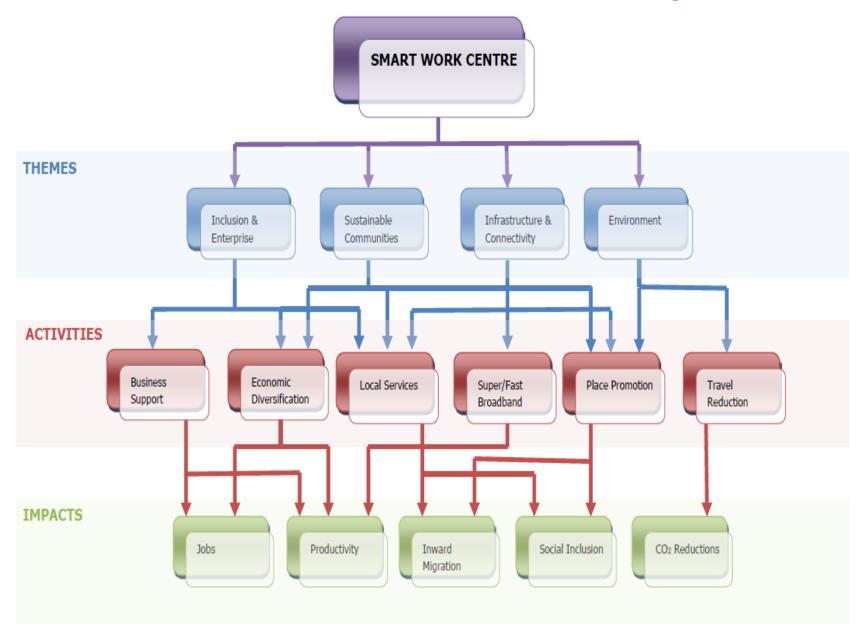
2 examples:

- Telework House in Nagykőrös (Hungary)
- Pendlerhuset (Denmark)

Short guide to smart work centres



Smart work centres impact





Smart Work Centers in Non-Metropolitan Areas



Jean-Dimas MALOT Tél: 333 86 61 82 66 jd.malot@nievrenumerique.fr



Move on Green Programas Unión Europea



Move on Green: sustainable transport in rural and mountain areas

X European Mountain Convention, Bragança, 4th October 2016 Luis Muñoz



This project is co-financed by the ERDF and made possible by the INTERREG IVC programme





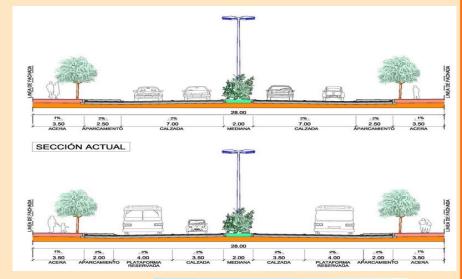






Context: how did the project emerge?

- For many people, mobility is just not practical without a car in rural& mountain areas
- Policy-makers are not enough taking into account specific characteristics of mobility in rural areas











Main aims of Move on Green

- To improve design and effectiveness of regional policies on sustainable transport
- To be more sustainable (economic, social and environmental dimensions)
- Offer a number of transport alternatives
 - Implemented by 13 Partners (Province of Teruel, SODEBUR, Euromontana...)







Main outputs

- A Good Practices guide (51 GP)
- Policy guidelines on Sustainable Transport in rural areas
- Implementation plans in 12 different regions
- Factsheet results







Examples of GP

- Short-term electric vehicles rental at bus ticket price in Sagunto
- Transport on demand cluster
- KOMBIBUS







The implementation in the Province of Teruel

 Round table of transport in the region of Aragon

 Transport of 3 students to the school with the support of the town hall (Mezquita de Jarque)

Move on Green Programas Unión Europea



More information and deliverables:

http://www.euromontana.org/en/project/move-on-green-2/

Thank you for your attention



This project is co-financed by the ERDF and made possible by the INTERREG IVC programme





Land-use planning and physical infrastructure: Planning for increased or decreased climate change vulnerability?

Presentation at workshop 6 "Innovation linked to the management of natural hazards" under Session 4 "Good Practices of adaptation and mitigation to make the best of climate Change" during the X European Mountain Convention "Mountains' vulnerability to climate change: how can people and territories adapt and mitigate its effects?"

