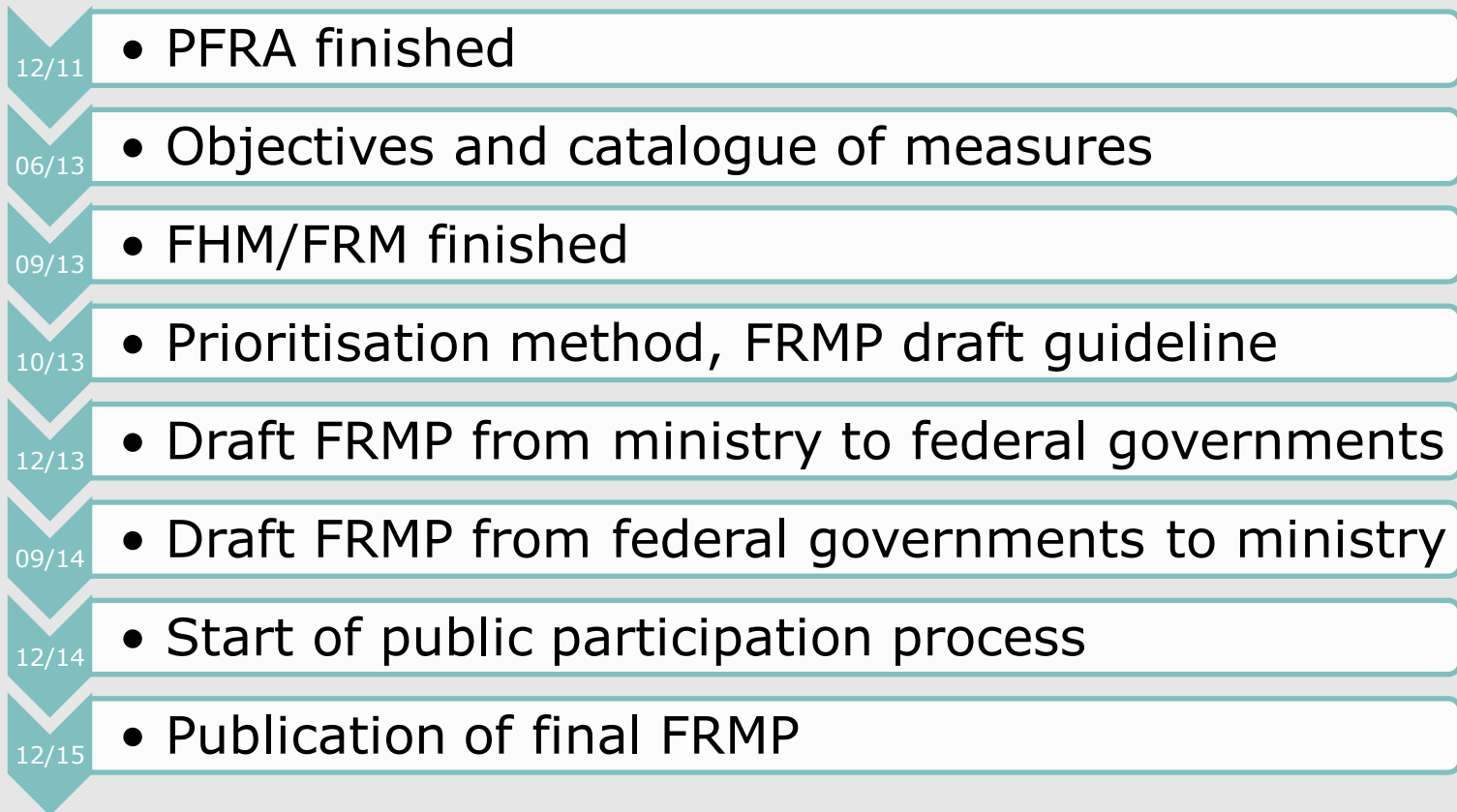




Draft FRMP in Austria: Objectives, Measures, Prioritization

Dr. Yvonne Spira

Schedule for FRMP in Austria

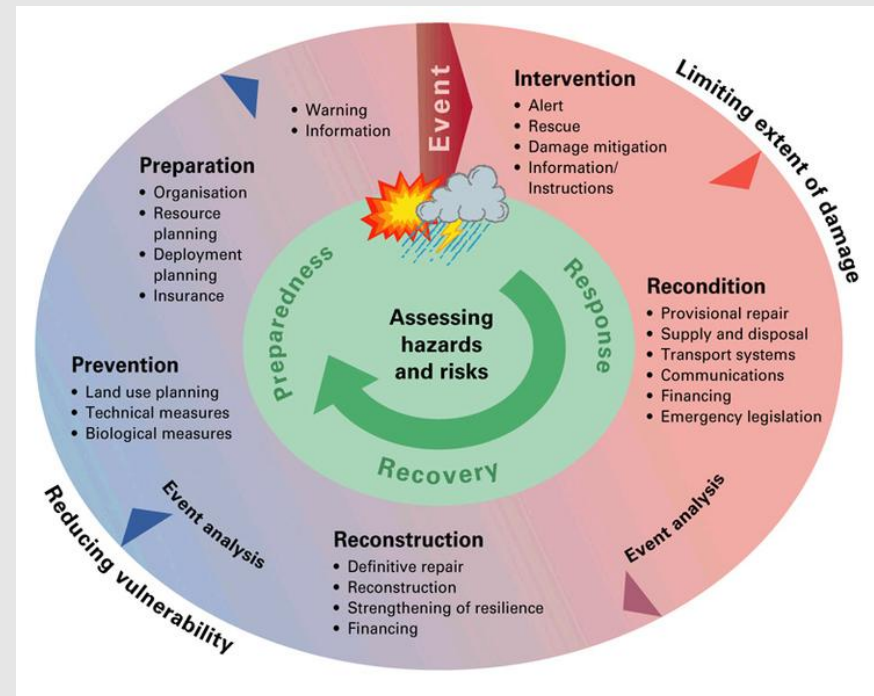


EU Floods Directive (14)

*"Flood risk management plans should focus on **prevention, protection and preparedness**. With a view to giving rivers more space, they should consider where possible the maintenance and/or restoration of floodplains, as well as measures to prevent and reduce damage to human health, the environment, cultural heritage and economic activity."*

Austria and Integrated Flood Risk Management Strategy

- Before 2011:
aim of keeping flood damage low through prevention and protection
- After 2011:
Flood Risk Management Plans and stakeholder and public participation strengthen and complement existing strategy

