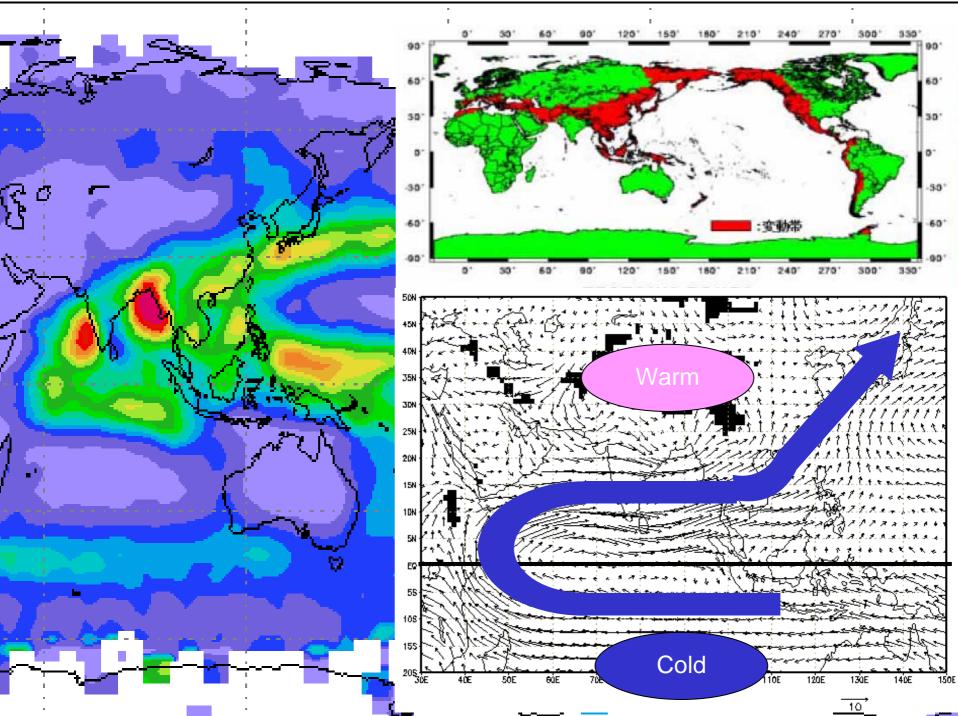
Resolving the Climate and Water Cycle

Toshio Koike Earth Observation Data Integration and Fusion Research Initiative (EDITORIA), The University of Tokyo

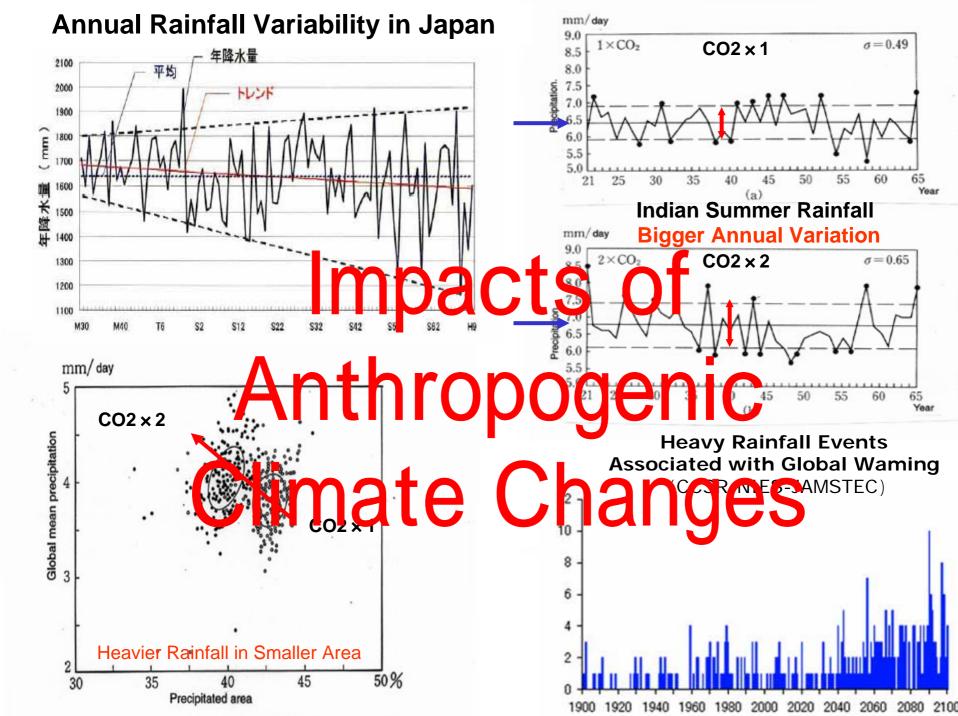
GEOSS Symposium on Integrated Observation for Sustainable Development In the Asia-Pacific Region January 11-12, 2007, Tokyo

