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Leibniz Institute of Agricultural Development
in Transition Economies



Bundesministerium
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AGRIWANET

Agricultural Restructuring, Water Scarcity and the Adaptation to Climate Change in Central Asia: A Five-Country Study (AGRIWANET)

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Agricultural Transitions along the Silk Road: Restructuring, Resources and Trade in the Central Asia Region
IAAE Inter-Conference Symposium | 4-6 April 2016, Almaty (Kazakhstan)

Central Asia (CA5) countries

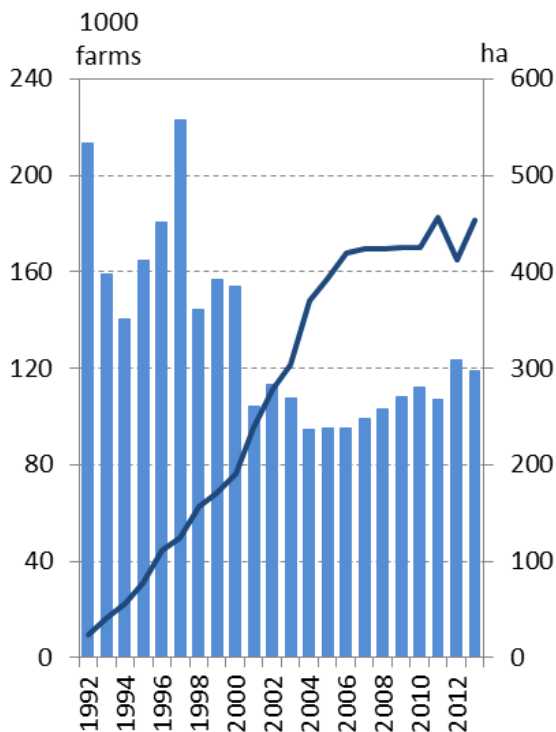
Commonwealth of Independent States - Central Asian States



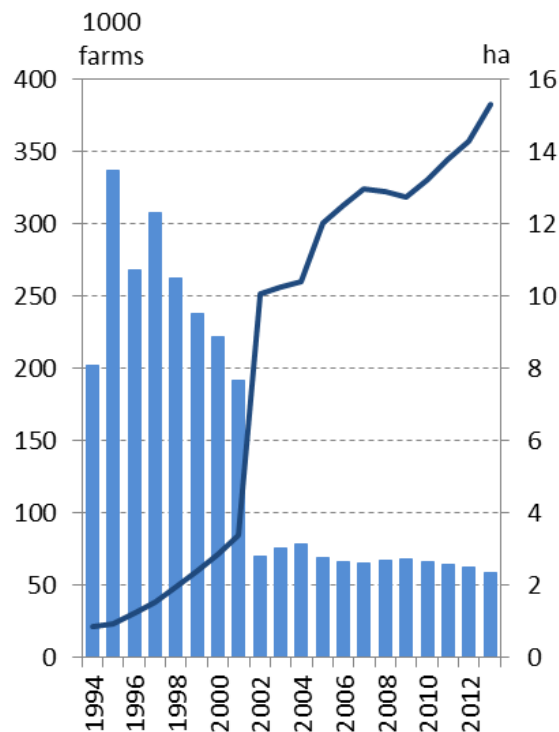
Source: University of Texas Perry-Castañeda Library: Map Collection

