



Leibniz Institute of Agricultural Development
in Transition Economies

*Two decades of research on land and water reforms,
trade and regional integration in post-Soviet Central Asia*

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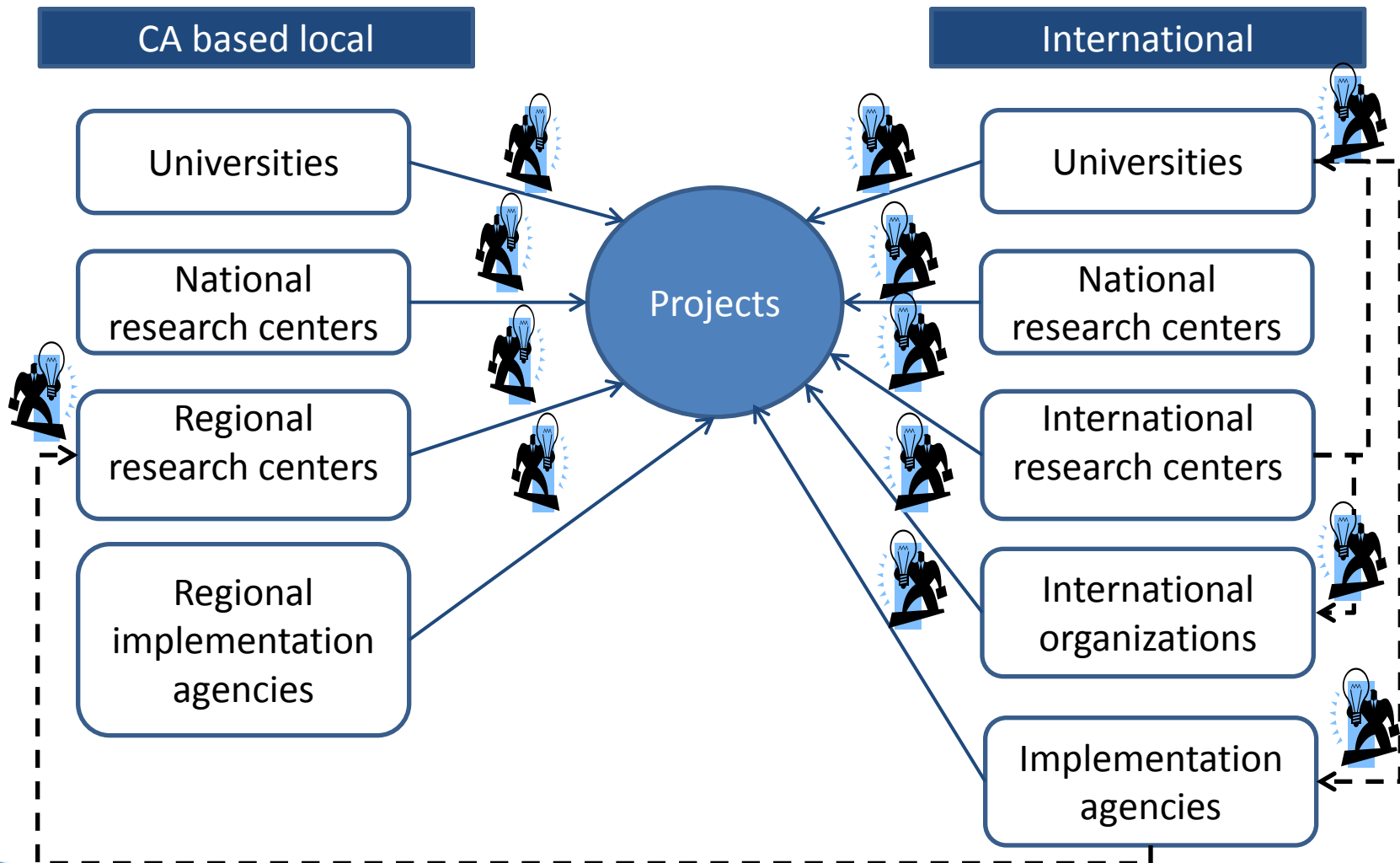
ReCCA conference - Regional Economic Cooperation in Central Asia: Agricultural Production and Trade

November 24-26, 2014, Halle (Saale), Germany

Research on research

- Social scientists are human, ... part of a social system and a culture. Research **interests**, the particular **approach** we choose, the course we follow in drawing inferences and organizing **finding**, are not determined by facts alone....
 - Our lack of curiosity about our own peculiar behavior as researchers should be surprising...our behavior can be easily ascertained from our writing.
 - Gunnar Myrdal, 1968

Research landscape in Central Asia



Questions related to

- Evolution of research topics
- Trends in the Central Asia research landscape since 1991:

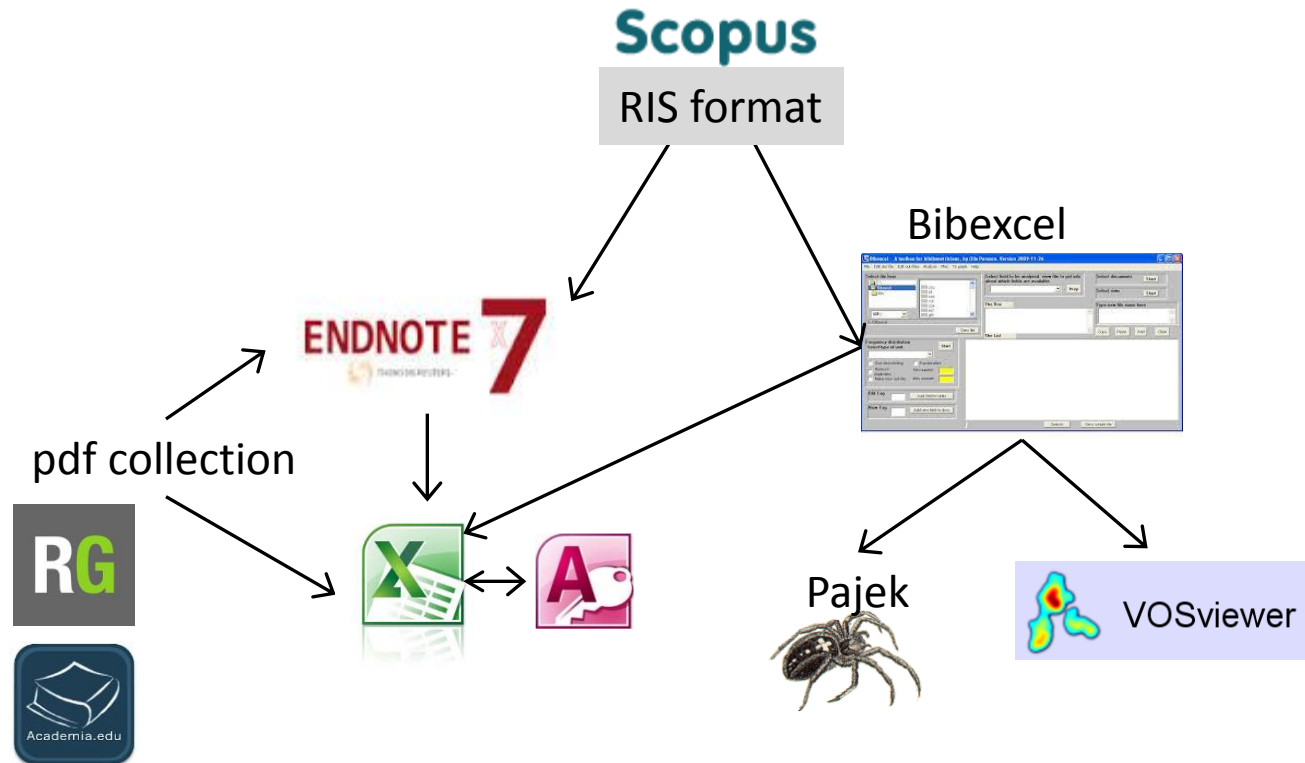


Bibliometrics

- Methods to quantitatively analyze academic literature
 - Citation analysis, co-authorship and content analysis
- to evaluate the **scientific production** within certain field and its impact, the impact of certain **researchers**, particular papers and **journals** or to look on the **knowledge topics** and **research network**



Data collection and processing



- Imported from Scopus: RIS format + all available information for each publication

Headache: Correction of surnames (umlaut, Swedish/Danish); reference lists, author addresses; remove publisher and journal names from abstracts in RIS files.