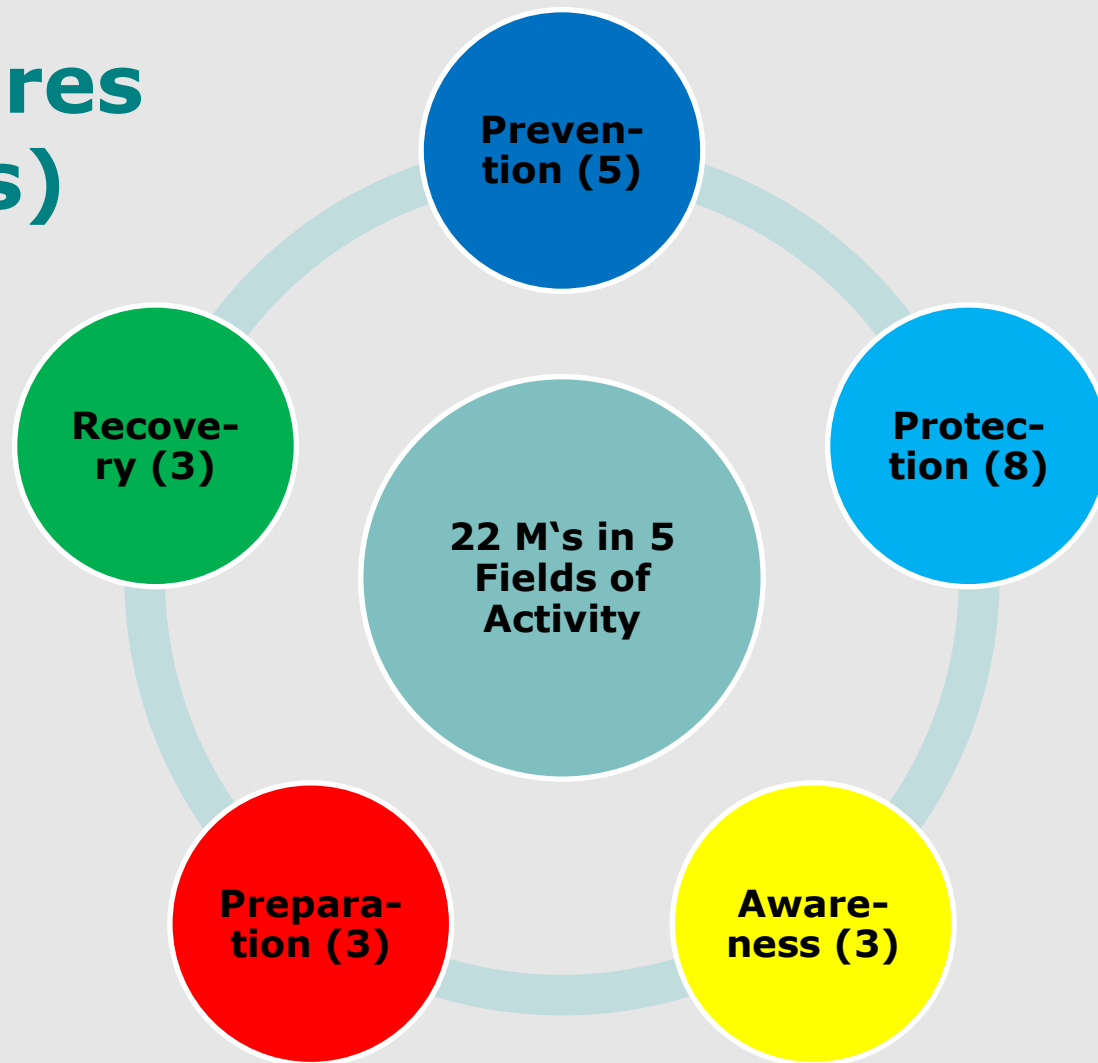


Appropriate Objectives

„ ... focus on prevention, protection and preparedness ... ”

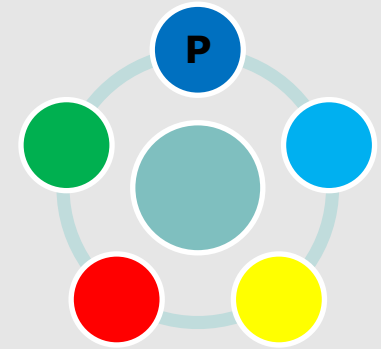
- O1: Avoidance of new risks before a flood event
- O2: Reduction of existing risks before a flood event
- O3: Reduction of existing risks during/after a flood event
- O4: Raising awareness for risks and hazards

Measures (Types)

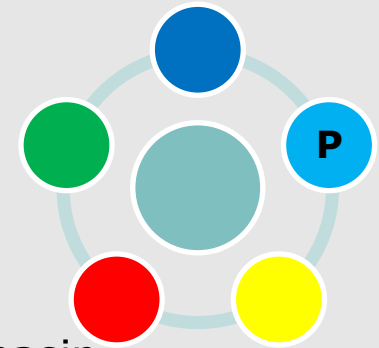


5 Prevention Measures

- M01: elaborate and update hazard zone plans
 - M02: take into account hazard zone plans
 - M03: create catchment-wide concepts and plans to improve the water and solid matter cycle
 - M04: elaborate and take into account local and supra-local plans for land use
 - M05: create a framework for the implementation and maintenance of protective measures
- Addressed expert fields: water management, **spatial planning**

