

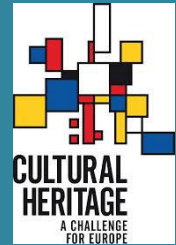
CHANGES - Changes in Cultural heritage Activities: new Goals and benefits for Economy and Society



International Conference
CULTURAL HERITAGE MANAGEMENT:
CONSERVATION AND VALORISATION IN AN
INTEGRATED PERSPECTIVE
VILLA REALE, MONZA - 2016, May 26

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THE EXPERIENCE OF VALTELLINA CULTURAL DISTRICT



Study area - VALTELLINA



Valtellina is a wide valley stretching for about 120 km from Adda's spring to Como Lake with a valley bottom height form 300 to 1000 m above sea level

The beginning: reconstruction after 1987 flood



THE FIRST ORGANIC CONSERVATION ACTIVITIES IN VALTELLINA DATE BACK TO A CATASTROPHIC EVENT: THE 1987 FLOOD

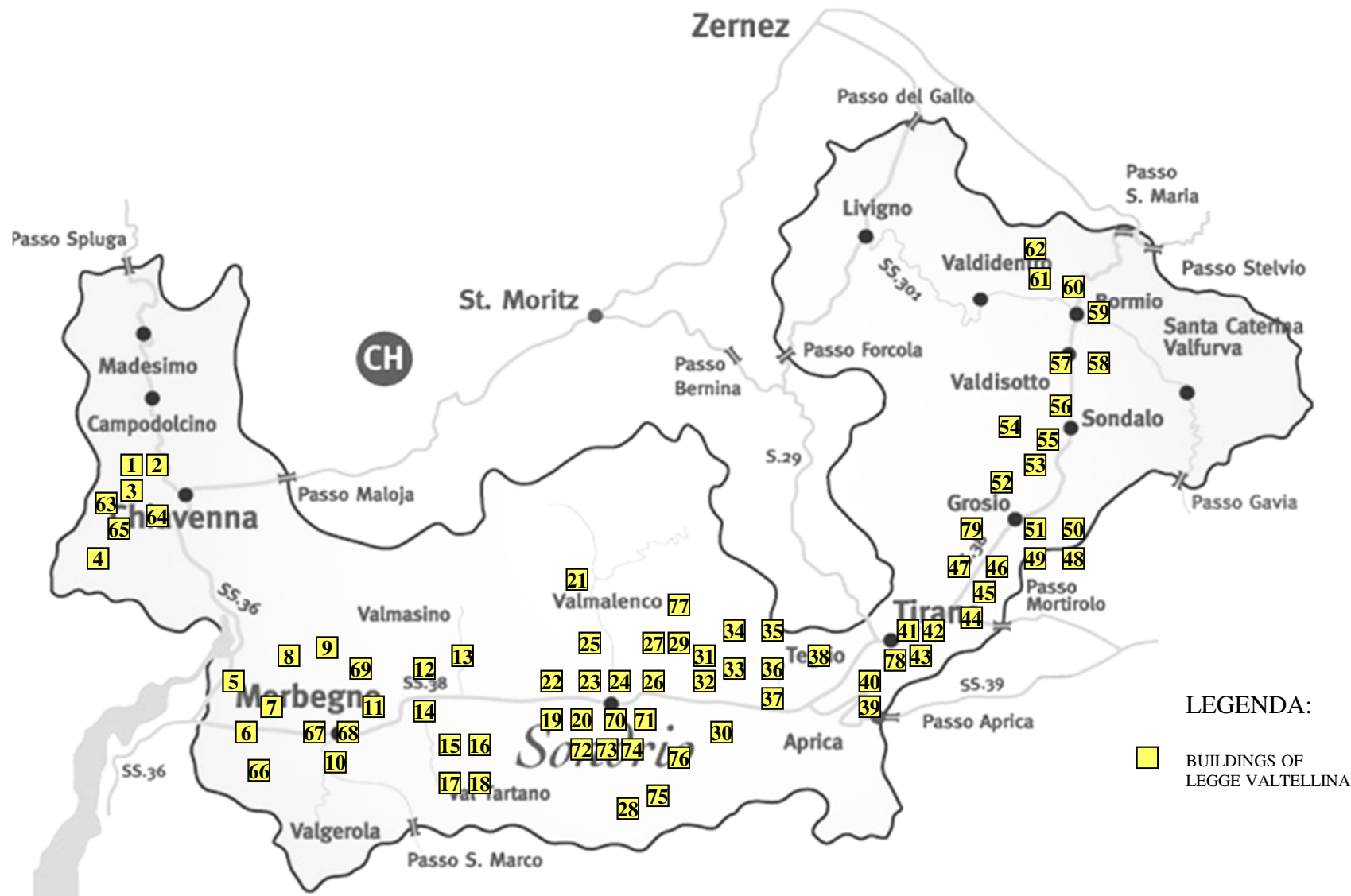
FOLLOWING THIS EVENT THE RECONSTRUCTION HAS BEEN FUNDED UNDER A SPECIAL LAW (L. 102/90 THEN CALLED “**LEGGE VALTELLINA**”) WHICH ALSO PROVIDED FUNDINGS FOR THE RESTORATION WORKS OF HERITAGE BUILDINGS.

ALTHOUGH THEIR POSITIVE EFFECTS, THE RESULTS OF THOSE OPERATIONS WERE NOT SUBJECTED TO A GOOD PPC APPROACH.

CONSEQUENTLY IN SPITE OF THE RELEVANT INVESTMENTS, RESTORED BUILDINGS HAVE NOT PROVIDED EFFECTS FOR THE PROMOTION AND DEVELOPMENT OF THE TERRITORY.

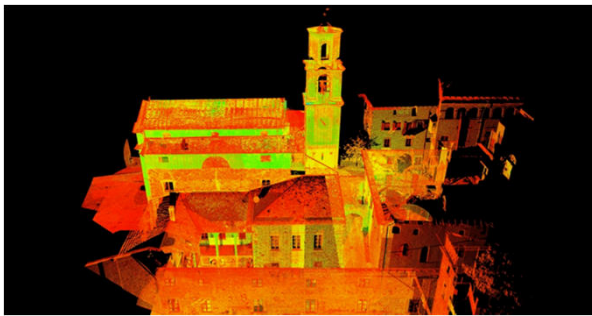
Total amount : € 35 MLs
Financing with 25% own resources

The beginning: reconstruction after 1987 flood



THE WORKS WERE CARRIED ON IN THE YEARS BETWEEN 1997 AND 2005 AND THEY INVOLVED THE RESTORATION OF **79 HERITAGE BUILDINGS** ALL OVER THE VALLEY

The development of idea of PPC in Valtellina



OVER THE YEARS AFTER 2002, EVEN WITH THE SUPPORT OF FONDAZIONE CARIPLO, MANY LONG-TERM PROJECTS HAS BEEN DEVELOPED WITH A POSITIVE APPROACH TO PPC METHODOLOGIES:

- **“ANTICA PIEVE DI MAZZO”** Project (2006-2009)
Total amount : € 1,991,000
Financing with 41% own resources
- **“INNOVATIVE TECHNOLOGIES”** Proj. (2009-2010)
Total amount : € 345,000
Financing with 44% own resources
- **“CULTURAL DISTRICT”** Project (2011-2015)
Total amount : € 8,290,000
Financing with 57% own resources
- Interreg **“CPRE”** Project (2013-2015)
Total amount : € 1.570000
Financing with 56% own resources

Cultural District of VALTELLINA



CHANGES - CULTURAL HERITAGE MANAGEMENT
A change of step



PARTNERSHIP

- Local Development Found.(proj.leader)
- Sondrio Province
- Sondrio Municipality
- Morbegno Municipality
- Tirano Municipality
- Valdidentro Municipality
- Credito Valtellinese Foundation
- Sondrio Mountain Council
- Morbegno Mountain Council
- Tirano Mountain Council
- Ass. for the Route of Wine & Flavour
- Valtellina Quality Agric.& Food District
- Pavia University

OTHER FUNDERS

- Sondrio Chamber of Commerce
- Popolare di Sondrio Bank
- Credito Valtellinese Bank
- A2A (electricity production company)
- Valposchiavo Regional Authority (Switzerland)
- Via Valtellina Association (Switzerland)

Cultural District of VALTELLINA



THE “CULTURAL DISTRICT OF VALTELLINA” AIMS TO:

- ✓ IDENTIFYING THE ROLE THAT THE **CULTURAL LANDSCAPE AND HERITAGE** HAVE IN THE DEVELOPMENT STRATEGY OF TERRITORY
- ✓ DEVELOP THE **IDENTIFICATION** AND AWARENESS OF LOCAL COMMUNITIES
- ✓ **ENHANCE** THE CULTURAL HERITAGE
- ✓ MAKE A **SYSTEM** OF CULTURAL ACTIVITIES