Keywords combinations used

- Aral Sea; Amudarya, Syrdarya
- Central Asia; Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan

Selected those with focus on:

- Land reforms
- Agriculture, rural development
- Water management
- Pasture management
- Migration, remittances
- Institutions
- Transition, transformation
- Trade, Regional cooperation, Regional integration

Dates of literature search:

Before July 2014:	206
10-12 July 2014:	125
6-10 August 2014:	81

Additional publications found
by checking references
and author profiles in Scopus

Some selection rules

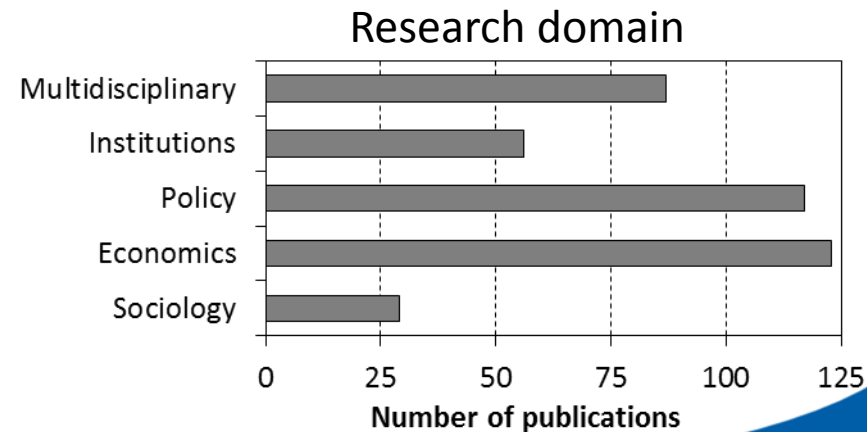
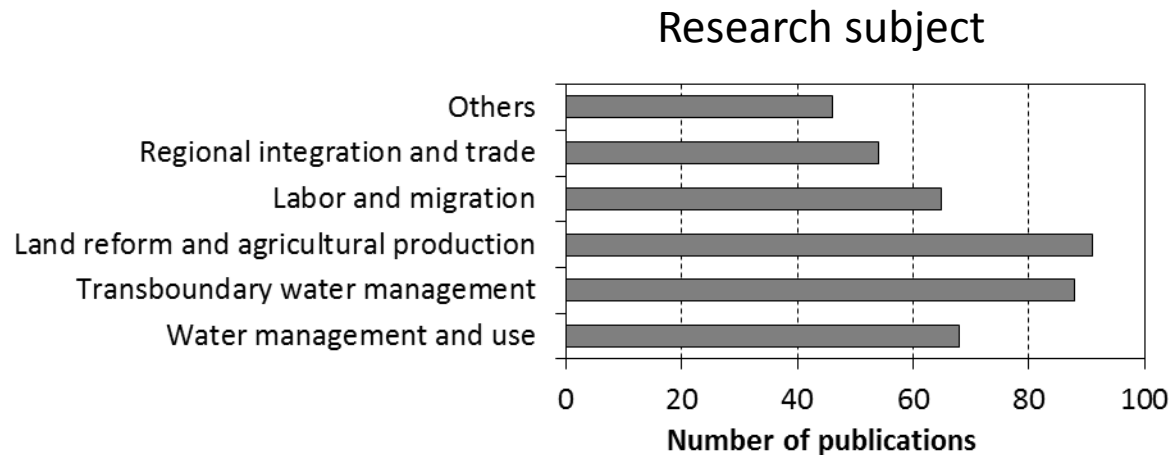
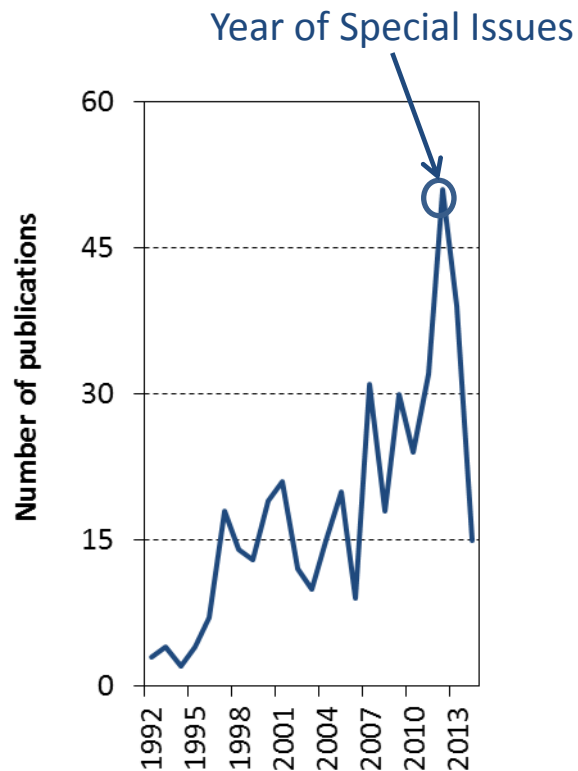
- Only peer-reviewed journal publications in English language
- Publications in journals without IF.
- Introduction to special issues, reviews, reports, keynote papers were not considered.
- English language publications in national journals are not considered

Data retrieved for each publication

1. Publication year
2. Journal name
3. Journal IF
4. Part of a special issue
5. Authors names
6. Number of authors
7. Authors affiliations (institute, country)
8. Lead author gender
9. Lead author's total publications
10. Lead author's total citations
11. Publication's number of citations
12. Study area (country)
13. Type of paper (descriptive; analytical)
14. Qualitative/quantitative
15. Subject of research
 - Water management and use
 - Transboundary water management
 - Land reform and agricultural production
 - Labor and migration
 - Regional integration and trade
 - Others
16. Research domain
 - Sociology
 - Economics
 - Political science
 - Institutions
 - Multidisciplinary
17. Collaboration
 - Non-CA alone (incl. Asia and FSU)
 - Collaboration
 - CA alone