Diversity in CA farm restructuring experience

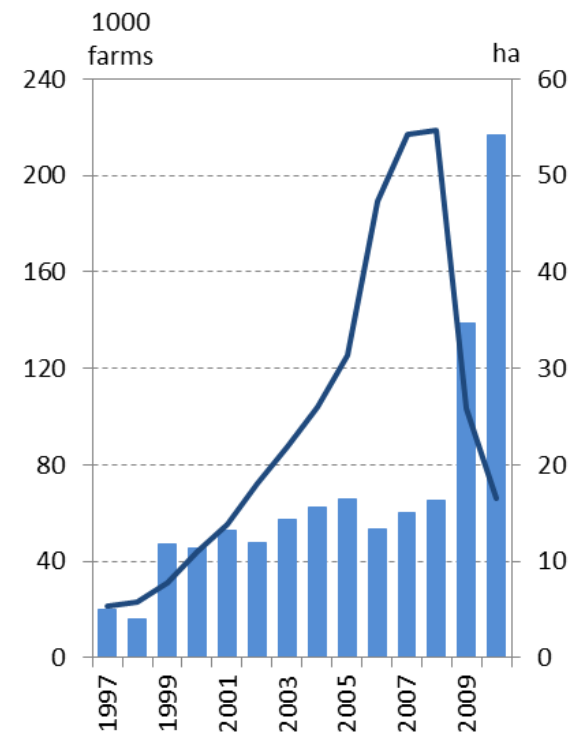
Kazakhstan



Kyrgyzstan



Uzbekistan



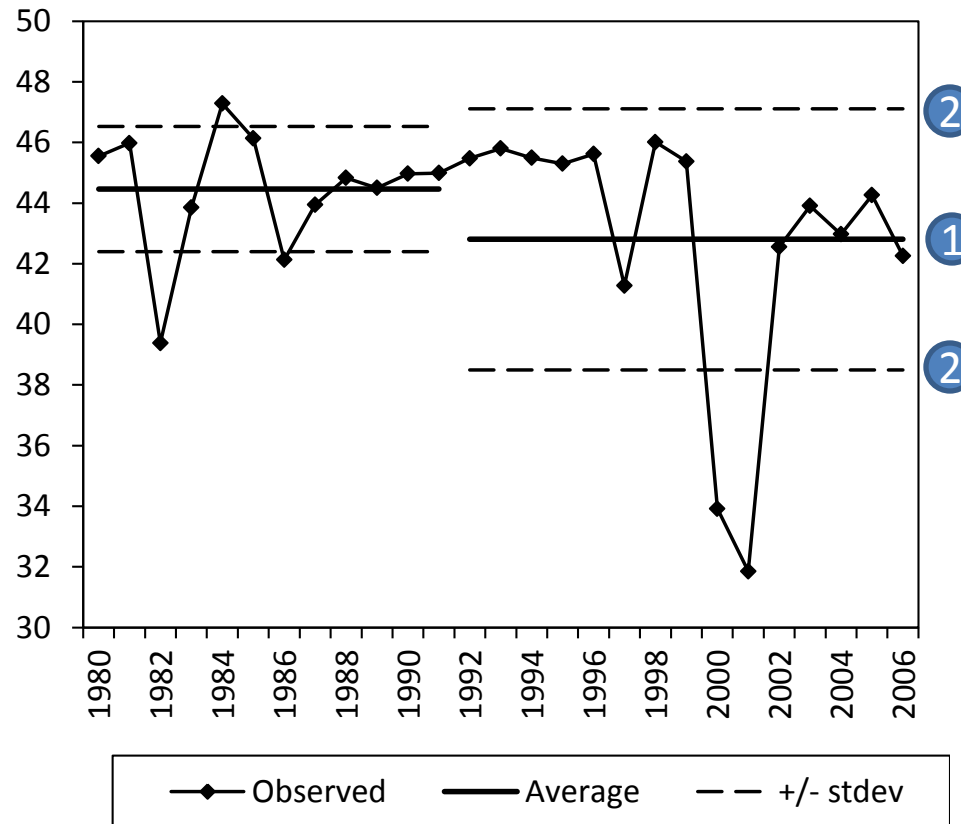
■ Average farm size (ha)
— Number of farms (1000)

Source: Based on official statistical yearbooks of CA5 countries.