CHANGES - CULTURAL HERITAGE MANAGEMENT
A change of step

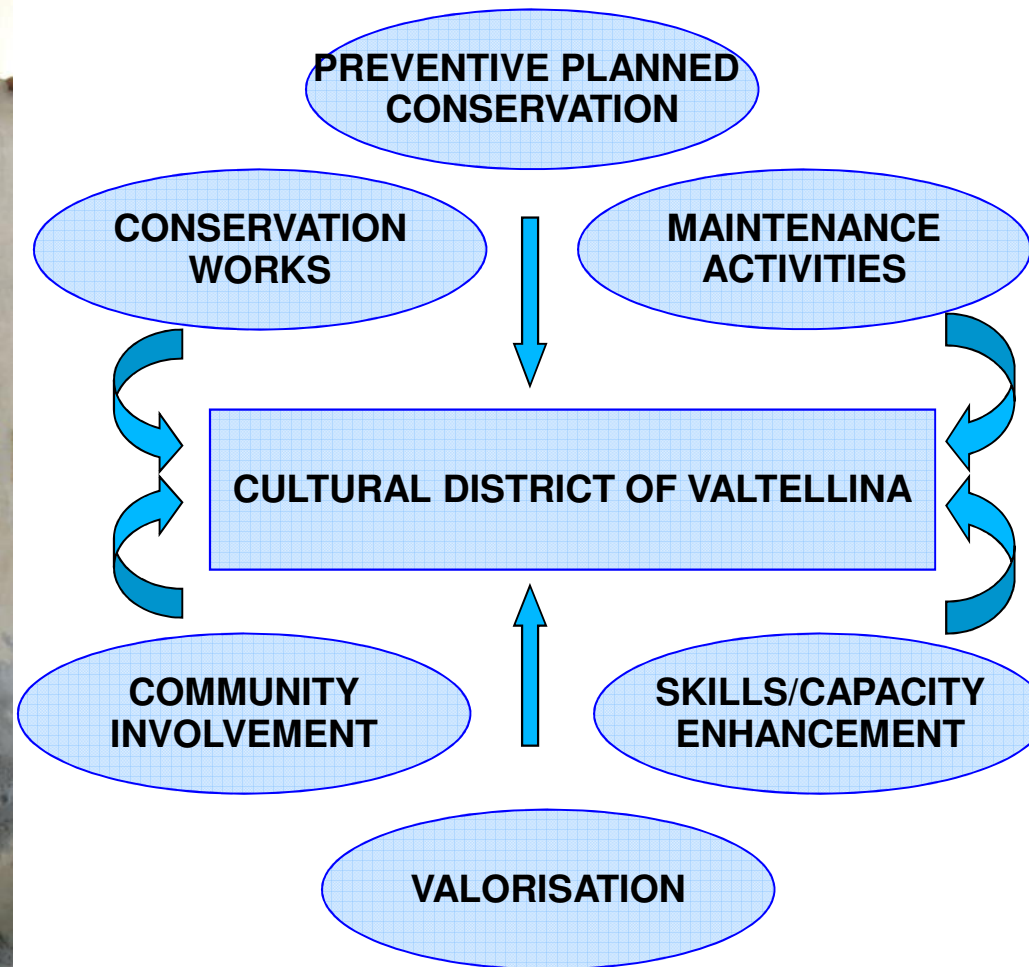


Cultural District of VALTELLINA



CHANGES - CULTURAL HERITAGE MANAGEMENT

A change of step



DATA:	SURFACE	km ² 2.760	POPULATION	155.000
	MOUNTAIN COUNCILS nr. 4		MUNICIPALITIES	nr. 65

Tangible Asset WP1 - The Route of Terraces



CHANGES - CULTURAL HERITAGE MANAGEMENT
Community Involvement

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The Route of Terraces



CHANGES - CULTURAL HERITAGE MANAGEMENT
Community Involvement



DATA

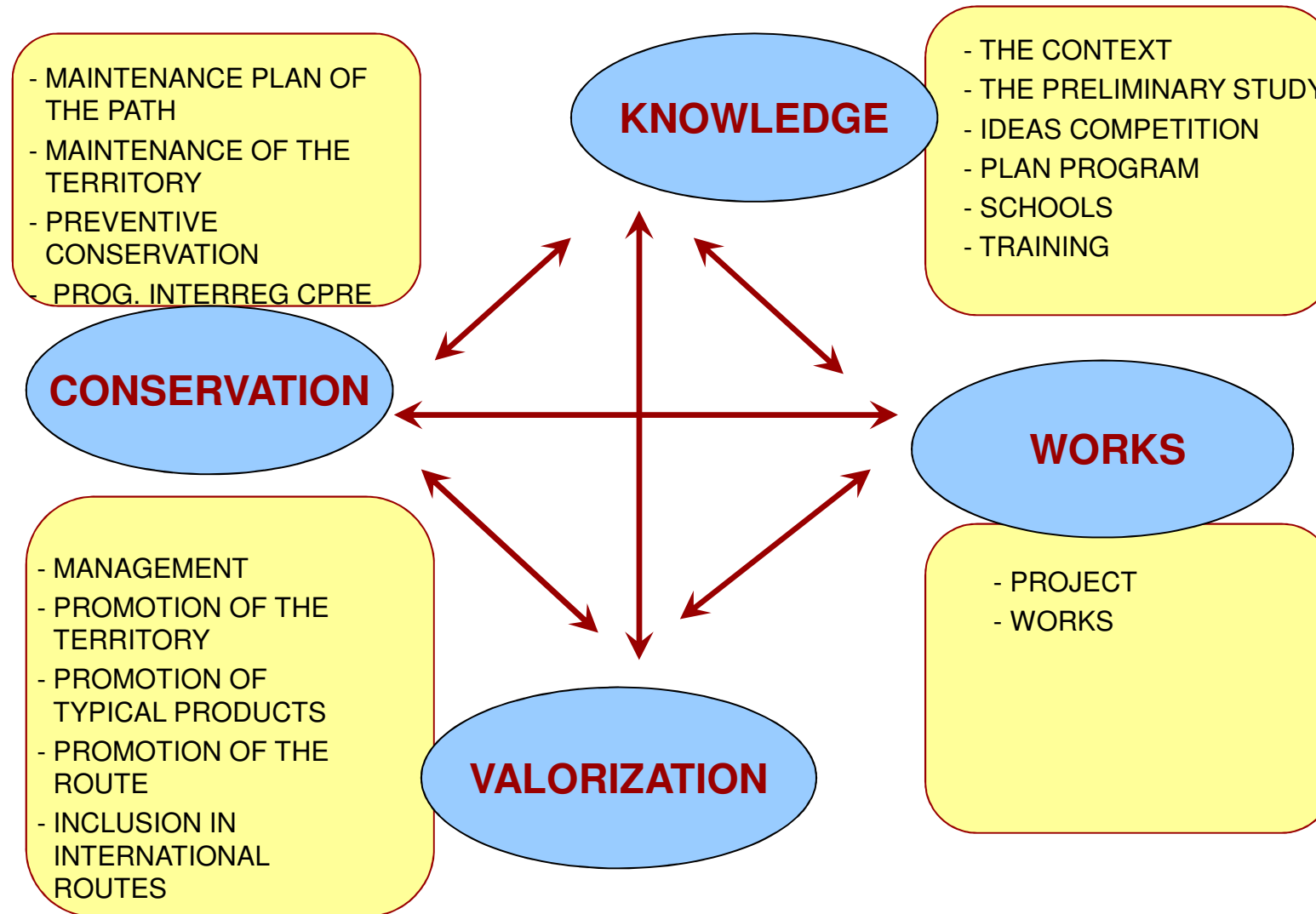
- 74 km of Route
- 40 rest areas
- 234 signage and touristic signs
- everything detected with GPS methodology

IT IS A CYCLE-PEDESTRIAN PATH CROSSING THE TERRACED AREAS OF RHAETIC SOLPE LINKING THE MANY HERITAGE BUILDINGS OF SIGNIFICANT INTEREST THERE EXISTING

