



សន្និសីទ និងពិព័រណ៍ទឹកកម្ពុជាលើកទី៤

The 4th Cambodian Water Conference & Exhibition

Relationship between Climate Change and Water Sector in Cambodia

Nov 29, 2022



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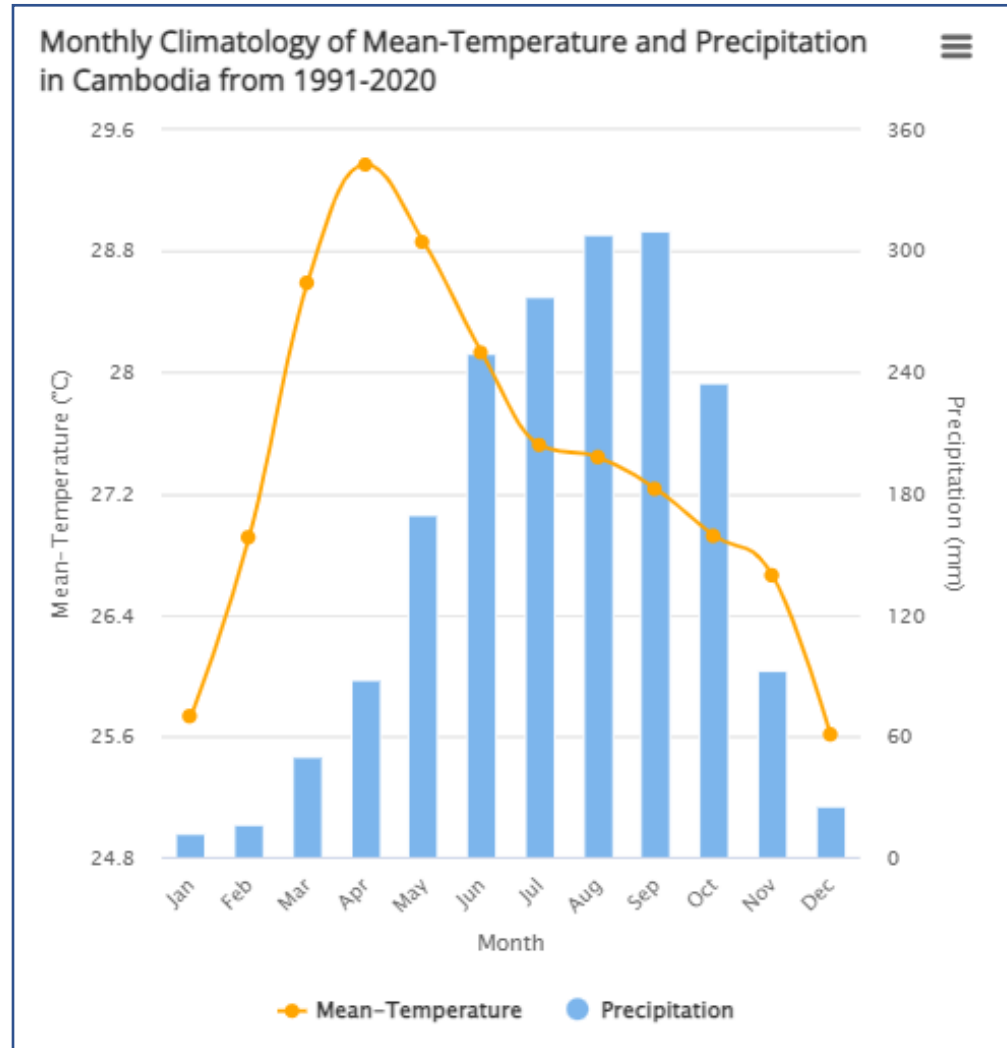


Overview – Water Sector

- Cambodia has abundant water: Mekong system (475 BCM) and groundwater resource (20 BCM) --- **Water Sector Roadmap 2003**
- Water usage:
 - Irrigation/agriculture
 - Domestic
 - industry