4 October 2016 Teatro Municipal de Bragança, Bragança, Portugal

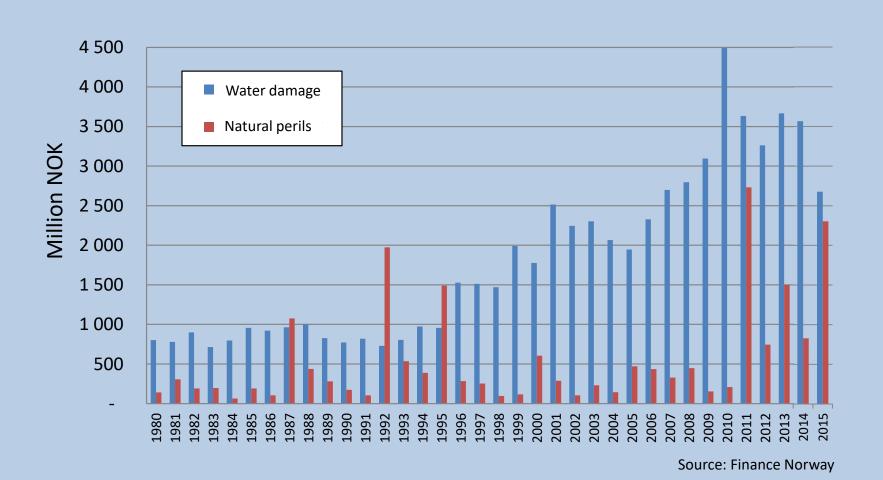
Carlo Aall

Head of research at Western Norway Research Institute Professor II in Sustainable Development at the Sogn og Fjordane University College

The mountains and the Sognefjord on Sunday the 2nd of October!

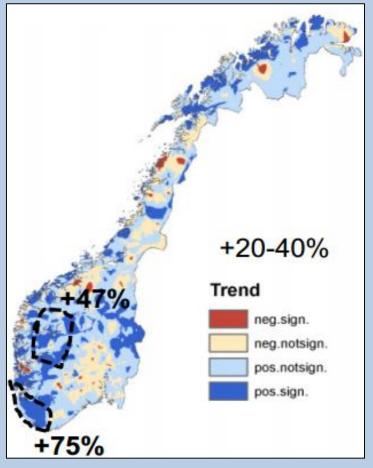


Natural hazard events are changing



The <u>climate</u> is changing

Increase in annual events with five-day precipitation of 40 mm during the period 1957-2010 (Dyrdal et al 2011)



The actual increase in precipitation is currently 6x higher than what was forecasted to happened in 2016 by the climate models in 2001

Some areas of Norway are already experiencing levels of precipitation that are predicted to occur in 2100 according to the climate models

Land-use planning is changing

- Supporting the capacity of climate change adaptation
 - A number of adjustments during the last decades of the Planning Act in order to increase the ability to prevent damage from natural hazard events by means of better land-use planning
- Decreasing the capacity of climate change adaptation
 - A decrease in the land-use planning capacity in many small and medium sized municipalities the last decade
 - Increasing share of land-use planning is initiated by private developers and land-owners at the expense of local authorities

The AREALKLIM Project (2012-2015)

The project

- Co-funded by the Regional Research Council of Western Norway and regional and national authorities
- Analyzing 10 former and 4 ongoing land-use planning processes in which weather related natural hazard events have taken place or major such risk have been identified
- Limited to the region of Western Norway

Research questions

- 1. What to blame when natural hazard events occur?
 - Bad planning
 - Current climate
 - Climate change
- 2. How to be better prepared?
 - Suggested improvements in land-use planning



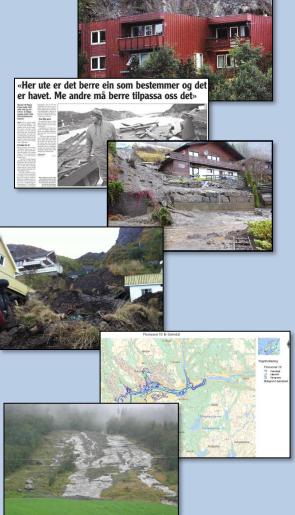
The analysed historic events

County	Municipality	Time for incident	Weather cateogory (name of event)	Kind of natural hazard event	Description of event
Hordaland	Bergen	14.09.2005	«Kristin», extreme precipitation	Water saturated landslide	Hatlestad, row house hit by landslide, 4 lives lost
Hordaland	Sund	12.01.2005	«Inga», storm	Wind, storm surge	Destroyed boat- house
Hordaland	Voss	15.11.2005	«Loke», extreme precipitation	Landslide / flood avalanche	Evacuated houses
Møre og Romsdal	Midsund	05.03.2012	Extreme precipitation	Landslide	New housings exposed to landslide, road erosion
Rogaland	Sokndal	56.10.2010	Extreme precipitation	Riverine flood	Inundation
Sogn og Fjordane	Luster	Several times during the 1990s	Freezing/thawing episodes	Rock fall	Detached houses hit by rock fall
Sogn og Fjordane	Stryn	14.11.2005	«Loke», extreme precipitation	Mudslide	Mudslide damage
Sogn og Fjordane	Balestrand	21.03.2011	Intense rain and melting in dry snow	Slush avalanche	Tuftadalen, house taken by slush avalanche, 2 lives lost
Sogn og Fjordane	Nordfjordeid	25.12.2011	«Dagmar», storm	Storm surge	Stormflo over delar av Eid sentrum
Sogn og Fjordane	Vik	Risk, last mudslide took place in 1897		Mudslide	Tenål, domestic houses raised in hazards prone area









Examples



Bergen

- Mud slide resulting in 4 people died
- The cause: 'Climate change'
 - Precipitation above natural variability of current climatic conditions
 - Municipality not to be blamed for not taking the danger of mud-slide sufficiently into account