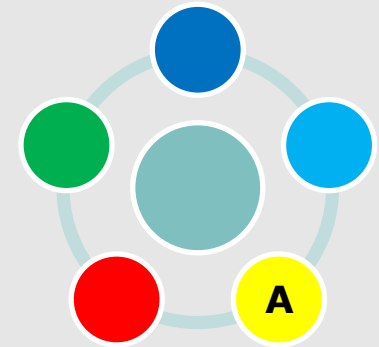


8 Protection Measures



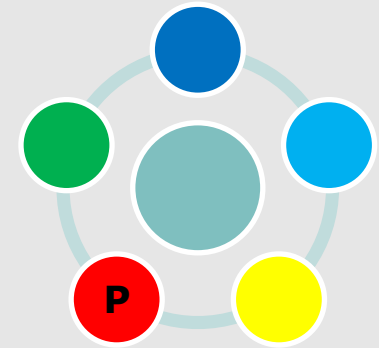
- M06: manage areas retention efficient in the catchment basin
 - M07: re-establish floodplains and deposition areas
 - M08: plan and build protection and water regulation facilities
 - M09: implement and adapt protection measures for individual objects
 - M10: check and apply re-settlements and re-classification of areas
 - M11: perform and improve water monitoring
 - M12: maintain, operate and improve flood protection facilities and perform water management and monitoring activities
 - M13: elaborate operating rules for facilities in flood risk or flood affected areas
- Addressed expert fields: water management, **spatial planning + federal governments + municipalities + private parties (inhabitants, farmers, industry)**

