

T3.2.5 GUIDANCE IN SPATIAL PLANNING FOR IMPLEMENTATION: SELECTED MEASURES REFLECTED IN SPATIAL PLANNING DOCUMENTATION

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T3.2.5 Guidance in spatial planning for implementation: Selected measures reflected in spatial planning documentation

Datum 11/06/2020
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1.1. Project content

The international project RAINMAN CE 968 deals with the development of tools and methods for identifying risk areas and the design of measures to mitigate the damage associated with torrential rains and pluvial floods. Prepared material T3.2.4 Catalog of Measures and Guideline or the method of selecting measures for spatial planning documentation evaluated the proposed measures to protect the territory from the effects of torrential rainfall according to whether it is possible to include them in spatial planning documentation, specifically in the spatial or regulatory plan. This document deals with how specifically the selected measures will be reflected in the spatial or regulatory plan. For each measure, it therefore determines in which area or corridor with different uses it can be included. Further specify the measure in order to be reflected as concretely as possible in the resulting spatial planning documentation, but in an effort to respect the detail within which this measure is to be specified in the documentation according to the requirements of the Czech Building Act.

1.2. Goals

The aim of this material is to include selected measures in the relevant detail of the spatial planning documentation, in such a detail that belongs to the spatial and regulatory plan according to the Building Act. Specify how a specific measure would be reflected in these documentation, in graphic and textual form.

1.3. Selected measures

During the work on the project, the catalog of measures, which is the basis for the outputs T3.2.4 "Catalog of Measures and Guideline - Method of selecting measures for spatial planning documentation" and T 3.2.5 „Guidance in spatial planning for implementation: Selected measures reflected in spatial planning documentation“ changed many times. The comments of the project partners were applied to this catalog, which were subsequently discussed and incorporated. Material T3.2.4 "Catalog of Measures and Guideline - Method of selecting measures for spatial planning documentation" lists 100 measures that have been assessed in relation to their implementation in spatial planning documentation. 31 measures were selected that can be projected, but some of them were excluded due to their nature, because they can be implemented in the spatial planning documentation by the conceptual concept of the proposal, not by the specific definition of the measure. The following subchapters provide more information.

Measures suitable for implementation in spatial planning documentation

These measures are the result of the material T3.2.4 „Catalog of Measures and Guideline - Method of selecting measures for spatial planning documentation“ and there are 31 measures. Below is a list of measures that are too general for a specific inclusion in the spatial or regulatory plan, or for which

the parameters of implementation in the spatial or regulatory plan were not subsequently defined, including the justification for the absence of a definition of parameters.

Measures which, due to their nature, can be applied in spatial planning documentation only by the conceptual concept of the proposal, not by the specific definition of the given measure:

- Strategic documents (3)
- Establishing and considering of local and regional land-use planning (46)
- Avoidance of building in hazard zones: Adaptation/re-zoning/shifting of building areas (47)
- Avoidance of building in hazard zones: Prevention by designation of specific grassland or protection zones in development or zoning plans (48)
- Avoidance of building in hazard zones: Appropriate location of houses on properties (50)
- Blue and green infrastructure (61)

Measures (or their parts) for which the parameters of implementation in the spatial or regulatory plan have not been defined:

- Conversion of arable land into grassland/ deciduous forest or short rotation plantations (parameters for implementation in the spatial or regulatory plan are not defined for the part of the measure "conversion of arable land to agricultural land with short-term crop rotation") (19)
- Decommissioning of farmland and forest roads (due to the number of ways to implement this measure into the spatial or regulatory plan, it is not possible to set specific parameters) (33)

Measures for which the parameters of inclusion in the spatial or regulatory plan have been defined

- Terracing (8)
- Infiltration belts (grass) and buffer strips (permanent vegetation) (9)
- Stabilisation of runoff pathways (11)
- Protection and preservation of existing meadows and pastures (13)
- Baulks (15)
- Furrows (16)
- Barrages (17)
- Drainage ditches; swales (18)
- Conversion of arable land into grassland/ deciduous forest or short rotation plantations (19)
- Afforestation in headwater areas and on hillslopes (27)
- Dry detention reservoirs and depressions of any capacity (29)
- Dry retention reservoirs with a constant flow (30)
- Small retention reservoirs (31)
- Increasing the retention capacity of existing channels and floodplains by restoration (32)
- Restoration of floodplains and floodplain forests, natural succession (35)
- Restoration of wetlands (36)
- Creation of inundation zones (37)
- Regulation of torrent streams and gullies (38)
- Small elevation oriented dikes (39)
- Linear protection measures (42)
- Creation and maintenance of retention areas in urban areas (53)