Balestrand

- Slush avalanche resulting in 2 people died
- The cause: 'Bad planning'
 - Local land-owner wanted to put up a residential house on a location with a barn very close to the river
 - The municipality asked the land-owner if he thought there were any natural hazard risks involved he said "no", and the municipality did not take any further action

Examples





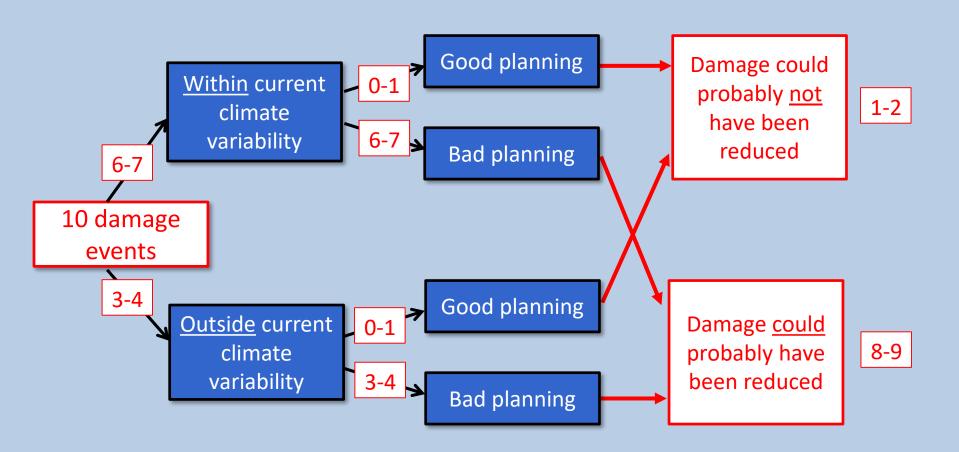
- Frequent inundation flooding of residential homes
- The cause: 'Bad planning'
 - Municipality allow to put up residential homes in flood prone areas
 - · Calculated risk!



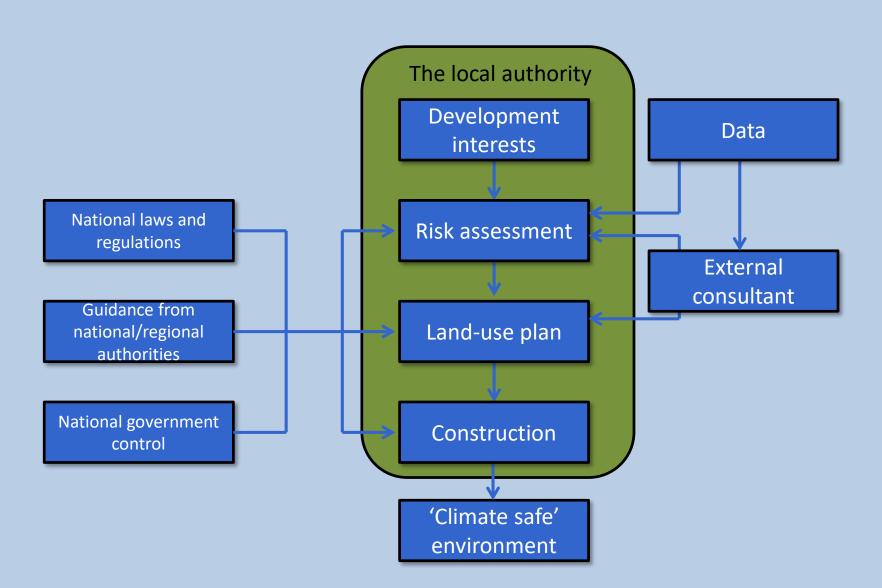
Luster

- Four residential homes tared down due to risk of rock-fall
- The cause: 'Bad planning'
 - Municipalities did not do thoroughly enough risk assessments in the land-use planning process
 - Had to pay 4 households for moving their homes to a 'safe' area

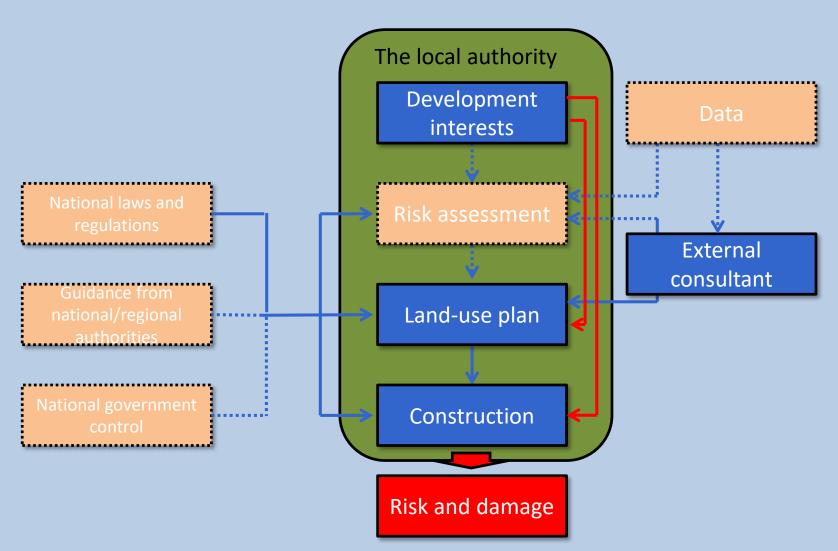
Who to blame? Potential for improvements



Planning "by the book"



Summing up the observed "bad planning practices"



How to be better prepared?