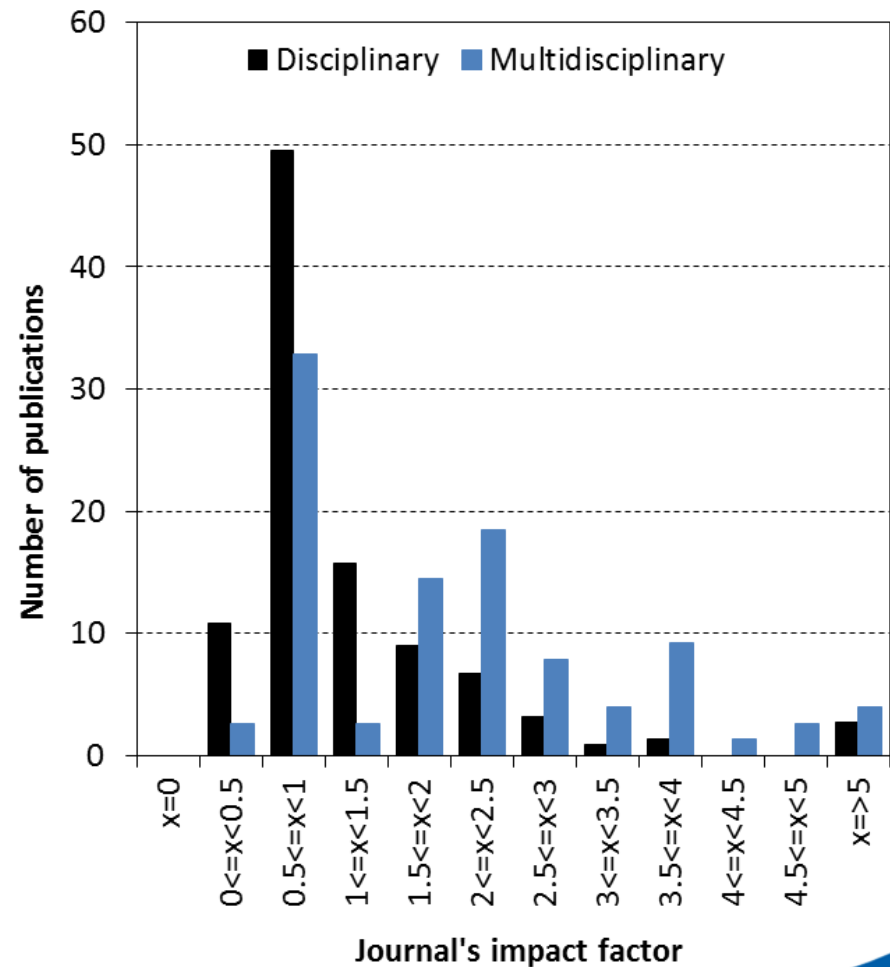
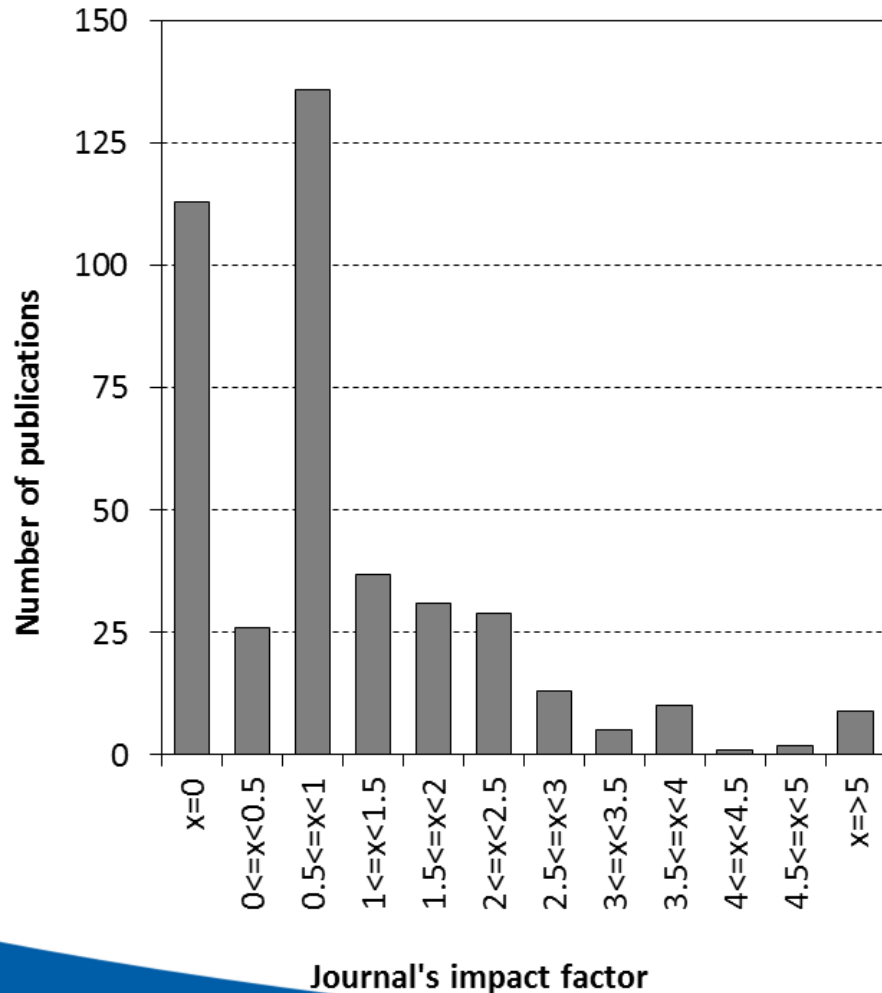
Number of articles

