

# UNIQUE PROJECT DOCUMENT OF LRDs STRATEGIES



ACHELOUS is co-financed by the EU Civil Protection Mechanism

## ACTION OF CONTRAST TO HYDRAULIC EMERGENCY IN LOCAL URBAN SITE

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### INTRODUCTION – EXECUTIVE SUMMARY

In project ACHELOUS emphasis is on establishment of Local Risk Districts (LRDs) that are being created by a number of municipalities to effectively and efficiently tackle the challenges of floods in urban – semi urban environment. Past events have clearly shown that flood risks from the same source (s) can be common challenge for a number of municipalities around the same hydrographic basin. However, so far the prevention, preparedness and mitigation measures were taken independently without serving a common strategy and action plan. Thus, results from isolated actions were doubtful and even floods management operations, where all players act together due to circumstances, were less effective.

Operational partners of ACHELOUS project acted fast and took all the necessary steps to formulate the LRDs. Agreements were signed among municipalities that understood the need for common action and optimization of resources that in many cases are in scarcity. LRDs have been involved in international training activities in Thessaloniki and also in all exercises planned and executed by ACHELOUS partners. The LRD concept was new in all partners' area. Seeds of it could be identified prior to the project in regularly civil protection meetings organized prior to floods season to achieve a minimum cooperation level among the different stakeholders. However, little progress has been made towards joint actions implementation. Sign of LRDs in all partners' areas officially acknowledged the common problem of floods risks, allowed LRDs involvement in exercises planning that for the first time included inter-municipal elements and in each area –depending on legislative limitations- partners are working on giving to LRDs the most appropriate official structure and form to fully activate them.

LRDs must have a strategy on floods risk coupled by an action plan that will aim in optimization of resources during prevention and preparedness phase, supporting management and restoration. Such strategies and action plans do not exist and present document is project ACHELOUS contribution towards that direction.

What was the situation before ACHELOUS project implementation?

- ✓ All countries had detailed emergency plans either worked in depth more at local level due to higher degrees of autonomy (e.g. Italy), or just adapted from national ones (in all other countries).
- ✓ Strategies and Action Plans were not obligatory in all countries by the legislation, although Italy and Romania have documents entitled strategy for floods. However the Inter municipal approach was not the key element of those documents, though present.
- ✓ In Macedonia and Croatia there were many elements (e.g. risk assessment studies, maps, early warning systems, training activities...) that can constitute part of a Floods Risk Strategy and Action Plan for LRDs. The same applies in Italy and Romania.

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- ✓ In Greece mainly but also in Bulgaria the great shortcomings in staff and the rigidity of the legislative and operational framework have not allowed in the past inter municipal cooperation activities. Partners tried to overcome these obstacles through joint implementation of European projects.
- ✓ In Greece there is no floods risk strategy. Elements are dealt within operational plan.
- ✓ European projects were also a useful tool for planning, implement and evaluate joint actions to all partners' areas. Bulgarian floods risk strategy has been conducted through European project.
- ✓ In Italy but also in Macedonia, Arad and Virovitica, the biggest cities/municipalities take over main responsibility for joint actions (from now on also within LRDs framework), which is normal as resources are more there than in small municipalities.

In all ACHELOUS partners' areas despite the certain limitations, there are enough elements for making Local Risk Districts functional and leading bodies in floods risk tackling, however the culture of joint actions has to be cultivated further among involved stakeholders.

### COLLECTION OF INFORMATION ON PRESENT SITUATION

Initially all partners had to fill in the following document, regarding existing local strategies against floods risk. In elaboration of the questionnaire –and present document in total- the following belief was considered as the basis:

*“We believe that any strategy existing on floods management includes all phases of civil protection life cycle: Prevention, Preparedness, Management and Post event planning. So when we write floods management we assume that all phases are included”.*

### STRATEGY & ACTION PLAN

Firstly, we have to check if there are any existing strategies per area of interest/intervention:

1. Are there any Flood Management Strategies in your Territory?
2. If no, why? Please explain in details?
3. Are there any plans for formulating such a strategy? What are the scheduled steps and time horizon? Please explain.
4. If yes, please describe the shortly the strategy with reference to the related document (s).

Secondly, we will deal with the existing floods management strategy in general terms:

1. Through which procedure the floods management strategy was formulated (open dialogue, implementation of national law, etc)?
2. Was the strategy adopted by regional/local council or by national authorities?
3. Which is the responsible body for the implementation of the strategy?
4. Which stakeholders participate in this body? Do they have clear roles and responsibilities?
5. Is local community represented? How?
6. Is strategy includes procedures for revision/updated versions? How often? In what procedure?
7. Is there any interdependence with national floods management strategy (if existing)?