- Adapt national laws and regulations
 - Current national laws and regulations are not adopted to cope with the challenge of adapting current infrastructure and old land-use plans to climate change
- Increase government capacity on local guidance and control
 - Currently there are large regional variations on this matter
- Increase local planning capacity
 - Small and medium sized local authorities are under-staffed and under-budgeted when it comes to map vulnerability and conduct land-use planning
- Increase data quality
 - Local authorities lack sufficient data to assess climate related natural hazard risks
- Change political priorities
 - National and local politicians have to take more account of climate change concerns in land-use planning
- Increase knowledge
 - Knowledge is lacking on how to assess and prevent "new risks", in particular slush avalanches, landslides and flash floods linked up with climate change



Thank you for your attention!

Carlo Aall, caa@vestforsk.no, www.vestforsk.no, + 47 991 27 222











FORRISK and PLURIFOR: Innovative risk management in Basque forests

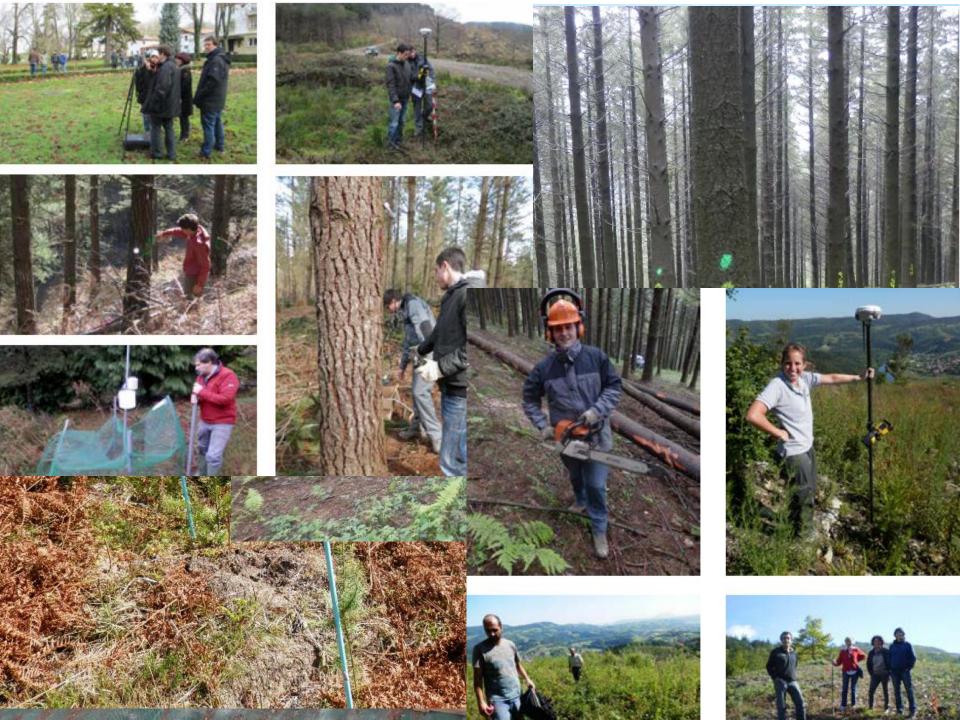
FORRISK et PLURIFOR: Gestion innovant des risques dans les forêts basques

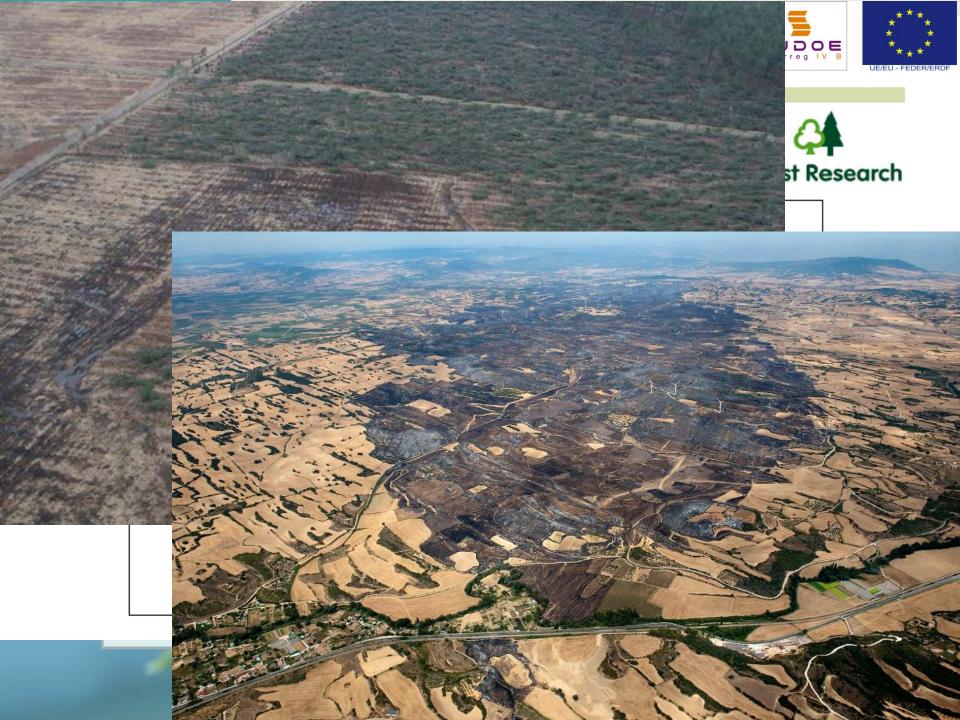
Alejandro Cantero Amiano, HAZI Foundation

