

Integrated Climate Change Adaptation (CCA) and Flood Risk Management Strategy and Plan for the Drin River Basin



Drin Basin - Measures According to Countries

 Measures according to Albanian APSFRs

 Measures according to Kosovo APSFRs

No	Type of Measure	APSFR
1	Aspect: Prevention of risks	
1.1	Administrative Instruments	
1.1.1	Mapping of flood risk areas	AL-4, AL-5, AL-6
1.1.2	Restriction for building in risk areas	AL-4, AL-5, AL-6
1.1.3	Protection of the flood plains and retention areas	AL-4, AL-5, AL-6
1.2	Adaptation of Land Use	
1.2.1	Adaptation of existing land use in flood risk areas	AL-4, AL-5, AL-6
1.2.2	Adaptation of constructions and infrastructure in risk areas	AL-4, AL-5, AL-6
1.2.3	Consultation of agriculture and forestry for awareness-raising	AL-4, AL-5, AL-6
1.3	Risk prevention by flood adapted building	AL-4, AL-5, AL-6
1.3.1	Flood adapted handling for water impervious substances	AL-4, AL-5, AL-6
2	Aspect: Natural Flood Protection	
2.1	Natural flood management	
2.1.1	Revitalisation of river beds and river banks / former flood plains	AL-6
2.1.2	Changing of river courses and slope conditions	AL-4, AL-5, AL-6
2.1.3	Protection of zones along river banks	AL-4, AL-5, AL-6
2.1.4	Support of the development of natural floodplains	AL-4, AL-5, AL-6
2.1.5	Modified extensive river maintenance	AL-6
2.1.6	Disconnection / Removal pavements in urban areas / Rainw. man.	AL-4, AL-5, AL-6
2.2	Reactivation of retention areas	
2.2.1	Deconstruction a dike or dam	
2.2.2	Setting back dikes	
2.2.3	Removal of an artificial bank	
2.2.4	Connection of a retention-relevant terrain	
3	Aspect: Technical Flood Protection	
3.1	Water Flow Regulation / Flood plain works	
3.1.1	Construction of a retention pond	
3.1.2	Creation of a retention polder	
3.1.3	Restoration, expansion or improvement of existing retention system	AL-4, AL-5, AL-6
3.2	Water Flow Regulation (e.g. dikes)	
3.2.1	Flood protection works	AL-6
3.2.2	Strengthening of existing flood protection works	AL-4, AL-5, AL-6
3.2.3	Adoption of a mobile (stationary) flood protection system	AL-4, AL-5, AL-6
3.2.4	Drainage in diked area and backflow protection	AL-5, AL-6
3.3	Water Flow Regulation (e.g. river training)	
3.3.1	Keeping clear cross-sections in settlement areas	AL-6
3.3.2	Removal of bottlenecks / narrow passages in rivers	AL-6
3.3.3	Construction and strengthening of a bypass channel	AL-6
3.4	Surface water management	
3.4.1	Rain water management	AL-5
3.4.2	Development of a municipal retention system	
3.4.3	Flood-adapted improvement of a drainage system	
3.5	Protection of object / facilities	
3.5.1	Object / Facility protection of individual buildings	
3.5.2	Object / Facility protection of infrastructure facilities	AL-6
3.6	Other protection measures	
3.6.1	Improvement of the storage management of dams/reservoirs	
3.6.2	Protection against seepage and ground water	AL-4, AL-5, AL-6
4	Aspect: Preparedness and information	
4.1	Economical / financial preparedness	
4.1.1	Financial precautions by reserves and insurances	AL-4, AL-5, AL-6
4.2	Informational preparedness	
4.2.1	Improvement of flood forecast and flood warning / messaging	AL-4, AL-5, AL-6
4.3	Behavior-related preparedness	
4.3.1	Publication of flood hazard and flood risk maps close to the spot	AL-4, AL-5, AL-6
4.3.2	Continuing advancement of awareness raising and publicity	AL-4, AL-5, AL-6
4.4	Allowance, preparation, post-processing	
4.4.1	Alignment or optimization of alert and operation schemes	AL-4, AL-5, AL-6
4.4.2	Civil Protection	AL-4, AL-5, AL-6
4.4.3	Collection and analysis of experiences concerning flood events	AL-4, AL-5, AL-6