3 Awareness Measures



- M14: prepare information on flood hazards and flood risks and suitably provide it to the public
 - M15: promote public participation activities regarding flood hazards and flood risks
 - M16: establish educational activities regarding flood hazards and flood risks
- Addressed expert fields: water management + communication + municipalities + education (children, adults)

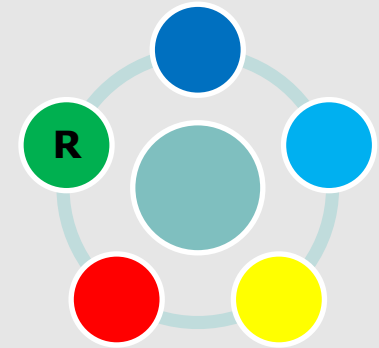
3 Preparedness Measures



- M17: establish and operate monitoring systems, forecasting models and early warning systems
- M18: elaborate flood emergency plans
- M19: set up requirements for the application of flood emergency plans

→ Addressed expert fields: water management + **civil protection**

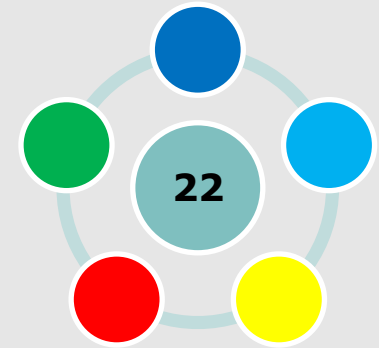
3 Recovery Measures



- M20: carry out emergency measures and repair of waters and flood protection facilities immediately after the flood event
 - M21: assess and eliminate flood damage to buildings and infrastructure; ensure settlement of claims
 - M22: carry out a documentation of the flood event and its damage and analyse the flood event
- Addressed expert fields: water management + civil protection + municipalities + inhabitants

Integrated FRM

Types of Measures and Consequences



- FRMP enlarges available types of measures for integrated Flood Risk Management; more and broader commitment
- Large number of players from different expert fields needed
- Not all measures can be implemented within the Water Act
- Not all required players are bound by Water Act

→ challenge: large amount of coordination and cooperation needed

Prioritisation

A Short History



- EC frame: FRMPs to be prioritized

time

classes

verbal
description

- Task: find a system which is

transparent

objective

applicable

comprehensible

- Question: how? Attempts:

- Qualitative assessment: „Low – medium – high“ risk reduction and feasibility
- Quantitative assessment
- Comparison status now and then
- Question catalogue
- ...