- Multi-functional traffic and parking areas dedicated as thoroughfare for runoff or as temporary inundated retention area (54)
- Rain / stormwater gardens, bioretention cells (55)
- Absorbent pans/basins, filtration pans (63)

1.4. Possible way of projection into spatial planning documentation

For each measure, an area with a specific use was selected, which best corresponds to the given measure. The definition of specific areas for individual measures was carried out in connection with the Czech Building Act. For some measures, more types of areas are chosen, because according to a closer method of implementation, specific measures can be further categorized. For the processing of the graphic part of the documentation, individual measures and other categories of one measure were assigned codes for which the corresponding explanatory information is given. In case it will be necessary to include the given specific measure in the form of a corridor in the spatial planning documentation, it is possible to use Table 2. As a result, it is possible to use 25 types of proposed measures for the implementation of specific measures into spatial planning documentation, the classification of which into the relevant areas with different uses or the relevant corridors is shown in the following tables:

Table No. 1 - Classification of measures into areas with specific uses and their code designation

Measure number in the catalog	Name of the measure according to the catalog	The name of an area with a different use	Area designation (p)	Identification of the measure	The resulting code designation of the measure
33	DECOMMISSIONING OF FARMLAND AND FOREST ROADS*	-	-	-	-
FOREST AREAS					
19	CONVERSION OF ARABLE LAND INTO GRASSLAND/ DECIDUOUS FOREST OR SHORT ROTATION PLANTATIONS**	forest areas	p_PL	A	p_PL_A
27	AFFORESTATION IN HEADWATER AREAS AND ON HILLSLOPES	forest areas - afforestation at water sources	p_PL	B	p_PL_B
NATURAL AREAS					
36	RESTORATION OF WETLANDS	natural areas - wetland	p_PP	A	p_PP_A
8	TERRACING	natural areas - terrace with natural character	p_PP	B	p_PP_B
13	PROTECTION AND PRESERVATION OF EXISTING MEADOWS AND PASTURES	natural areas - permanent grassland	p_PP	C	p_PP_C
19	CONVERSION OF ARABLE LAND INTO GRASSLAND/ DECIDUOUS FOREST OR SHORT ROTATION PLANTATIONS**	natural areas - permanent grassland	p_PP	D	p_PP_D
AREAS OF MIXED UNDEVELOPED LAND					
39	SMALL ELEVATION ORIENTED DIKES	areas of mixed undeveloped land - dikes	p_SN	A	p_SN_A
15	BAULKS	areas of mixed undeveloped land - baulks	p_SN	B	p_SN_B
35	RESTORATION OF FLOODPLAINS AND FLOODPLAIN FORESTS, NATURAL SUCCESSION	areas of mixed undeveloped land - area for overflow	p_SN	C	p_SN_C
16	FURROWS	areas of mixed undeveloped land - furrow	p_SN	D	p_SN_D
17	BARRAGES	areas of mixed undeveloped land - barrage	p_SN	E	p_SN_E

18	DRAINAGE DITCHES; SWALES	areas of mixed undeveloped land - ditch	p_SN	F	p_SN_F
38	REGULATION OF TORRENT STREAMS AND GULLIES	areas of mixed undeveloped land - system of dams	p_SN	G	p_SN_G
37	CREATION OF INUNDATION ZONES	areas of mixed undeveloped land - valley floodplain flow	p_SN	H	p_SN_H
9	INFILTRATION BELTS (GRASS) AND BUFFER STRIPS (PERMANENT VEGETATION)	areas of mixed undeveloped land - infiltration belt	p_SN	CH	p_SN_CH
11	STABILISATION OF RUNOFF PATHWAYS	areas of mixed undeveloped land - grassing valley	p_SN	I	p_SN_I
AREAS OF MIXED BUILT-UP AREA					
54	MULTI-FUNCTIONAL TRAFFIC AND PARKING AREAS DEDICATED AS THOROUGHFARE FOR RUNOFF OR AS TEMPORARY INUNDATED RETENTION AREA	areas of mixed built-up area - floodplain in urbanized area	p_SZ	A	p_SZ_A
AREAS OF PUBLIC SPACES					
55	RAIN / STORMWATER GARDENS, BIORETENTION CELLS	areas of public spaces - rain garden	p_VP	A	p_VP_A
WATER AND WATER MANAGEMENT AREAS					
42	LINEAR PROTECTION MEASURES	water and water management areas - dike, wall, ditch	p_VV	A	p_VV_A
31	SMALL RETENTION RESERVOIRS	water and water management areas - small water reservoir	p_VV	B	p_VV_B
53	CREATION AND MAINTENANCE OF RETENTION AREAS IN URBAN AREAS	water and water management areas - retention area	p_VV	C	p_VV_C
63	ABSORBENT PANS/BASINS, FILTRATION PANS	water and water management areas - infiltration area	p_VV	D	p_VV_D
29	DRY DETENTION RESERVOIRS AND DEPRESSIONS OF ANY CAPACITY	water and water management areas - retention tank out of flow	p_VV	E	p_VV_E
30	DRY RETENTION RESERVOIRS WITH A CONSTANT FLOW	water and water management areas - retention tank on the flow	p_VV	F	p_VV_F
32	INCREASING THE RETENTION CAPACITY OF EXISTING CHANNELS AND FLOODPLAINS BY RESTORATION	water and water management areas - adjustment of the flow line to the near-nature state	p_VV	G	p_VV_G

