

Action Area 5.1: Water resources and associated environmental data and information

Strategic Action	Specific Action	Activity	TB	B	L	N	SA	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Responsibility			
																		Lead	ORASECOM		
5.1.1: Improve reliability, usefulness, trans-boundary confidence and areal coverage of surface water monitoring networks at the transboundary and national (sub-catchment) levels	Identify and agree on key stations for different purposes - trends, climate change, EFRs, drought, flood, water quality)	Agreement on key station networks; inclusion of already identified stations (eg for real-time monitoring)																	ORASECOM	Manage	
		Draw up detailed implementation plan covering technical, institutional and financing aspects (esp for additional stations/upgrading) aspects																	ORASECOM	Manage	
	Improve data storage and sharing platforms	Technical guidelines for data exchange and sharing developed (SAP PCN1-2																		ORASECOM	Manage
		SAP PCN1-3: ORASECOM WIS enlarged and maintained																		ORASECOM	Manage
		HYDSTRA fully operational in all countries																		Countries	Facilitate
	Improve coverage in selected sub-catchments	Implementation of South African rationalisation study																		SAfrica	Support
		All key Lesotho Stations made fully operational																		Lesotho	Support
		Implement new stations/upgrades on the Fish in Namibia																		Namibia	Support
		Improve monitoring of the Molopo Basin in Botswana (including recommendations of the SA/Botswana JPTC)																		SAfrica/ Botswana	Support
	Programme of establishment/ upgrades for low flow measurement (drought/EFRs)	Update studies and existing recommendations and establish plan (esp. in view of EFR recommendations and other plan (eg SA estuary management plan)																		ORASECOM	Manage
		Improve coverage of low flow measurement in the lower Orange including at key EFR sites																		Safrica/ Namibia	Facilitate
		Review and improve Caledon/Mohakare low flow measurements																		Safrica/ Lesotho	Facilitate
		Finalise and implement low flow measurement in Lower Fish, downstream of Neckertal for EFRs																		Namibia	Facilitate
	Improve stage/discharge ratings and confidence therein	Identify, agree and prioritise programme of joint gaugings and verification measures for key surface water stations																		ORASECOM	Manage
		Implement joint-gauging programmes																		Countries	Facilitate
		Evaluate and report results, make recommendations																		Countries	Facilitate
	Upgrade stations to real-time monitoring status	Identify, agree, prioritise and design programme																		Countries	Manage
		Implement real-time monitoring for priority stations according to programme																		Countries	Facilitate
	Provide on-line access to “real-time” discharge data and historic data series	Identify, agree, prioritise and design programme																		Countries	Manage
Implement programme																			Countries	Facilitate	
Provide Institutional capacity building in monitoring activities	Draw up detailed capacity-building plan using a consultative process																		ORASECOM	Manage	
	Implement capacity building according to the Plan.																		Countries	Facilitate	
5.1.2: Improve water resource focused climate (change) monitoring	Identify and agree on key hydro-meteorological stations for climate change monitoring	Investigation into required density of network, potential sites and operational modalities - project design																	ORASECOM	Manage	
		Investigate usefulness of snowfall measurement network as indicator of climate change trends - project design																	Lesotho	Manage	
	Implement (in phases) improved CC-focussed hydro-meteorological monitoring	Installation, operation and maintenance of improved (density, intensity etc) precipitation/ climate network																	Countries	Manage	
		Installation, operation and maintenance of new snow fall/depth network																		Lesotho	Support
5.1.3: Improve reliability, usefulness, trans-boundary confidence areal coverage of groundwater monitoring networks at the transboundary and national (sub-catchment) levels	Improve monitoring of transboundary aquifers aimed at better quantification of resource (SAP PCN 2 - O1.1)	Draw up consolidated monitoring plan for all key transboundary aquifers																	ORASECOM	Manage	
		Installation, operation and maintenance of transboundary monitoring network for all key aquifers																	Countries	Facilitate	
		Review recommendations of "FGEF" studies (specifically on groundwater databases) and the current status of ORASECOM WIS																	ORASECOM	Manage	
		Operationalise the system, using the ORASECOM WIS if feasible																	ORASECOM	Manage	
	Improve monitoring of key national aquifers and sharing of data, including the impacts of fracking	Investigate monitoring status, make recommendations and implement for Mohakare aquifer in Lesotho																		Lesotho	Support
		Investigate monitoring status, make recommendations and implement for several aquifers in Botswana portion of basin																		Botswana	Support
		Investigate monitoring status, make recommendations and implement for key aquifers in Namibia portion of basin																		Namibia	Support
		Investigate monitoring status, make recommendations and implement for key aquifers in South Africa portion of basin																		South Africa	Support
		Draw up detailed capacity-building plan using a consultative process																		Countries	Facilitate
	Institutional capacity building in monitoring activities	Implement capacity building according to the capacity-building plan.																		Countries	Facilitate
5.1.4: Improve reliability, usefulness, trans-boundary confidence areal coverage of water quality monitoring networks at the transboundary and national (sub-catchment) levels	Review and expansion of basin-wide monitoring network	Review and make recommendations on expansion of basin-wide monitoring network of key stations in line with recommendations for transboundary network																	ORASECOM	Manage	
		Addition of monitoring sites and parameters (including POPs)																	Countries	Facilitate	
		Review and improve inter-laboratory benchmarking and quality assurance and control (QA/QC)																	Countries	Manage	
		Incorporation of river health/bio monitoring into the basin-wide network and for inclusion in the JBS																	ORASECOM	Manage	
	Implementation of improved and expanded monitoring programme	Installation, operation and maintenance of improved basin-wide monitoring network																	Countries	Facilitate	
		Continue with regular (5-yearly) joint basin-wide surveys (JBS)																	ORASECOM	Manage	
		Support and capacity-building programme																	ORASECOM	Facilitate	
	Develop database and internet portal	Consolidation of basin-wide historic data into common database																	ORASECOM	Manage	
		Development of internet portal (integrated into ORASECOM WIS) for display of results and trends																	ORASECOM	Manage	
5.1.5: Integration of water resources and related environmental through development of Water Information System (WIS)	SAP PCN 1-2: Technical guidelines for data exchange and sharing developed	Formalise arrangements for data sharing through ORASECOM																	ORASECOM	Manage	
		Agree on metadata standards, quality assurance procedures towards data sharing protocol																	ORASECOM	Manage	
	Continue expansion of WIS to accommodate new data and data sharing requirements	Agree on which elements of national datasets can be replicated or accessed through WIS																	ORASECOM	Manage	
		Implement expansion of WIS																	ORASECOM	Manage	
		Regular updating of MIS databases																	ORASECOM	Manage	
		Review and update quality control measures																	ORASECOM	Manage	
Regular updating and quality control	Apply quality control measures																	ORASECOM	Manage		