Water resources and the Aral Sea basin



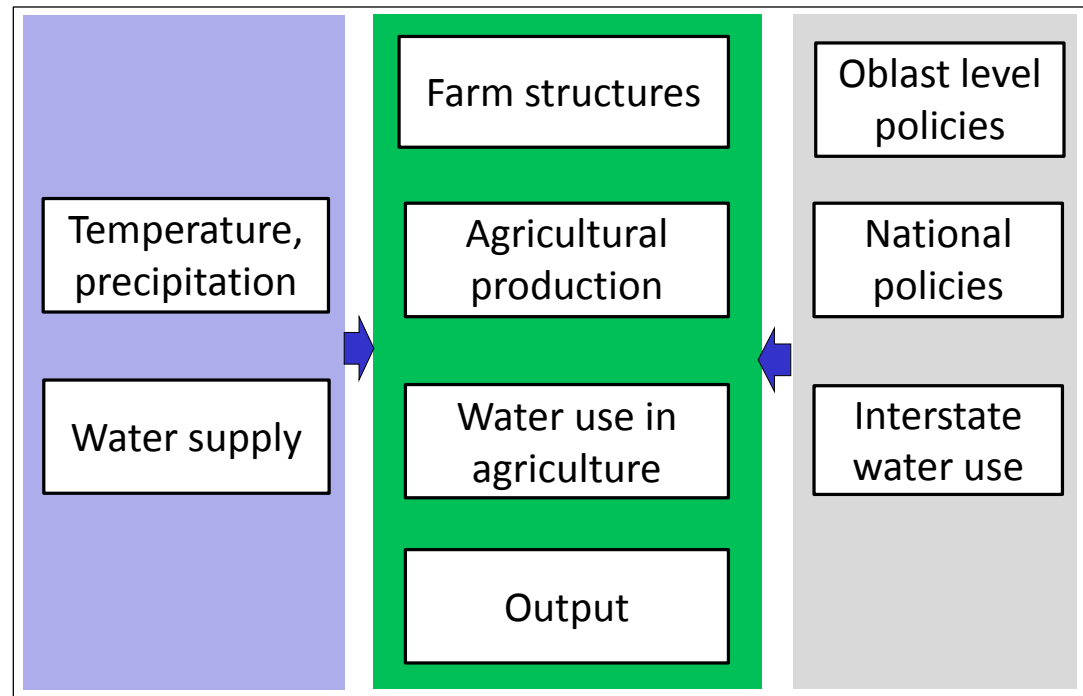
Irrigation water use in Amudarya Basin: 1980-1991 & 1992-2006, (April-September), km³



1. Decrease in average irrigation water use
2. Increase in variability in irrigation water use

Sources: Bekchanov (2014)

- Evolution of cropping and livestock patterns at subnational level?
- Water dependency of different farm types?
- Effect of farm restructuring on water scarcity?
- How does farm restructuring translate water availability (or climate change) into agricultural production & incomes?
- Role of national policies?



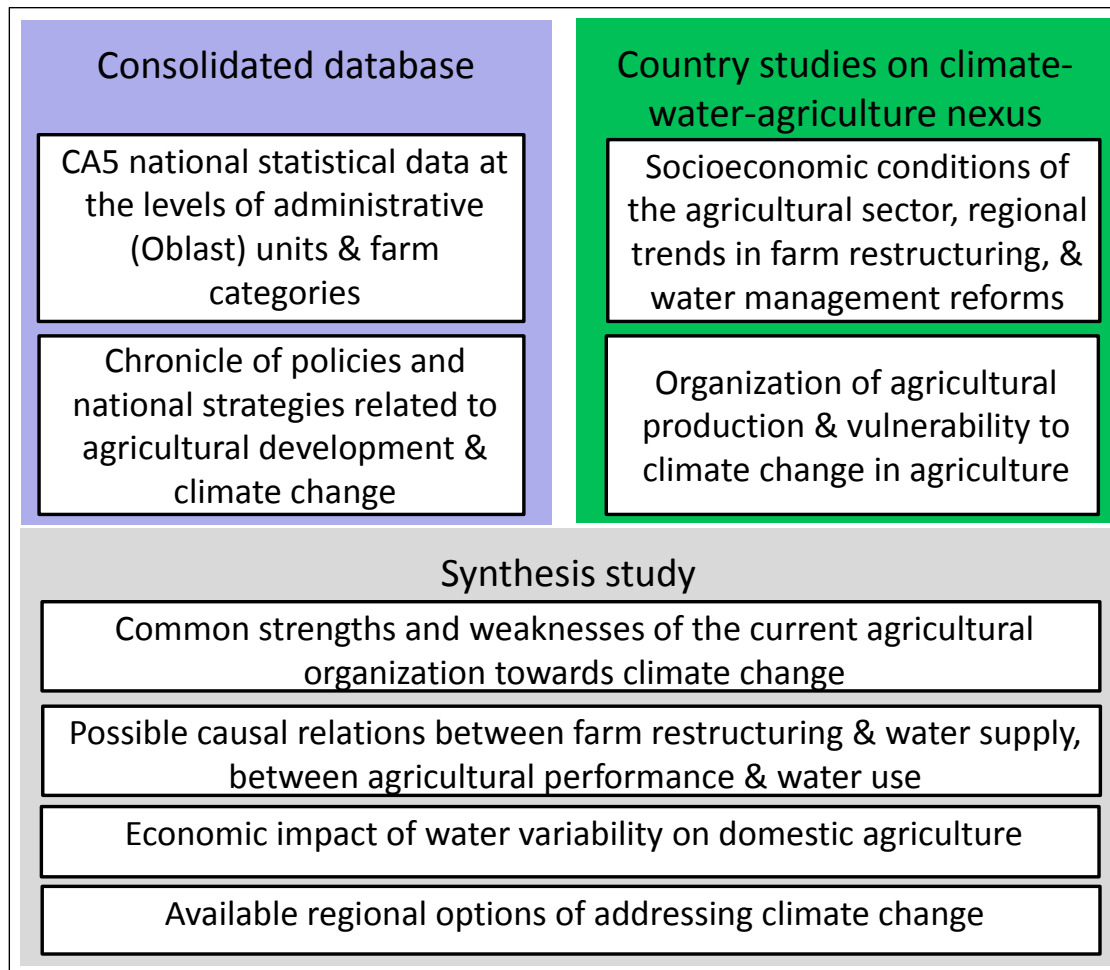
German Federal Ministry of Education and Research