AGRICULTURAL AREAS

8	TERRACING	agricultural areas - terrace with agricultural use	p_PZ	A	p_PZ_A
13	PROTECTION AND PRESERVATION OF EXISTING MEADOWS AND PASTURES	agricultural areas - permanent grassland	p_PZ	B	p_PZ_B
19	CONVERSION OF ARABLE LAND INTO GRASSLAND/ DECIDUOUS FOREST OR SHORT ROTATION PLANTATIONS**	agricultural areas - permanent grassland	p_PZ	C	p_PZ_C
11	STABILISATION OF RUNOFF PATHWAYS	agricultural areas - grassing of the valley	p_PZ	D	p_PZ_D

* Due to the number of ways to include this measure in the spatial or regulatory plan, specific parameters cannot be set

** the parameters for inclusion in the spatial or regulatory plan are not defined for the part of the measure ("conversion of arable land to agricultural land with short-term crop rotation", this is the detail that cannot be applied)

Table No. 2 - Classification of measures into corridors with different uses and their code designation

Measure number in the catalog	Name of the measure according to the catalog	The name of the corridor with different uses	Corridor designation (k)	Identification of the measure	The resulting code designation of the measure
33	DECOMMISSIONING OF FARMLAND AND FOREST ROADS*	-	-	-	-
FOREST AREAS					
19	CONVERSION OF ARABLE LAND INTO GRASSLAND/ DECIDUOUS FOREST OR SHORT ROTATION PLANTATIONS**	forest corridors	k_PL	A	k_PL_A
27	AFFORESTATION IN HEADWATER AREAS AND ON HILLSLOPES	forest corridors - afforestation at water sources	k_PL	B	k_PL_B
NATURAL AREAS					
36	RESTORATION OF WETLANDS	natural corridors - wetland	k_PP	A	k_PP_A
8	TERRACING	natural corridors - terrace with natural character	k_PP	B	k_PP_B
13	PROTECTION AND PRESERVATION OF EXISTING MEADOWS AND PASTURES	natural corridors - permanent grassland	k_PP	C	k_PP_C

19	CONVERSION OF ARABLE LAND INTO GRASSLAND/ DECIDUOUS FOREST OR SHORT ROTATION PLANTATIONS*	natural corridors - permanent grassland	k_PP	D	k_PP_D
AREAS OF MIXED UNDEVELOPED LAND					
39	SMALL ELEVATION ORIENTED DIKES	corridors of mixed undeveloped land - dikes	k_SN	A	k_SN_A
15	BAULKES	corridors of mixed undeveloped land - baulks	k_SN	B	k_SN_B
35	RESTORATION OF FLOODPLAINS AND FLOODPLAIN FORESTS, NATURAL SUCCESSION	corridors of mixed undeveloped land - area for overflow	k_SN	C	k_SN_C
16	FURROWS	corridors of mixed undeveloped land - furrow	k_SN	D	k_SN_D
17	BARRAGES	corridors of mixed undeveloped land - barrage	k_SN	E	k_SN_E
18	DRAINAGE DITCHES; SWALES	corridors of mixed undeveloped land - ditch	k_SN	F	k_SN_F
38	REGULATION OF TORRENT STREAMS AND GULLIES	corridors of mixed undeveloped land - system of dams	k_SN	G	k_SN_G
37	CREATION OF INUNDATION ZONES	corridors of mixed undeveloped land - valley floodplain flow	k_SN	H	k_SN_H
9	INFILTRATION BELTS (GRASS) AND BUFFER STRIPS (PERMANENT VEGETATION)	corridors of mixed undeveloped land - infiltration belt	k_SN	CH	k_SN_CH
11	STABILISATION OF RUNOFF PATHWAYS	corridors of mixed undeveloped land - grassing valley	k_SN	I	k_SN_I
AREAS OF MIXED BUILT-UP AREA					
54	MULTI-FUNCTIONAL TRAFFIC AND PARKING AREAS DEDICATED AS THOROUGHFARE FOR RUNOFF OR AS TEMPORARY INUNDATED RETENTION AREA	corridors of mixed built-up area - floodplain in an urbanized area	k_SZ	A	k_SZ_A
AREAS OF PUBLIC SPACES					
55	RAIN / STORMWATER GARDENS, BIORETENTION CELLS	corridors of public spaces - rain garden	k_VP	A	k_VP_A

