GREEN RISK 4 ALPS

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Interreg Alpine Space
EUROPEAN UNION

GREEN RISK 4 ALPS

European Regional Development Fund

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Which are the specific objectives the project will be working towards? Define max. 3 project specific objectives.

Title of specific objective	Please provide a short explanation on the link with the project outputs
1. To develop and apply affordable, innovative, preventive and **nature-based risk mitigation strategies**	SO1 will be achieved by: i) transalpine guidelines to assess the protection function and effects of mountain forests; ii) **new model to evaluate costs, benefits and consequences of different risk reduction measures; iii) guidelines for the prioritization of risk reduction strategies on the municipality level;** iv) **new recommendations for ecosystem-based risk mitigation;** v) **new user-tailored forest assessment tool (compilation of four tools to support expert in ecosystem-based risk management).**
2. To increase the **awareness for the necessity of ecosystems for risk mitigation and to rise acceptance of nature-based risk reduction** measures	SO2 will be achieved by: i) catalogue of actors and network structure; ii) map of interests, conflicts and awareness in ecosystem-based risk management; iii) map of decision structure on the municipality and regional level; iv) **application of the research-integration-utilization (RIU) model for decision optimization in ecosystem-based risk control; v) road map for a multiple actor and decision targeted information process**; vi) strategy of acceptance raising for nature-based risk management
3. To enforce **transnational and multi-actor involvement** for long-term oriented risk governance	SO3 will be achieved by: i) involvement of important transnational political steering groups (EUSALP, ALPINE CONVENTION, CIPRA); ii) survey and comparison of national barriers for applying new ecosystem-based natural hazard risk mitigation concepts; iii) new transnational recommendations for the governance of sustainable protection forests and ecosystem-based risk mitigation; iv) new transalpine workbooks for experts on protection forest and ecosystem-based risk management.

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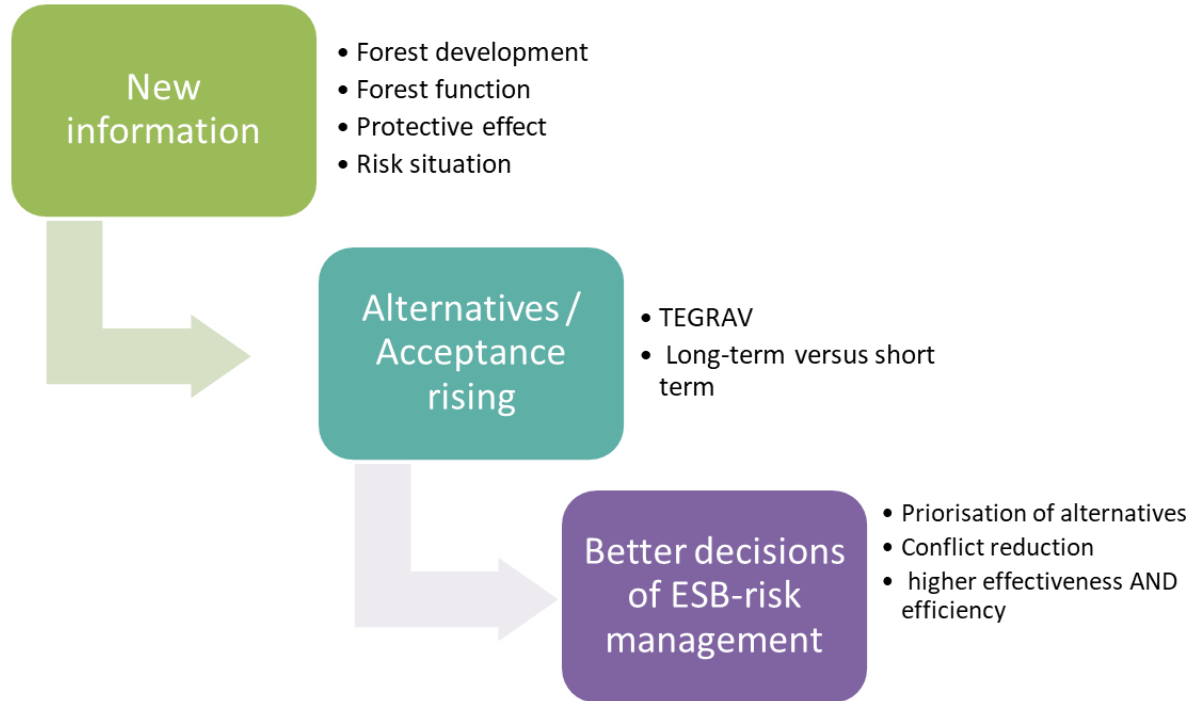RISK
4 ALPS

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Out1: Innovative and **integrated risk management** procedures by balancing ecosystem-based, technical and preventive natural hazard management concepts. Solutions are built upon the **newly developed ecosystem-based method for risk reduction.**

Out2: **Transnational and multilevel support** platform for ecosystem-oriented decision-making, including: i) a transnational acceptance driver network; ii) a newly developed method for balanced cost/benefit scenarios; iii) a strategic communication method, fostering decision alternatives.

Out3: **Innovative policy input to national and transnational policy** platforms, by delivering **methodological and operational model** pathways for strategic optimization of integrated risk control measures and systematic compromising and conflict reduction.