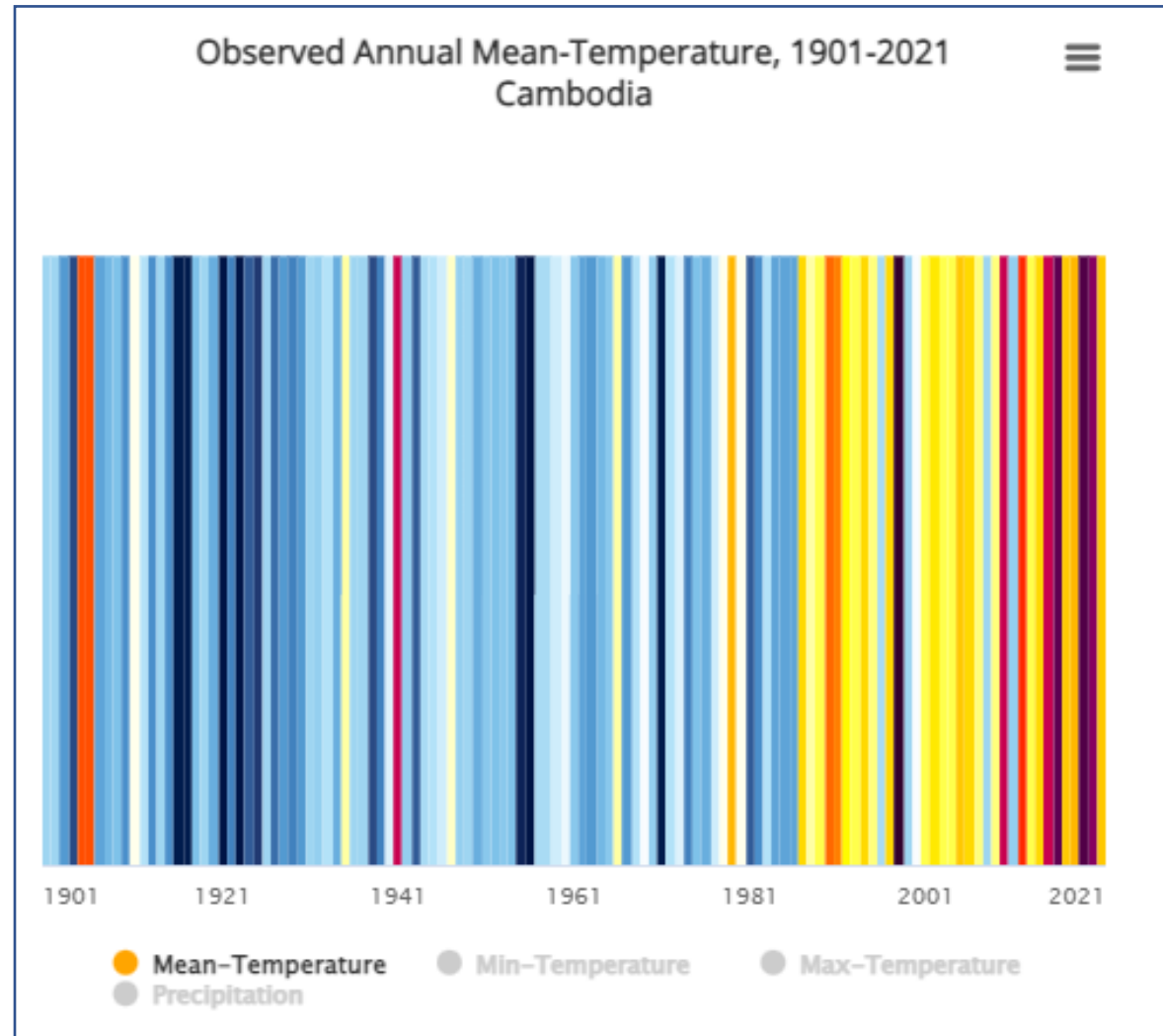
Climate - Cambodia



Source: Climate change Knowledge portal



Climate - Cambodia