 Measures according to North Macedonian APSFRs

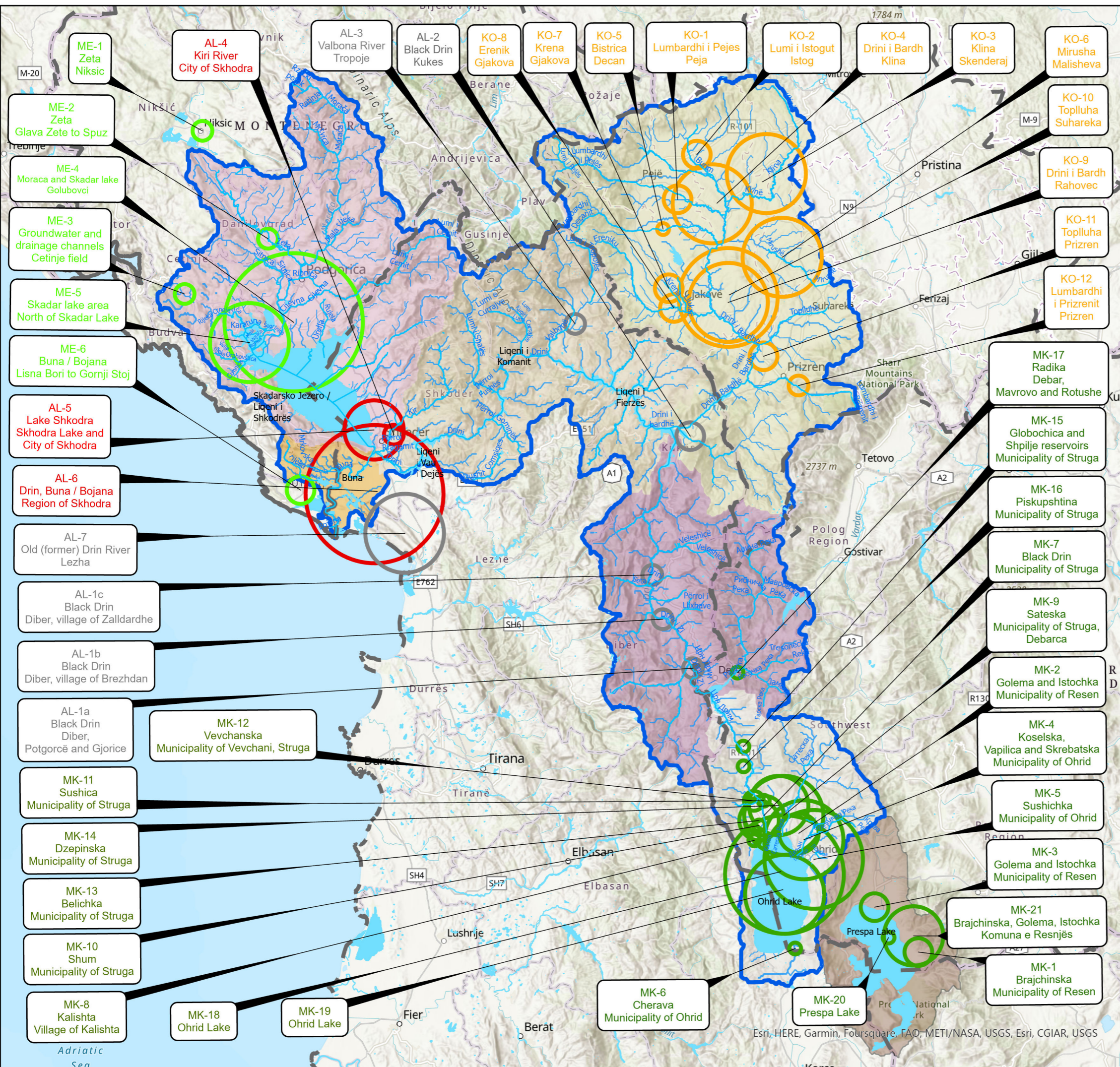
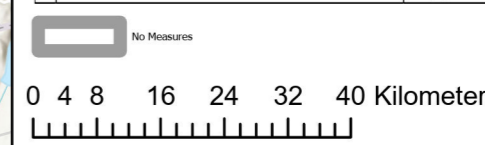
 Measures according to Montenegrin APSFRs