WATER AND WATER MANAGEMENT AREAS					
42	LINEAR PROTECTION MEASURES	water and water management corridors - dike, wall, ditch	k_VV	A	k_VV_A
31	SMALL RETENTION RESERVOIRS	water and water management corridors - small water reservoir	k_VV	B	k_VV_B
53	CREATION AND MAINTENANCE OF RETENTION AREAS IN URBAN AREAS	water and water management corridors - retention area	k_VV	C	k_VV_C
63	ABSORBENT PANS/BASINS, FILTRATION PANS	water and water management corridors - infiltration area	k_VV	D	k_VV_D
29	DRY DETENTION RESERVOIRS AND DEPRESSIONS OF ANY CAPACITY	water and water management corridors - retention tank out of flow	k_VV	E	k_VV_E
30	DRY RETENTION RESERVOIRS WITH A CONSTANT FLOW	water and water management corridors - retention tank on the flow	k_VV	F	k_VV_F
32	INCREASING THE RETENTION CAPACITY OF EXISTING CHANNELS AND FLOODPLAINS BY RESTORATION	water and water management corridors - adjustment of the flow line to the near-nature state	k_VV	G	k_VV_G
AGRICULTURAL AREAS					
8	TERRACING	agricultural corridors - terrace with agricultural use	k_PZ	A	k_PZ_A
13	PROTECTION AND PRESERVATION OF EXISTING MEADOWS AND PASTURES	agricultural corridors - permanent grassland	k_PZ	B	k_PZ_B
19	CONVERSION OF ARABLE LAND INTO GRASSLAND/ DECIDUOUS FOREST OR SHORT ROTATION PLANTATIONS**	agricultural corridors - permanent grassland	k_PZ	C	k_PZ_C
11	STABILISATION OF RUNOFF PATHWAYS	agricultural corridors - grassing of the valley	k_PZ	D	k_PZ_D

* Due to the number of ways to include this measure in the spatial or regulatory plan, specific parameters cannot be set

** the parameters for inclusion in the spatial or regulatory plan are not defined for the part of the measure ("conversion of arable land to agricultural land with short-term crop rotation", this is the detail that cannot be applied)

1.5. Summary

The main purpose of this material was to create a "manual" for designers of spatial or regulatory plans who process documentation in an area that is threatened by negative phenomena associated with torrential rains (or where these phenomena occur). These areas require more attention and more specific solutions to the issue than those areas whose characteristics minimize the occurrence of these negative phenomena. Within this material, 25 measures were included in the relevant areas or corridors with specific uses and defined names and code designations that can be used when it is necessary to define specific measures in the spatial or regulatory plan. The specific definition of the measure in the spatial or regulatory plan contributes to the complexity of flood protection solutions, creates prerequisites for easier permission of the measure, ensures transparency (the public is familiar with the possible location of the measure within the acquisition of the spatial or regulatory plan), the measure can be defined as a public benefit measure.

RAINMAN Key Facts

Project duration: 07.2017 – 06.2020
Project budget: 3,045,287 €
ERDF funding: 2,488,510 €

RAINMAN website &
newsletter registration: www.interreg-central.eu/rainman



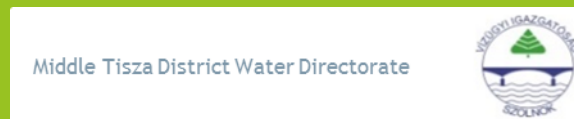
Lead Partner



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Project support



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