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AS SHORT AS POSSIBLE

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New information
- Forest development
- Forest function
- Protective effect
- Risk situation

Alternatives / Acceptance rising
- TEGRAV
- Long-term versus short term

Better decisions of ESB-risk management
- Priorisation of alternatives
- Conflict reduction
- higher effectiveness AND efficiency

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Better Decisions

New communication strategies

New ESb risk management principles

Actors and decision oriented
Conflict reducing
Acceptance rising
Optimizing compromise
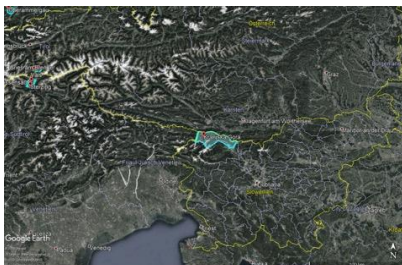
Assessment Priniciples
Guidelines
Management handbooks

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Project structure

WPMAN

T5 RIGOR RISK GOVERNANCE SUPPORT (25M)

LP1 - BFW	A.T5.4	Protection forest work book
PP12 - LWF	A.T5.3	Govern. ESb risk mitigation
PP4 - IRSTEA	A.T5.2	National barriers
PP4 - IRSTEA	A.T5.1	EUSALP, A. CONVENT., CIPRA

T4 ACRI : ACCEPTANCE RISING FOR ECO-SYSTEM BASED RISK CONTROL MEASURES (21M)

PP11 - UGOE	A.T4.4	Decis.-targeted communic.
PP11 - UGOE	A.T4.3	RIU based decision space
PP11 - UGOE	A.T4.2	RIU model in two PAR
PP11 - UGOE	A.T4.1	Adapting RIU

T3 DORA : DECISION ORIENTED RISK ASSESSMENT (27M)

PP5 - EURAC	A.T3.5	Application of Risk Analysis
PP5 - EURAC	A.T3.4	TEGRAV risk mngnt strat
PP7 - DISAFA	A.T3.3	Cost/Benefits/Consequences
PP5 - EURAC	A.T3.2	Risk Analysis & Strategy Prior.
PP8 - SFS	A.T3.1	Risk managmt w. forest focus

WP 2 ACTINA: ACTORS INVOLVEMENT & NETWORK ANALYSIS(20M)

PP11 - UGOE	Awar. & conflict analysis
LP1 - BFW	Protection and damage pot.
PP11 - UGOE	Decision structures
LP1 - BFW	Analys. of networks of actors
PP12 - LWF	Social-network analysis

WP 1 PRONA: FOREST ASSESSMENT (20M)

PP9 - UL	A.T1.6	ProtFor assmnt tool (FAT)
LP1 - BFW	A.T1.5	Forest special topics
PP4 - IRSTEA	A.T1.4	Maintng forest protection
PP9 - UL	A.T1.3	Forest protection effect
LP1 - BFW	A.T1.2	Modeln NH Scenarios
PP5 - EURAC	A.T1.1	CC-FC-NHC scenarios

Periode 1			Periode 2			Periode 3			Periode 4			Periode 5			Periode 6	
Q2-18	Q3-18	Q4-18		Q1-19		Q2-19		Q3-19		Q4-19		Q1-20		Q2-20		Q3-20	Q4-20		Q1-21		Q2-21

| MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAI | JUN | JUL | AUG | SEP | OKT | NOV | DEZ | JAN | FEB | MAR | APR | MAI | JUN | JUL | AUG | SEP | OKT | NOV | DEZ | JAN | FEB | MAR | APR |

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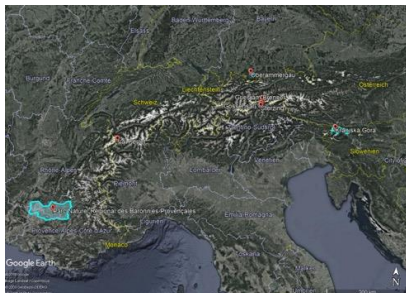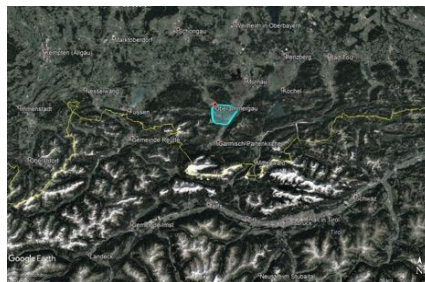Partners

Kranjska Gora (SLOV)

Oberammergau, Germany
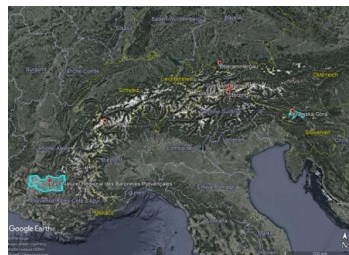
Sterzing/Gossensass (ITA)
Vals and Gries a.B. (AUT)

Val Ferret, Mont Blanc area, (ITA)