Atelier 6. Innovation dans la gestion des risques naturels

- 4 octobre 2016
- X Assises européennes de la montagne, Bragança













FORRISK: overview

- Interreg SUDOE (southwestern Europe)
- Theme: Forest management
- Duration: more of 2 years (27 months), closed 31/12/2014
- **❖ 10 partners (coordinated by EFIATLANTIC**
- **❖** Total budget: 1.138.646,00 EUR





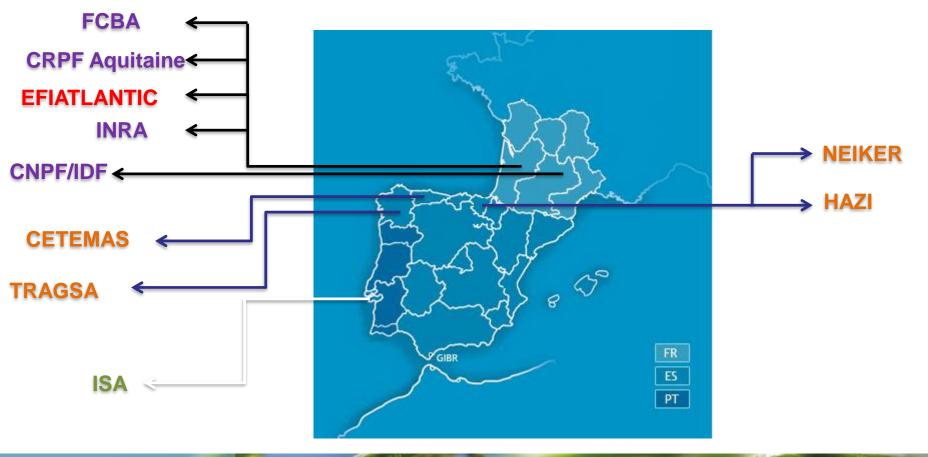






FORRISK: overview

Partners: 5 from France (including coordination), 4 from Spain, 1 from Portugal







ĄP

Project

monitoring

nd

evaluation



FORRISK project general diagram

WP 2 : Institutional tools of risk management

WP 3 :Risk management

WP 4 : Risk analysis and decision support tools

Analysis of existing institutional tools for each region Comparison of systems Suggestions for improvements Installation and assessment of devices and analysis to identify ways to fight against risks (ecological, genetic and silvicultural) Risk analysis (mapping, vulnerability assessment..) Development and adaptation of modelling tools and decision support tools



