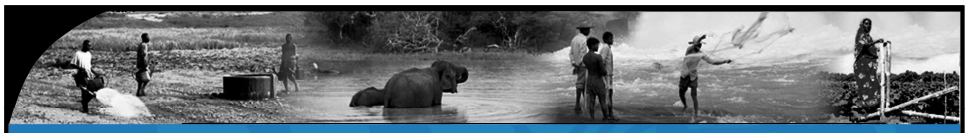

Development of Irrigation Extension for Improving Water Productivity at Plot level in the Ferghana Valley

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Presentation has been presented on May 20, 2015 at Academic workshop for young researchers "Improving the Efficiency of Common Pool Resources Management in Transition: Case Study of Irrigation Water and Pasture"

at Tashkent Institute of Irrigation and Melioration

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Outline

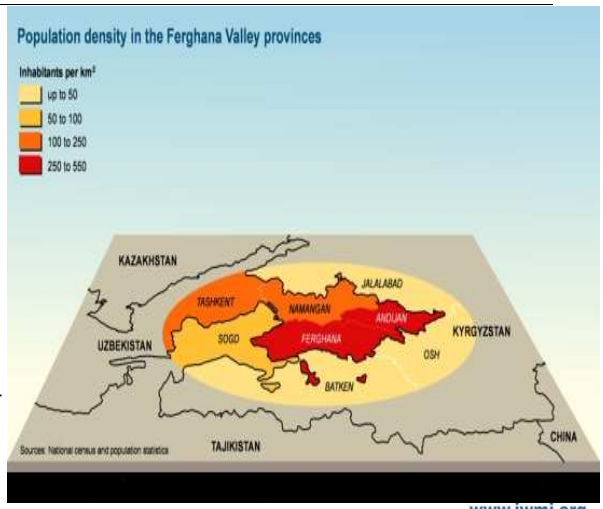
- *Introduction*
- *Main constraints to improve water productivity*
- *Goals and objectives*
- *Organizational structure*
- *Project interventions and results*
- *Conclusion*
- *Next steps*

Ferghana Valley

Area: 124,200 km2

Population: 11,342,000

Shared by: Kyrgyz republic (Osh, Jalabad, Batken), Tajikistan (Sogd) and Uzbekistan (Andijan, Ferghana and Namangan)



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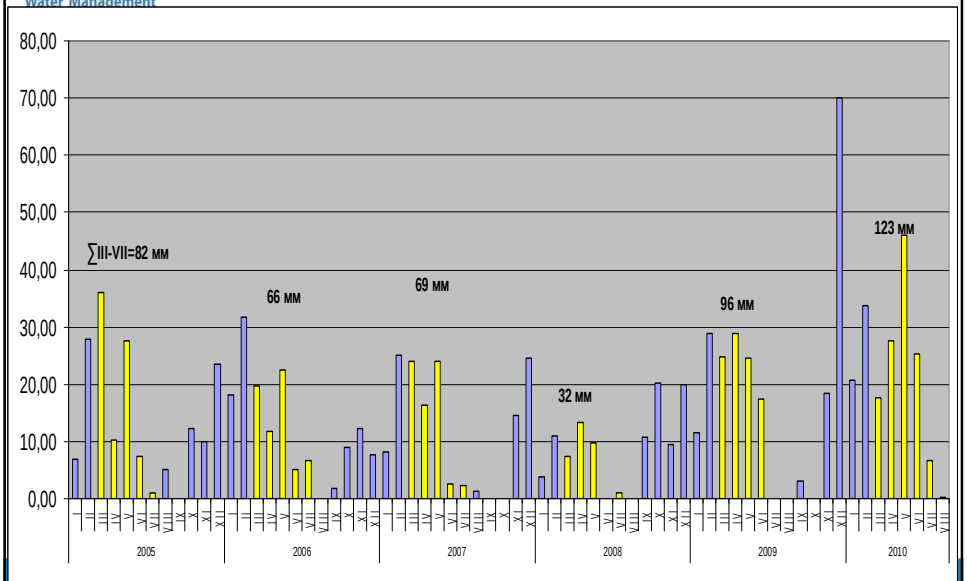
Rainfall during growing season in FV



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Why Water Productivity?