Prioritisation

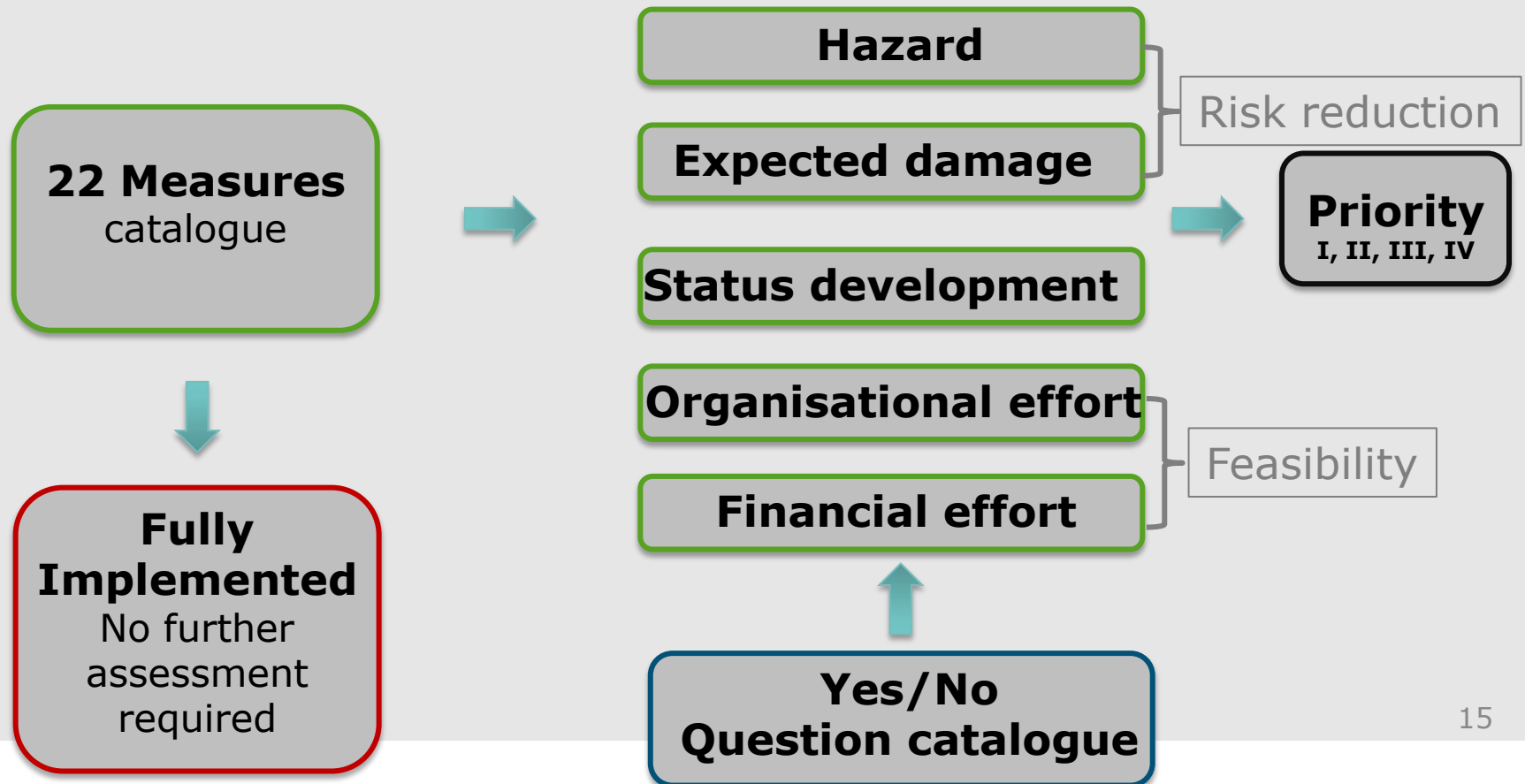
Requirements, Challenges



- Austria has 391 very different APSFR
 - From 1 to 33 km length
 - From one to 4 risk receptors affected
 - From small torrents in mountains to large rivers in plains
- Assessment will be done by many different experts
- Assessment has to fit all kinds of measures
 - Water management
 - Spatial planning
 - Civil protection
 - Awareness raising
 - ...

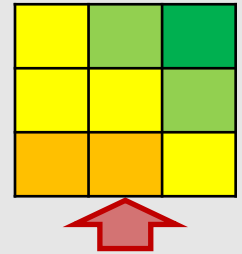
Prioritisation

Concept; Draft 23.10.2013



Prioritisation

Catalogue of Questions: Risk Reduction



■ Reduction of Flood Hazard

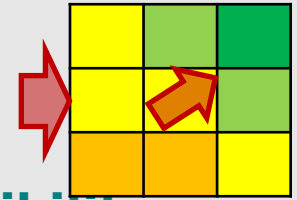
- Does the measure add to the reduction of the flood hazard through retention?
- Does the measure add to the reduction of the flood hazard through enhanced discharge?
- Does the measure add to the reduction of adverse morphodynamic processes during the flood event?



■ Reduction of Expected Damage

- Does the measure add to flood adapted use?
- Does the measure add to flood adapted development?
- Does the measure add to damage control during the flood event?

Prioritisation

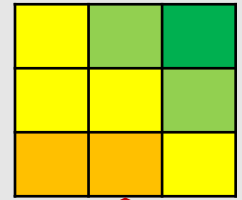
Catalogue of Questions: Status development and feasibility



- Status development 
 - Is the start of the planning process possible in the current cycle?
 - Is the finalisation of the planning process possible in the current cycle?
 - Is a partial implementation of the measure possible in the current cycle?
 - Is the full implementation of the measure possible in the current cycle?
- Organisational and financial effort (feasibility) 
 - Is an implementation of the measure in the current cycle possible when considering the organisational effort?
 - Is an implementation of the measure in the current cycle possible when considering the financial effort?

