



Topics of discussion	Needs identified from discussions	Tokyo Action Plan 2018 <i>Proposal</i>		
		Short term -2020	Middle term -2023	Long term -2028
Future visions for surface observation networks	<ul style="list-style-type: none"> Encouragement for use of precipitation observation station data in DRR Integration of surface/remote sensing to maximize observation data application 	<ul style="list-style-type: none"> Increase the number of reporting stations and observation resolution (every three hours or hourly). Conduct research to determine optimal observation network configuration. Encourage all countries to implement WQMS and other tools. Improve QC techniques in instrument calibration, field inspection and other areas. Implement standard operating procedures (SOPs) for AWS maintenance, including methods for instrument inspection after extreme events. Engage in post-workshop activities, including newsletter issuance and provision of e-mail-based support. Encourage OSCAR surface training in all countries. 	<ul style="list-style-type: none"> Enhance integrated quality management. Establish special environments/appropriate exposure around observing stations. Develop guidance on integrated observing systems for surface observation with remote sensing. Provide further training on instrument maintenance and calibration. 	<ul style="list-style-type: none"> Improve observation resolution. Increase station observation network density. Develop computerized QC methods for correction of historical data. Establish collaboration among international agencies/academics/engineers for improved observation capability.
Short- and long-term goals in observation data quality	<ul style="list-style-type: none"> Encouragement for deployment of AWS in sparsely covered regions Encouragement for AWS calibration activities toward the provision of quality data to users Encouragement for enhancement of integrated quality management to support user assessment of observation data Encouragement for development of training methods to support skilled observation and technical expertise 			
Improvement of on-site quality management activities				
Approaches to staff training				
		 Workshop #1	 Workshop #2	