- Total number of articles found in Scopus (1992-2014) = 412



Impact factor of journals

- Articles in journals with no IF = 27%



The most productive journals

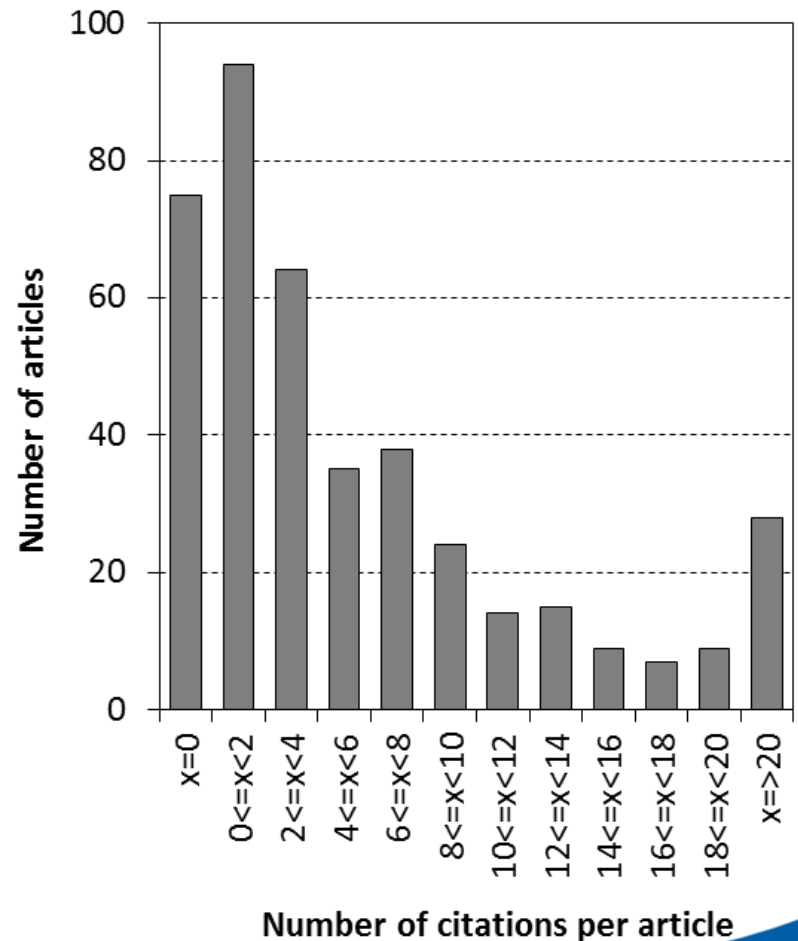
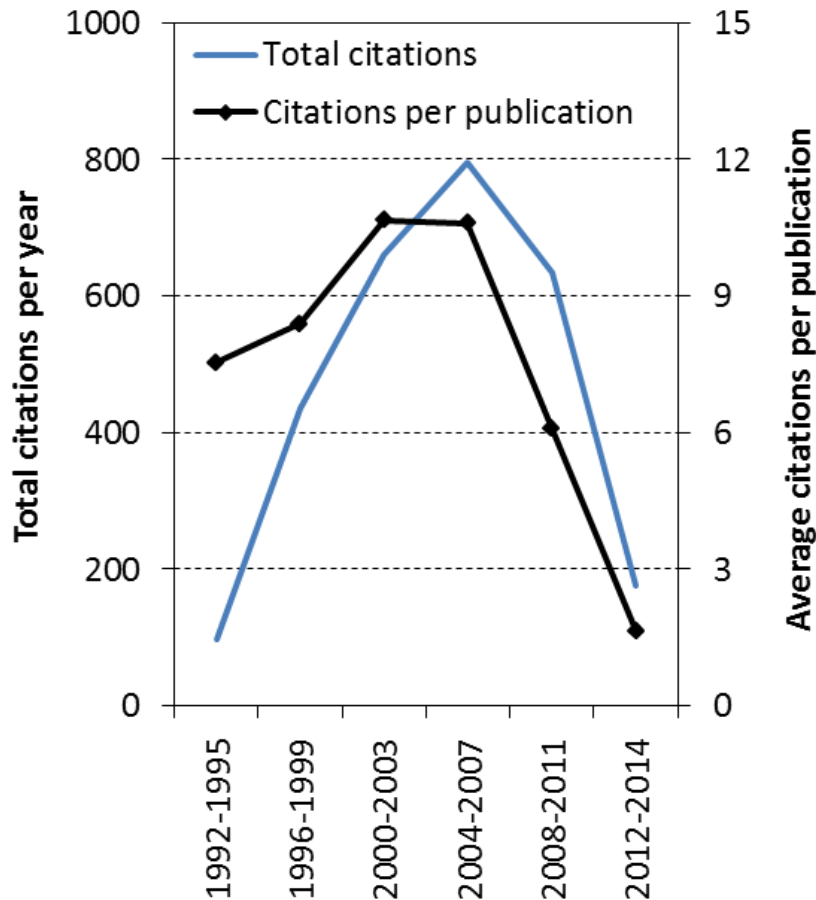
Journals = 145

	Journal	No. of publications	IF
1	Central Asian Survey	35	0
2	International Journal of Water Resources Development	15	0.895
3	Eurasian Geography and Economics	13	0.827
4	Water International	13	0.639
5	Europe - Asia Studies	13	0.706
6	Irrigation and Drainage	11	0.685
7	Mountain Research and Development	9	0.989
8	Post-Soviet Geography and Economics	9	0.827
9	Journal of Comparative Economics	8	1.176
	Food Policy	8	2.331
	Post-Communist Economies	8	0.393
10	Economic Systems	7	0.611

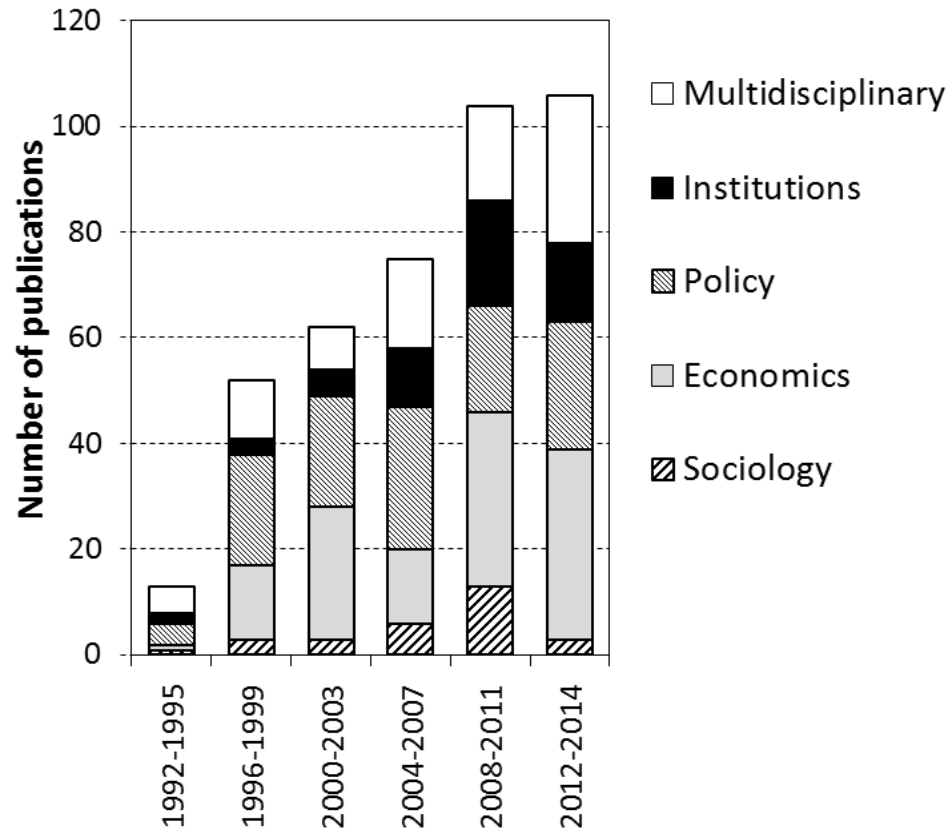
Top 10 journals cover 36% of publications

Global citations

- Citation since 1996 (from www.scopus.com)
- Zero citation: 18% of articles

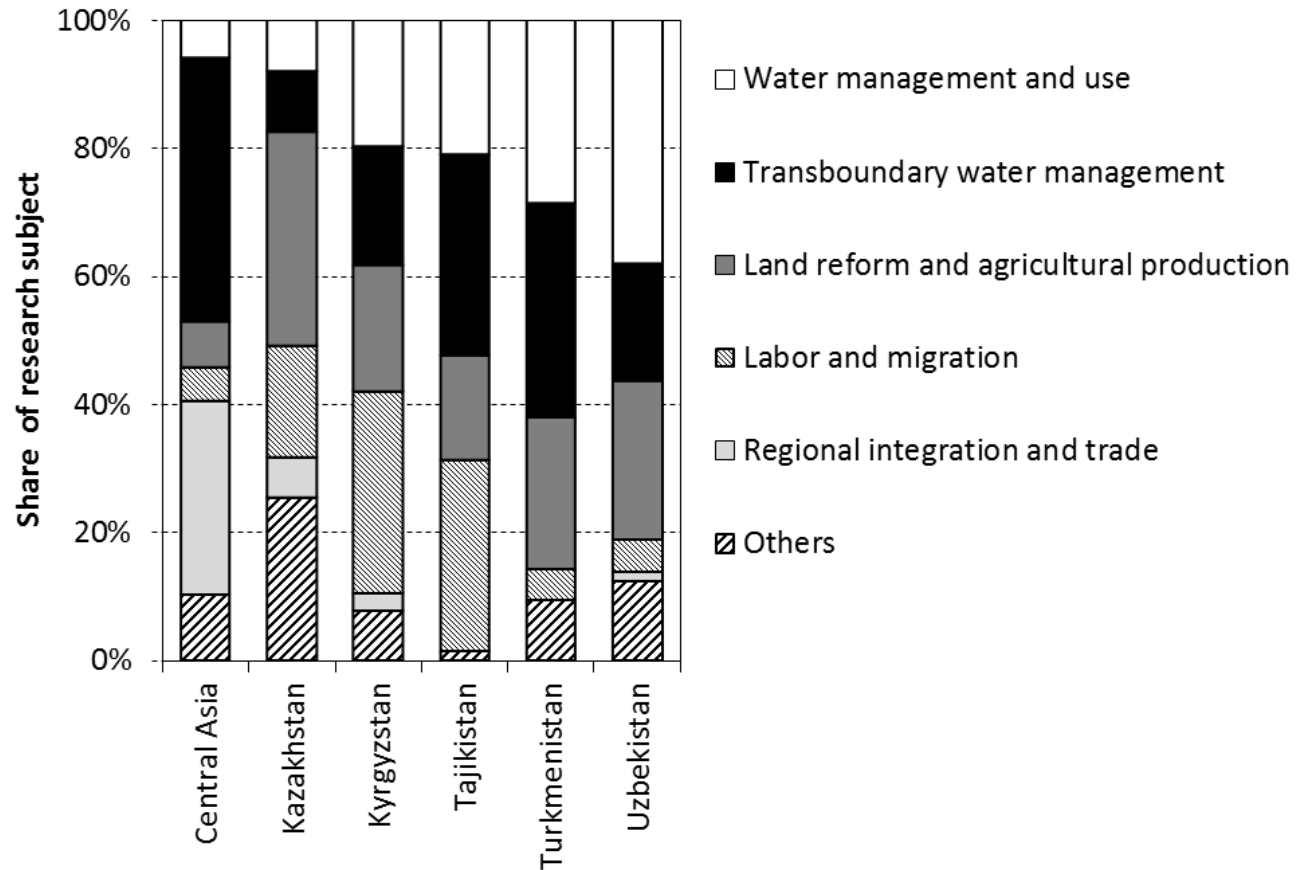
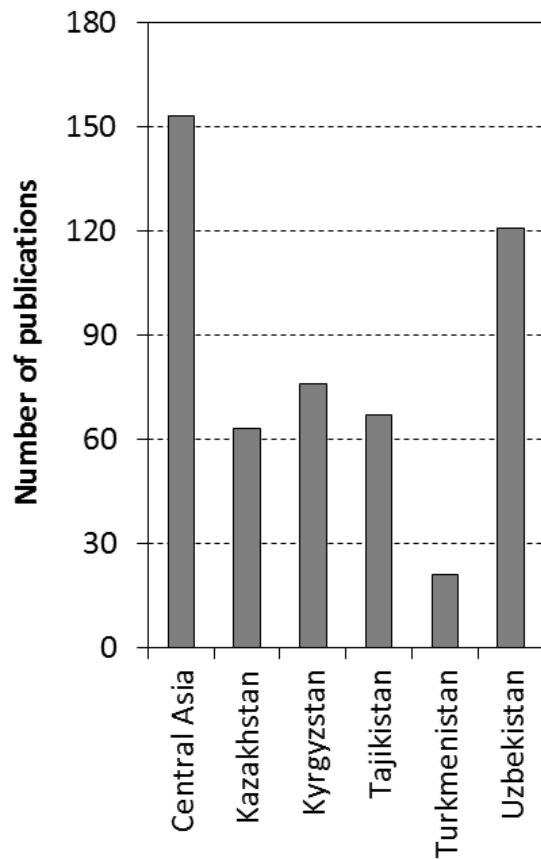


Research domain dynamics

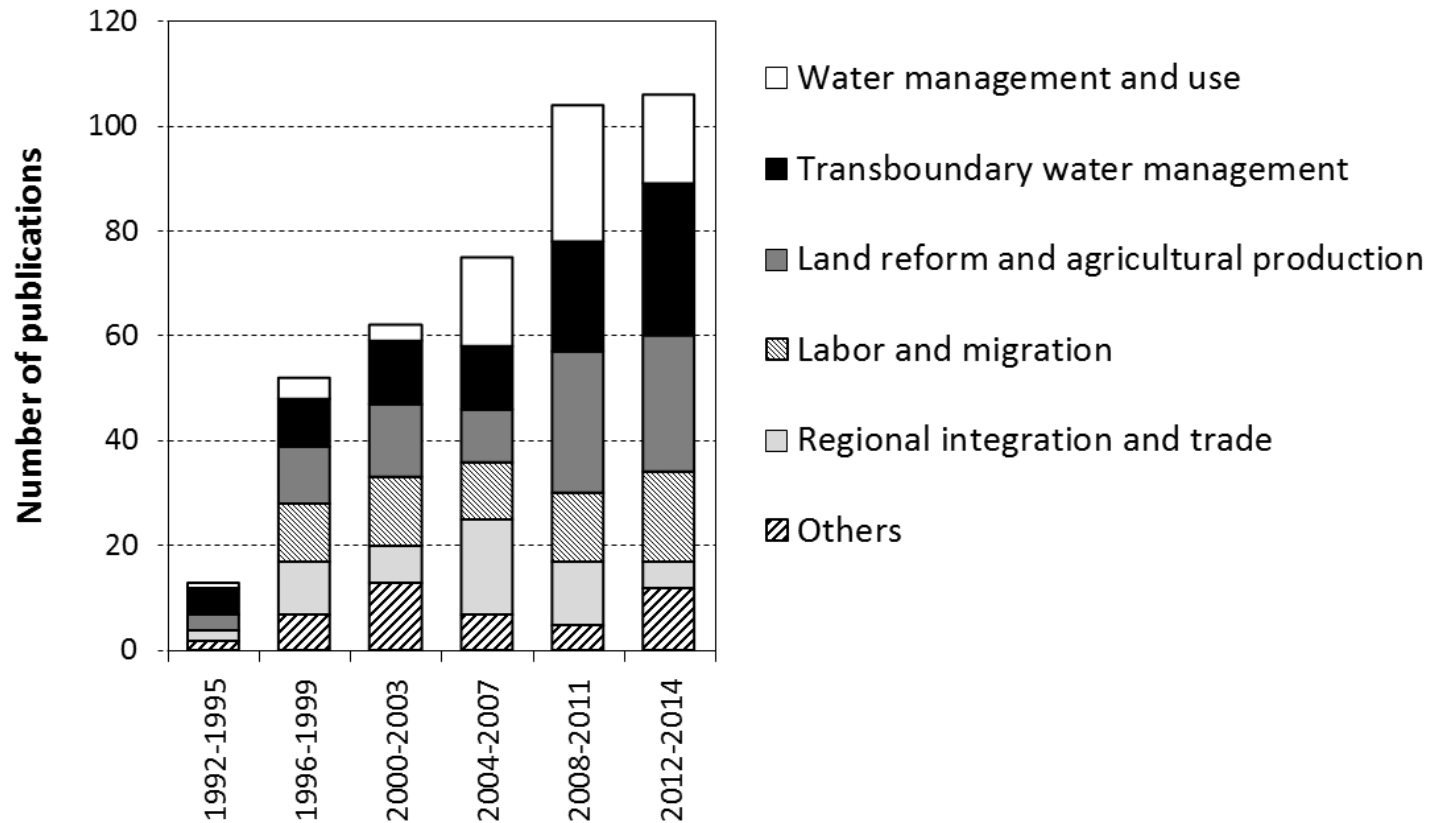


- Growing number of multidisciplinary and economics publications
- New rules for research projects
- Available datasets for Kyrgyzstan and Tajikistan

Geography of research subjects



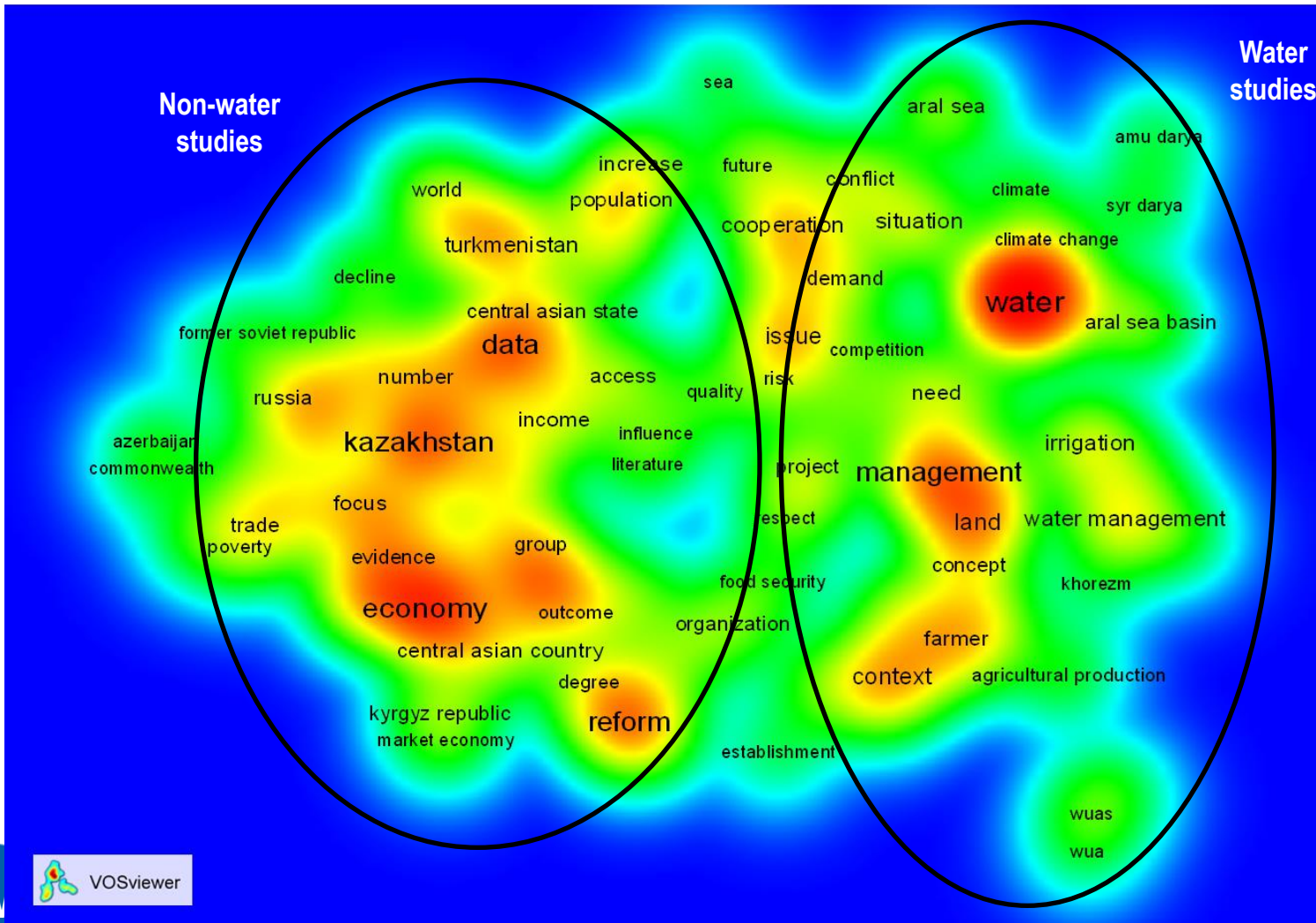
Research subject dynamics



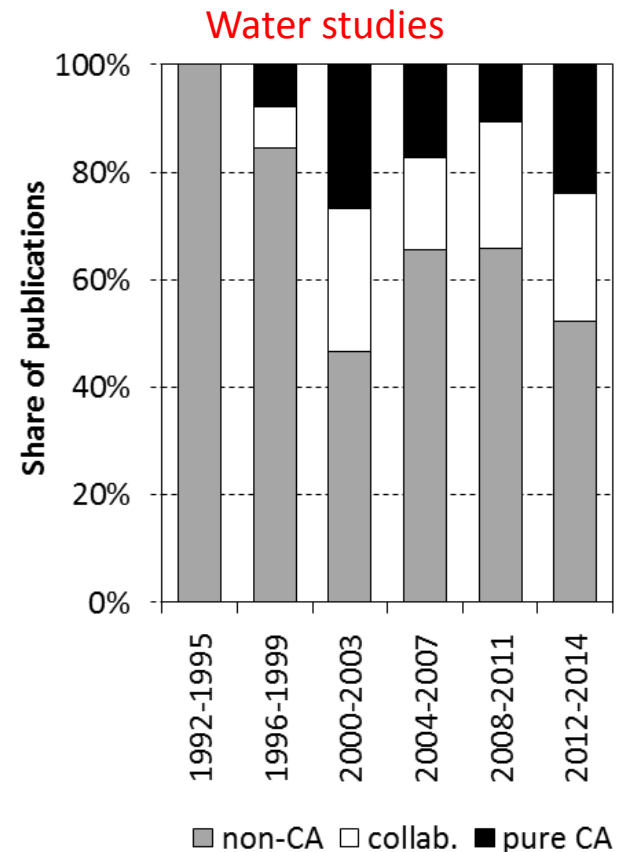
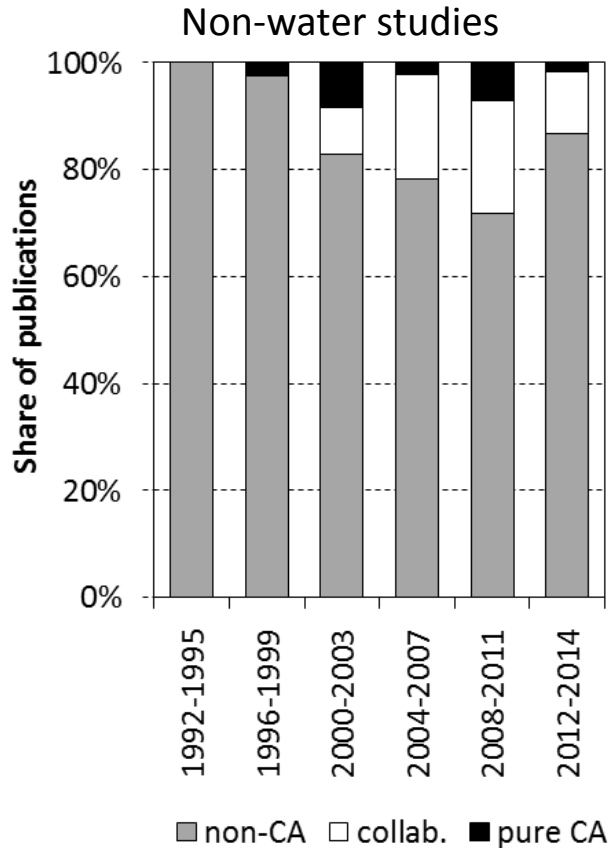
- Increasing share of publications on 'Transboundary Water' & 'Agricultural production'
- Contributions from IWMI and ZEF-project