WP 6 : Advertising, information and capitalization of the project

Inter-regional workshops on risks

Panel discussion on existing systems for risk prevention

Publication of technical sheets, management manuals

Publication of records, summary documents and scientific articles

Website-Logotype

WP 1: Project coordination and management





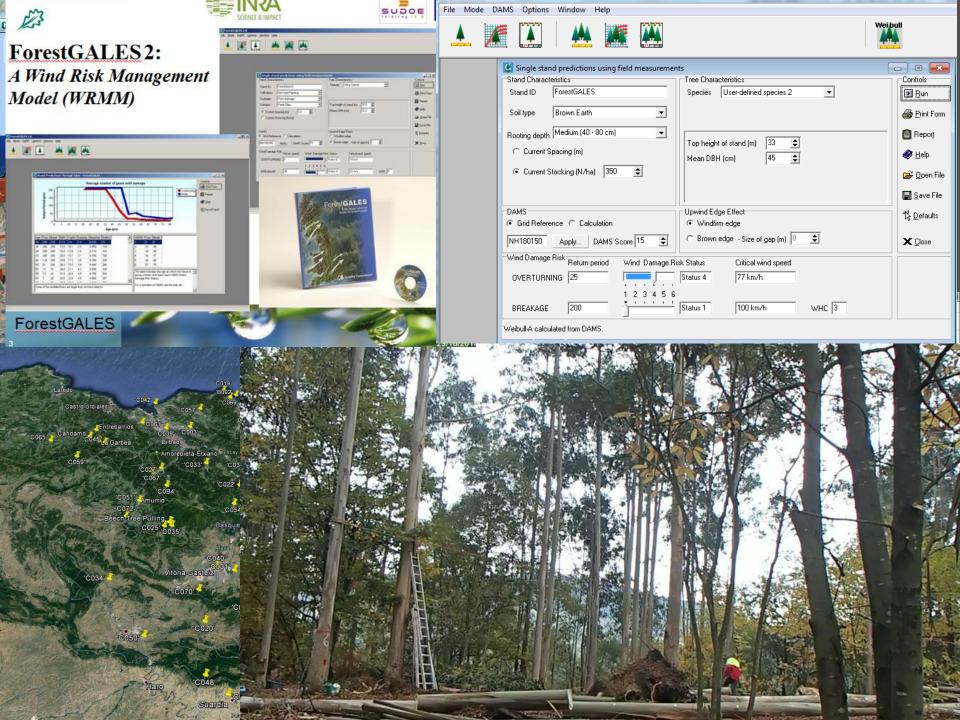




Results, Innovative points

- Collaboration: Inside regions and among partners
- Technology: Use of new forest tools and transfer of results











Necessary conditions to successfully transfer the initiative

- Cluster/Team work among technological partners
- Good team coordination
- Common forest species and risks
- Rentability, forest owners interested for improving their management
- ... And public funds





A STRATEGY FOR "INNER AREAS" IN ITALY

Fostering growth through Inner Areas development



- Political Input: 2012 the Monti's Minister for Cohesion Policy asks for a special action in favor of many small municipalities loosing population
- Consensus of three Governments (Monti, Letta e Renzi);
- The Strategy is negotiated between State, Regions, (Provinces) and Municipalities (June 2013); introduction in the Partnership Agreement (Horizontal Strategy, demography action) with the European Commission;
- Financial Allocation within the National Financial law (Legge di Stabilità) 2014
- It becomes one of the relevant actions of the **Nation Plan of Reform** (2014; 2015 and 2016)
- Financial Allocation within the National Financial law (2015 and 2016)
- EC/EU Territorial Cohesion Objective, European Parliament Special Action on Rural Urban linkages; OECD Rural Working Party

Recognition of the Policentric character of the Country (many small cities networks)

Overcoming Rural Urban dichotomy

Inner Area: what does it mean?

Inner Areas are those territories characterized by

- a NOT adequate offer of/access to essential services to assure citizen's rights;
- being rich in natural assets (water resources, agricultural systems, forests, natural landscapes) and cultural resources (archaeological settlements, abbeys, small museums, craft centres);
- low population density;
- often: high seismic risk.

In Italy inner areas covers almost the 60% of the whole national territory embracing about the 23% of its total population and more than 4000 municipalities

Methodology to identify Inner Areas

'Service Centers' have been defined as those municipalities that offer

- an exhaustive range of secondary schools;
- at least a 1st level DEA (highly specialized) hospital;
- at least a 'Silver type' railway station (RFI).

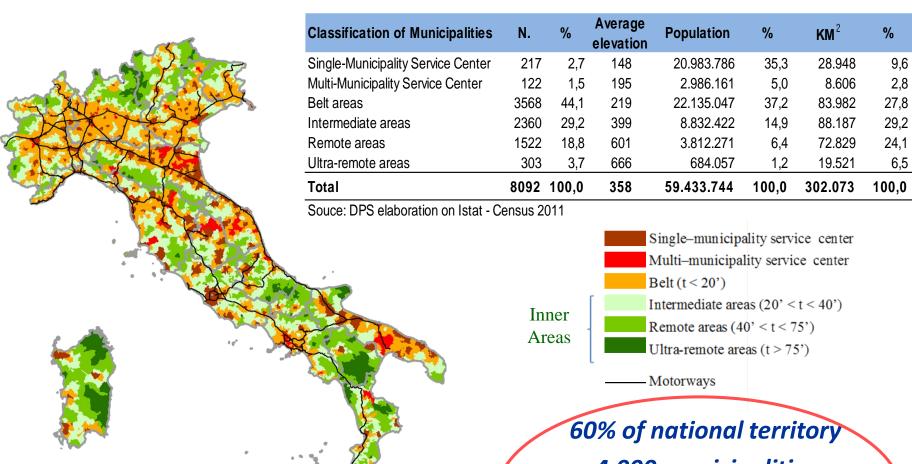
NO DEMOGRAPHIC CRITERIA HAVE BEEN APPLIED

Areas have been mapped according to the distance (travel-time) from these 'Service Centers' as:

- Belt' areas up to 20 minutes far from the centers;
- 'Intermediate' areas from 20 to 40 minutes;
- 'Remote' areas from 40 to 75 minutes;
- 'Ultra remote' areas over 75 minutes far