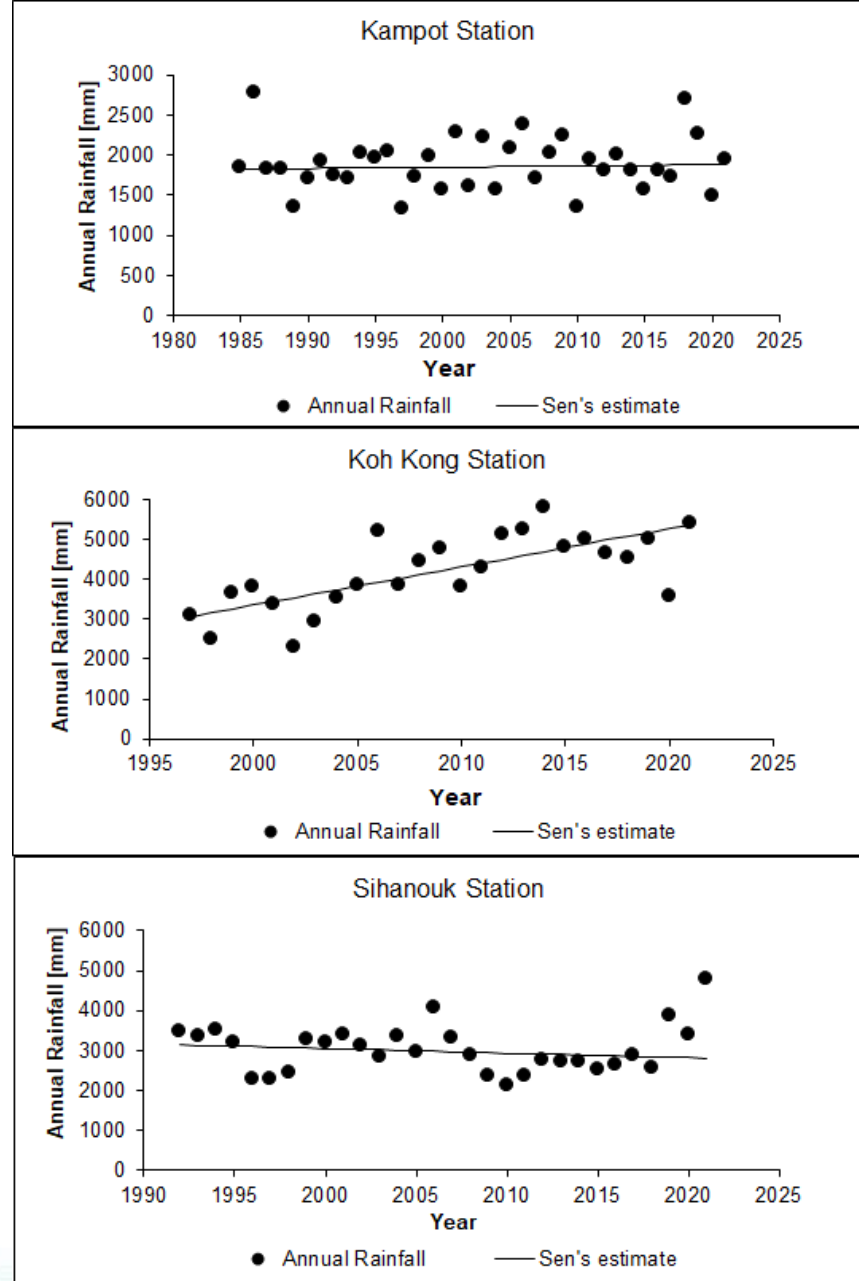


Source: Climate change Knowledge portal



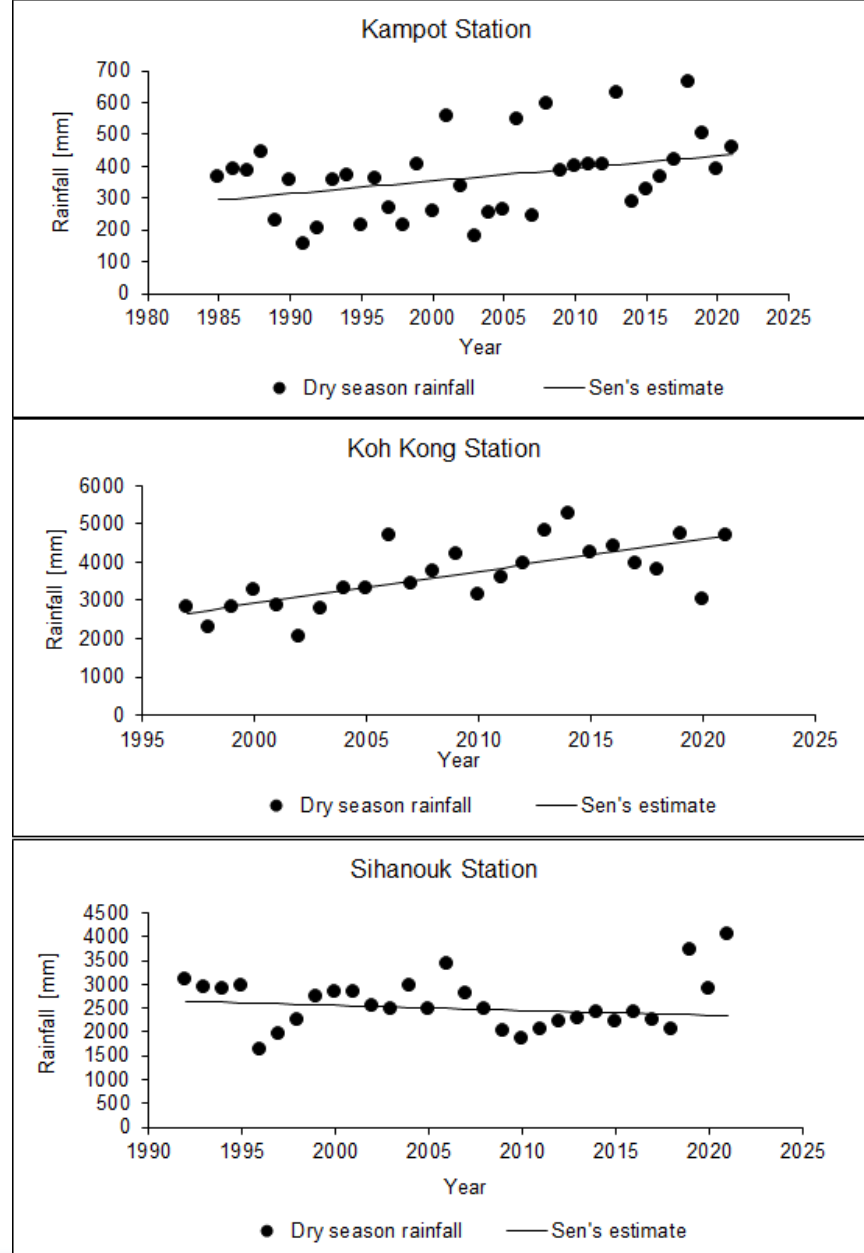
Case study

- Rainfall trend in coastal region of Cambodia
- Climate change is complex and manifold issue