Relations between research subjects

Abstract keyword density view

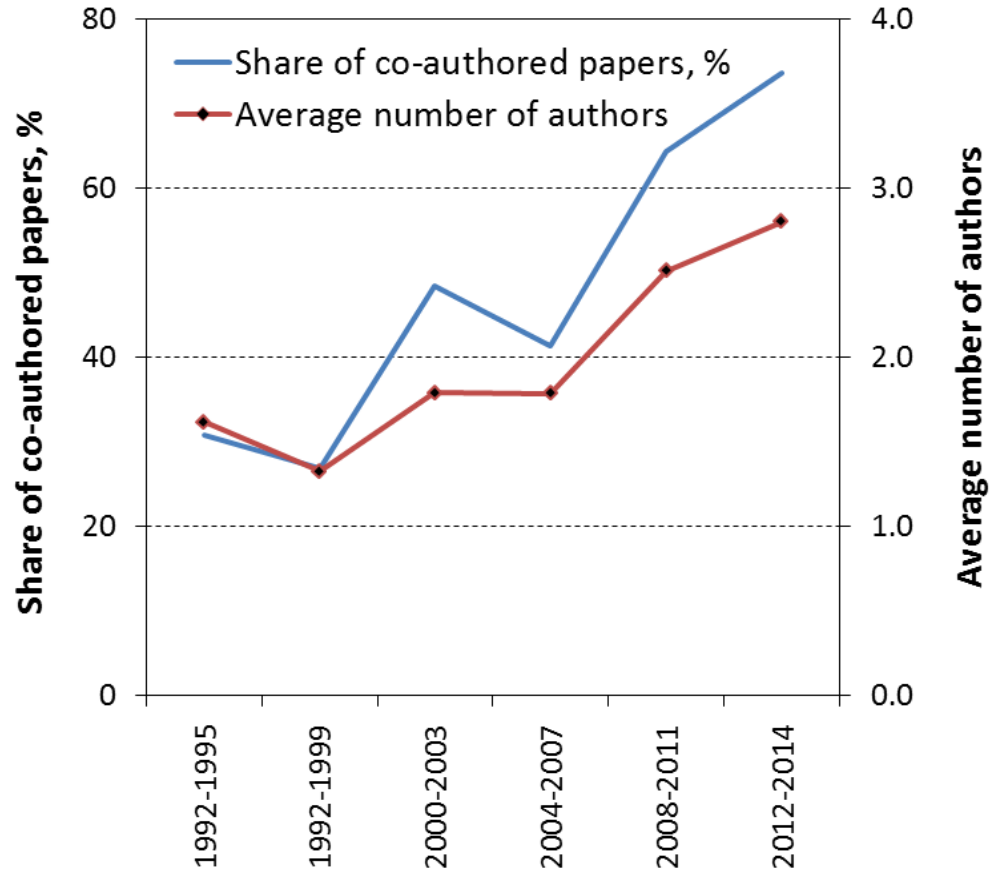


Cooperation in non-water & water studies



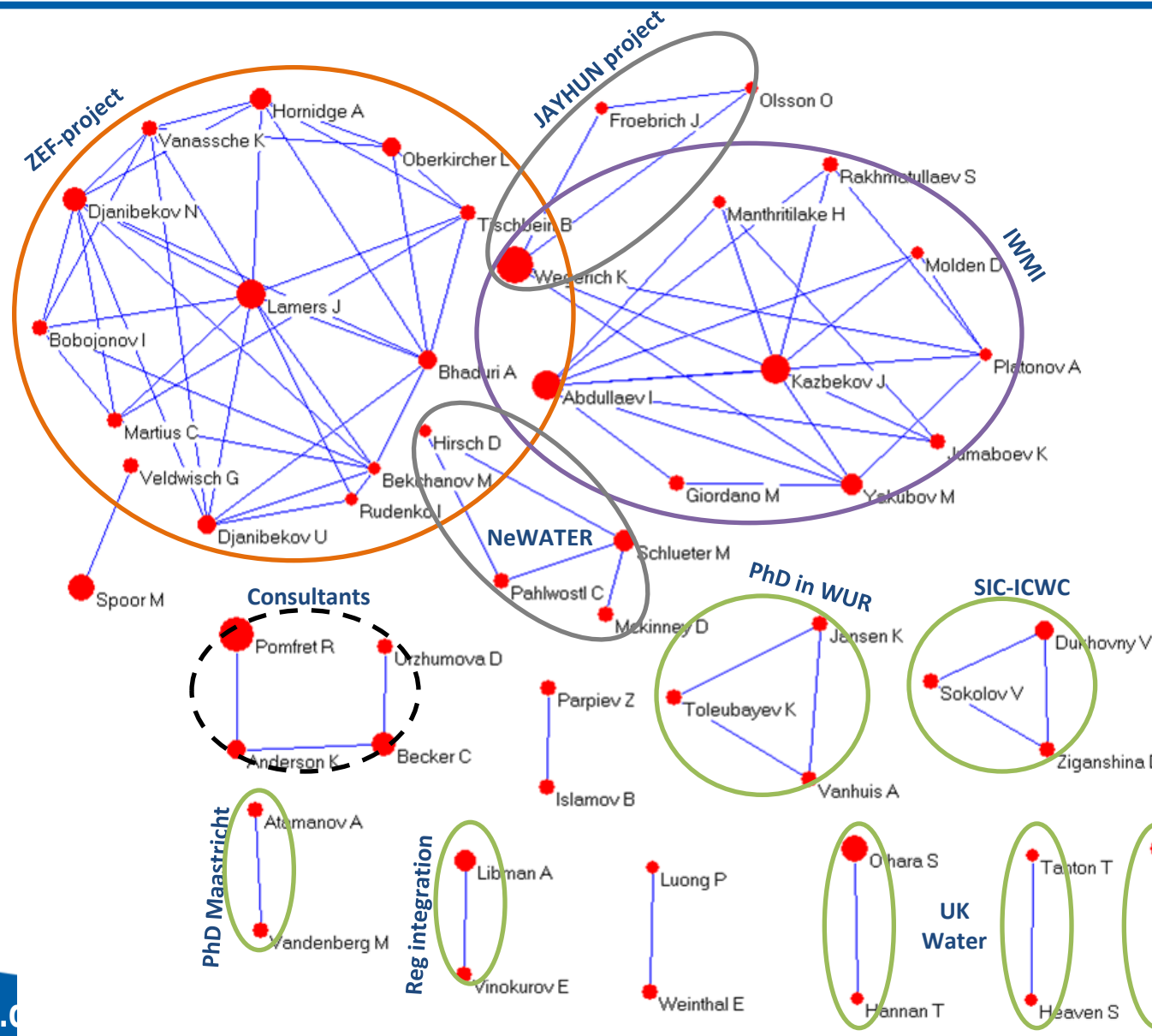
- 1992-1999: publications based on consultancy dominate
- Availability of local expertise on water studies
- Emerging competence of CA-based researchers in non-water fields (data availability)

Incidence and extent of co-authorship



- Increasing share of publications produced through research cooperation
- Increasing number of coauthors per paper

Co-authorship networks



Rule:
Authors have
> 2 publications

General conclusions

- CA region has experienced a major and still continuing increase in the number of publications
- Output of multidisciplinary and economic studies has been increasing (new project rules, data access for some countries)
- Two clusters of research focus are emerging: (1) Transboundary water, (2) agricultural production,
- However, these research clusters are narrow geographically (KG, TJ and UZ)
- Publications are mainly on water-related studies.
- Water-related research dominates in CA

General conclusions

- Two main co-authorship clusters are driven by heavy-based research components (ZEF-Uzbekistan and IWMI-CA), but of opposite tasks (Research vs Implementation).
- Available experts on water issues and the location of IWMI office in CA and SIC-ICWC benefited the development of water studies, collaboration, international networks and regional publications.
- Collaboration was contributed by:
 - (1) authors' mobility across institutes/countries,
 - (2) individual occurrences (PhD)

Further analysis

- What are the drivers of research cooperation in Central Asia?
- How have the research subjects changed over time? Are the research subjects interdependent on each other?
- What are the most influential (most cited) publications?