The Route of Terraces



CHANGES - CULTURAL HERITAGE MANAGEMENT
Community Involvement



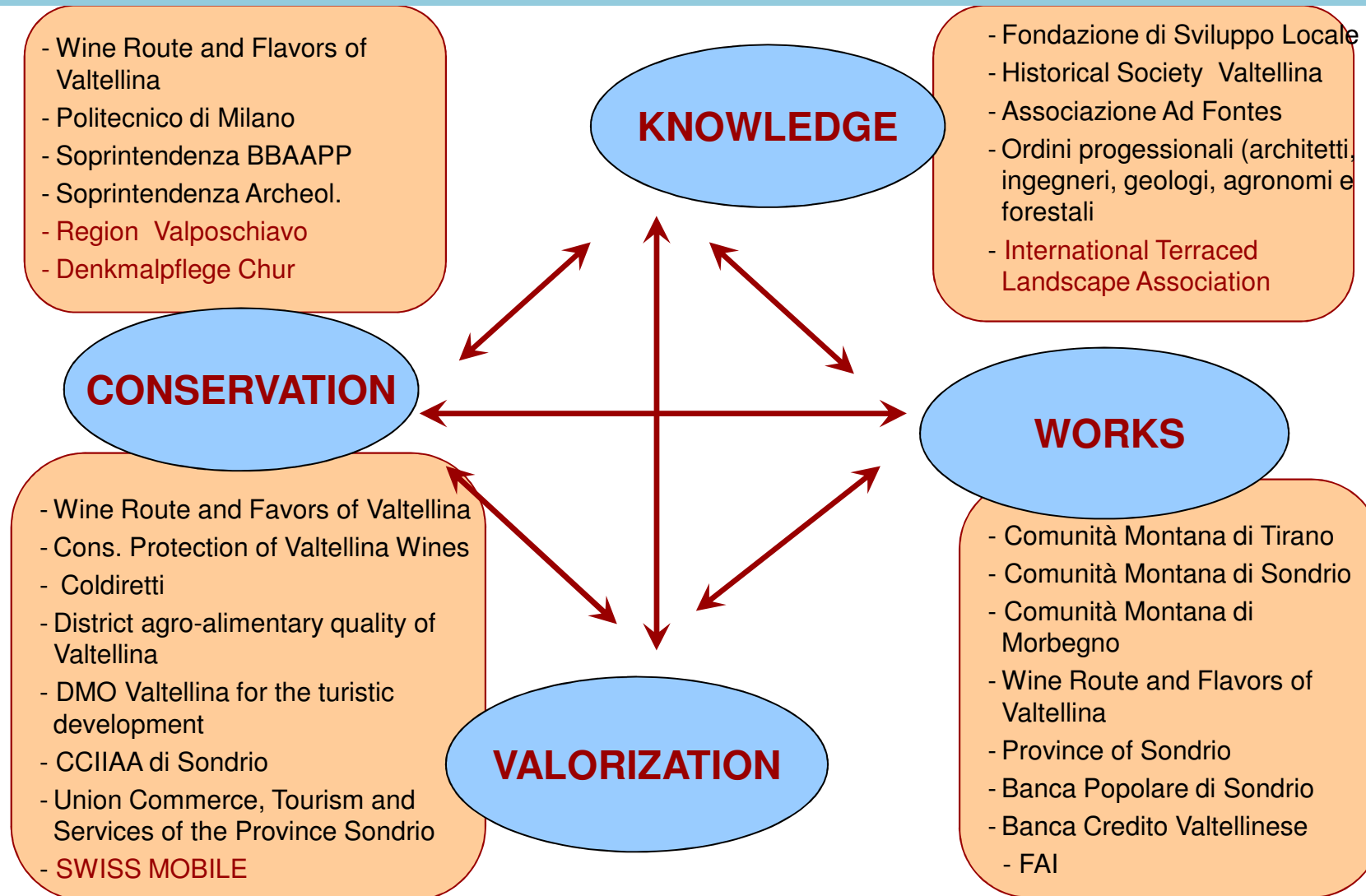
OBJECTIVE AND TOOLS

The Route of Terraces



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Community Involvement

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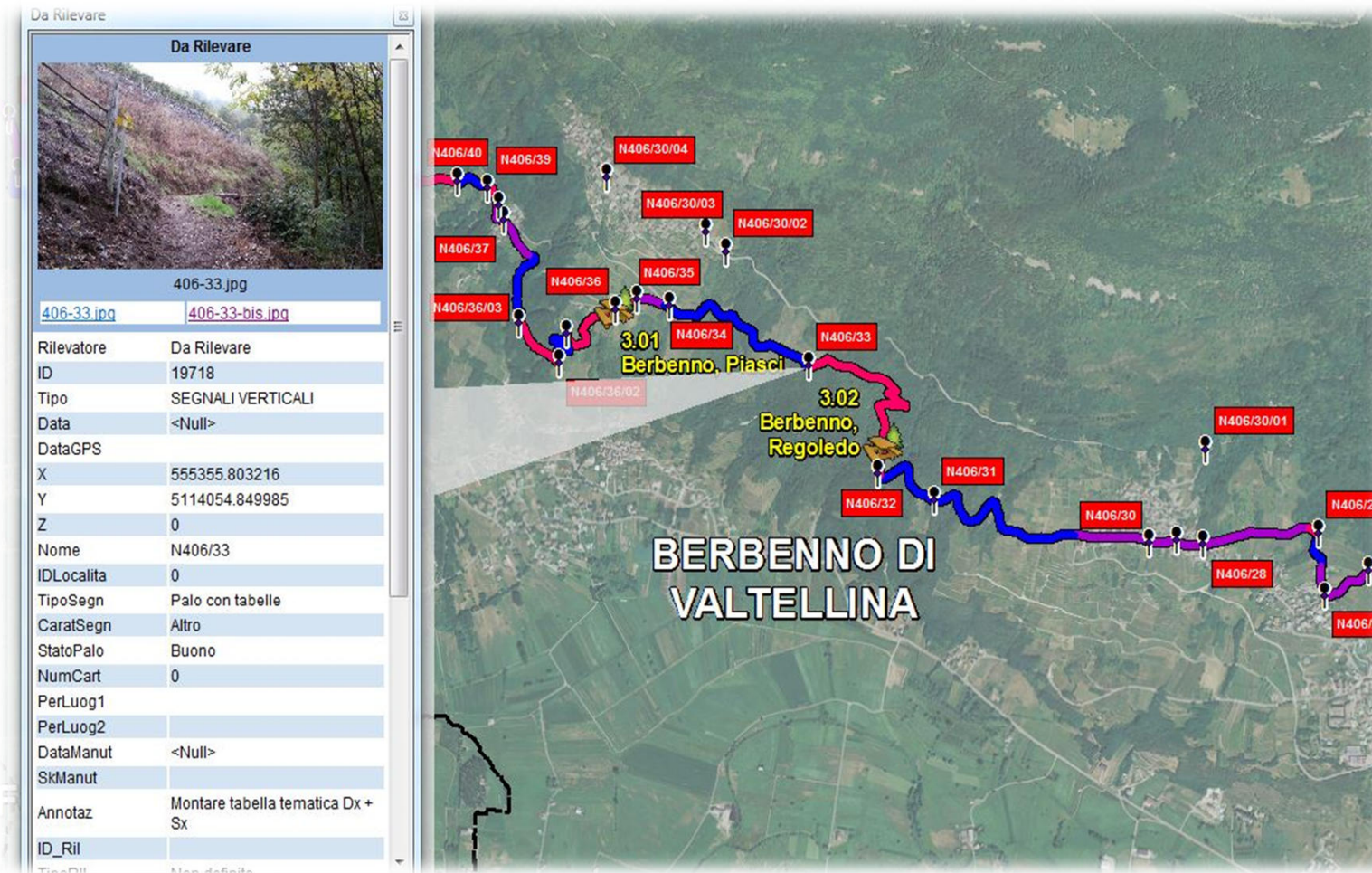


STAKEHOLDERS

The Route of Terraces : Maintenance practices



CHANGES - CULTURAL HERITAGE MANAGEMENT
Community Involvement



MAINTENANCE PLAN WITH GIS TECHNIQS, ALLOWS:

- TO HAVE INFORMATION AVAILABLE ON TRACK WITH A TOUCH
- TO KEEP THE PATH UNDER CONTROL
- TO MAP COMPLETELY THE REST AREAS
- TO CREATE DIRECT REPORT OF MAINTENANCE ACTIVITIES

The Route of Terraces : Maintenance practices



CHANGES - CULTURAL HERITAGE MANAGEMENT
Community Involvement



#MorePositiveSigns IS AN ACTUAL ACTIVITY MATCHING
MAINTENANCE OF TERRITORY AND SOCIAL INCLUSION

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Tangibles Assets of Valtellina Cultural District



CHANGES - CULTURAL HERITAGE MANAGEMENT
Conservation Quality



WP 2 – MASEGRA CASTLE - SONDRIO

WP 3 – CLOISTER OF SAINT ANTHONY - MORBEGNO

WP 4 – CIRCUIT OF THE CASTLES AND HISTORIC BUILDINGS IN THE AREA OF TIRANO

WP 6 – THE WAY OF WATER AND ENERGY

"GOOD PRACTICES" for conservation: Critical analysis and proposals



CHANGES - CULTURAL HERITAGE MANAGEMENT
Conservation Quality



Development of sensitivity, strategies and research in the field of preventive planned conservation of heritage, in order to define the means of prevention of deterioration and proper maintenance policies.

The action is divided into two activities

- 1) Enhancement of Preventive Archaeological Research in Valtellina: works and services for the use of data
- 2) Inspection service for the critical analysis of the current state of the buildings restored with the grant of Law 102/90

ACTIVITIES PERFORMED IN COOPERATION WITH: 1)  Ministero dei beni e delle attività culturali e del turismo

2)