- Irrigated agriculture provides almost 90% of crop production and 88% of water used for irrigation
- It is forecasted by 2020 CA population reach to 70 mln.
- More kilograms of agricultural production per unit of water delivered

Constraints

1. **Lack of knowledge about actual crop water requirements.**
2. **Reliability of water supply from canals.**
3. **High field infiltration and runoff losses.**
4. **Low crop yields.**
5. **Inefficient distribution of water on farm level (no measurement)**
6. **Knowledge gap to facilitate communication between researchers and farmers**

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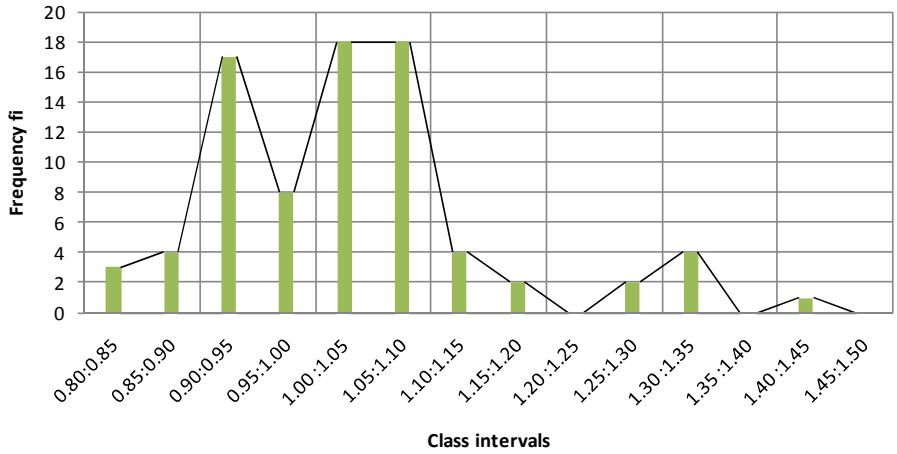
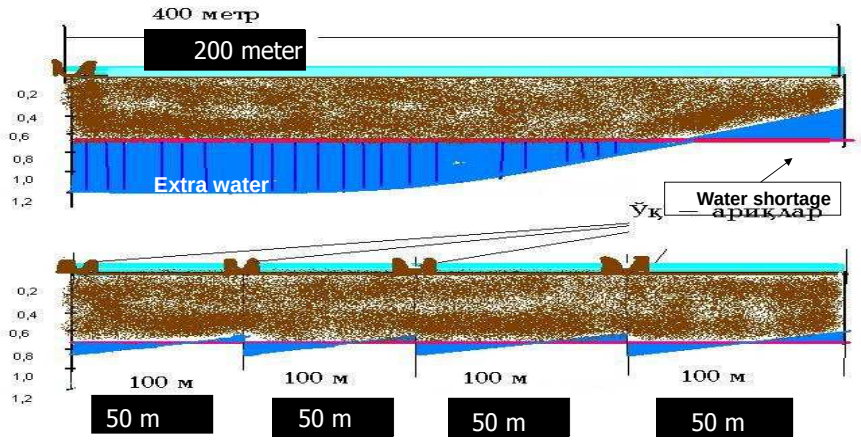
Inequity in Water distribution within a WUA



