

# WATER USE AND THE ARAL SEA

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Sustainable Development and Sustainability Science  
Spring 2021

Master level course is a cooperation between Karakalpak State University and the Swedish Aral Sea Society

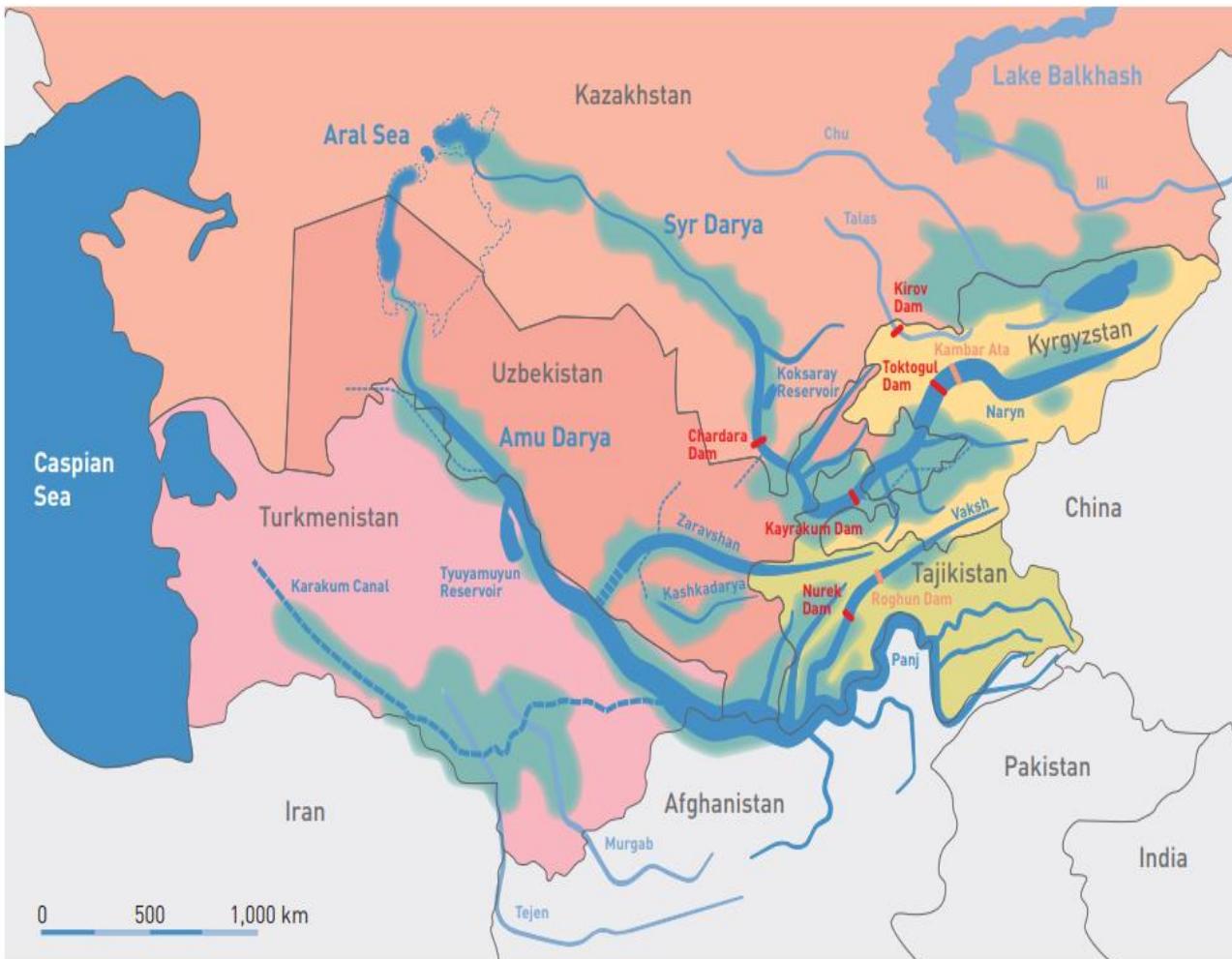
## Aral Sea Basin

Shared rivers Amu Darya and Syr Darya

All or most of the water used, mainly for irrigation

On-going work in the Amu Darya delta, Northern Aral Sea where water is supplied by Syr Darya, the dry bottom is being planted

## Map 2: Water resource use in the Aral Sea Basin



■ Irrigated lands  
— Rivers (breadth reflects average annual flow)  
---- Aral Sea shoreline 1960

---- Major canals  
— Major dams  
— Proposed dams

Based on: Zoi Environment 2011

## Basin-wide issues

- Water over-use for irrigation
- Water-energy conflict
- Dam safety (Sardobe)
- Water quality

**But there is (almost) no discussion  
on the protection of water-based  
ecosystems in the region!**

## Countries sharing the basin

- Afghanistan – uses 20 cbkm
- Kazakhstan – uses 14 cbkm
- Kyrgyzstan – uses 7 cbkm, hydropower important
- Tajikistan – uses 10 cbkm, hydropower important
- Turkmenistan – uses 26 cbkm
- Uzbekistan – uses 50 cbkm

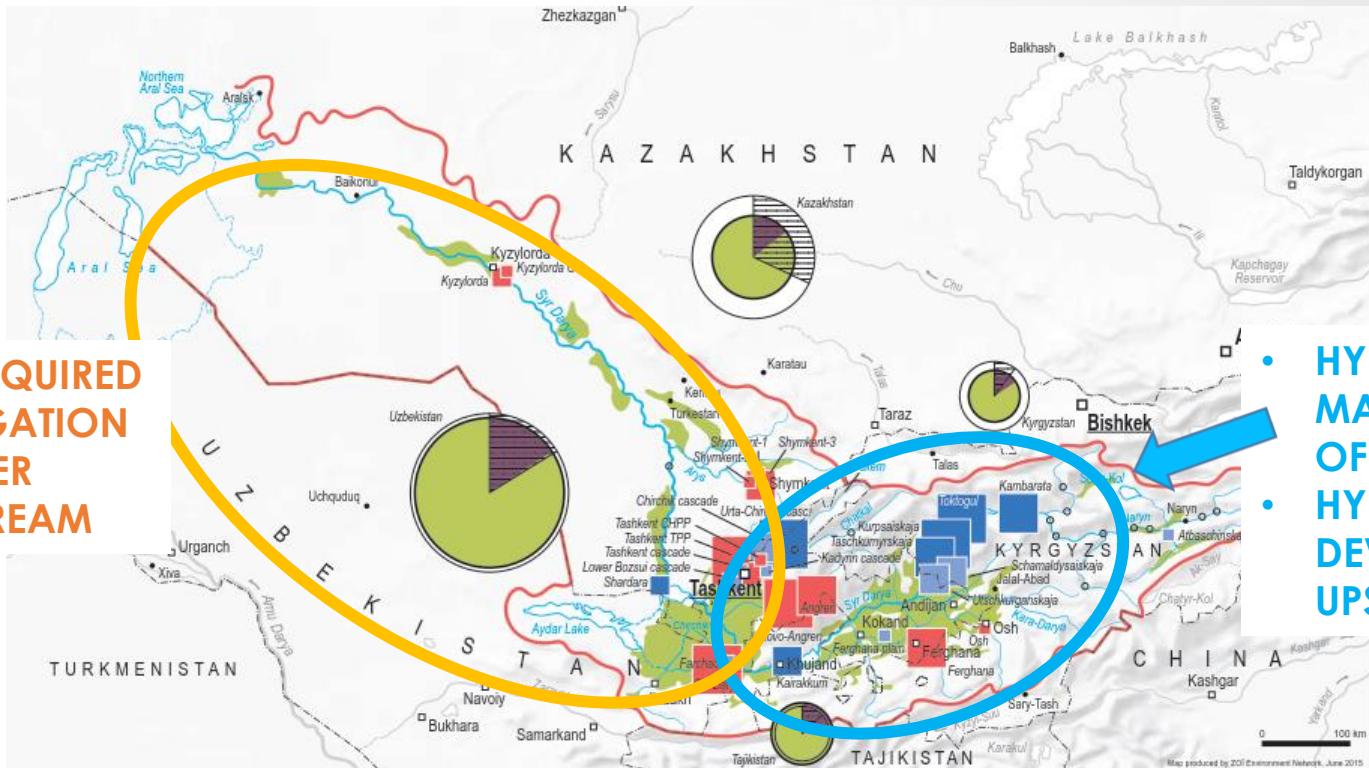


**TABLE 11**  
**Areas under irrigation**

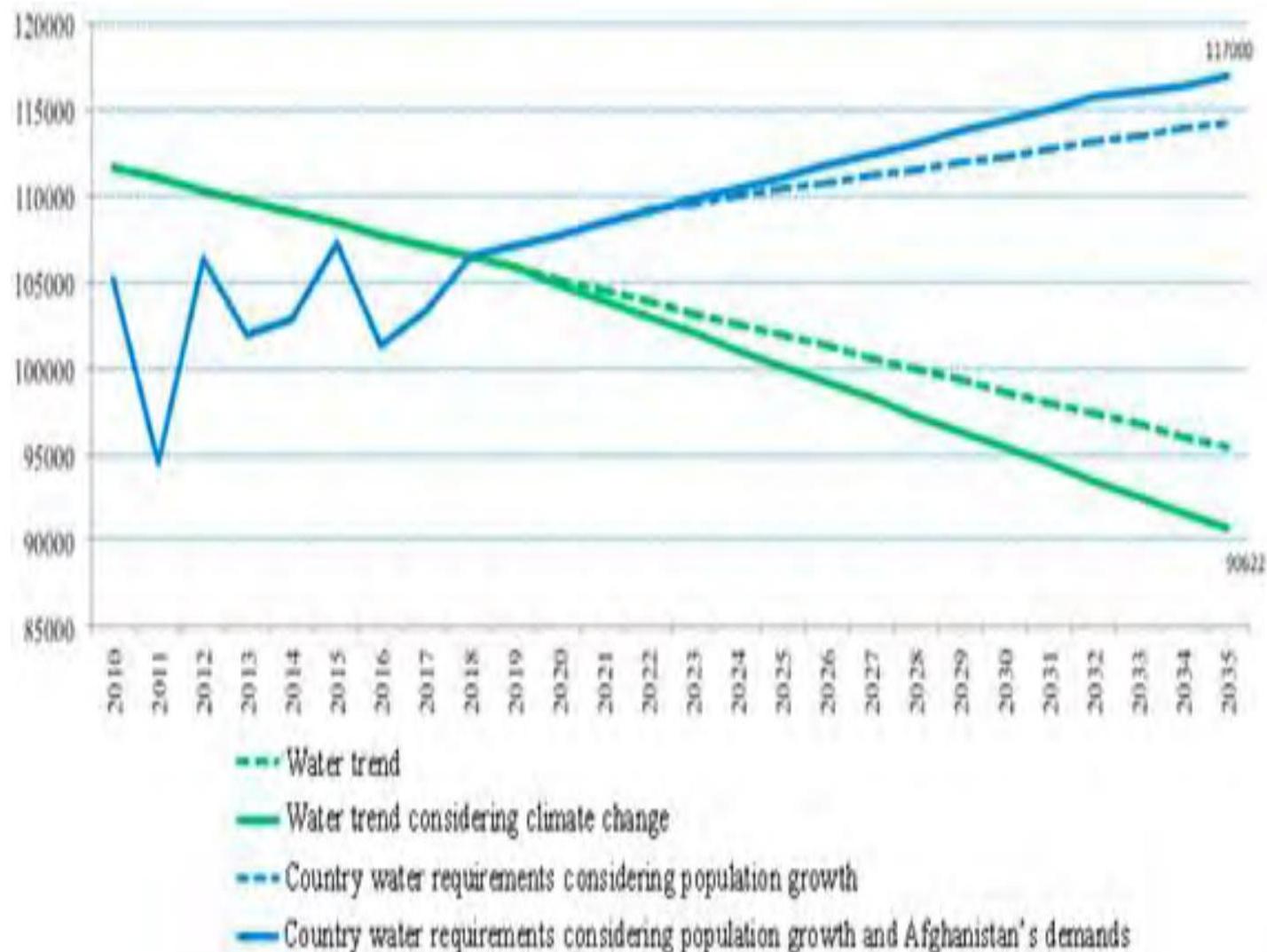
Country	Year	Full	Spathe	Total	Area	Area	Area	Area
		control	irrigation	area	equipped	equipped	equipped	actually
		ha	ha	ha	%	%	ha	%
Afghanistan	2002	3 208 480		3 208 480	42	24	1 896 000	59
Kazakhstan	2010	1 199 600	866 300	2 065 900	9	16	1 264 970	61
Kyrgyzstan	2005	1 021 400		1 021 400	75	8	1 021 400	100
Tajikistan	2009	742 051		742 051	85	6	674 416	91
Turkmenistan*	2006	1 990 800		1 990 800	102	15	1 990 800	100
Uzbekistan	2005	4 198 000		4 198 000	89	32	3 700 000	88
<b>Central Asia</b>		<b>12 360 331</b>	<b>866 300</b>	<b>13 226 631</b>	<b>33</b>	<b>100</b>	<b>10 547 586</b>	<b>80</b>

\* Total area equipped for irrigation is larger than the cultivated area, since the irrigation area includes irrigated permanent pasture while permanent pasture is not included in cultivated area.

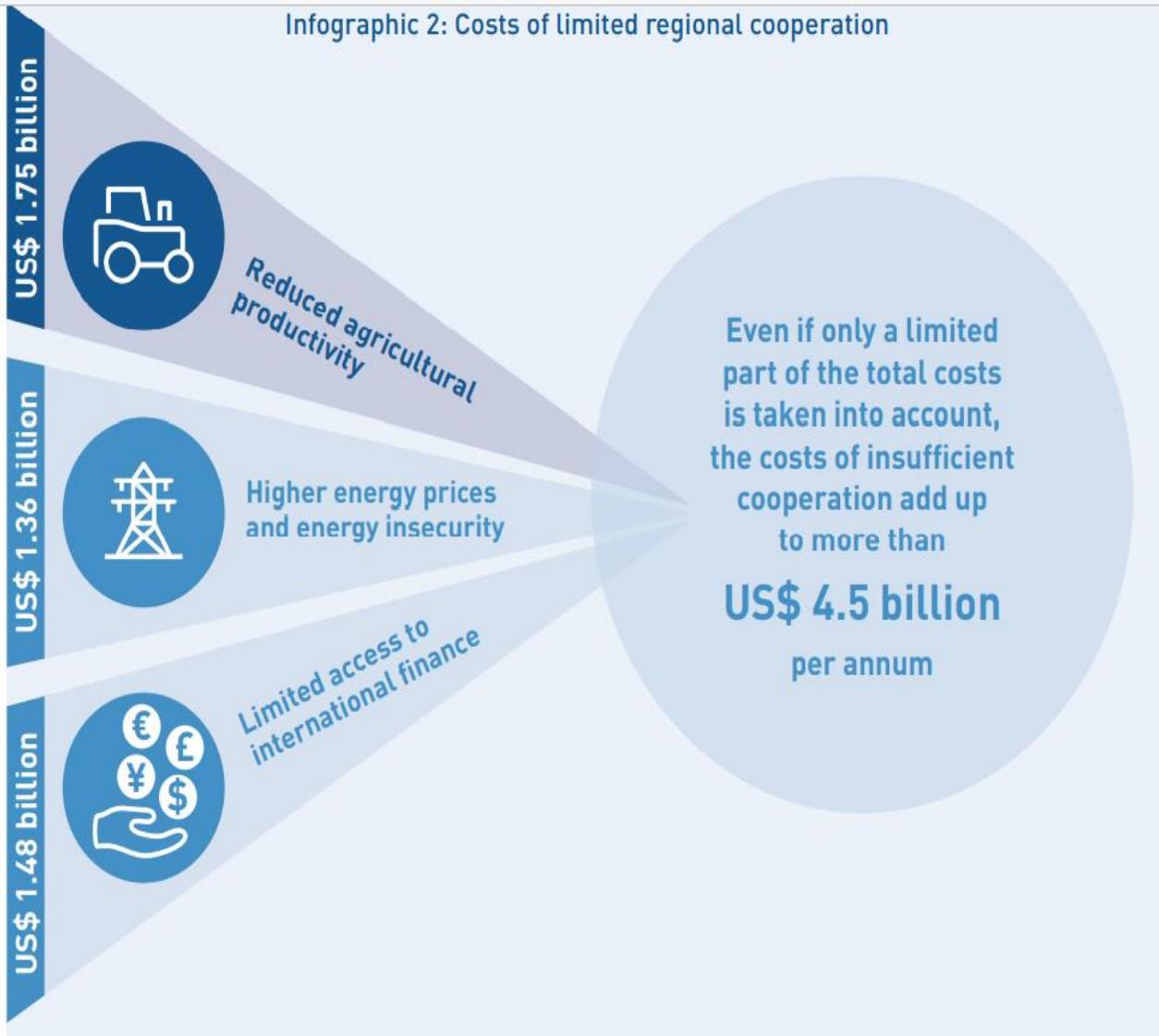
# THE SYR DARYA RIVER BASIN



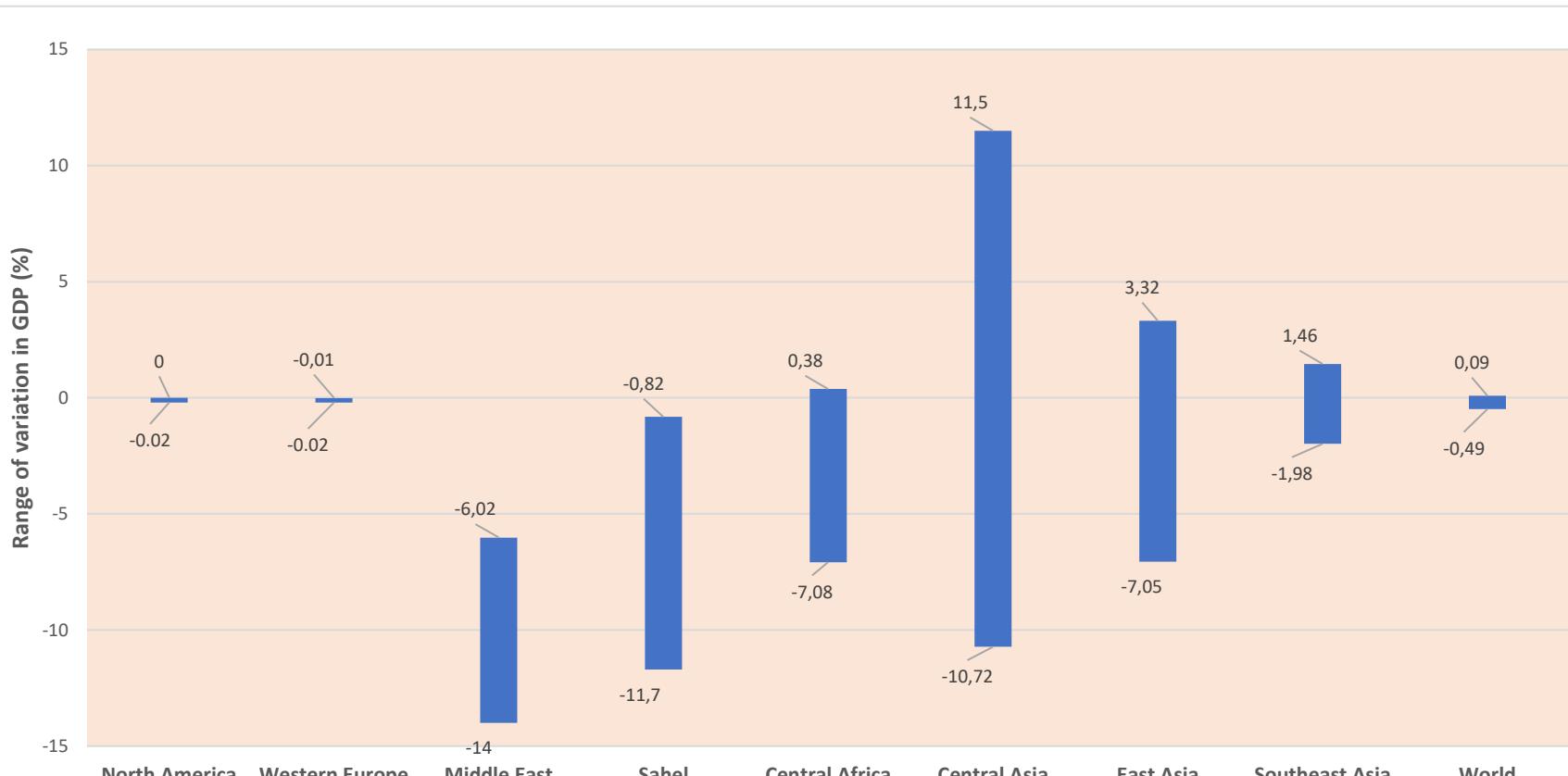
## Figure 9.2. Comparison of water demand and water availability in ASB, Mm<sup>3</sup>



### Infographic 2: Costs of limited regional cooperation



## Climate-related impacts on GDP in 2050 (ranges of impacts determined by policies)



Source: High and Dry: Climate Change, Water and the Economy, World Bank Group 2016

## **«Об утверждении Стратегии управления водными ресурсами и развития сектора ирригации в Республике Узбекистан на 2021–2023 годы».**

- увеличение доли каналов с бетонным покрытием
- уменьшение орошаемых площадей с низким уровнем водообеспечения
- доведение внедрения водосберегающих технологий орошения с 308 тыс. до 1,1 млн га, в том числе технологий капельного орошения – с 121 тыс. до 822 тыс. га;
- сокращение площади засоленных земель;
- перевод на автоматизированное управление на основе цифровых технологий 60 крупных объектов водного хозяйства;
- ведение мониторинга учета потребления электроэнергии и расхода воды;