Parc des Baronnies, France

DEFINITIONS OF PROTECTION FORESTS

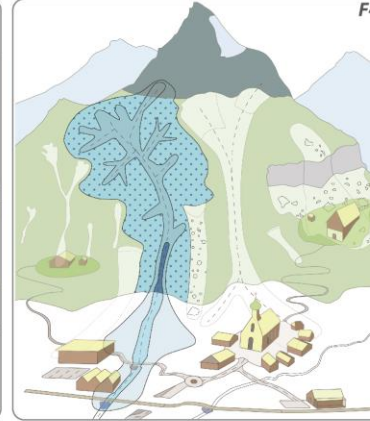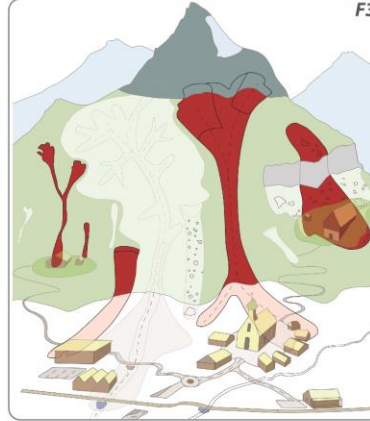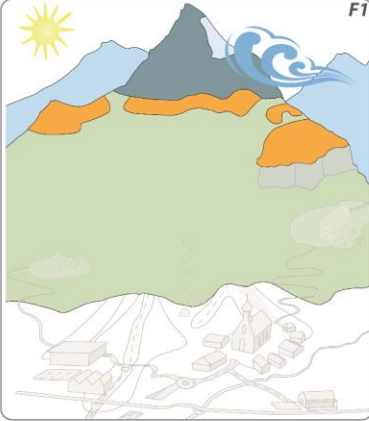| Site protection forest		Object protection forest	
Soil protection forest	Process protection forest	Direct protection forest	Indirect protection forest

Protection function — *Defines what should be*

F1 · F2 · F3 · F4

Protective effect — *Defines what is*
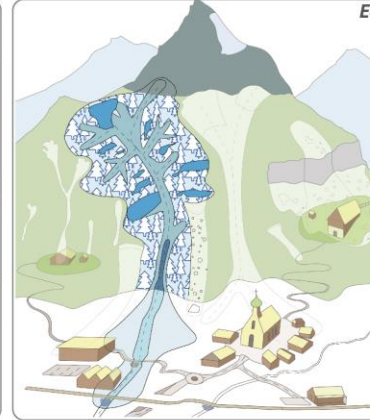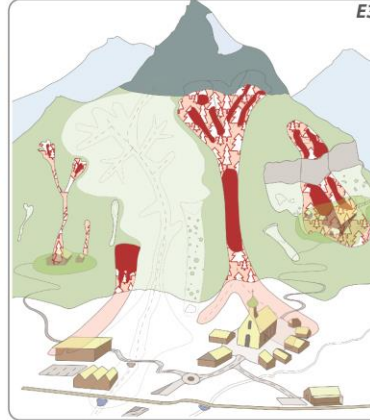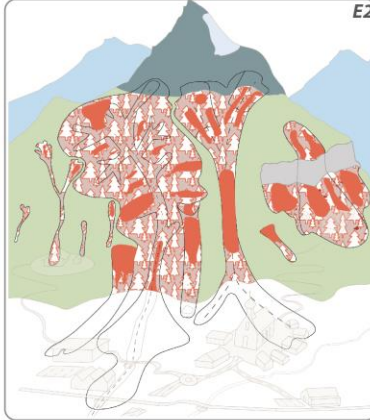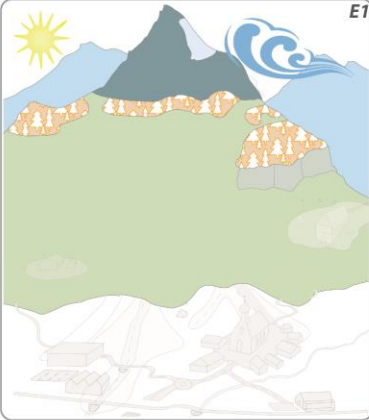
E1 · E2 · E3 · E4
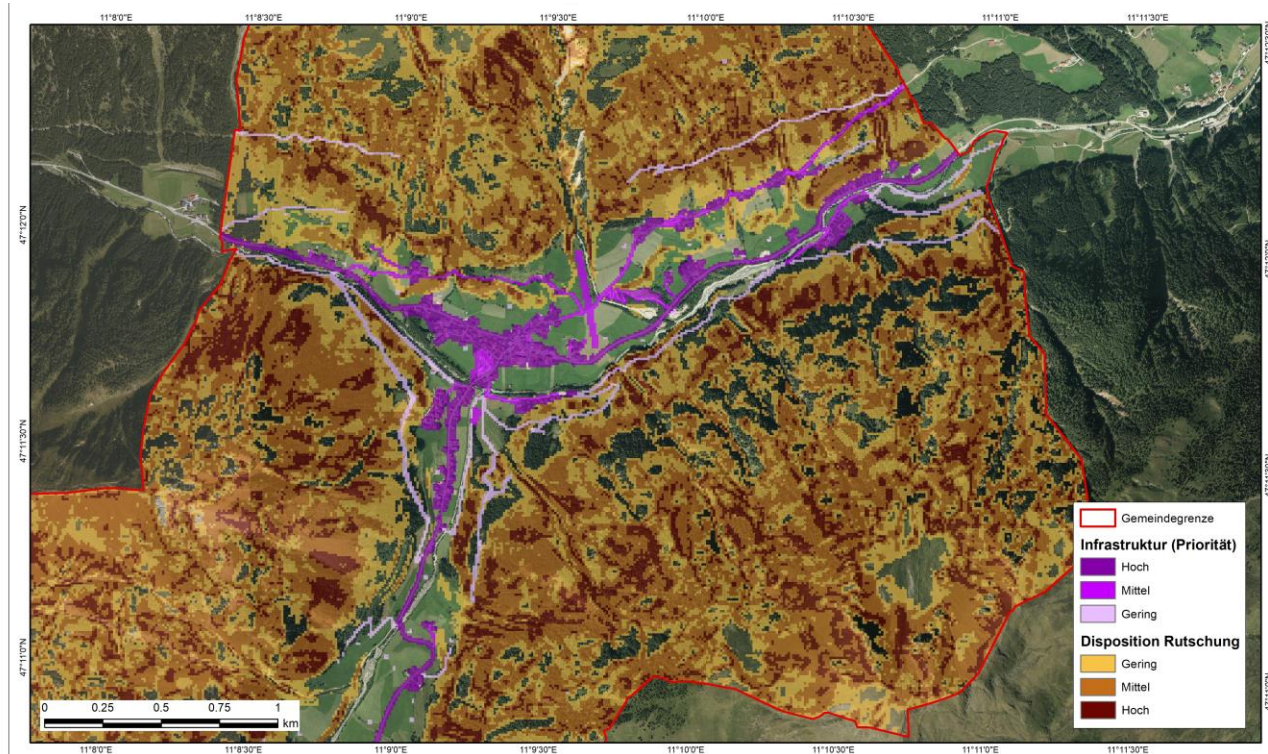
Datenquellen
(c) Land Tirol 2018; BEV 2018;
WLV 2018; BMNT 2018

Bundesforschungszentrum für Wald (BFW)
Institut für Naturgefahren
Bearbeiter: Marc Adams

Legend:
- Gemeindegrenze
- **Infrastruktur (Priorität)**
  - Hoch
  - Mittel
  - Gering
- **Disposition Rutschung**
  - Gering
  - Mittel
  - Hoch

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New information – PROTECTIVE EFFECT
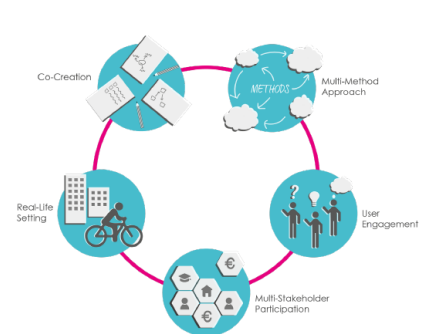
FAT Results

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PAR mitigation development plan GreenRisk4Alps - Phases of Living Labs

Interreg
Alpine Space

Co-Creation

Multi-Method Approach

METHODS

Real-Life Setting

User Engagement

Multi-Stakeholder Participation

Malmberg et al. 2018

What is a Living Lab?

A Living Lab is an orchestrator of open innovation processes focusing on co-creation of innovations in real-world contexts by involving multiple actors with the objective to generate sustainable value for all actors focusing in particular on the end-users.