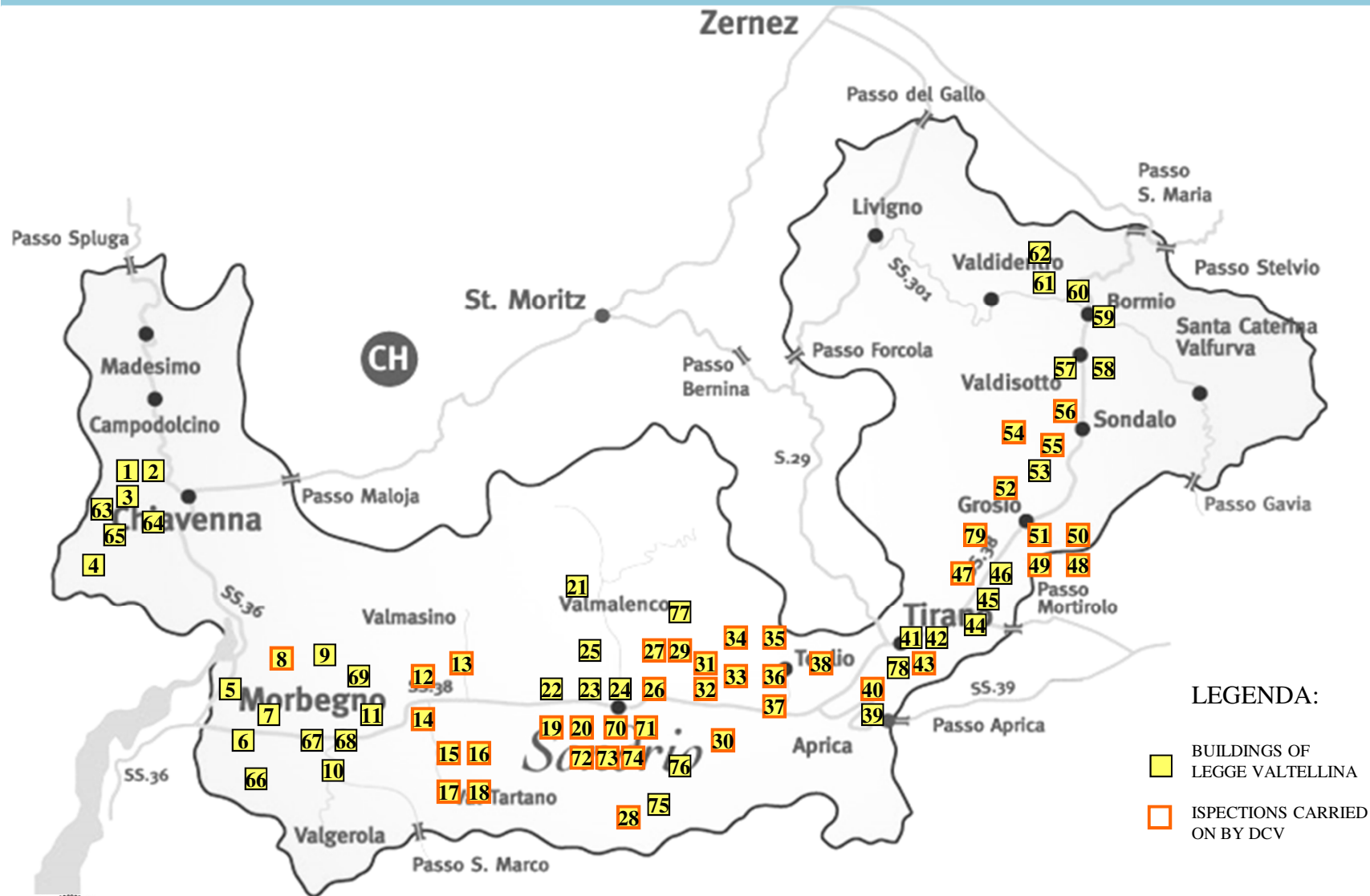


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Inspections and critical analysis



CHANGES - CULTURAL HERITAGE MANAGEMENT
Conservation Quality



INSPECTION FOR THE ANALYSIS OF THE CURRENT STATUS OF HERITAGE
BUILDINGS RESTORED AFTER 1987 FLOOD. (**40 BUILDINGS**)

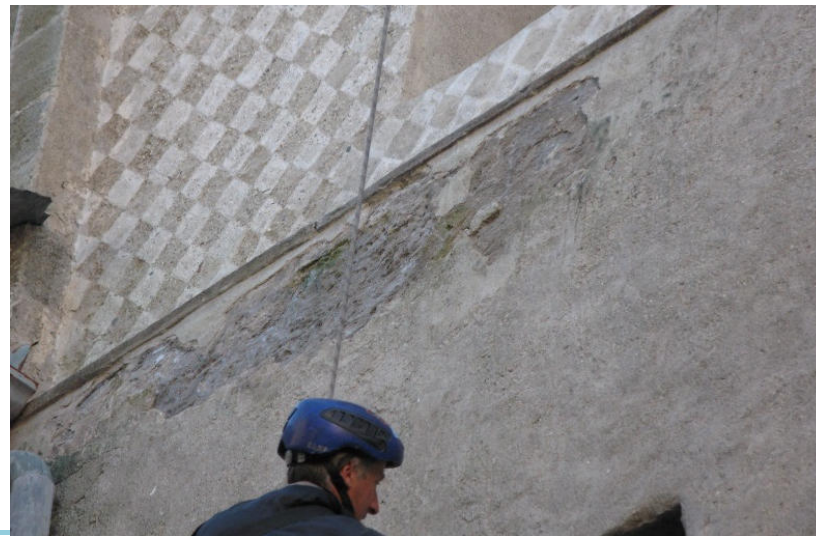
Inspections and critical analysis - ACTIVITIES



CHANGES - CULTURAL HERITAGE MANAGEMENT
Conservation Quality



CLOSE INSPECTIONS USING VISUAL SURVEYS
FROM THE GROUND, WITH THE USE OF MOBILE
PLATFORMS AND ALSO WITH THE USE OF ROPES



SAFETY IMPROVEMENT BY REMOVING DETACHED ELEMENTS
VERIFICATION OF FUNCTIONALITY AND STATE OF CONSERVATION



Inspections and critical analysis - REPORTS



CHANGES - CULTURAL HERITAGE MANAGEMENT
Conservation Quality

Elemento/aggregazione di elementi	Ambiente cappella laterale angolo nord-est	Codice elemento canale di gronda
Cappella lato nord-ovest vista d'insieme e muratura alla base Cappella lato nord-ovest - Dettaglio canale di gronda	Rilevazione ☒ visiva a distanza ☐ visiva ravvicinata	☒ bassa ☐ media ☐ alta ☒ localizzato ☐ esteso %
	Descrizione Danneggiamento della canale di gronda della copertura cappella laterale (presenza di verdetame sulla superficie della lattoneria) con possibile perdita di acqua con conseguente percolamento sulla superficie muraria e rimbalzo di acqua da terra.	
	Condizioni di rischio Presenza di umidità sulla superficie muraria; rischio di degrado dell'intonaco	
	Urgenza ☐ 1 ☒ 2 ☐ 3	
Situazione rispetto alla visita precedente Non rilevato in precedenza ☐ Stabile ☐ In progressione ☐ In recessione ☐		

Elemento/aggregazione di elementi	Ambiente parete ovest	Codice elemento rivestimento interno
Parete ovest - Vista d'insieme	Rilevazione ☐ visiva a distanza ☒ visiva ravvicinata	☐ bassa ☒ media ☐ alta ☐ localizzato ☒ esteso %
	Descrizione Presenza di umidità diffusa su tutta la parete ovest dovuta al fatto che il muro è completamente contro terra. Durante i lavori è stato realizzato un drenaggio esterno.	
	Condizioni di rischio Rischio degrado dell'intonaco con distacchi e perdita della pellicola superficiale	
	Urgenza ☐ 1 ☒ 2 ☐ 3	
Situazione rispetto alla visita precedente Non rilevato in precedenza ☐ Stabile ☐ In progressione ☐ In recessione ☐		

NOTE :

