

Policy areas identified by the IBKF and UIBN CC capacity building needs and opportunities

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27 Jan 2021



Indus Basin Knowledge Forum (IBKF)

Goal: To assess the nature of existing knowledge related to development of the Indus Basin and the challenges faced, to explore new knowledge frontiers, and to build greater coordination through further co-development and sharing of knowledge.

4th IBKF 2019: Pathways to impactful research

1. Policy-driven impactful research
2. Engagement and inclusiveness
3. Packaging of research



Four key messages:

1. Policy decisions on the basin are poorly informed as a result of limited institutional and technical capacities.
2. Research being conducted within the basin are relevant, however, there is a poor linkage between scientists and academia with the policymakers means that the impact being generated by research have minimal influence in the policy making process.
3. Scientists need to engage frequently and flexibly with the policy process may play a key role in getting a better understanding of the relevant policy needs.
4. Gender and social inclusion are shared challenges in development priority areas. For making research meaningful and impactful, inclusive approaches in planning and implementation need to be adopted.

ICIMOD

PROCEEDINGS

Fourth indus basin knowledge forum: Pathways to impactful research

Applying the science-policy-communication interlinkage to cooperation in the indus basin



Priority research topics identified by the IBKF

1. Ground water resources assessment
2. Water induced disasters (flood)
3. Water induced disasters (drought)
4. Cryosphere studies
5. Impact of Climate Change of cryosphere and weather patterns of HKH
6. Groundwater extraction pricing and framework for regulation
7. Environmental flows for Indus river and its territories
8. Water Spatio-economic model for decision making
9. Regional Ground/ Subsurface Water (Legal, Contamination- Water quality)
10. Climate (Resilient Agriculture, Disaster, ecosystem services, Glaciers, Pastoral communities)
11. Society (Gender, Intersectoral, health)
12. Urbanization, tourism, and trade



12 Priority Areas Identified by the IBKF

Priority research topics	Policy outcomes	Communication strategy to achieve the outcomes	Engagement and inclusiveness approach
Ground water resources assessment	Revising the existing policy for commercial usage ground water	Relating people, water users and policy makers	Land right and access of water
Water induced disasters (flood)	Preparing flood prone area and flood inundation maps and early warning system	Supporting research teams and involving electronic and social media	Experts, ANDMA, local communities and civil societies
Water induced disasters (drought)	Drought (hydrological, meteorological and agricultural drought) risk and analysis assessments	Water user association, river basin and sub river basin authorities	SCoWLE, ANDMA, experts, local communities and civil societies
Cryosphere studies	Ground based monitoring	Researches and governmental organizations	SCoWLE, NWARA and academia
Impact of Climate Change of cryosphere and weather patterns of HKH	Integrated water resource management	Converging the policy in simplified language for public	Social inclusiveness of all segments of target society including gender, youth, and vulnerable (built up in budget)
Groundwater extraction pricing and framework for regulation	Legislative and regulatory framework	Sensitization of media and its inclusion on policy making	Involve all stakeholders in planning and implementation
Water Spatio-economic model for decision making	Guidelines to the Planning and Development department	Social media outreach	



Priority research topics	Policy outcomes	Communication Strategy	Engagement and inclusiveness
Environmental flows for Indus river and its territories	Framework for environmental flows	Including environmental education in curriculum	
Regional Ground/ Subsurface Water (Legal, Contamination- Water quality)	Socio-Eco-hydrology outcomes, Water budge	Regional Water Vision White Paper Position paper from the country perspective, focused policy briefs, workshops for journalists, story grants for in-depth reports	Workshop and local consultations with regional policy makers, Gram Sabha, water panchayats, water user associations, community perspective from the beginning
Climate Resilient Agriculture, Disaster, ecosystem services, Glaciers, Pastoral communities	Better livelihood	Nexus modeling result in the form of policy briefs; workshops for local journalists	Linking to existing plans in media, citizen science approaches
Society (Gender, Intersectoral, health)	Social Inclusion	Citizen science and Youtube channels Newspaper articles – all to be factchecked by professionals	District Health Centres, Aaganwadis, Asha Workers, Women’s groups are represented in water user groups , male champion
Urbanization , tourism and trade	Sustainable livability	Social media/community radios, all to be fact-checked by professionals	CSR publicity, livelihoods related to tourism, urban local bodies



Key factors in securing better regional cooperation

The RSC members discussed some immediate actions to contribute to better cooperation in the UIBN; they lay emphasis on joint research activities, training and professional support, and stronger communication.

