How to implement climate adaptation plan?
Water/Erosion in Wallonia

ESPON-TNO online roundtable
25/06/2020

Julien Hoyaux
Process to adapt to climate change

And at local scale?
“Adapte ta commune” approach

1. Diagnosis tool
2. Detailed evaluation of the risks
3. Selection of actions & cases studies
4. Monitoring
5. Reporting

Preparing the ground
Assessing risks and vulnerability
Identifying adaptation options
Assessing adaptation options
Implementation
Monitoring & Evaluation

Floods maps & management plans

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Example of collaboration between region – municipalities – citizens -farmers

Impact: soil erosion
Adaptation: agricultural practices, spatial planning, local action
Water Run-off & mudflow Hazard Prevention in Wallonia (Belgium)
Wallonia facing water flood crisis

- 10% of Wallonia under flood risks exposure regarding the Flood Hazard Map
- More than 60 floods being reported as natural disasters these last 60 years
- More than 50 millions € covered by insurance companies in year 2018 regarding river overflow, water run-off and/or mud flow hazards
- More than 50% of Local Authorities facing mud flow and/or water run-off flood hazards on last 5 years
  - Misappraisal of Water run-off hazard incidences in most cases...
- FLOODS MANAGEMENT -

- All administrative levels involved:
  - Regional Government and Administration
    - Land Use Planning
    - Agriculture, Natural Resources and Environment (DAFOR, DCENN, GISER)
  - Provinces
  - Local Authorities
  - Civil associations (River basins associations, ...)

- UE-MS Flood Risk Management Program
Localities impacted by water run-off and/or mud flow hazards (2011-2019)

Localities impacted by water run-off and/or mud flow hazards in 2018
GISER ?

• A Regional unit working on Soil, Water & Runoff Erosion alongside Local Authorities
• Integrated Management ?
  • At watershed level, from the field to the river
  • Proposals towards farmers, impacted residents and Local Authorities
• Since 2011
• Implemented by the Minister for Agriculture & by Walloon BioEngineering universities
- SPATIAL INFORMATION -

WATER RUN OFF COURSES & CONTRIBUTION AREAS

ERRUISOL application: Main natural water run-off courses
LIDAXES application: Accurate course of water run-off taking account land artificialisation

http://geoportail.wallonie.be/walonmap
GISER Research & Development unit
• Cartography
• Model-building
• Impact assessment on Pilot sites
• Validation of water, run-off and erosion management practices

GISER Expertise unit
• Delivery of advices on Planning permissions (Building permits, fill embankments, etc)
• Watershed analysis/mudflows and run-off erosion management proposals
• Facilitation between Local Authorities, farmers and residents regarding the implementation of water run-off and soil conservancy measures

Prevention
Correction
Advices on building permits regarding floods

Mandatory since June 2017 for:
- Building constructions
- Land allotments or collective buildings
- Land excavation or bank filling

... For both overflows & water run-off floods

Project exposure towards flooding?
Project impacts towards downstream residents?

How?
- Floodstreams, topography, watershed, project vulnerability analysis

Advices given on 6,000 projects in 2019
- 25% under modification
Advices on building permits regarding floods

Risk integration & correction
Watershed analysis and mudflows management proposals

- DAfOR (since 1997 on large perimeters, land reparation)
- GISER (since 2011): 880 critical sites covering 32,000 ha

Risk management in already impacted areas

- Black spotting and prioritization
- On-field visit & watershed analysis
- Conciliation with farmers and LA
- Implementation assistance

Monitoring Work acceptance Stewardship
Ma commune face aux inondations et coulées boueuses

- Comment agir pour mieux prévenir
- La Wallonie à vos côtés!

Risque naturel d’inondation par ruissellement concentré

Les avis sur permis et autorisations en zone à risque
Informations à l’attention des communes

- La contrainte d’inondation par ruissellement
- L’avis technique de la Cellule GISER

Risque naturel d’inondation par ruissellement concentré

Dans une demande de permis et autorisation urbanistique
Informations à l’attention des demandeurs

- Le CoDT et le risque de ruissellement concentré
- Recommandations pour les auteurs de projet
Adaptation framework: a world of links & collaborations

- White Paper COM(2009) 147 final
- Climate-ADAPT
- Evaluation EU Strategy
- National Adapt. Strategy
- Regional impacts studies
- Regional plans
- Outil de diagnostic
- Adapte ta commune

Timeline:
- 2009
- 2010
- 2012
- 2013
- 2015
- 2016
- 2017
- 2018
- 2020

Resources:
- http://www.burgemeestersconvenant.be
Contacts

For more information on adaptation
http://www.adapt2climate.be

Our services toward Local Authorities
- Consulting regarding mudflows and rill erosion management at watershed level
- Information and conciliation between LM and farmers regarding erosion control practices or tools
- Preventives measures, sof hydraulic techniques
  DDR – Cellule GISER
- Advice on flood control management: hedges, dams, ditch, water storage basins
- Financement regarding agricultural roads improvement
- Land repaneling
  DAFoR
- Financement for watercourse maintenance
- Flood hazard cartography
- Flood Risk Management Plans coordination (PGRI)
  DCENN

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