THE IN SITU OBSERVATIONS WERE COLLECTED IN ANALYTICAL REPORTS THAT DESCRIBE THE DAMAGE STATE AND EXPRESS A JUDGMENT ABOUT ITS GRAVITY AND THE RISK CONDITIONS



REPORTS PROVIDE AN OVERALL JUDGMENT ON THE STATE OF CONSERVATION AND A REFERENCE FOR THE NEXT REPETITION OF INSPECTIONS

Preventive Seismic assessment



CHANGES - CULTURAL HERITAGE MANAGEMENT
Conservation Quality



PREVENTIVE SEISMICAL ASSESSMENT OF HERITAGE BUILDINGS
RESTORED AFTER 1987 FLOOD. (**36 BUILDINGS**)

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Programma Operativo di Cooperazione
Transfrontaliera
Italia - Svizzera 2007-2013



Preventive Seismic Assessment METHODS



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Conservation Quality

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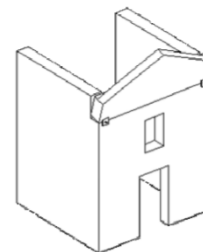
edificio Chiesa di S. Sisto - Piacenza		2.1	PAG. 10/17
INDICE DI DANNO E VULNERABILITÀ SISMICA			
1 - RIBALTAMENTO DELLA FACCIATA			
Presenza del macroelemento in relazione al meccanismo: ☒ Sì ☐ No			
Vulnerabilità	☒ Sì	<i>Presidi antisismici</i> Presenza di catene longitudinali Presenza di efficaci elementi di contrasto (contrafforti, corpi addossati, altri edifici) Ammassamento di buona qualità tra la facciata ed i muri della navata	☒ ☒ ☒ ☒
	☐ No	<i>Indicatori di vulnerabilità</i> Presenza di elementi spingenti (puntoni di copertura, volte, archi) Presenza di grandi aperture nelle pareti laterali in vicinanza del cantonale	☐ ☐ ☐
Danno	attuale	Distacco della facciata dalle pareti o evidenti fuori piombo	☐ ☐ ☐ ☐
	vecchio	Distacco della facciata dalle pareti o evidenti fuori piombo	☐ ☐ ☐ ☐
2 - MECCANISMI NELLA SOMMITÀ DELLA FACCIATA			
Presenza del macroelemento in relazione al meccanismo: ☒ Sì ☐ No			
Vulnerabilità	☒ Sì	<i>Presidi antisismici</i> Presenza di collegamenti puntuali con la copertura (travi-catene) Presenza di controventi di falda Presenza di cordoli leggeri (metallici reticolari, muratura armata, c.a. sottili)	☒ ☒ ☒ ☒
	☐ No	<i>Indicatori di vulnerabilità</i> Presenza di grandi aperture (rosone o altro) Presenza di una sommità a vela di grande dimensione e peso Cordoli rigidi, trave di colmo in c.a., copertura pesante in c.a.	☐ ☐ ☐
Danno	attuale	Lesioni inclinate a (taglio) - Lesioni verticali o arcuate - Rotazioni delle capriate	☐ ☐ ☐ ☐
	vecchio	Lesioni inclinate a (taglio) - Lesioni verticali o arcuate - Rotazioni delle capriate	☐ ☐ ☐ ☐
3 - MECCANISMI NEL PIANO DELLA FACCIATA			
Presenza del macroelemento in relazione al meccanismo: ☒ Sì ☐ No			
Vulnerabilità	☒ Sì	<i>Presidi antisismici</i> Presenza di catene in controfacciata Contrasto laterale fornito da corpi addossati o facciata inserita in aggregato	☒ ☒ ☒
	☐ No	<i>Indicatori di vulnerabilità</i> Presenza di grandi aperture (anche tamponate) Elevata snellezza (rapporto altezza/larghezza)	☐ ☐ ☐
Danno	attuale	Lesioni inclinate (taglio) - Lesioni verticali o arcuate (rotazione) - Altre fessurazioni o spaccamenti	☐ ☐ ☐ ☐
	vecchio	Lesioni inclinate (taglio) - Lesioni verticali o arcuate (rotazione) - Altre fessurazioni o spaccamenti	☐ ☐ ☐ ☐
4 - PROTIRO - NARTECE			
Presenza del macroelemento in relazione al meccanismo: ☒ Sì ☐ No (Peso nella tabella (c1):			
Vulnerabilità	☒ Sì	<i>Presidi antisismici</i> Presenza di catene Presenza di colonne, pilastri di adeguata rigidità	☒ ☒ ☒
	☐ No	<i>Indicatori di vulnerabilità</i> Presenza di elementi spingenti (archi, volte)	☐ ☐
Danno	attuale	Lesioni nella trabeazione per rotazione delle colonne - Distacco complessivo dalla facciata - Martellamento del protiro - Archi lesionati	☐ ☐ ☐ ☐
	vecchio	Lesioni nella trabeazione per rotazione delle colonne - Distacco complessivo dalla facciata - Martellamento del protiro - Archi lesionati	☐ ☐ ☐ ☐

Evaluation of 28 local mechanisms of damage

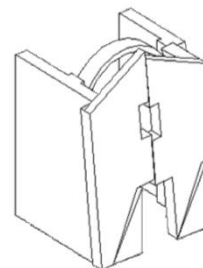
✓ **Overtuning the facade**



✓ **Mechanisms in the top of the facade**



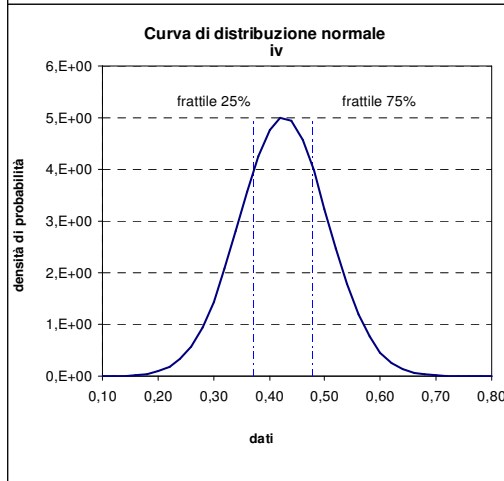
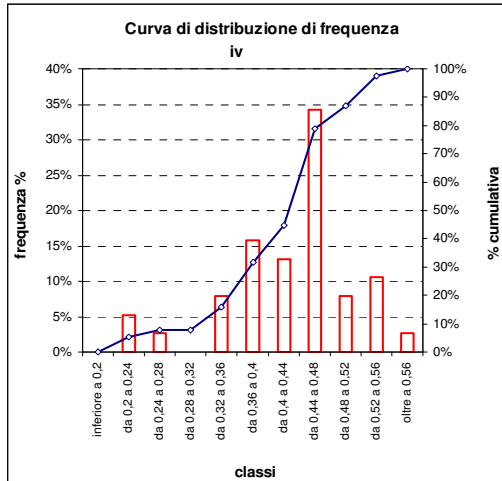
✓ **Mechanisms in the plane of the facade**