Anna Stahlbröst, Botnia Living Lab

What we get — Information inventory update

What we bring in — Innovative information

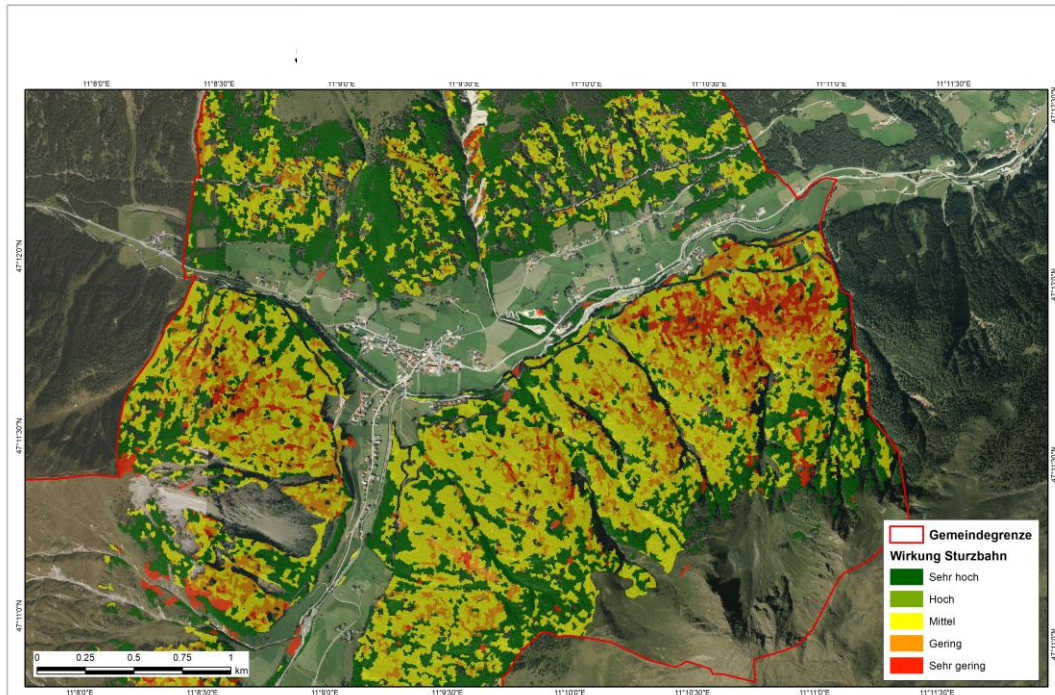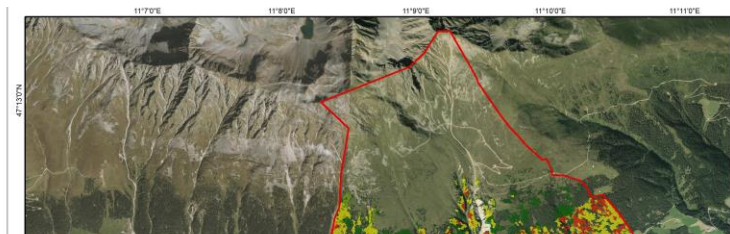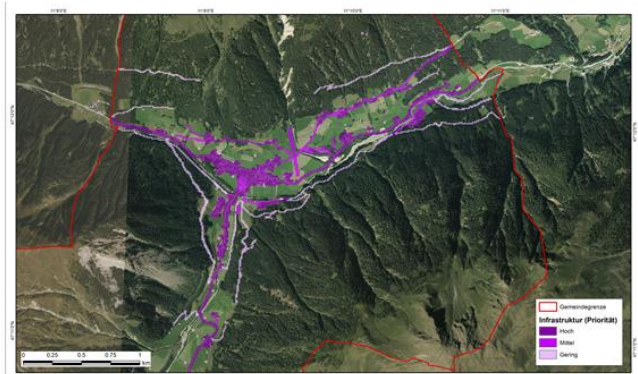