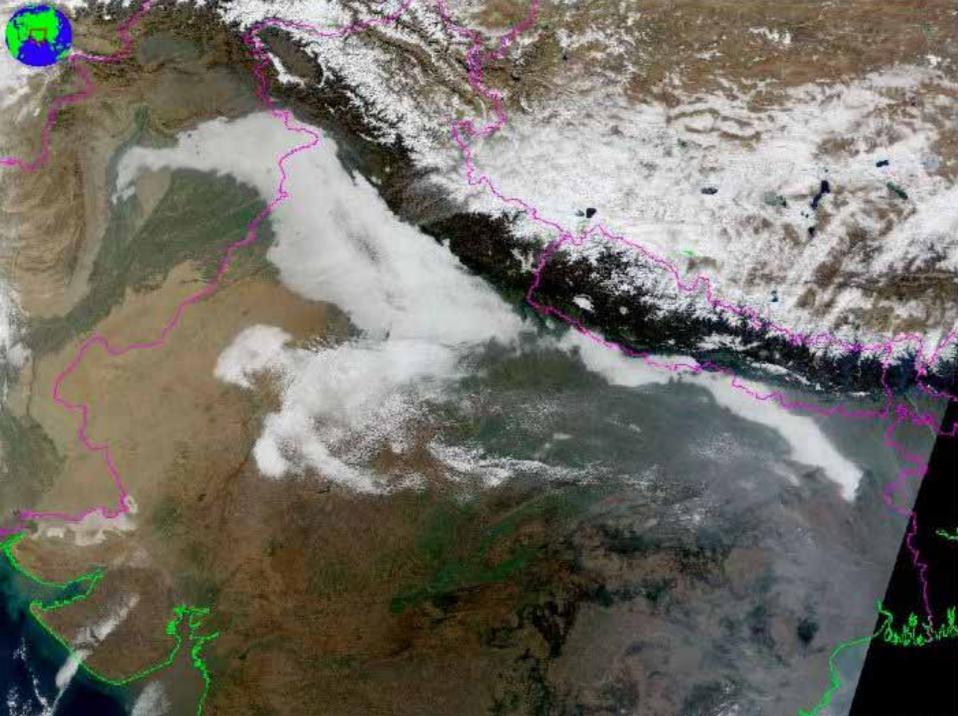






Water Pollution and Ecosystem Degradation





The 1st Asian Water Cycle Symposium

The University of Tokyo, Tokyo Japan, 2-4 November 2005

GEO Secretary UNESCO UNEP WMO IGOS Mekong Committee Bangladesh China Indonesia India Japan Korea Laos

Malaysia Mongolia Pakistan Philippine Sri Lanka Thailand Vietnam

The Asian Water Cycle Initiative (AWCI) International Task Team (ITT) Working Session (III) Workshop

Bangladesh 3 Cambodia 1 Indonesia 1 Japan 2 Lao PDR 1 Myanmar 1 Nepal 1 Pakistan 1

Philippines 1 Sri Lanka 2 Uzbekistan 1 Vietnam 2

September 2006

Rama Gardens Hotel, Bangkok, Thailand September 26, 2006 International Workshop on Capacity Building in Asia **"Earth Observations in the service of Water Management"** September 26-28, 2006, Bangkok Co-hosted by GEO, IGWCO, JAXA, Univ. of Tokyo, AIT, UNU, WMO, WCRP, UNESCAP, ICHARM