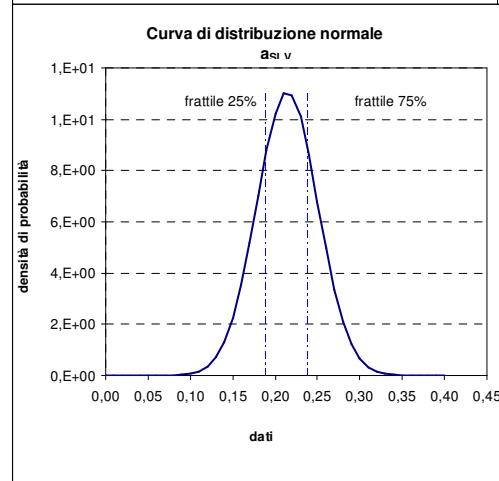
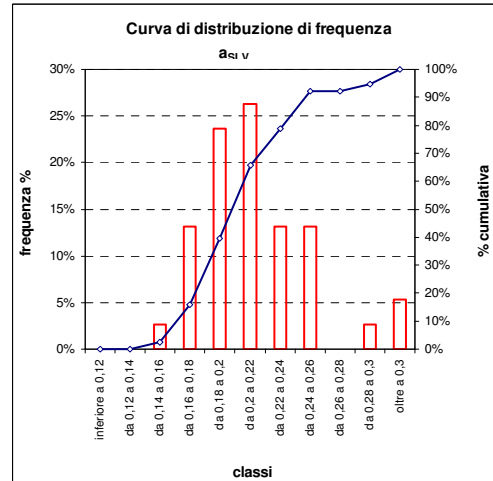
Preventive Seismic Assessment RESULTS



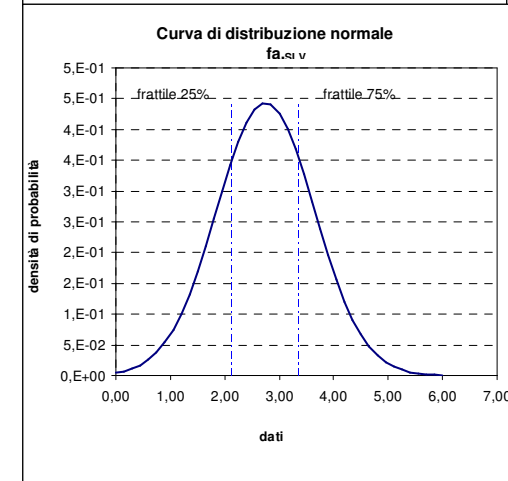
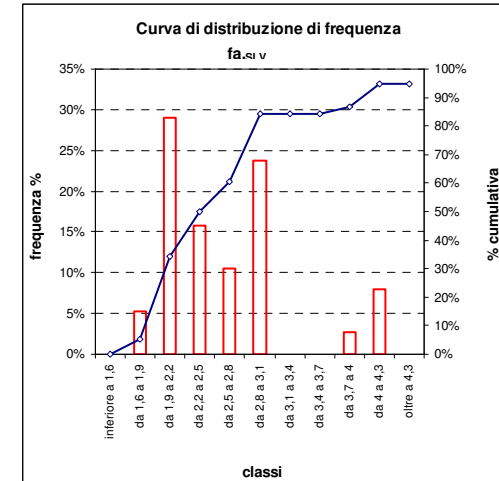
CHANGES - CULTURAL HERITAGE MANAGEMENT
Conservation Quality



Vulnerability Index I_v



Ground acceleration associated with the Life safety L. S. a_{SLV}



Acceleration factor associated with the Life safety f_{asLV}

Intangibles Assets of Valtellina Cultural District



CHANGES - CULTURAL HERITAGE MANAGEMENT
Enhancement of Capacity/Skills



WP 5 – TECHNOLOGIES FOR INTEGRATED PROMOTION
(WP 7 – THE "GOOD PRACTICE" OF RESTORATION: CRITICAL ANALYSIS AND PROPOSALS)
WPs 8/9/10 – TRAINING ACTIVITIES ADDRESSED TO TEACHERS, STUDENTS AND
PROFESSIONALS

Courses: Identity and cultural landscape

**PAESAGGI
VALTELLINESI**
Trasformazione
del territorio, cultura
e identità locale



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**CORSO DI FORMAZIONE
E DI AGGIORNAMENTO PROFESSIONALE**
Modulo 1 - Il paesaggio dei terrazzamenti



**CORSO DI FORMAZIONE
E DI AGGIORNAMENTO PROFESSIONALE**
Modulo 2 - La gestione e la valorizzazione
del patrimonio culturale



**CORSO DI FORMAZIONE
E DI AGGIORNAMENTO PROFESSIONALE**
Modulo 3 - Gli altri paesaggi della Valtellina

Aprile - Giugno 2013



Luglio - Ottobre 2013



Maggio - Giugno 2014



CHANGES - CULTURAL HERITAGE MANAGEMENT
Enhancement of Capacity/Skills

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Courses: Preventive and Planned Conservation



Workshop di presentazione del Progetto
La Conservazione Programmata nello spazio comune RETICO
 progetto CPRE

27 SETTEMBRE 2013 ore 14.00
 sala consiliare di palazzo Marinoni
 p.zza Cavour, 18 – Tirano (SO)

Scansione laser-scanner chiesa di S. Romero - Brusio

LA CONSERVAZIONE PROGRAMMATA NELLO SPAZIO COMUNE RETICO

**CORSO DI FORMAZIONE
 E DI AGGIORNAMENTO PROFESSIONALE**
 Modulo A – Gli strumenti

Febbraio – Aprile 2014

LA CONSERVAZIONE PROGRAMMATA NELLO SPAZIO COMUNE RETICO

**CORSO DI FORMAZIONE
 E DI AGGIORNAMENTO PROFESSIONALE**
 Modulo B – Le tecniche

Ottobre 2014



ORDINE DEGLI ARCHITETTI,
 PIANIFICATORI, PAESAGGISTI E CONSERVATORI
 DELLA PROVINCIA DI SONDRIO



ORDINE DEGLI INGEGNERI
 DELLA PROVINCIA DI SONDRIO



ORDINE DEGLI ARCHITETTI,
 PIANIFICATORI, PAESAGGISTI E CONSERVATORI
 DELLA PROVINCIA DI SONDRIO



ORDINE DEGLI INGEGNERI
 DELLA PROVINCIA DI SONDRIO

CHANGES - CULTURAL HERITAGE MANAGEMENT
 Enhancement of Capacity/Skills

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Results of training and educational activities



CHANGES - CULTURAL HERITAGE MANAGEMENT
Enhancement of Capacity/Skills



activity	promoter	total nr. of partecip.	partecip. from the valley
Master thesis	Politecnico di Milano	4 tesi	5 stud.
Fellowships	Politecnico di Milano	8	1
80h Training course "tecnico ispezione"	ENAIIP Lombardia	10	4
54h Training course "Cultural Landscape"	Fondazione Sviluppo Locale	226	95%
36h Training course "Prev. Conservation"	Fondazione Sviluppo Locale	164	92%
40h Training course "Dry walls"	Polo Poschiavo	24	12
Workshop and conferences – 5 gg	Fondazione Sviluppo Locale	646*	87%