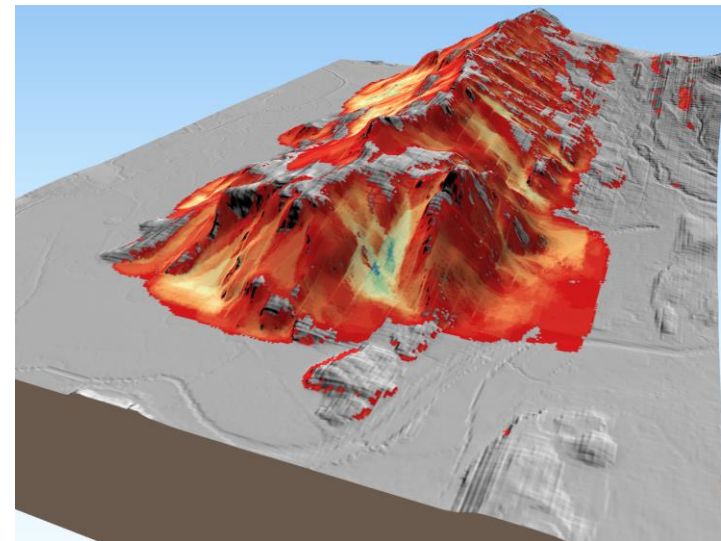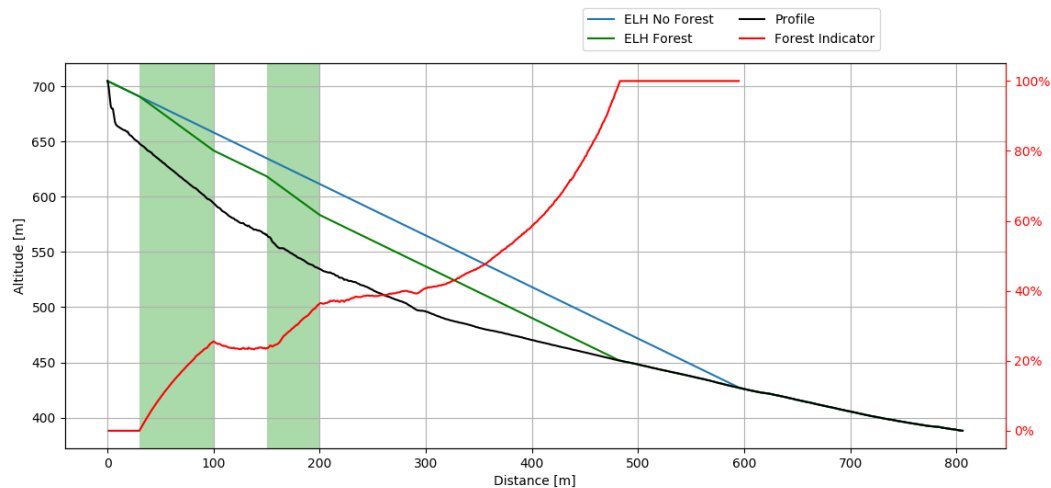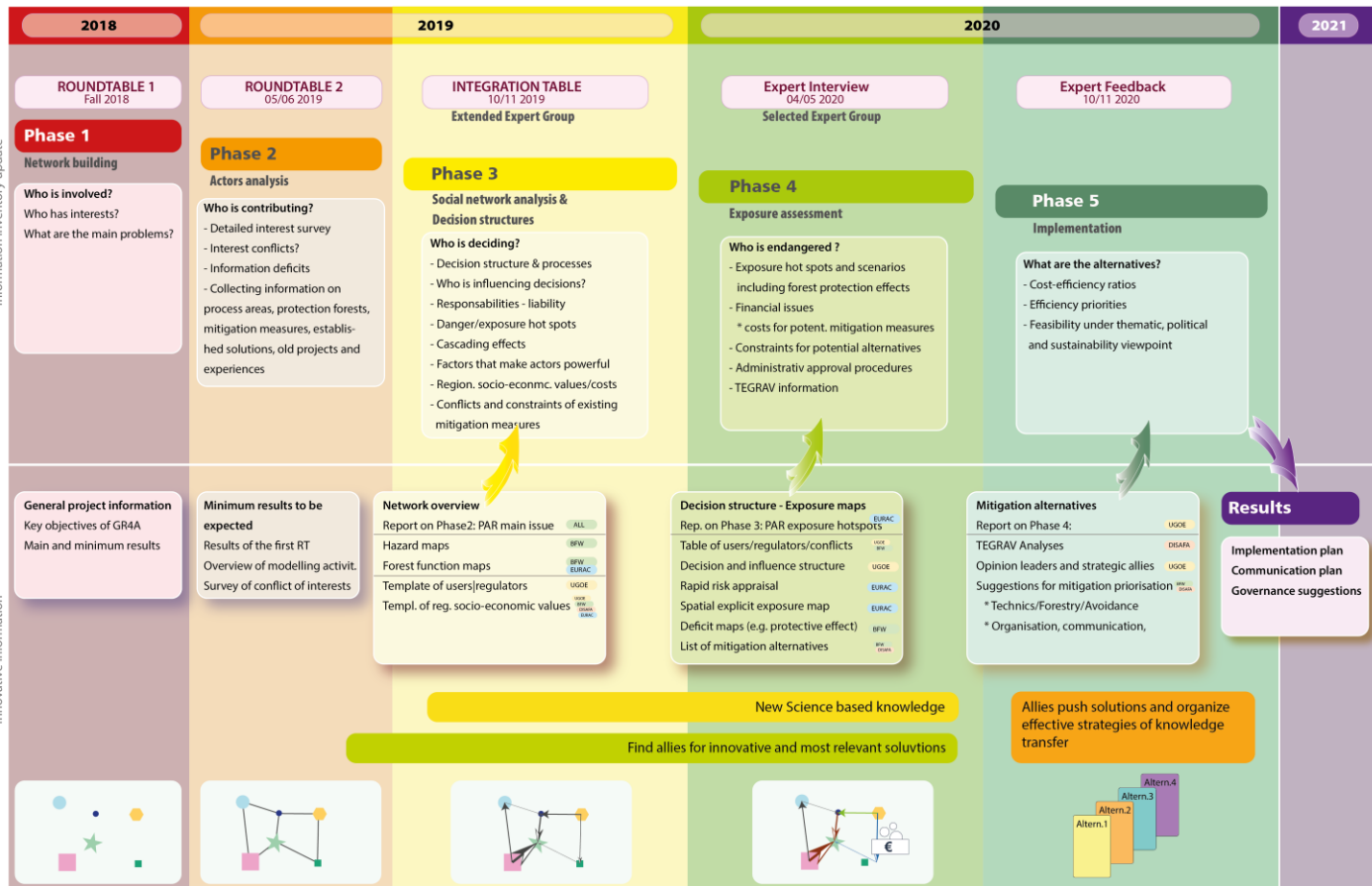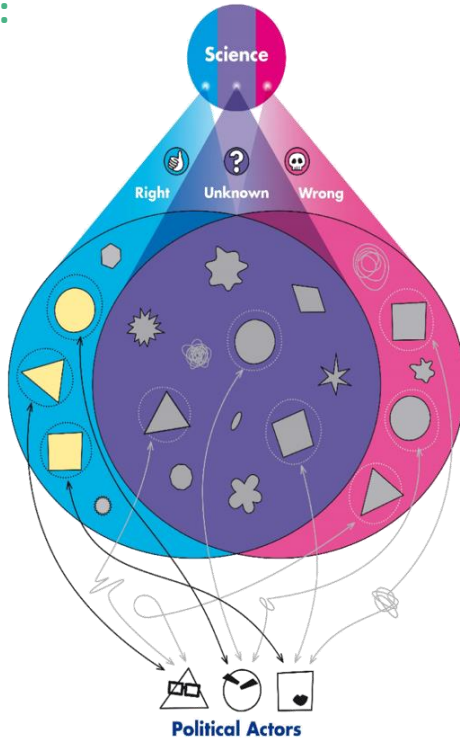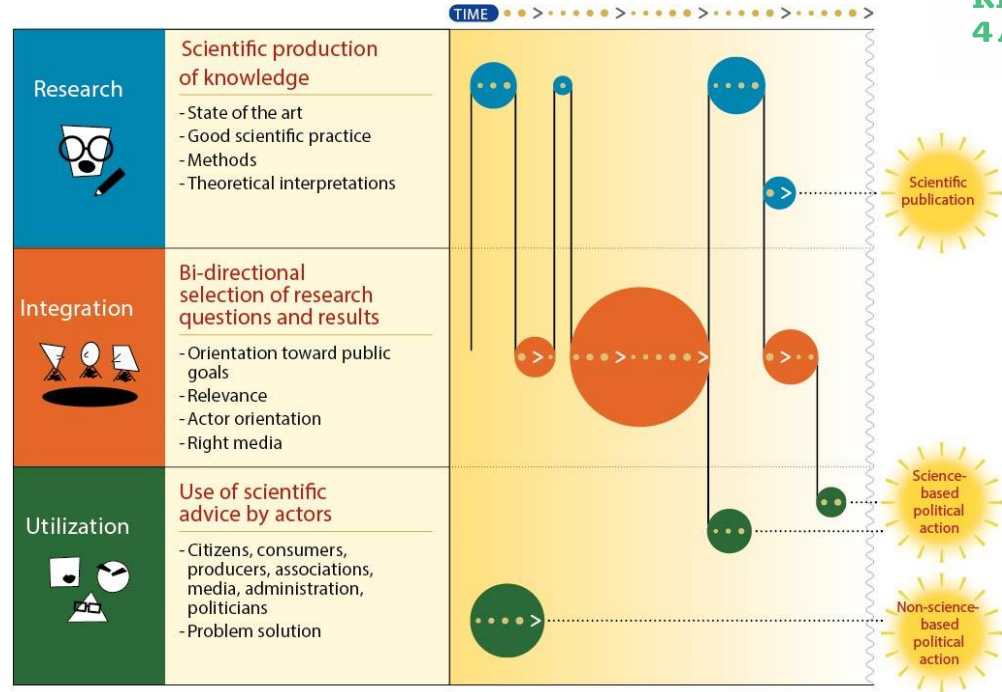| 2018	2019	2020	2021