- Announcement within the framework of the strategy of the German Federal Government for the **internationalization of science and research**
- *“Partnerships for sustainable solutions in transforming and developing countries – Research for development”*
- Pilot projects for partnerships in science, research and education with the countries of Central Asia and the South Caucasus (September 5, 2012)

(1) to provide an analytically sound and politically relevant understanding of the *water-farm restructuring nexus*

(2) to investigate how vulnerable certain organizational forms or patterns of agricultural production are to climate change

(3) to investigate causal relations between agricultural restructuring and resilience to climate change



- Establish a network of partners from each CA5 country
- Provide a platform for harmonised data collection & analysis
- Train young researchers from CA5
- Engage in mutual learning & cooperation

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AGRIWANET – Network of partners



Kazakhstan Association
of Economists (AEK)
Kazakhstan



University
of Central Asia
Kyrgyzstan



Centre of Economic
Researches (CER)
Tajikistan



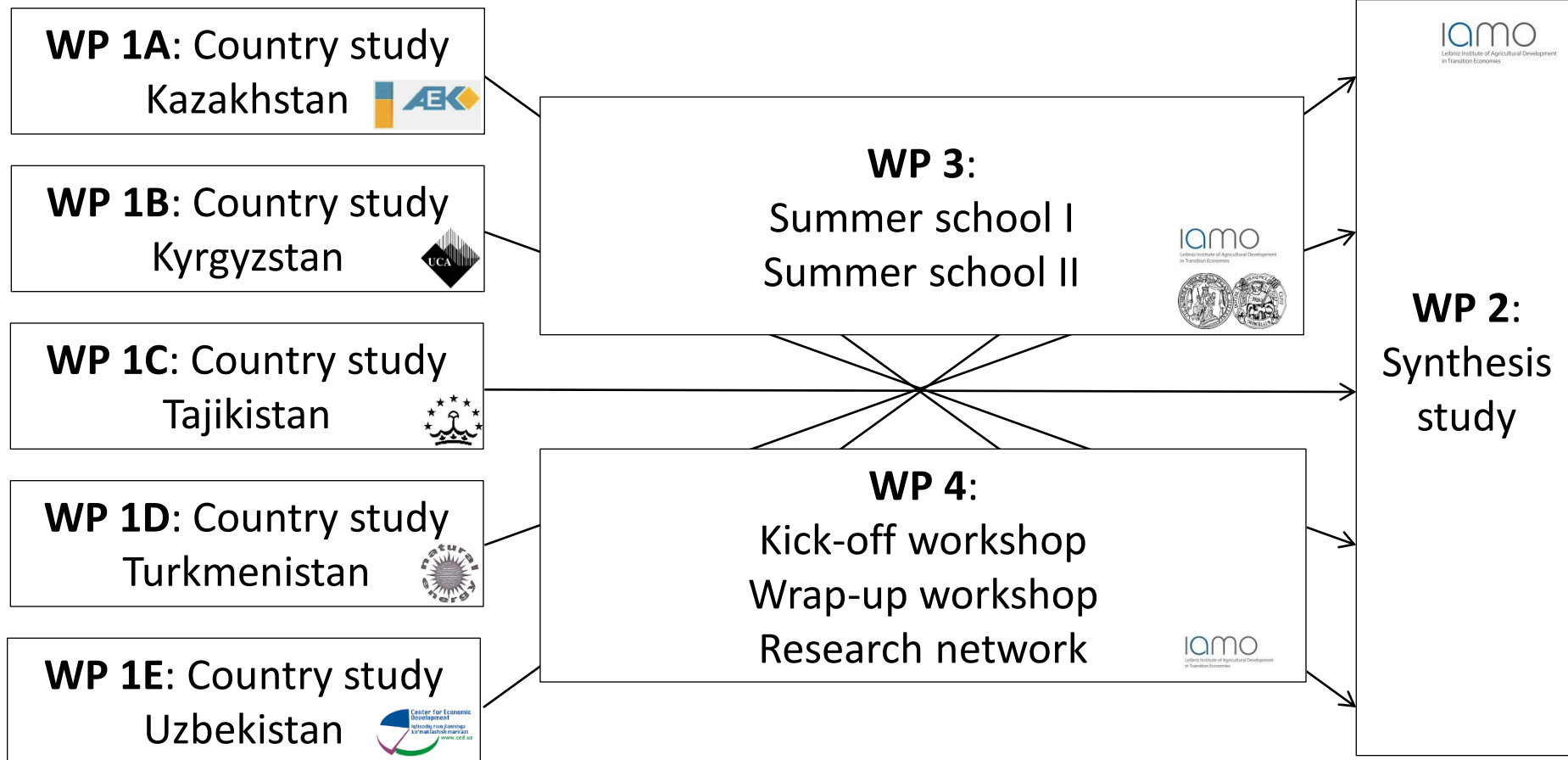
NGO Tebigy Kuwwat,
Turkmenistan



Center for Economic
Development (CED)
Uzbekistan



Interactions of workpackages



- Collate a consolidated, **cross national database** on agriculture & water, based on official statistics
 - 43 provinces x 22 years (crops and livestock at 3 farm categories:
Enterprises; Family farms; Households
- Assemble national **chronicles of 1991-2014 policy events**
- Identify & analyse **geographical hotspots** of the climate-water-agriculture nexus
- **Ex-post quantitative analysis** of regional panel data