Inner Areas

Italy's Inner Areas



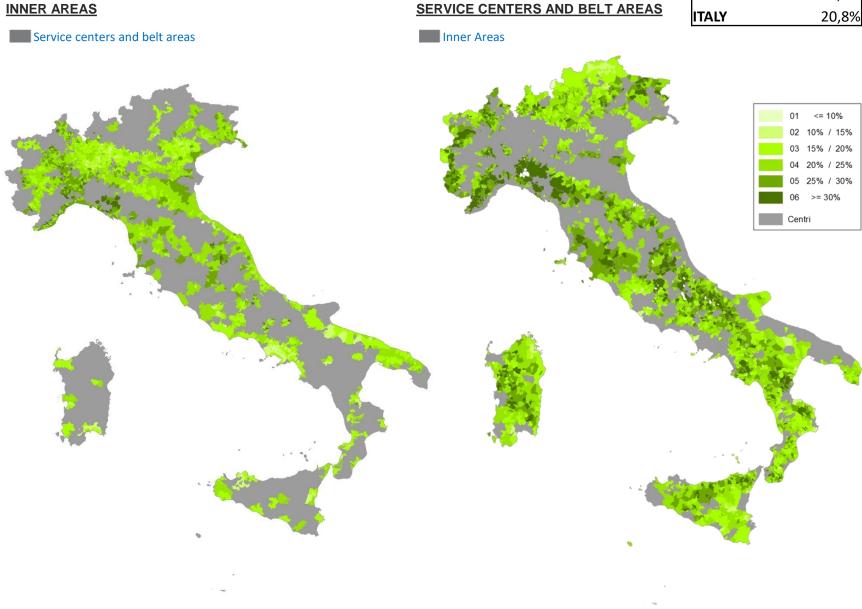
60% of national territory
4.000 municipalities
23% of total population
65% mountain municipalities

Italy – Percentage of population aged 65 and over - 2011

 Centers
 20,7%

 Inner Areas
 21,2%

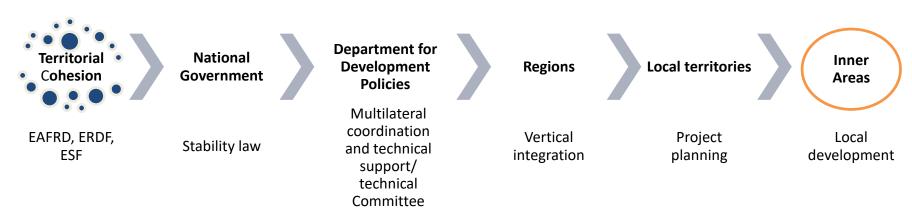
 ITALY
 20,8%



Why an Inner Areas National Strategy?

- To give true content to the EU Cohesion Policy Territorial Objective;
- To overcome the rural- urban dichotomy;
- To empower territories and people to restore growth and wellbeing over marginalized areas, recognizing their **diversity**
- To recover non-valorized natural and cultural assets, reducing territories' depopulation and consequent abandonment costs;

Ultimate Goal: Reinforce Inner Areas demographic structure



Inner Areas Strategy_ INNOVATION

5 main innovation

- National dimension and multilevel governance (Centers Regions municipalities and inter municipalities cooperation)
- In the project areas at the same time services improvements (mainly through national policy) and investments in selected development factors (energy; agriculture; crafts; cultural heritage; regional policy-)
- Multi-fund attitude (EAFRD, ERDF, ESF and National Funds)
- Participatory approach to local development
- Municipalities Associations

Inner Areas National Strategy method

The Technical Committee along with Regions analyze Inner Areas through a desk and a field analysis process



Quantitative data and qualitative information are used to identify and select weakest inner areas



Each selected area define its local development strategy



A local development strategy is an integrated path aimed to development and growth



It is based on local essential services improvements and local development projects support

Open Method & criteria for Area Selection

Two - step assessment process:

Desk analysis (Inner Areas Open Kit)

Each pre-selected area is thoroughly analyzed with respect to a series of demographic and socio-economic parameters:

e.g. Population losses and demographic structure, Utilized Agricultural Area (UAA) trends, deforestation, hydrological risk, entrepreneurship, tourism and cultural heritage, quality of education, mobility and health services, Digital Divide



Field analysis (National Committee's visits to preselected areas)

A number of focus groups are organized at local level aiming at "meeting territories" e.g. local authorities, mayors, public officers in charge of services delivery, School Directors, teachers, students, Hospital managers and doctors....

Inner Areas' Selection Criteria

The Open Inner Areas method over 100 indicators and filed work to individuate

- Territories with people living mainly in Inner areas
- Inner Areas loosing populations
- Inner Areas with consistent elderly characteristics
- Inner Areas with good project Implementation capacities
- Inner Areas with strong local leadership and municipalities capacities to work in association

Inner Areas focus group

Focus group is organized by the Italian Committee on Inner Areas in collaboration with Regions and local territories. On average it lasts 3 hours organized as follow:

<u>4 sessions</u>: local development, healthcare services, education, transport services;

<u>16 speakers</u>: 3 local actors + 1 expert from relevant Ministry each session.



A typical <u>session</u> focused on local <u>healthcare</u> <u>system</u>

- ❖ 1 speaker from the Ministry of Healthcare _ Directorate General health services
- 1 Chief medical officer representing local healthcare system
- 1 Social Care Supply Worker
- 1 NGO or ONLUS member or chief

.......... Discussing and analysing the OPEN KIT data on healthcare local services

Fieldwork

working with stakeholder to develope Strategy Area



Tavolo di lavoro socio-sanitario

Tracciano sentieri per le Mountain Bike



Tavolo di lavoro TPL: in pullman per toccare con mano insieme agli attori rilevanti la questione trasporti

Focus Group 2 di discussione sul preliminare di strategia

Selected project-areas



At present, selected areas within the Strategy:

- are 66, total resident population of 1.896.000; around 1000 municipalities;
- **85%** are mountain municipalities;
- ❖ 3% of the total national population, 55% of which live in remote and very remote areas; cover 16% of the national territory. Strong population decrease;
- are composed by an average of 15 municipalities, with around 29.000 habitants each;

What's next?