No	Type of Measure	APSFR
1	Administrative instruments	
1.1	Preparation of a program for protection against the harmful effects of water in the respective river basin, as an integral part of the river basin management plans	MK-1, up to MK-21
1.2	Dividing spatial construction works and other activities that can increase the risk of flooding and material damage	MK-1, up to MK-21
1.3	Implementation of the Floods Directive (Directive 2007/60/EC) (Preparation of preliminary flood risk assessment, flood hazard maps, flood risk maps, and flood risk management plan with the Floods Directive)	MK-1, up to MK-21
1.4	Raising public awareness	MK-1, up to MK-21
1.5	Preparation of integrated international plans for flood protection	MK-1, up to MK-21
2	Structural flood protection measures	
2.1	Maintenance of water management facilities (dams, reservoirs, protection embankments, etc.) in a way that ensures capture of flood waves, as well as protection from natural disasters	MK-1, up to MK-21
2.2	Provision of preventive measures (construction of embankments, reservoirs, regulation of rivers, regulation of erosion, afforestation, etc.)	MK-1, up to MK-21
2.3	Using floodplains and wetlands as natural storage areas	MK-1, up to MK-21
2.4	Remedial measures	MK-1, up to MK-21
2.5	Removal of waste, rubble, and barren from flooded areas	MK-1, up to MK-21
3	Non-structural flood protection measures	
3.1	Improvement of river basin planning at the level of flood management	MK-1, up to MK-21
3.2	Integration of rural land use and flood management policy and financial protection embankments, etc.) in a way that ensures capture of flood waves, as well as protection from natural disasters	MK-1, up to MK-21
3.3	Improvement of hydro-meteorological forecasts	MK-1, up to MK-21
3.4	Protection of retention areas (flooded areas and wetlands)	MK-1, up to MK-21
3.5	Arrangement of integral urban plans (avoidance of flood risk areas)	MK-1, up to MK-21
3.6	Intensive control over interventions in flood-risk areas	MK-1, up to MK-21
3.7	Education of engineers and other related water associates	MK-1, up to MK-21

No	Type of Measure	APSFR
1	Protection Measures	
1.1	M31- Natural Flood Management/runoff and catchment management	
1.2	M32- Water Flow Regulation	ME-1
1.3	M33- Channel Riverbanks and Floodplain Works	ME-1, ME-2, ME-3, ME-4, ME-5, ME-6
1.4	M34- Surface Water Management	ME-2, ME-4
1.5	M35- Other Protection Measures	
2	Preparedness Measures	
2.1	M41- Flood forecasting and warning	ME-1, ME-3, ME-4, NE-5
2.2	M42- Emergency event response planning/contingency planning	
2.3	M43- Public awareness and preparedness	
2.4	M44- Other measures for preparedness	
3	Recovery & Review	
3.1	M51- Individual and Social Recovery	
3.2	M52- Environmental Recovery	
3.3	M53- Another recovery measures	

Drin Sub-Basins

- Black Drin
- Buna / Bojana
- Drin
- Ohrid Lake
- Prespa Lake
- Skadar Lake/ Moracha
- White Drin
- Drin Basin Boundary



Esri, HERE, Garmin, Foursquare, FAO, METI/NASA, USGS, Esri, CGIAR, USGS