Long furrows

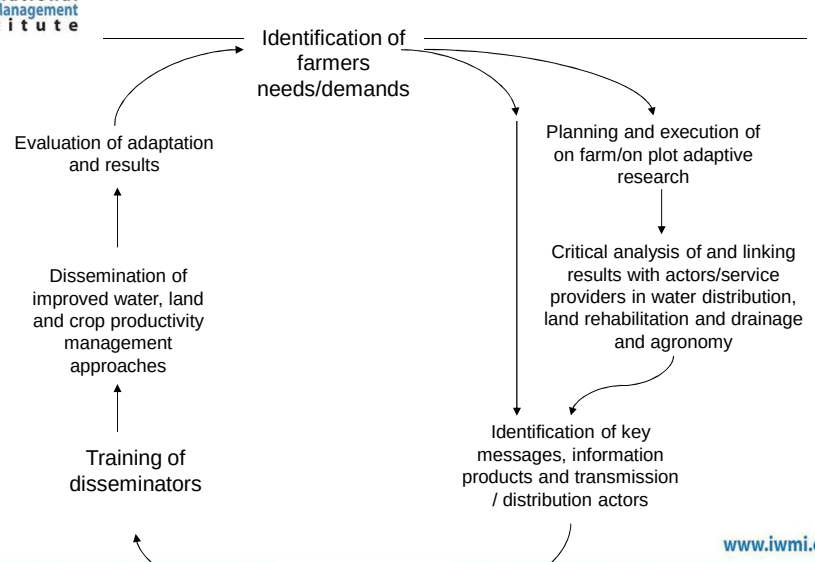


WPI-PL

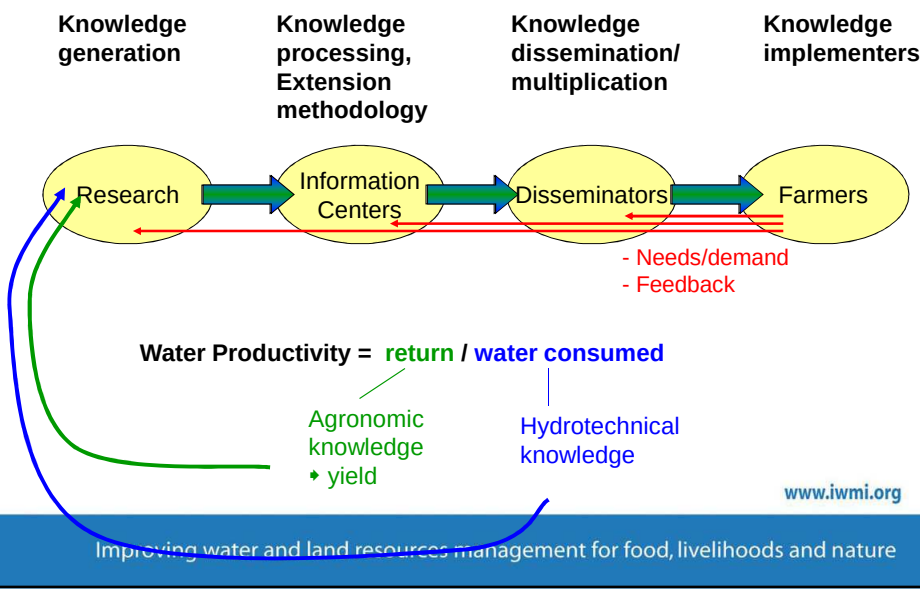
Goal: Enhancing WP, crop yields and yield stability at plot level through improved on-farm water management

Objective: To strengthen the capacity (in terms of knowledge, extension material and methods) of the different actors in the agricultural innovation system through conveying solid and adapted extension messages relating to WP to the farmers.