> CARACITY BUILDING IN ASIA END Observation II Water Management Services & Considering

The 2nd Asian Water Cycle Symposium

The University of Tokyo, Tokyo November 9-10, 2007

29 Countries and 176 participant

Reserved

Reserved

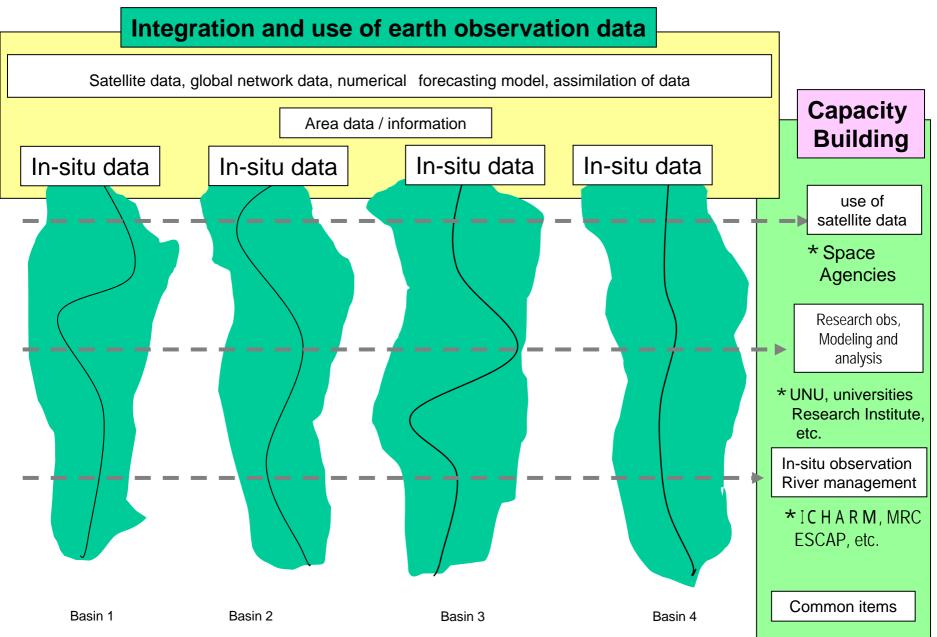
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Pasanja

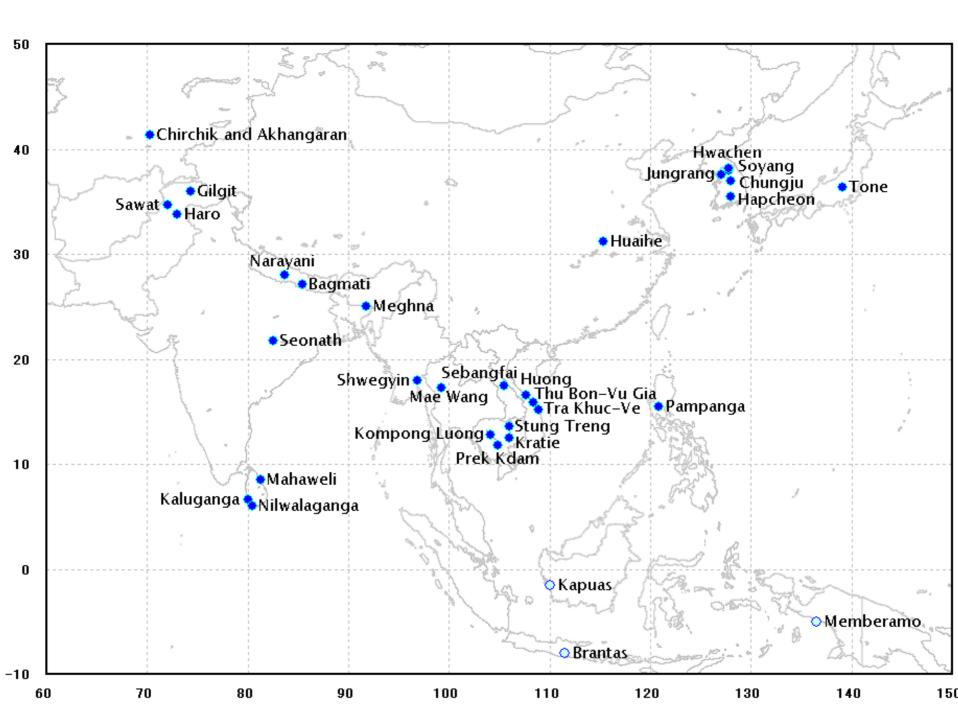
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GEOSS Asian Water Cycle Initiative (AWCI)

