

## PROGRAMMATIC ELEMENTS TO CONTRIBUTE TO THE WMO URBAN INITIATIVES, IN CONSIDERATION OF SOCIETAL VALUES AND TECHNICAL REQUIREMENTS

- Purpose of this mapping: to provide an overview to agree on specific target and direction for initial urban service and related development.
- To be considered for realization of the 'Urban Matters' resolution of the PTC/PRA meeting (January 2016), and to be submitted to EC-68 (June 2016) as background document.
- Contents in each cell represent existing/potential activities under WMO technical commissions/programmes/projects.

	Research			Observations					Services			
Programs Focus areas	GAW	WWRP	WCRP	WIS	WIGOS	CIMO	GEO	CCL & CAgM	GFCS	APFM/IFM	PWS	GURME
<b>Urbanization and climate interactions</b>	GURME, GHG SAG, MoU with IAUC	MoU with International Association for Urban Climate (IAUC), suggestions for GCF	Plans for climate information for coastal cities CORDEX	Discover, access and usage of data and products from WMO. GISCs provide train the trainers with support from RAs. NMHSs provide training and support on use of WIS DAR	Develop Statement of Guidance for WMO Application Area #8 (Providing Atmospheric Composition information to support services in urban and populated areas) and feed into RRR	Urban observations, Chapter 11, CIMO Guide	Global urban analysis, urban sprawl inventory on satellite data	CLPA Branch currently does not have an explicit urban focus, but to be involved in many relevant activities.	IBCS2 - urban climate related activities included as a GFCS priority area	IFM Tool on Urban Flood Management in a changing climate		Collaboration with CCAC: SLCPs, MEGAPOLI, IAUC. GAW report 205
<b>Urban problems/ DRR</b>												
<b>Urban climate and comfort</b>	GURME pilot Projects	High Impact Weather (HIW) project	-	-,-	Important to look at standards and practices very early	CIMO Guide Chapter on Urban Observations	Task SB-04 on Global Urban Observation & Information	Collaboration with IAUC, urban climate publications database	Development of guidelines and relevant documentation			UHI pilot studies, Increasing attention
<b>Urban hydrology: drainage and flooding</b>	-	HIW	plans for climate information for coastal cities GC : Changes in water availability GC: sea level rise & coastal impacts	-,-	-,-	Precipitation measurement intercomparisons	-,-	Climate information for urban water management and drainage systems	-,- CIFDP	Training Manual and IFM Tool on Urban Flood Management ; IFM Tool on flood proofing		-
<b>Urban Air Pollution</b>	GURME many years activity and cities pilot projects, WB Pollution Management	Sand and Dust Storm Warning Advisory and Assessment System	CMIP5(/6) : AEROCOM	Contact with RSMCs providing atmospheric transport modelling		CIMO Guide chapter on atmospheric composition	Data characterizing urban air quality				Shanghai EXPO2010 AQF project (with GURME)	Main focus, many pilot studies

	& Environment Health (PMEH)	(SDS-WAS)		Via GAWSIS (not urban yet)								
<b>Health Risks</b>	WHO Global Platform on AQ&Health, Climate & Clean Air Coalition (CCAC) Urban Health Initiative (UHI), PMEH	-	-	GISCs link into GEOSS; possible link to WHO DBs register in WIS or link metadata catalogues			Pattern of human, environmental and infectious diseases	Heat-health warning systems	WHO/WMO/GFCS joint program on health, weather and climate?		-,-	SAFAR Pilot study, WHO, PMEH
<b>Natural hazards and High Impact Weather</b>	GURME Pilot Projects	<b>HIW</b> , S2S, SDS-WAS, several RDPs: TOMACS, SURF	GC: Weather and climate extremes (GC: sea level rise & coastal impacts)	Discover data & products through WIS associated with events identified as high impact	CBS needs to review obs standards and practice for urban areas; Update SoG for Nowcasting and for GNWP & HRNWP taking urban aspects into account, and feed into RRR	CIMO Guide Chapter on Urban Observations; Radar Quality Control ... Weather radar QC intercomparison	?	Climate early warning for disaster risk reduction			Disaster Risk Reduction program; Shanghai MHEWS system (with GURME)	Pilot studies TOMACS, WISE, SURF
<b>Adaptation</b>												
<b>Urban sustainability: Land-use planning and green cities</b>	-	-	plans for climate information for coastal cities	WAM15 (CaGM service available through WIS)	WIGOS contribution to GFCS; WIGOS Vision 2025/2040	Siting classification	Urban morphology database	CAGM report 90 – Urban agriculture	Urban activities are specific cross-cutting element within GFCS	IFM Tool on Land-use planning for Flood Management (2 <sup>nd</sup> edition)		Collaboration with WUDAPT
<b>Urban design and planning</b>	-	-	- CORDEX.	Discover, access, use relevant data (e.g. wind, solar radiation, heat) through WIS (subscription ; ad hoc; visualization)			Data on urban ecosystems, build environment	Climate information for urban planning and operations.		IFM Tool on Flood Proofing	-,-	WUDAPT
<b>Energy efficiency and green-</b>	-	HIW	-				?	Climate-smart urban infrastructure			?	Planning for Mexico