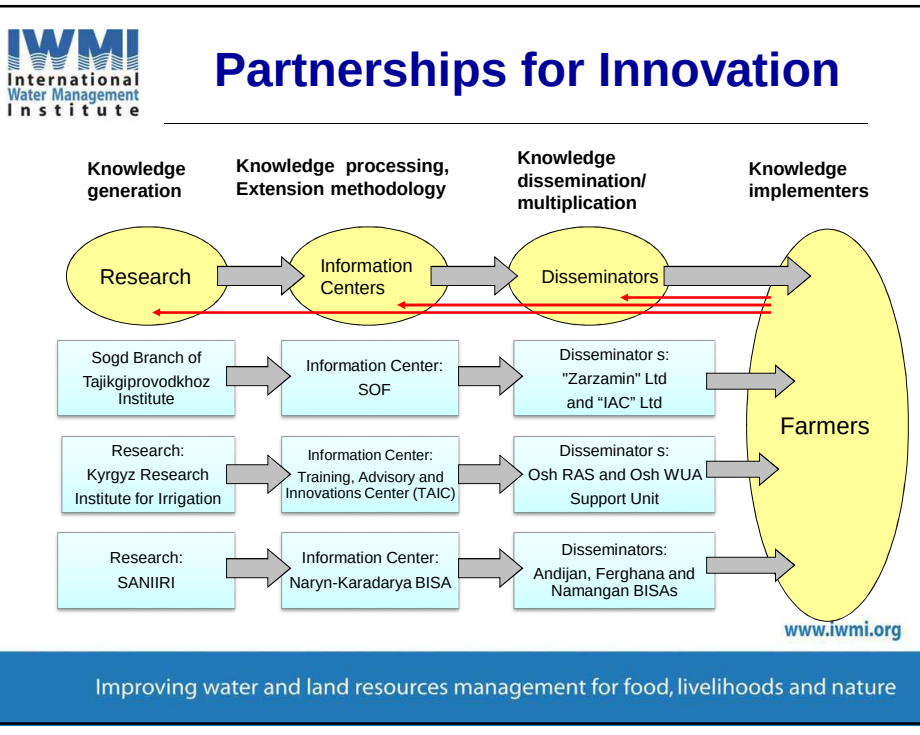
Innovation cycle

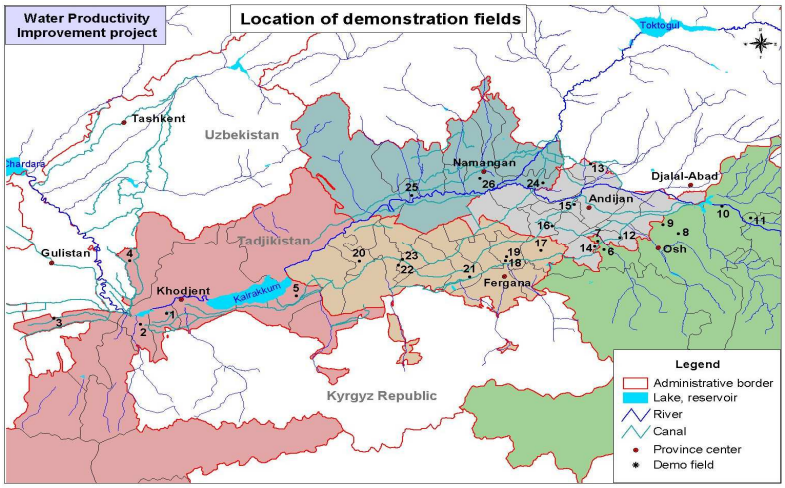


Actors in innovation cycle



Partnerships for Innovation





Map of demonstration fields within Ferghana Valley:

Tajikistan: 1 – Buri Kurmas, 2 – Shark, 3 – Navbahor, 4 – Amakjon, 5 – Khimoyatbonu; **Kyrgyzstan:** 6 – Tukhtarov, 7 – Tolobekov, 8 – Absattarov, 9 – Kyrgyzbaeva, 10 – Mamafaliev, 11 – Jusubaliev; **Uzbekistan:** 12 – Akiev, 13 – Abdurahmon ota, 14 – Mirzakhmad sahovati, 15 – Baht imkon rivozh, 16 – Dilshoda, 17 – Kahramon davlat, 18 – Ergash ota, 19 – Sobir ota, 20 – Botirjon, 21 – Ortikov, 22 – Kosimov, 23 – Nilu, 24 – Durdona Gayrat, 25 – Omonov, 26 – Nabijon ota

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Demo fields

Water accounting

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Use of water saving technologies

- **"*Progress – Shavkat*" – ochard - 5ha;**
- **"*Akbarali fayz nihol*lari" – ochard – 10ha;**
- **"*Dam guldastasi*" – ochard – 25ha;**

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Best practices

Gated pipe

Alternate furrow

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Best practices

Short furrow

Water discharge measurement

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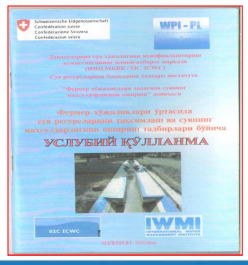
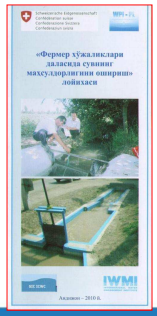
PUBLICATIONS