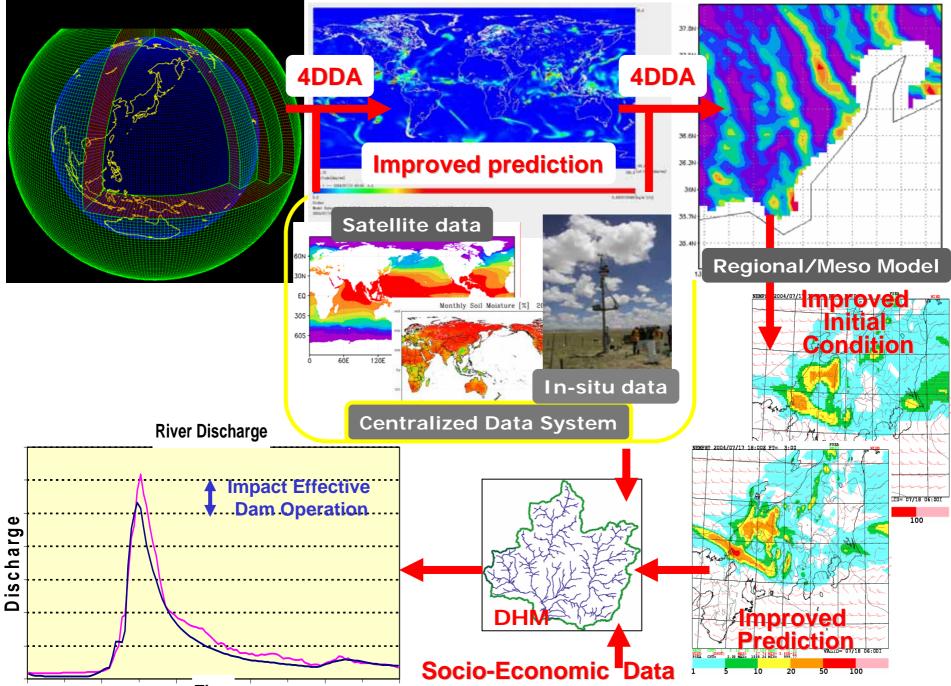
[integration and use of earth observation data] + [capacity building] programme