Prioritisation

Method for Assessment: Risk Reduction



	Hazard 1	Hazard 2	Hazard 3	Damag e 1	Damag e2	Damag e3	Matr ix	Status 1	Status 2	Status 3	Status 4	Matr ix	Org. effort	Fin. effort	PRI O
M01	N	N	N	J	J	J	3								
M02	N	N	N	J	J	N	2								
M08 _a	J	N	J	N	N	N	2								
M08 _b	N	J	N	N	N	N	1								
M08 _c	N	N	J	N	N	N	1								

III	II	I
III	III	II
IV	IV	III

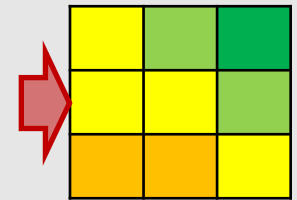
1 2 3
Risk reduction

Process:

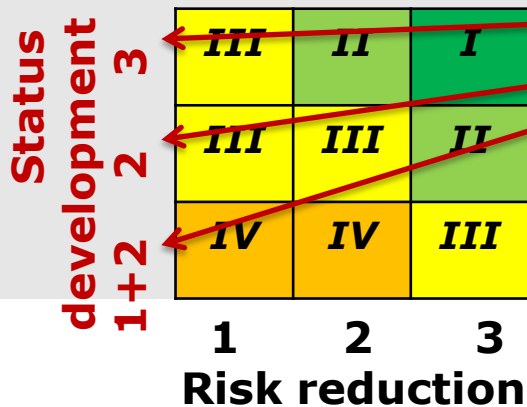
1. National level pre-fills,
2. federal states can adapt according to local characteristics (incl. SH's)

Prioritisation

Method for Assessment: Status Development



	Hazard 1	Hazard 2	Hazard 3	Damag e1	Damag e2	Damag e3	Matr ix	Status 1	Status 2	Status 3	Status 4	Matr ix	Org. effort	Fin. effort	PRI O
M01	N	N	N	J	J	J	3				x	I			
M02	N	N	N	J	J	N	2			x		III			
M08	J	N	J	N	N	N	2		x			IV			
M08	N	J	N	N	N	N	1	x				IV			
M08	N	N	J	N	N	N	1	x				IV			

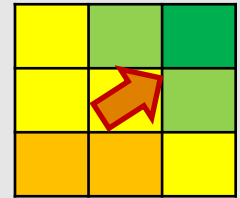


Process:

1. federal states fill according to local characteristics (incl. SH's)

Prioritisation

Method for Assessment: Feasibility



	Hazard 1	Hazard 2	Hazard 3	Damag e1	Damag e2	Damag e3	Matr ix	Status 1	Status 2	Status 3	Status 4	Matr ix	Org. effort	Fin. effort	PRI O
M01	N	N	N	J	J	J	3				x	I	+	+	I
M02	N	N	N	J	J	N	2			x		III	+	+	I
M08	J	N	J	N	N	N	2		x			IV	-	+	III
M08	N	J	N	N	N	N	1	x				IV	+	-	III
M08	N	N	J	N	N	N	1	x				IV	-	-	IV

Status development
1+2 2 3

III	II	I
III	III	II
IV	IV	III

1 2 3
Risk reduction

Each plus in feasibility increases priority by 1 class

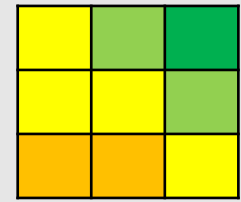
Feasibility

Process:

1. federal states fill according to local characteristics (incl. SH's)

Summary and Conclusions

- 4 objectives
 - 22 types of measures in 5 fields of activity
 - Draft prioritisation method
 - Vertical and horizontal cooperation for drafting the FRMP necessary
-
- Integrated FRM can be considerably improved by FRMPs
 - Transparent, objective, comprehensible prioritisation
 - New level for Stakeholder involvement and Public participation possible
 - „Real life“ application for 391 APSFR's from 01/2014 on



EU Floods Directive (14)

*"Flood risk management plans should focus on **prevention, protection and preparedness**. With a view to giving rivers more space, they should consider where possible the maintenance and/or restoration of floodplains, as well as measures to prevent and reduce damage to human health, the environment, cultural heritage and economic activity."*

Contact & Information

Dr. Yvonne Spira

Tel. Nr. +43-1-31314-5932

E-Mail yvonne.spira@umweltbundesamt.at

Umweltbundesamt
www.umweltbundesamt.at

Practice And Research In Flood Risk Management
Sofia ■ 07.11.2013