Then, we have to consider if there is any action plan for strategy’s implementation:

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1. Is strategy coupled with action plan that describes the means, the resources and the activities to implement the floods management in detail?
2. Which entity is responsible for the action plan implementation?
3. Which entities/stakeholders are engaged in implementation? Through which procedures?
4. What is the duration of the Action plan?
5. Are there adequate resources/funds to support action plan implementation? Please describe in details origin of the resources/funds. and responsible for using them
6. How evaluation of action plans is taking place?
7. Is action plan related to civil protection procedures and official structures? In which way?

ACHELOUS partners proceeded with completion of the document (all of them are being presented in the ANNEX). The findings from them were the ones presented in INTRODUCTION – EXECUTIVE SUMMARY session, but the analysis revealed the elements a strategy and action plan for LRDs should contain.

The STRATEGY & ACTION PLAN questionnaire was completed by core / partners municipalities before LRDs formulation. However, it is a useful tool that suits LRDs as entities and can be used in order –each time- to assess the level of maturity their strategy and action plan have.

### **Key Elements for an Effective and Efficient Action Plan towards Floods Risk Minimization/Elimination**

With the below questionnaire / document already presented to ACHELOUS partners, we draft the details of such a strategy and action plan (both for standalone Municipalities and for LRDs) in order to identify the key elements that must be in place so that risk minimizing/eliminating approaches in a Local Risk District (LRD) to be the optimum one.

It would be meaningless that ACHELOUS partners would complete it and it is too early for LRDs to do so. However, it is a useful diagnostic tool for LRDs conditions at any time point. As established LRDs are trying to find the best ways to operate, we believe that their strategy and action plan will be an amalgam of adapted and modified elements of existing floods risk related elements in municipalities – LRD members and new ones deriving either from legislative and operational obligations or from European projects and other financing sources. Therefore this questionnaire can be a guide on LRDs operation evaluation and subsequent corrective/improving actions.

### ***Best Practices Adaption, Adoption and Implementation***

1. Have you ever identified the categories of activities where best practices from abroad could benefit your area/entity?
2. Have best practices been collected?
3. What was the source of finance for collecting best practices (e.g. European project, National Funds)?
4. Was any other entity (e.g. University, Research Institute supported you)?
5. Were any of the best practices adapted to local conditions, and finally adopted by the Action Plan? Please describe the nature of the best practice(s) being adopted.

### ***Risk Assessment / Counter Measures Prioritization / Funding – Implementation / Evaluation***

1. Is there in place a concrete methodology on floods risk assessment in your territory?
2. Is methodology implemented for the entire territory or at pilot areas, selected on criteria such as past events, risk related studies etc)?

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3. Does this methodology include counter measures prioritization and selection procedure?
4. Are there procedures for evaluating the impact of any counter measure to be adopted in risk assessment results and evaluation of their expected performance?
5. How often risk assessment is revised (after each adopted measure implementation, after a set of implemented measures...)?
6. Are risk assessment results and counter measures decided communicated to interested parties (e.g. productive units near or inside risk prone areas, population sensitive units (schools, camps, hospitals etc)?
7. Are risk assessment results linked to what to do lists for entities/ people inside risk prone areas?
8. What are the Permanent (and temporary) funds being used for updating / revising risk assessment?

### ***Early Warning / Monitoring Systems***

1. Are any early warning / monitoring systems been in place at risk prone areas of your territory?
2. What kind of systems? Please describe briefly.
3. Are those systems connected to operational centers / decision support systems?
4. Is connection real time?
5. Is connection on line?
6. How often the early warning / monitoring systems are being maintained / updated?

### ***Decision Support Systems***

1. Does any Decision Support System exist that supports Action Plan implementation?
2. Where is it located (operational center)?
3. What tools are integrated in the decision support system? Please list:
  - a. Resources allocation tools
  - b. Floods evolution prediction tools



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- c. Scenarios creation tools
  - d. Other (please describe shortly)
4. Are decision support system results displayed in TV/PC Screens, maps, etc in the operational center?
  5. Are decision support systems info / results being also available to equipment (mobiles/ tablets etc) at the local units outside the operational center?