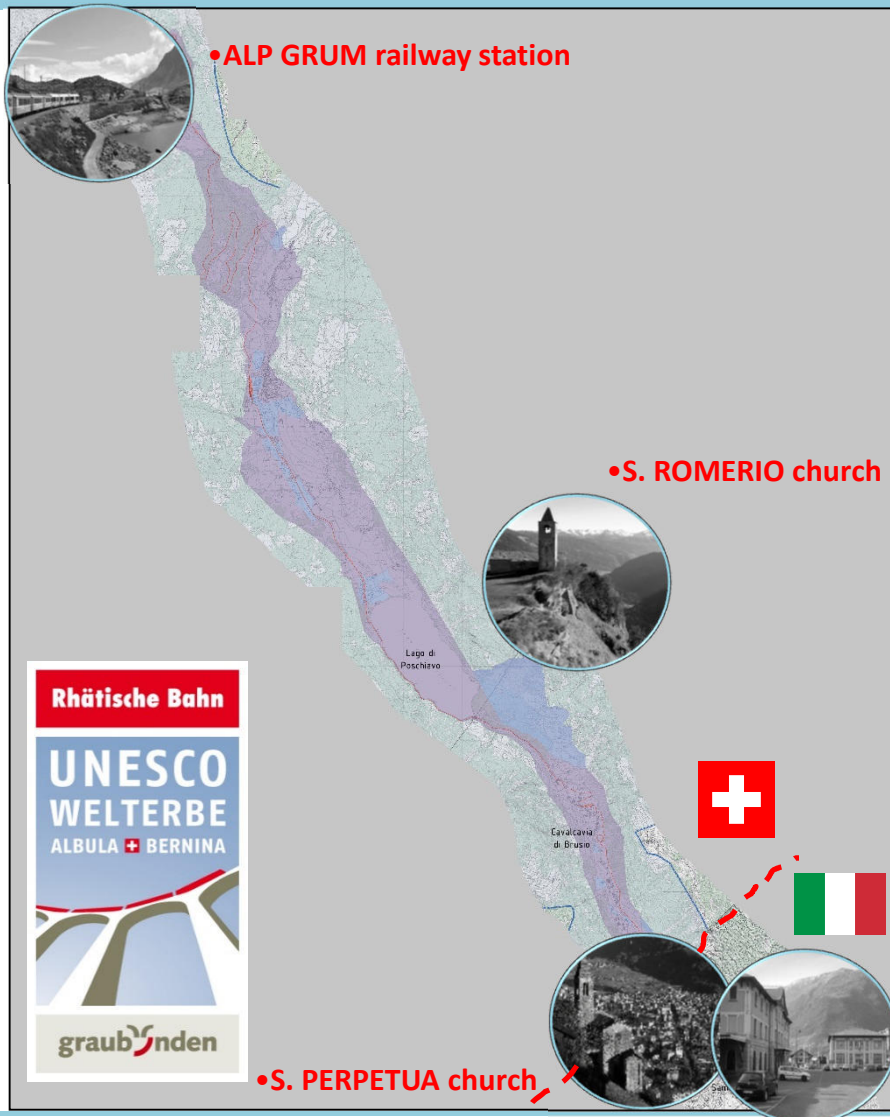
Not secondary aim and essential positive impact on the territory was the involvement of human resources and local professionals.

To involve young people they were activated thesis, fellowships and training courses to ensure over time the presence of appropriate professionals who were able to carry on the operational tasks of protection and preservation.

THE RHAETIAN RAILWAY IN THE LANDSCAPE OF ALBULA - BERNINA



CHANGES - CULTURAL HERITAGE MANAGEMENT
Valorisation through cross-border cooperation



•TIRANO railway station

UNESCO world heritage was intended as an opportunity for cooperation
between Valtellina and Graubünden (Italy and Switzerland)

CPRE Project: Planned Conservation in the Rhaetian Alpine common space



KNOWLEDGE

- ❖ history of buildings
- ❖ of materials
- ❖ of building technologies
- ❖ of the local context
- ❖ correlation between buildings and cultural landscape

CONSERVATION

- ❖ systemic approach
- ❖ vision of pro-active protection
- ❖ conservation plans
- ❖ collaboration with UNESCO

SKILL/CAPACITY ENHANCEMENT

- ❖ technicians
- ❖ craftsmen
- ❖ integrated multidisciplinary approach

VALORIZATION

- ❖ increase in trade
- ❖ increase job opportunities
- ❖ growth of tourism
- ❖ creation of a pool of expertise

CHANGES - CULTURAL HERITAGE MANAGEMENT
Valorisation through cross-border cooperation

The project was funded by Italy-Switzerland Interreg EU program

CPRE Project: Planned Conservation in the Rhaetian Alpine common space



CHANGES - CULTURAL HERITAGE MANAGEMENT
Valorisation through cross-border cooperation



They were carried on knowledge and conservation activities on churches and castles, valorization of landscape and skill enhancement both for technicians and craftsmen

CPRE Project: **Planned Conservation in the Rhaetian Alpine common space**



CHANGES - CULTURAL HERITAGE MANAGEMENT
Valorisation through cross-border cooperation

CPRE OUTCOMES:

- ❖ **DEVELOPMENT AND APPLICATION OF ADVANCED AND INNOVATIVE TECHNOLOGIES IN THE AREA OF VALTELLINA / VALPOSCHIAVO**
- ❖ **DEVELOPMENT AND SHARING OF THE PRACTICE OF PREVENTIVE PLANNED CONSERVATION OF CULTURAL HERITAGE**
- ❖ **INCREASE OF THE CROSS-BORDER ITALY/SWITZERLAND COOPERATION IN THE TECHNICAL FIELD**
- ❖ **JOINT TRAINING OF TECHNICIANS AND CRAFTSMEN AIMED TO A POSSIBLE INTER-BORDER MOBILITY**
- ❖ **CREATION OF USEFUL COMPETENCE FOR THE EXCHANGE OF QUALIFYING EXPERIENCES BOTH IN THE ALPINE CONTEXT AND IN THE UNESCO CONTEXT**

In December 2015, the CPRE project was awarded by region Lombardy among the 6 most significant Interreg projects of the 2007-2013 period

AN OVERALL ECONOMICAL VIEW



CHANGES - CULTURAL HERITAGE MANAGEMENT

Numbers

		Global cost	%
Program Design	Cons. planning	€ 152.553	1,8%
	Diagnostic	€ 502.065	5,9%
	Monitoring		
	Design	€ 1.089.812	12,9%
Works	Works	€ 4.334.077	51,1%
Maintenance -prevention	Conservation control	€ 190.000	2,2%
	Maintenance		
	Skills Enhancement	€ 314.510	3,7%
	Valorisation	€ 1.359.768	16,0%
	Project management	€ 530.656	6,3%
TOTAL AMOUNT		€ 8.473.441	

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THANK YOU FOR YOUR ATTENTION