What are the drivers of research cooperation / publications on Central Asia?

What explains the research collaboration (“Number of authors”)?

- **Information about lead author:**

- Lead author’s gender
- Number of citations (since 1996)
- Lead author’s publications
- Total citations of author’s all publications (since 1996)

Lead author
survey

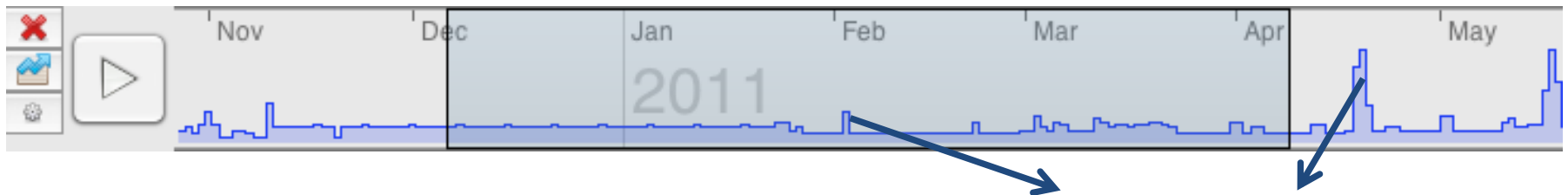
- **Information about research:**

- Type of article
- Subject of research
- Research domain
- Study area
- Part of special issue
- Qualitative or quantitative methods
- Part of PhD study
- Research funding source, country
- Academic title when published
- Special issue

- **Journal’s IF**

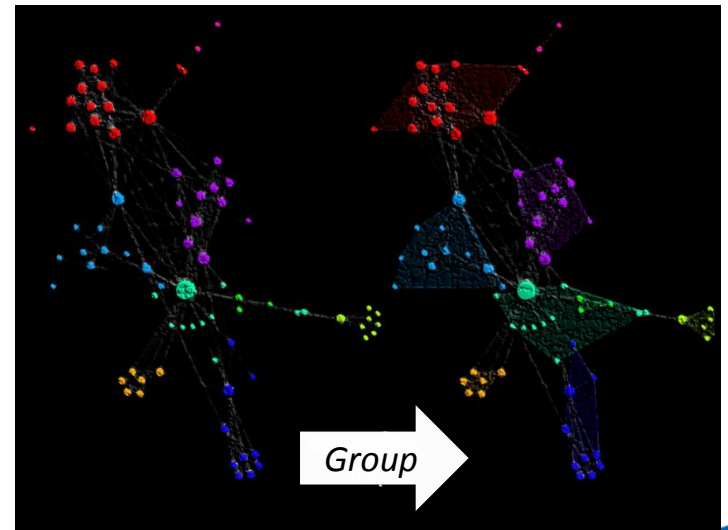
Evolution of the research subjects on Central Asia

- Dynamic co-authorship and research domain networks
- Analysis & visualization using Gephi software
<https://gephi.github.io/>

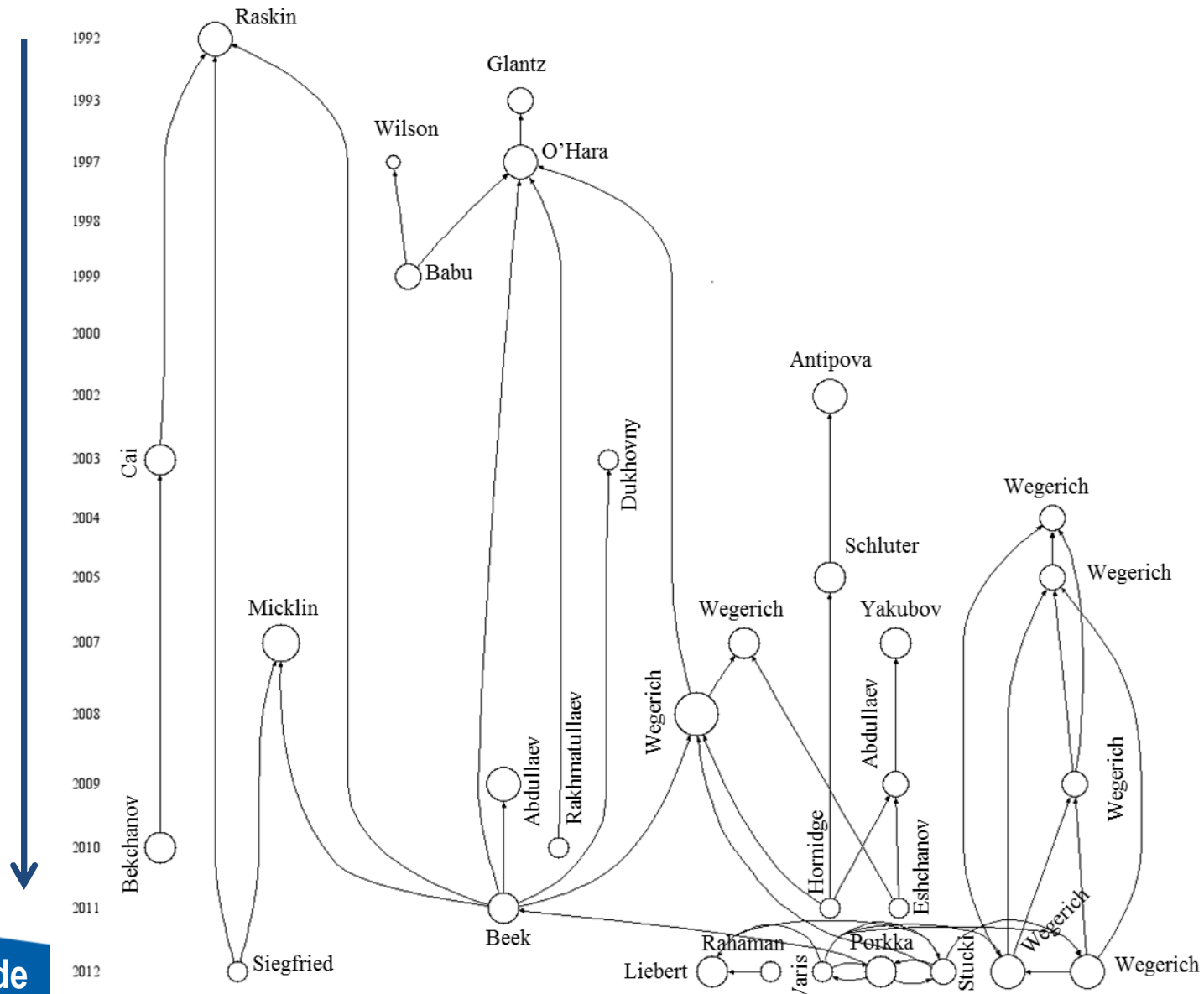


Publication info:

- Year
- Subject, domain
- Authors names
- Type of institute, country



What are the most influential publications on Central Asia?



THANK YOU