### ***Logistics***

1. Does there exist a detailed logistics plan on floods prevention, preparedness and management phases?
2. What does it include? Please list(warehouses, transport network, available vehicles, etc):
3. Is it available on line and in real time in a GIS connected screen?
4. Is logistic plan integrated into decision support system (if exist)?
5. Are all engaged entities/units aware of the logistic plan?
6. How often the logistic plan is revised to take into consideration new evolutions (e.g. a new railway line, an obsolete ware house, changes in available fleet, a new airport available etc)?

### ***Educational / Training Activities***

1. Does the key personnel been educated / trained within the framework of Action Plan implementation procedure or independently at organizational level?
2. Are there any incentives for the personnel (professionals and volunteers) to being constantly educated/ trained?
3. Please mention examples of educating / training activities that you follow. Please include information such as who organizes them, at what premises, training subjects etc.
4. Is cross sectorial / cross territorial education/ training being encouraged? Please describe.
5. Is there any exchanging of experience /joint training events with floods related personnel abroad? Please describe characteristic cases, mentioning also the framework (e.g. European

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project, European Civil Protection Mechanism, Other) in which such exchange of experience / joint training took place.

### ***Exercises (Table top – Field) – Planning/Execution/Evaluation => Action Plan Elements Revision***

1. What are the types of exercises you use on floods operations simulation (table top, on the field, both)?
2. How often do you contact those exercises (please mention frequency per type of exercise)?
3. Are organizations outside your territory invited to plan/participate/evaluate (e.g. other municipalities, prefectures, and regions, national authorities, cross border foreign organizations)? Please describe shortly.
4. Please list the main organizations/entities that take place in those exercises?
5. Are technological systems (such as decision support systems) used during any phase of the exercises?
6. Who and how evaluates the exercises (workshops, questionnaires)?
7. Is there an evaluation report produced? By whom (entity or personnel)?
8. Does the evaluation report affect the planning of future exercises? In which way?
9. At which stage the existing Action Plan is revised taken into consideration the lessons learnt extracted from the exercises?

### ***Regional / Interregional Partners / Entities Alliances***

1. Is there existing cooperation with other territorial entities that face floods risks problems?
2. What type of entities/cooperation exists (inter-municipal, regional, interregional, and national)?
3. Inside your territory but also in cooperating territories is there an alliance of organizations dealing with different aspects of floods (research institutes, etc)? Is it working as a cluster?
4. How do you evaluate the benefits of such an alliance / cluster?

### ***Cross Border/ Transnational / International Cooperation***

1. Is there a case of cross border / transnational /international cooperation that helped understand, improve / solve and sustain solutions on floods management issues? Please explain briefly the programme/ project and the solution/benefit you had.
2. Are there planned different cooperation initiatives / projects to support you in floods management challenge?
3. In which fields do you believe such cooperation efforts are most valuable (i.e. training, exchange of experience, collection of best practices, operational training,)?

### ***Communities Participation***

1. As local communities and active citizens play a more and more important role in our democracies what are the actions / measures that make sure local communities interests, points of view and arguments are taken into consideration during elaboration, implementation and revision of action plan. Please describe in the form of list:
2. In many cases specific groups from local communities can play the role of enablers and mobilize the whole local societies towards floods risk prevention, preparedness and management. Do you agree with that approach? (if you have relevant examples, please mention shortly)
3. Such groups can be (or are) equipped and trained so that can ac more effectively and responsibly the first critical hours of an emergency situation? Please give some examples.

### ***Risk Elimination as a basic element of other sectors policies***

1. Is the Action Plan obligatory only for civil protection related authorities?
2. Is the Action Plan taken into consideration when other sectors decisions are made [e.g. land use, location of an investment (e.g. hotel, factory)], in regards with risk assessment changes and effectiveness of counter measures?
3. Does the vice versa procedure exists (i.e. how a specific investment or land use modify risk assessment)? For example a new school / camp by the river banks, a new hospital near a floods risk area.

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4. Is there a prediction to use floods Action Plan as an advertisement for attracting productive investments or/and tourism related activities in a “secure” area that every responsible knows what to do?

### ***Communication / Dissemination***

1. Is there a communication / dissemination plan that accompanies the Action Plan?
2. Who has elaborated (civil protection experts, politicians, marketing and communication experts, others)?
3. Has the Action Plan been communicated so far?
4. Which are/were the target audiences?
5. What are the results?
6. Do the politicians in your territory –that are related to certain aspects of Action Plan- fully understand the political value of and effective and efficient Action Plan? Please give some short examples

### **IMPORTANT NOTICE:**

The pre-mentioned elements are neither exhaustive, nor restricting. They are key elements that try to bring experience existing in floods management related personnel into the light. Please use the questions to record any experience that can make a difference in common effort to reduce floods risk. Even if the experience seems not to be so hi tech or technology related it can reveal hidden factors that influence floods prevention and management and thus it can lead to serious improvements.

