

# Tyrolean Torrent Monitoring System

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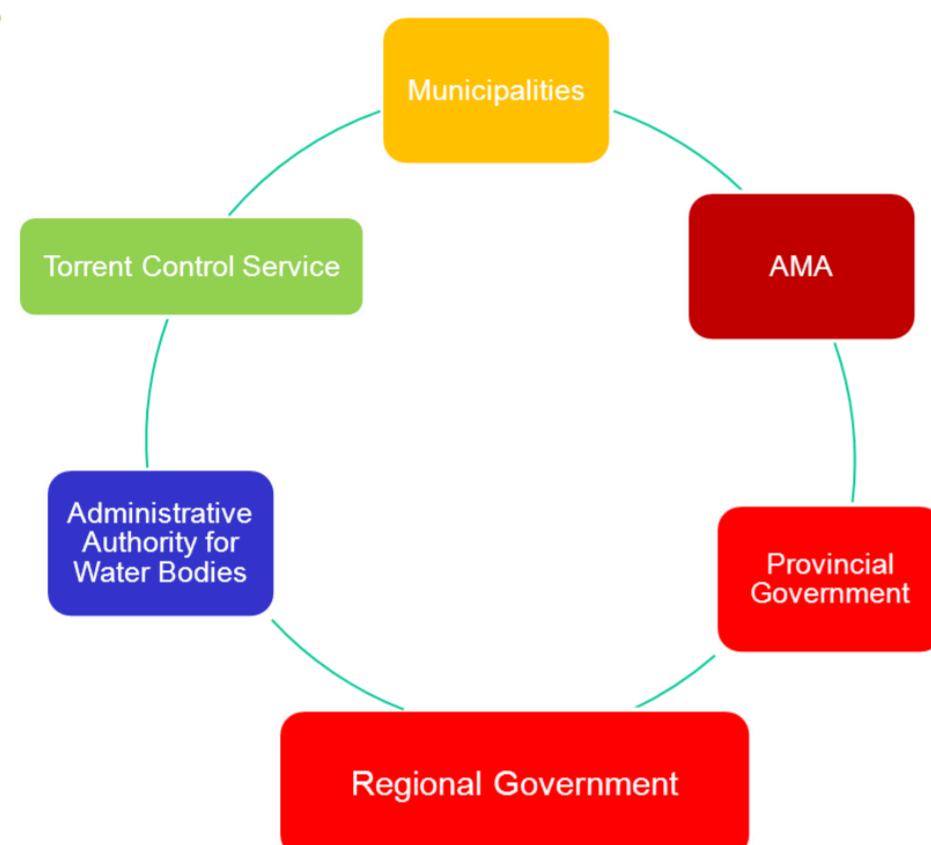
## Dilemma

Local municipalities are responsible for monitoring torrents and defense structures  
Local municipalities are insufficiently prepared for this challenge

## Solution

Tyrolean Forest Service, Austrian Torrent and Avalanche Control Service and the Confederation of Local Municipalities worked out a consolidated solution

## Partners:



## Responsibilities:

### Local forester

patrols the torrents  
reports about run off barriers and damage to defense structures  
finds out land owners and initiators for run off barriers  
proposes measures  
arranges measures

### Regional Avalanche and Torrent Control Service

defines routes to be patrolled by the local foresters,  
evaluates the observations made by the local foresters,  
assigns priority, subsidy and responsibility for measures,  
arranges measures,  
manages subsidies together with the regional forest service and the AMA

### Municipality

informs land owners about measures  
Sends official notifications to initiators of run off barriers  
orders measures  
pays measures, gets subsidies from state/regional government

### Regional Government

gets reports about activities  
acts according to requirements

### Provincial Government

provides IT-infrastructure and software  
coordinates the project

## Vision:

- Documentation of defense works and observations by mobile tools in the field
- Integration of observations relevant to infrastructures run by OEGB
- Integration of CSA into the work environment of local foresters



- Documentation of damaged defense structures and run off barriers
- Authorization for timber harvests
- Silvicultural advice
- Timber logistic
- Documentation of silvicultural measures

## Monitoring levels

### Level 1 – „continuous observation“

- Survey according to Austrian Forest Law by local forester
- Optical survey of defense works

### Level 2 – „inspection“

- Quality assurance by a joint survey of local forester and a member of the Torrent and Avalanche Control Service

### Level 3 – „control“

- Quality control of crucial defense works by civil engineers

## Results:

