

Central Asia's agricultural potential and food security in the light of climate change

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Four CA countries we are talking about



Socio-economic features of CA

- A region with around 50 million people
- Low income and agrarian societies

Indicators	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan
Average income per capita (USD, 2015)	1103	926	6672	2132
Annual growth of average per capita income (average percentage for 2013-2015)	4.0	4.3	7.6	6.2
Rural population as a percentage of the total population	65	73	51	64
Total population (millions)	5.5	8.2	5.2	28.9

Tough climatic and biophysical conditions

- Continental climate, with cold winters and dry, hot summers
- Mountainous terrain, only small part of countries suitable for agriculture

	% agricultural area in total	Arable land per capita (hectares per capita)	Proportion of steep or hilly ground, %	% land that Risks increasing erosion
Kyrgyzstan	6.7	0.2	59	28
Tajikistan	5.3	0.1	54	26
Turkmenistan	3.9	0.4	19	1
Uzbekistan	10.1	0.2	25	3

Characteristics of CA agriculture

- Small scale and fragmented nature
- Extensive animal husbandry (sheep, cattle)
- Legacy of the past: Overgrazing pastures and degradation of grass steppes, especially at lower altitudes
- Low productivity in livestock as (winter) fodder is scarce, genetic potential of local breeds is low

Crop farming

- Low yields, due to natural conditions (drought, low soil fertility), salinization of irrigated land, repeated use of own seeds, poor treatment of the soil, little mechanisation is used
- Cotton remains important in TA as export product. Irrigation necessary, systems are outdated and poorly maintained. TU and UZ has shifted from cotton to wheat, and improved water use efficiency

Indicators	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan
Wheat yield per hectare (min./max. 2012-2014)	1.7-2.4	2.7-3.0	3.0-3.5	4.5-4.7

Food security outcomes (some indicators)

FOOD SECURITY INDICATORS	KY	TA	TU	UZ
AVAILABILITY				
Average dietary energy supply adequacy (%)	123	99	132	122
ACCESS				
Prevalence of malnutrition (%)	6	32	<5	6
Prevalence of food inadequacy (%)	12	43	7	12
STABILITY				
Grain import dependency ratio (%)	24	44	n/a	20
UTILISATION				
Percentage of children under the age of five who are stunted	18	39	28	20
Percentage of children under the age of five who are underweight	3	15	11	7
Prevalence of anaemia among children under the age of five	36	27	32	43

Ways to better use potentials

- Technical, agronomic improvements to help adapt to natural conditions and climate change:
 - water and energy saving agricultural techniques
 - more climate resilient seeds and animal breeds, crop rotation, etc.
- Socio-economic conditions encouraging productivity growth and efficient use of resources:
 - improved clarity on land ownership
 - water management (access and use)
 - access to other inputs and services (e.g. extension, market information)
- International aid a.o. via FAO, World Bank, UNEP

Thank you for
your attention

Questions?