ROUNDTABLE 1
Fall 2018

Phase 1
Network building
Who is involved?
Who has interests?
What are the main problems?

ROUNDTABLE 2
05/06 2019

Phase 2
Actors analysis
Who is contributing?
- Detailed interest survey
- Interest conflicts?
- Information deficits
- Collecting information on process areas, protection forests, mitigation measures, established solutions, old projects and experiences

INTEGRATION TABLE
10/11 2019
Extended Expert Group

Phase 3
Social network analysis & Decision structures
Who is deciding?
- Decision structure & processes
- Who is influencing decisions?
- Responsabilitys - liability
- Danger/exposure hot spots
- Cascading effects
- Factors that make actors powerful
- Region. socio-econmc. values/costs
- Conflicts and constraints of existing mitigation measures

Expert Interview
04/05 2020
Selected Expert Group

Phase 4
Exposure assessment
Who is endangered ?
- Exposure hot spots and scenarios including forest protection effects
- Financial issues
  * costs for potent. mitigation measures
- Constraints for potential alternatives
- Administrativ approval procedures
- TEGRAV information

Expert Feedback
10/11 2020

Phase 5
Implementation
What are the alternatives?
- Cost-efficiency ratios
- Efficiency priorities
- Feasibility under thematic, political and sustainability viewpoint

General project information
Key objectives of GR4A
Main and minimum results

Minimum results to be expected
Results of the first RT
Overview of modelling activit.
Survey of conflict of interests

Network overview
Report on Phase2: PAR main issue — ALL
Hazard maps — BFW
Forest function maps — BFW EURAC
Template of users|regulators — UGOE
Templ. of reg. socio-economic values — UGOE BFW EURAC

Decision structure - Exposure maps
Rep. on Phase 3: PAR exposure hotspots — EURAC
Table of users/regulators/conflicts — UGOE BFW
Decision and influence structure — UGOE
Rapid risk appraisal — EURAC
Spatial explicit exposure map — EURAC
Deficit maps (e.g. protective effect) — BFW
List of mitigation alternatives — BFW UGOE

Mitigation alternatives
Report on Phase 4: — UGOE
TEGRAV Analyses — DISAFA
Opinion leaders and strategic allies — UGOE
Suggestions for mitigation priorisation — UGOE DISAFA
  * Technics/Forestry/Avoidance
  * Organisation, communication,

Results
Implementation plan
Communication plan
Governance suggestions

New Science based knowledge

Find allies for innovative and most relevant soluvtions

Allies push solutions and organize effective strategies of knowledge transfer

Altern.1 Altern.2 Altern.3 Altern.4

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Communication – RIU Implementation