- **Networking & learning** across national borders
- **Capacity building** to promote follow-up cooperation

April 2015	Kick-off workshop & Summer school I in Halle
June 2015	IAMO Forum 2015 Halle, Organized session jointly with IWMI on <i>Climate change, water resources & agri development in CA5</i>
August 2015	ICAE2015 Milan, Organized session jointly with IFPRI on <i>Food Security & Food Self-sufficiency in CA5</i>
September 2015	Summer school II in Almaty
October 2015	Delivery of policy chronicle (national teams)
April 2016	Wrap-up workshop in Central Asia (IAAE Inter-annual symposium)
May 2016	Delivery of country reports (national teams)
July 2016	Synthesis report



I. Farm Restructuring in Central Asia

- 25 years of agrarian reforms in Kyrgyzstan: Achievements and issues
Roman Mogilevskii, Kanat Tilekeyev, Nazgul Abdrazakova, Aida Bolotbekova, Saule Chalbasova, Shoola Dzhumaeva (University of Central Asia, Kyrgyzstan)
- Turkmenistan's experience in farm restructuring
Stanislav Aganov, Yolbars Kepbanov, Gurbanmyrat Ovezmuradov (NGO Natural Energy, Turkmenistan)

II. The Challenges of Crop Diversification

- Kazakhstan's approach to cotton policy
Dauren Oshakbayev (Applied Research Center Talap, Kazakhstan), Regina Taitukova (Freelance Researcher, France)
- Development of cotton production and agricultural diversification in Tajikistan
Khodjamahmad Umarov (Tajik National University, Tajikistan)
- Agricultural policy of wheat production and crop diversification in Uzbekistan
Yuliy Yusupov (Center for Economic Development, Uzbekistan), Zafar Berdinazarov (Center for Economic Research Uzbekistan)

Thank you for your attention !

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