Development in practice:

Once the selection process is concluded, determining which areas will participate to the National strategy as projects one, those start out a planning process aimed to define its "local development strategy".

A good *local development strategy* has the following characteristics:

- It starts from local needs and available assets;
- ❖ It identifies the general long run development "vision" of each areas, defining how to escape from its negative development trends;
- It operates through local development projects and essential services improvements
- ❖ It is built on local stakeholders active engagement (active citizens, entrepreneurs, institutions.....)

The conceptual framework: a place-based approach

1) Citizens, vision and heated debate

- The identification of boundaries of project-areas ("places") is neither top-down nor bottom-up but top-down-bottom regions are helped to Plan (co-decision)
- The top contribution is the preliminary identification of the citizens' obstacles to live the life they would like to live (substantial freedom) in education, health and care, mobility.
- Both at this stage and later in the process, "rights" and "growth" are addressed simultaneously.
- The process does not start from projects but from "persons"/citizens: they are asked to conceive a vision of the place for the future and a "way out" from the present state;
- Throughout the process, a participatory approach is implemented based on a heated, open, informed and reasonable **debate**.

2) Local ownership and a New Central Reinforced Role

- Responsibility is entrusted to coalitions of Municipalities' majors (of the project-area), each of them choosing a leader
- The national team is highly pro-active, taking part on the field in all stages of Strategy-building, putting on the ground information, promoting working methods, and often acting as a "destabilising force" vis-à-vis the local conservative elite;
- Interventions are finally approved in an Agreement signed by the project-area's leader, the Region and the National team.

3) Territorialising and integrating sectoral policies

- Education, health-welfare and mobility policies to address "rights" are designed simultaneously with policies to promote growth and employment (agriculture, tourism, culture) Inner Areas with consistent elderly characteristics;
- Financial resources for "rights" (about 4 mln euros for each area) come from the national budget and are targeted to experimental actions which will be made permanent if proved successful;
- Financial resources for "growth" (on average three times as much) come from all four Regional EU structural funds for 2014-2020;
- The National team is made of functionaries of all sectoral administrations ("embedded territorial units") and external project experts (in different fields) selected for this task.

4) Expected results

- Outcome indicators are produced by the national team to orient the vision and the action;
- Each area decides its own Outcome Indicators
- The final strategy must point to expected results measurable by indicators and resources are destined to measurement and evaluation.

5) Democratic experimentalism

- The "rules of the game" are written as steering principles which can be adjusted while more knowledge comes on board (avoiding procedural traps);
- The whole Strategy is conceived by its actors as a learning process.

How do we monitor results?

- an example-

Result Indicators to measure healthcare improvements:

Actions:

Reduce the time (in minutes) between the start of the telephone call to the monitoring station and the arrival of the first rescue vehicle on site



Increase transport organization and efficiency that influences inhabitants' access to healthcare services

Increase in the percentage of population aged 65 and over treated in Integrated Home Care (ADI)



Promote social inclusion, fight poverty and all forms of discrimination

Increase the specialist outpatient - Services provided x 1000 residents



Increase/qualification of care services and of health and social service infrastructure

How we do communicate?

Our first way to communicate with territories are focus group.

At the end of the selection process, we share all relevant process documents through a dedicated website : http://www.agenziacoesione.gov.it/it/arint/index.html

In here we report:

- Each meeting report and the field mission programme
- An in depth analysis of each essential service considered (healthcare, education and transport) produced by the competent Ministry
- The "final Investigation report" produced by the Technical Committee on the analysed regional inner areas
- The OpenData Kit, made by a comma-separated values (CSV) file and a general guide to all the 100 indicators used in the selection process



Conclusion

So far the Committee has approved:

- ❖ 4 "Strategy" (Valtellina, Valchiavenna, Appenino Basso Pesarese e Antola Tigullio)
- ❖ 18 «Preliminary Strategy" (Abruzzo, Basilicata, Campania, Friuli, Marche, Molise, Lombardia – 2-, Liguria, Sardegna, Toscana, Valle d'Aosta, Umbria, Piemonte, PA Trento, Veneto, Puglia, Sicilia)
- 22 «Strategy draft"

critical issues:

- 1) Hard balancing between two opposite risks: not destabilising (or even legitimising) the existing "conservative elites"; disrupting the local order with no way out to rebuild it;
- 2) Local administrative capacity (especially in designing projects) and scarcity of truly high level technical assistance;
- 3) The pressure for quick-fix, even at national level, puts such Long-term Strategy at risk of being hurried or discontinued;
- 4) Difficulty in using "Result indicators" as guiding tools for policy design and implementation.

Bojano_Molise