						<u> </u>																							
Country	Ba Bu													Му			Pa			Ph					Uz				18
Reference basin	Me	Se	Sh	Ма	Ма	То	S0	Hw	Ch	Ju	На	Se	SE	Sh	Na	Ва	GI	Ha 🕄	Sa	Ра	Ма	Ка	N	Ма	CA	Hu	Th	٦T	29
Basin Desccription																													
Basin Maps	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	25
Basin Pictures	0	1				1	1	1	1	1	1	0	1	0			1	1	1	1	1	1	1		1	1	1	1	19
River Network Maps	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28
Soil	0	1				1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1		1		1	1	18
Land Use/Vegetation	0	1			1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1		1	1	0	1	19
River Constructions	0	1				1	1	1	1	1	1	0		0						1	1	1	1		1	1	1	1	15
HYDROLOGICAY																													
Streamflow	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	24
Reservoir	1	1				1	1	1	1	1	1	1	1	0			1	1	1	1	1	1	1		1	0	0	0	18
Groundwater Table	1	0	1									0	1	0			0	0	0	0	0	0	0		1	0	0	0	4
water quality																													
SUB-SURFACE																													
Soil Temperature	1	1	1			0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1	1	0	1	1	1	0	1	12
Soil Moisture	0	1	1			0	0	0	0	0	0	0	1	0			0	0	0	0	0	0	0	1	1	1	1	1	8
SURFACE																													
Air Temperature	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	24
Humidity	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	24
Wind	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	24
Pressure	1	1				1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	23
Precipitation	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26
Snow	0	0				1	1	1	1	1	1	0	1		1	1	1	0	1	0	0	0	0		1	0	0	0	12
Skin Temperature	0	1				0	0	0	0	0	0		1				0	0	0	0	0	0	0	1	0	0	0	0	3
Upward Shortwave	ō	ī				0	0	ō	0	0	0		1				ī	ī	ī	0	ō	ō	0	1	0	0	ī	ō	7
Downward Shortwave	õ	ī				ī	ō	õ	ō	ō	ō		ī				ī	i	i	ō	õ	ō	ō	ī	õ	ō	ī	õ	8
Upward Longwave	õ	ī				ō	ō	õ	ō	ō	õ		ī				ō	ō	ō	ō	õ	ō	õ	ī	õ	ō	ī	õ	4
Downward Longwave	õ	ō				õ	õ	õ	õ	ō	õ	1	i				õ	õ	õ	õ	õ	ō	õ	ī	õ	õ	ī	õ	4
Upward PAR	õ	ō				õ	õ	õ	õ	ō	õ	-	ī				õ	õ	õ	õ	õ	õ	õ	-	õ	õ	ō	õ	i
Downward PAR	õ	ō				õ	ŏ	ō	ŏ	ō	õ		ō				õ	õ	õ	õ	õ	õ	õ		õ	ŏ	õ	õ	ō
Net Radiation	ĩ	ŏ				õ	ŏ	ō	ŏ	ō	õ		ĩ				õ	õ	õ	õ	õ	ō	õ	1	õ	õ	ĩ	ŏ	4
Sensible Heat Flux	ō	ŏ				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	-	i				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	i	ŏ	ŏ	ō	ŏ	2
Latent Heat Flux	ŏ	ŏ				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	-	i				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	i	ŏ	ŏ	ŏ	ŏ	2
Ground Heat Flux	ŏ	ŏ				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	-	i				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	i	ŏ	ŏ	ŏ	ŏ	2
Momentum Flux	ŏ	ŏ				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	-	ō				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ		ŏ	ŏ	ŏ	ŏ	ő
CO2 Flux	ŏ	ŏ				ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	_	ŏ				ŏ	ŏ	ň	ŏ	ŏ	ŏ	ŏ		ĭ	ň	ŏ	ŏ	ĭ
Evaporation	ĭ	ŏ				1	ŏ	1	1	1	1	1	ŏ		1	1	ĭ	ĭ	ĭ	ŏ	1	1	ĩ		ō	1	1	ĩ	19
Vegetation	ō	ő	-			0		0	0	ò	0		ĩ			1	ò	i	0	ŏ	0	ò	0		ŏ	1	i	i	5
						0					0		-					-	•							-	-	-	,
Atmosphere PB L Tower	0	0				0	0	0	0	0	0	0	0				0	0	0	0	0	0	0		0	0	0	0	0
Radiosonde	1	ő				~	~	ŏ	0	ŏ	~	~	1				~	0	0	ŏ	0	0	ŏ		~	1	1	1	0
Radar	÷	1	1			1	0			ŏ	ŏ	~	1				~	0	0	0	0	0	ŏ	1	8	1	1	-	
	-	-	1			1	0	0	0	-	-	0	1				~	0	0	0	0	0		1		1	1	-	9
Lidar	0	0				0	0	0	0	0	0	0	0				0	0	0	0	0	0	0		0	0	0	0	0
Profiler	0	0				0	0	0	0	0	0	0	0				0	0	0	0	0	0	0		0	0	0	0	0
RASS	0	0				0	0	0	0	0	0	0	0				0	0	0	0	0	0	0		0	0	0	0	0



Global Data to Local Information



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