- Collaborative and multidisciplinary research focused on thematic topics
- Development of climate profile of the IB region using standard methods
- Strong communication between TWGs
- Support to young scientists and young career professionals
- Documentation and joint knowledge products
- Clear timeline and strategy for working group activities

Capacity Building needs and opportunities

COUNTRY	SEEKING FOR	ABLE TO PROVIDE
Afghanistan	<ul style="list-style-type: none">• Science-based trainings/university scholarships	<ul style="list-style-type: none">• Government and institutional partnerships
China	<ul style="list-style-type: none">• Government partnerships	<ul style="list-style-type: none">• Training for young scientists
India	<ul style="list-style-type: none">• Government partnerships/ short-term University courses	<ul style="list-style-type: none">• Climate data of the Afghanistan basin• Expertise in using technical tools• Research and lab fellowships
Pakistan	<ul style="list-style-type: none">• Human and technical capacity in the areas of high-altitude hydrology and cryosphere related science• Government partnerships	<ul style="list-style-type: none">• Joint research opportunities• Cryosphere monitoring and research training• Hosting university, research students

Afghanistan-India opportunities: Long term

	What (activity/strategy) - List provided by Afghanistan	How	Responsible organization/ person
1	Assessment of potential impact of climate change impact on water security, food security	JNU	APD
2	Future climate change projection on Kabul river basin	JNU	APD
3	Understanding of current and future hydrology risk	IIT Roorkee, Phd	Prof Arya
		Delhi University	Dr Suraj Mal
4	Water supply and demand assessment	IIT Roorkee, Phd	Prof Arya
5	Water quality assessment in Kabul river basin	IIT Roorkee, Phd	Prof Arya
6	Water and climate change impact assessment in Kabul river basin	IIT Roorkee, Phd	Prof Arya
		JNU, PhD	APD
7	Flood and drought	JNU, PhD	APD
8	Gender and water	JNU	
9	Groundwater assessment and management	NGRI, Hyderabad	Dr A K PaNDEY
10	Groundwater modeling and mapping	NGRI, HYDERABAD, PhD	Dr A K PaNDEY
11	Swirling flows for air and water filtration	NGRI, HYDERABAD, PhD	
12	River restoration and management	NGRI, HYDERABAD, PhD	
13	Governance of large hydraulic infrastructures	NGRI, HYDERABAD, PhD	
14	Water, environment and spatial planning	NGRI, HYDERABAD, PhD	
15	Well Hydraulic Analysis and Evaluation of Pumping Test Data	NGRI, HYDERABAD, PhD	
16	GW recharge and discharge mechanism	NGRI, HYDERABAD, PhD	
17	Groundwater quality assessment and interpretation	NGRI, HYDERABAD, PhD	
18	Integrated modelling of water systems	NGRI, HYDERABAD, PhD	

Afghanistan-India opportunities: Short term

	What (activity/strategy) - List provided by Afghanistan	How	Responsible organization/ person
1	Glacier and glacier lake	JNU and IIT Roorkee, Phd	APD
2	Hydrology (Modeling)	IIT Roorkee, (JNU) Phd	
3	Webinar (HUC+UIBN)		Prof Arya
4	Climate		Prof Dimri
5	Disaster		Prof Surajmal
6	Geomorphology		Prof Pandey

	Funding opportunities:
1	Master of Engineering on hydrology- Fellowship is provided for Afghan students-Ministry of External Affairs ITEC - IIT Roorkee - link to be provided (brochure) - contact prof Arya
2	Many followship with funding available ICCR, ITEC, for masters and PhD and bachelor -
3	Bilateral arrangement and treaty for exchange between India and Afghanistan
4	WMO - contact permanent representatives of Afghanistan, UNESCO, WB, ADB fellow ship
5	HUC and ICIMOD grants
6	Capsule short courses - Prof Dimri and Prof Arya
7	ICSSR (https://icssr.org/); ICCR (https://www.iccr.gov.in/)
8	MSc and PhD programs offered by Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST-K) 1) Assessment of potential impact of climate change impact on water security and food security 2) Water supply and demand assessment 3) Water and climate change impact assessment at river basin scale





Thank you

**Let's protect
the pulse.**