### **LRD STRATEGY characteristics**

Considering that the initial planning phase for LRDs strategy starts at the beginning of the Programming Period 2014 – 2020, provides many opportunities for full activation of LRDs. Therefore it is an imperative that each LRD creates a floods risk strategy that will allow attracting funding. Something not discussed within ACHELOUS project, but may be useful for LRDs is the expansion of the Strategy to Civil Protection issues in general, especially in the cases other risks (e.g. forest fires) can be a common threat for LRD members. Core of the proposed strategy formulating principle is the perception that civil protection concept and actions must be embedded in the majority of development initiatives that are implemented in the LRD area, in order to protect human lives, peoples' properties, the environment, investments and infrastructures.

Such an approach in planning, implementation and evaluation –starting from Flood Risks- secures optimum use of limited available resources, reinforces the prevention and preparedness phases of civil protection, facilitated the successful management of emergency situations and if we have disasters the restoration of natural and human environments.

What is most important is the establishment of a solid based culture that civil protection activities are the insurance for securing long term development efforts and perspectives of LRD area. Especially if those are planned in the framework of an LRD strategy, taking into consideration concerns, needs and priorities of local societies and stakeholders. In that way we guarantee that development efforts will not be cancelled by a sudden burst of a natural danger (e.g. flash floods) and that important investments of public and private sectors will not be depreciated after a big event (e.g. major flood. Those cases are indicative to show civil protection importance in most cases. Strategy revision procedure must be present in a clear transparent way to incorporate past events results, technological or other breakthroughs or simply a change in values and priorities of local societies.

Thus, the strategy must be broad enough to include also other than floods risks, to present the common vision of LRD members for a safe society and for secure sustainable development, that takes also into consideration local communities' priorities and needs and providing a sense of "together". The intermunicipal level that ACHELOUS LRDs represent is the optimum one for declaring such a synoptic, yet meaningful strategy.

### **LRDs' ACTION PLAN FRAMEWORK**

In executive summary we described roughly the LRDs establishment history and how a strategy must be supported by an LRD Action Plan, which differs from operational plans. In previous section we sketched the strategy characteristics and here we will picture the Action Plan Framework, its pillars. Discussion and wide dialogue during the following months –and after ACHELOUS official termination– will define the details and exact terminology and content of those actions as the planning procedures are open at LRDs level.

While each LRD will work on the action plan details we need to underline two points:

1. LRDs must be creative in seeking funds and resources for implementing their Action Plan. Any option from Regional Operational Programmes and European projects to Public – Private sector partnerships and Donors etc must be examined.
2. Existing established structures can be used prior to period LRDs will have legal personality and beyond. Regional Councils, Associations of Municipalities, Civil protection Coordinating Bodies etc can provide support, knowledge and be used as vehicles for optimizing LRDs' functioning.

### **Synergies with OTHER POLICIES / activities**

LRDs' Action Plan can by definition be correlated with other municipal, intermunicipal and regional policies and activities. That is because safety is the base for any social and economic activities planned and implemented at regional and local levels. For example, is it possible to have serious investments in flood risk prone areas that are not prepared for risk prevention and management? In addition, how rural areas development policies and development low for investments should or should not include safety parameters for the wider area of intervention? Spatial planning and development policies also have to encompass civil protection activities. Protection of natural and cultural heritage needs also elements of civil protection into related activities. So independently of the responsibilities each LRD and municipalities' members have, there must take place a systematic approach for achieving synergies with other policies and activities.