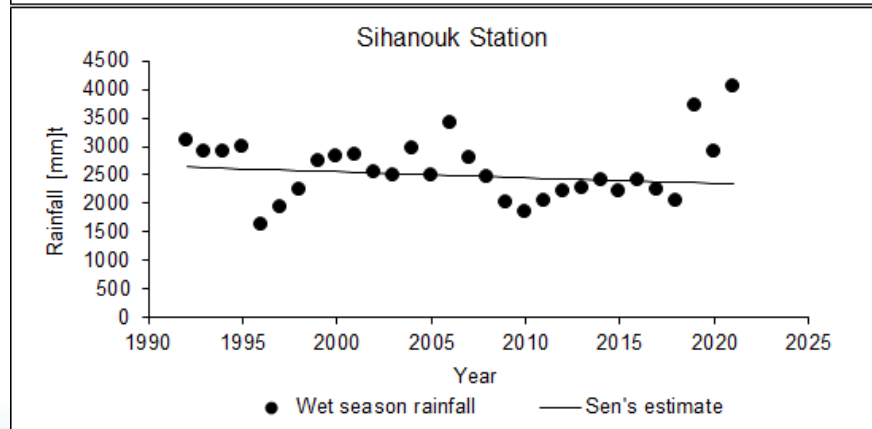
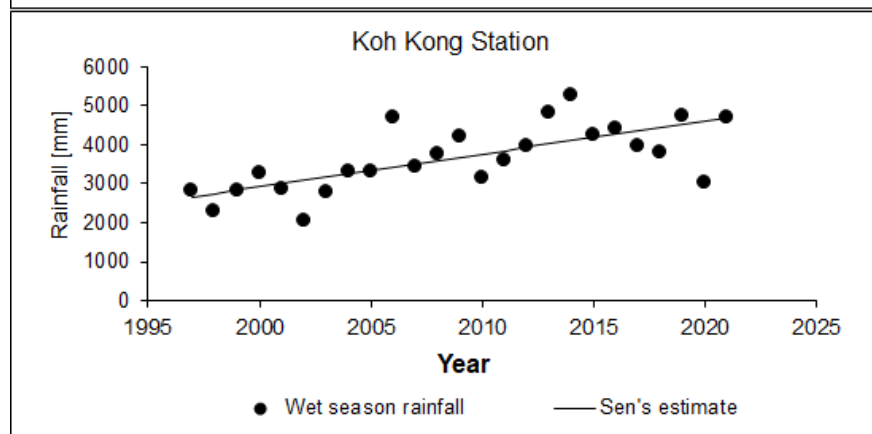
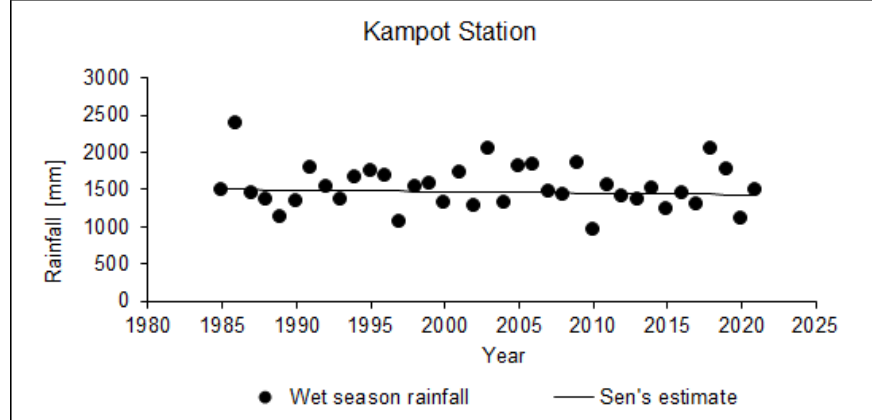
Case study

- Dry season rainfall trend



Case study

- Wet season rainfall trend



Case study

- Monthly rainfall trend

Month	Kampot			Koh Kong			Sihanouk		
	Z	Level of Significance	Sen's slope	Z	Level of Significance	Sen's slope	Z	Level of Significance	Sen's slope
January	1.77	+	0.400	1.23		0.764	0.45		0.078
February	0.04		0.000	-0.61		-0.438	0.87		0.285
March	0.68		0.600	0.44		0.809	0.16		0.176
April	0.00		-0.009	1.75	+	3.388	-0.70		-0.991
May	-2.24	*	-4.228	0.44		1.805	0.23		0.696
June	-0.14		-0.220	2.71	**	18.793	-1.36		-5.329
July	1.48		3.295	0.82		7.398	-1.11		-3.774
August	-1.16		-2.588	1.99	*	10.837	-1.00		-3.754
September	1.66	+	2.661	3.15	**	27.034	1.11		6.063
October	-0.04		-0.232	1.70	+	5.695	0.25		0.720
November	2.24	*	2.413	1.99	*	4.246	0.54		1.048
December	2.12	*	0.940	0.35		0.204	1.11		0.723



Common climate change induced natural hazard

- Increase frequency of extreme event (temperature, rainfall)
- Flood and drought



Climate change and irrigation sector

- More investment cost in infrastructure
- Require new design approach (solar driven irrigation, nature based solution, etc)
- Adopt new agricultural practice (rice straw management, alternate wet and dry, seed selection, etc)



Climate change and water supply sector

- More investment cost by increasing marginal cost
 - Depletion of water source
 - Lower water quality



Building climate resilience

- Strengthen institutional capacity on adaption and mitigation option
- Increase climate resilience for irrigation and water supply infrastructure
- Increase awareness of vulnerable communities



Thank you!