- Monthly bulletins
- Brochures
- Booklets
- Research articles in journals





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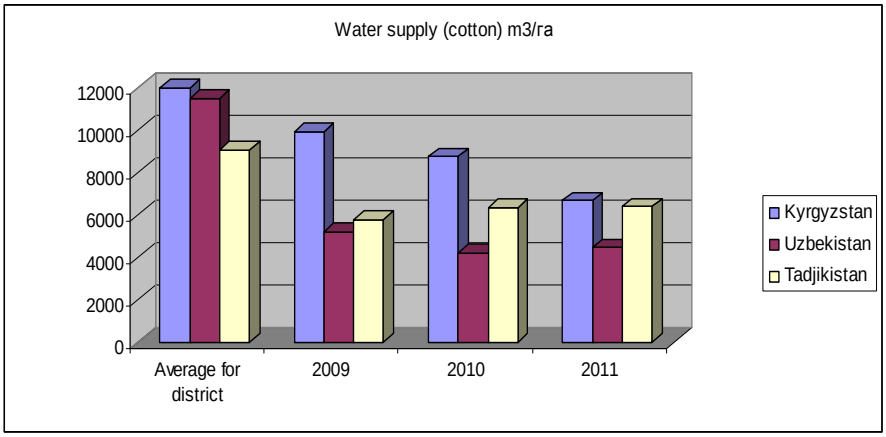
Average water supply to pilot fields of WPI-PL project (cotton)



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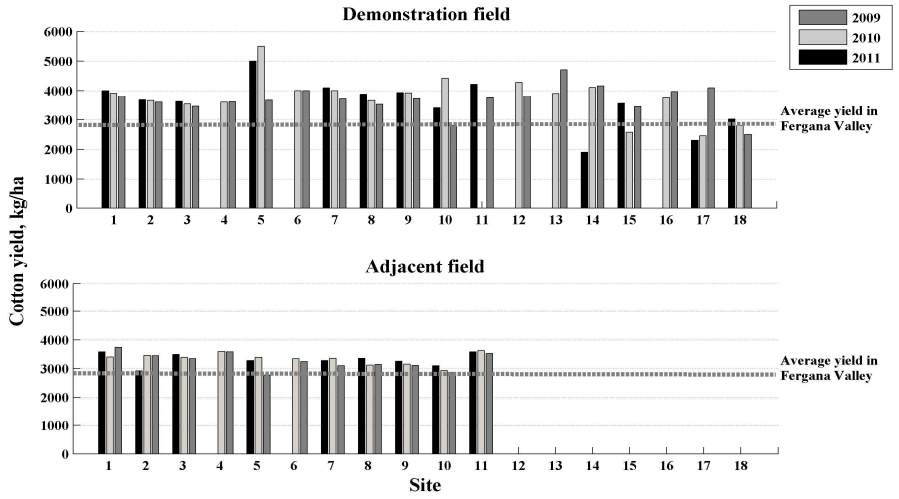
Cotton yield



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Conclusions

- The technologies, which promoted have proven extremely relevant for the participating farmers and for more efficient water productivity in the Ferghana Valley more generally
- WPI has been very successful in developing and applying the innovation cycle among participating institutional partners and farmers.
- Crop yields increased and water use on farm level decreased at the results of recommendations provided by Research Institutes, Information Centers and Disseminators
- During project period partners supported financially by donor, in future strategies for making the Innovation Cycle self-sustaining financially should be investigated

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Next steps

- Utilise project findings to contribute to policy change through, for example, policy briefs on the economic and environmental benefits of extending the use of water saving technologies
- Look into how to refine the innovation cycle with more explicit attention to changes currently underway in relation to the roles of WCAs, integration with efforts to respond to climate change
- Review of materials produced in WPI so as to (a) see if streamlining is needed, (b) identify and utilise “best practice” within the region regarding both content and approach, and (c) categorise materials according to different needs
- Conduct comprehensive and systematic research into the innovation process that has occurred, particularly comparative analysis across the three countries

Thank you

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