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RIU – Model:
Research-
Integration-
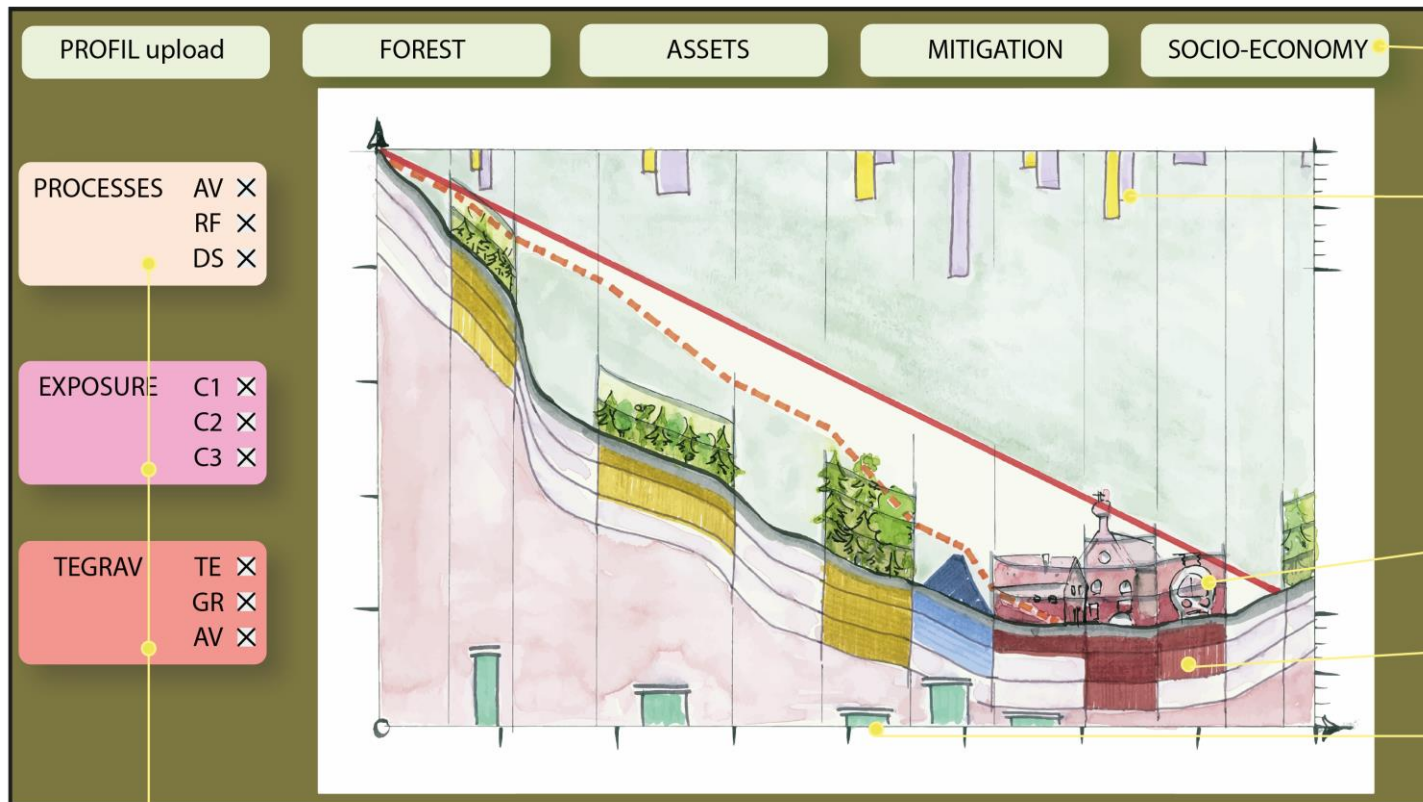Utilization

Actor-driven
selection of
scientific
knowledge

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Output – FAT [Forest Assessment Tool] based on TEGRAV Analysis

PROFIL upload | FOREST | ASSETS | MITIGATION | SOCIO-ECONOMY

input menu

PROCESSES
AV ✕
RF ✕
DS ✕

EXPOSURE
C1 ✕
C2 ✕
C3 ✕

TEGRAV
TE ✕
GR ✕
AV ✕

TEGRAV results

input visualisation

function/exposure

protective effect

analysis menu

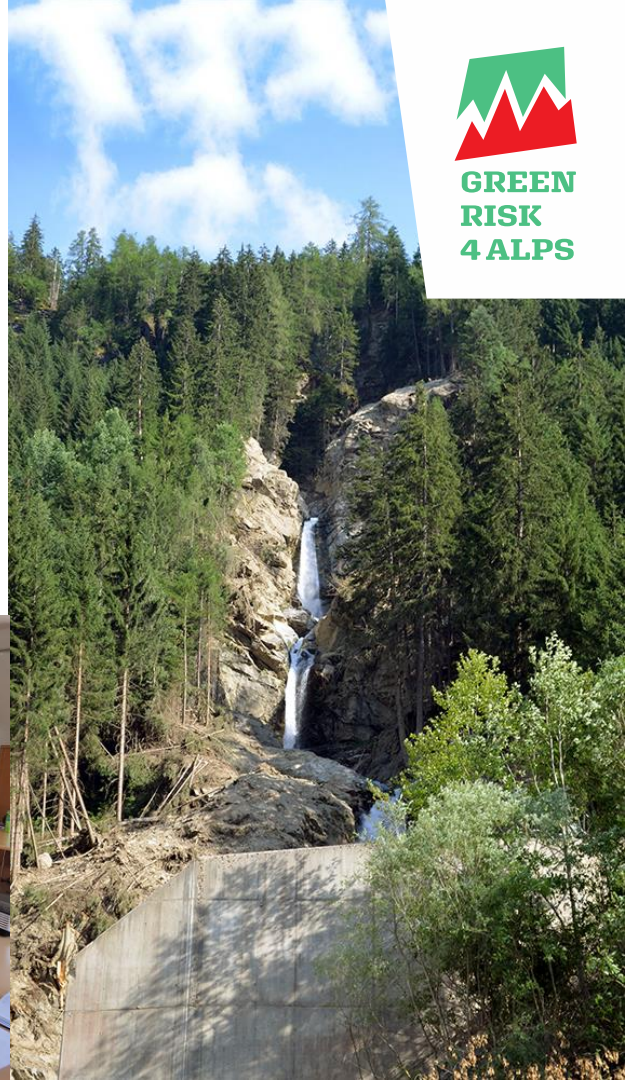GREEN
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GR4A Protection Forest Handbook Vol1
SCIENTIFIC BASIS

- Motivation
- Concept of Eco-DRR
- Methodological Framework
- Integration and implemetation of Eco-DRR

GR4A Protection Forest Handbook Vol2
Management in Practice

- Motivation/Workflow overview
- Forst Function assessment
- Assessment of protective effects
- Methodological Framework
- DSS (FAT) and cascading effects
- Catalogues and report list

✓ Development of harmonized, responsive, transparent and efficient strategies of ecosystem-based natural hazard risk governance

✓ Transnational policy improvement by complying current policy needs and cross-sectoral challenges in an innovative way

✓ Implementation of a multi-actor and multi-risk approach

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