### LRDS ACTION PLAN PILLARS:

Based on the experience in ACHELOUS project University of Thessaly proposes five pillars for the LRDs' Action Plan that will allow Local Risk Districts to act as complete entities both at planning (prevention, preparedness) and execution phases (implementation, restoration)

#### **The proposed LRDs Action Plan Pillars are:**

- 1. Quantitative Floods Risk Assessment at LRDs, municipal and city levels:** There is need to quantify Flood Risks for LRDs areas, so that you have a solid basis for proposing measures in Action Plan, with a clear priority and budgeting. Even if such quantification exists for the municipalities that are part of the LRD, a revision s needed taken into consideration the whole LRD area as it may reveal weaknesses, but also areas where joint actions cost less that individual ones. Subsequent risk mapping will allow better planning not only of civil protection policies but also for land use policies, development activities etc.
- 2. Planning and Establishment of an LRD Floods Early Warning System with elements located at risk prone areas:** Based on past events experience and quantitative Floods Risk Assessment some areas may need establishment of a suitable Early warning system for floods as they may have important influence on the total flood evolution and impacts. Therefore, as available resources are limited the LRD joint initiative will allow the establishment of early warning systems to the really critical places for the whole LRD area.
- 3. Design and Development of an Integrated Decision Support System within the LRD Operating Center and with local branches:** Decision Support Systems can vary from common resources (equipment, and personnel/volunteers) data bases and joint flee management components to more analytic tools (e.g. algorithms for optimum allocation of resources). Therefore, what LRDs need is tools that will allow all LRD members to have a clear, common operational picture, the available resources in LRD area (at next step also in near LRDs), and take optimal decisions based on LRDs interests and not in each municipality's ones. There is no need to go for complex tools but start filling the gaps with simple, user friendly tools for LRDs resources management.
- 4. Provision of an LRD Emergencies Logistics System to optimize operations support:** One element of the previously mentioned decision support system is the logistics system for the LRD area and beyond. Meaning that there must be a separate logistics plan (or clearly defined element of an existing one) that will allow the use of available resources in the best way and also the resources that will come from outside the LRD area in case the floods are huge (e.g. from neighbouring LRDs, Region, etc). It is important to have an updated picture of transport networks and available transport means that can be used in each case from public and private sector, depots and resources and how can be brought in risk area, how to evacuate areas at risk

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with alternative scenarios and options bases on the situation etc. Local and past experience is necessary to record specificities not included in official records (i.e. the quality of a road with possible bottlenecks).

- 5. Establishment and Operation of a Monitoring Department at each LRD:** As proposed also by University of Padua each LRD should monitor their activities, evaluate them and proceed to corrective or enhancing/promoting measures. Such monitoring can be done by the personnel that will serve LRD needs, using personnel from existing municipalities' structures to reduce costs. As the LRD will evolve then a specific department that will have among its duties also monitoring of activities may be necessary.



### CONCLUSIONS

LRDs Action Plan on Flood Risks is a long term request of people involved in prevention, preparedness, management and restoration related to civil protection and beyond. Although past events triggered the LRDs idea conception, the formulation procedure needed ACHELOUS to start. Until then no substantial progress was made.

ACHELOUS project provides the opportunity to put Strategies and Action Plan in motion, taking examples from international experience – as was presented also in training event in Thessaloniki-, exploiting field exercises results and understanding Action Plan added value. In preparation for the current programming period 2014 – 2020 in hard economic times, the proposed Action Plan can become the tool for effective, efficient and transparent use of available resources, can support exploitation of other financing tools and justify investments on civil protection.

More important, it is the opportunity to bring together all major civil protection related stakeholders, formulate an LRD Strategy on Flood Risks that can expanded to other risks, followed by LRDs Action / Operational Plans on major risks and transform the existing coordinating bodies of civil protection –as LRDs do not operate in vacuum- into a all time functioning entity that will upgrade the concept of civil protection in minds of stakeholders, investors, planners, decision makers and general public and eventually, increasing safety level and support efforts for intermunicipal sustainable development.

The proposed procedure is open, transparent and has strong society base as it included all related players/ stakeholders, is scientifically supported, gives the floor to local societies and underlines the political dimension through enhancement of the roles to be performed by the elected Mayors and Councils that constitute the heads of Local Risk Districts. After all, justified and scientifically, technically and operational solid actions for LRDs can be succeed if political support exists. ACHELOUS activities – mainly exercises- showed that such support exists.

Finally an important element is the financing of the LRDs action plan. Not just the operating costs that can be shared among the municipalities that consist each LRD but the costs of basic elements such as risk assessment, early warning systems, training activities etc. Financing mechanisms can be many such as Regional Operational Frameworks 2014 – 2020, European projects, Public – Private sector joint initiatives etc. Of utmost importance is the change in mentality. LRDs can make use of their members available funds and beyond in a commonly decided list of actions (prioritize the elements of Action Plan) in order to achieve the maximum benefit at lower cost not only from strictly financial perspective but also including social and development benefits, depending on each LRD case.