

# A framework to restore environmental flows in the Ganga

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RESEARCH  
PROGRAM ON  
Water, Land and  
Ecosystems

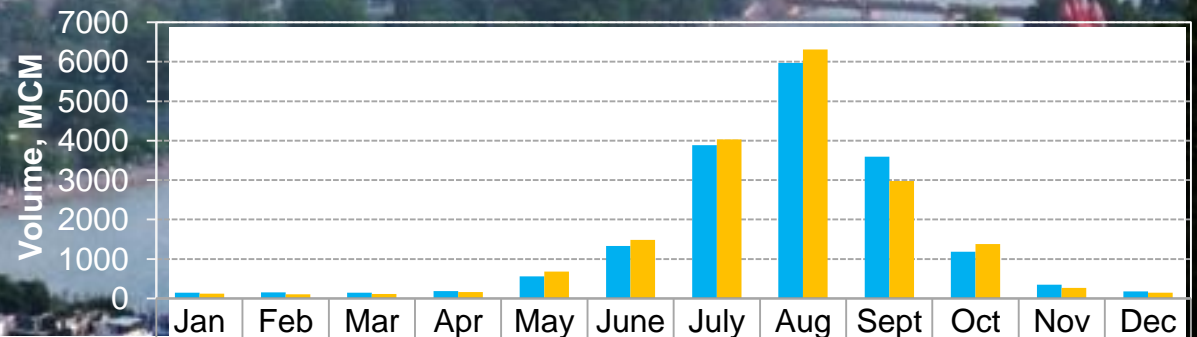


# Bhimgoda Barrage

UGC: (12 districts)

CCA: 1.01 Million hectare

*E-Flows gap: 120 -380 MCM  
(May to August)*



■ BAU flows (Present day flows at Balawali), MCM

■ E-Flows d/s of Bhimgoda Barrage at Balawali, MCM

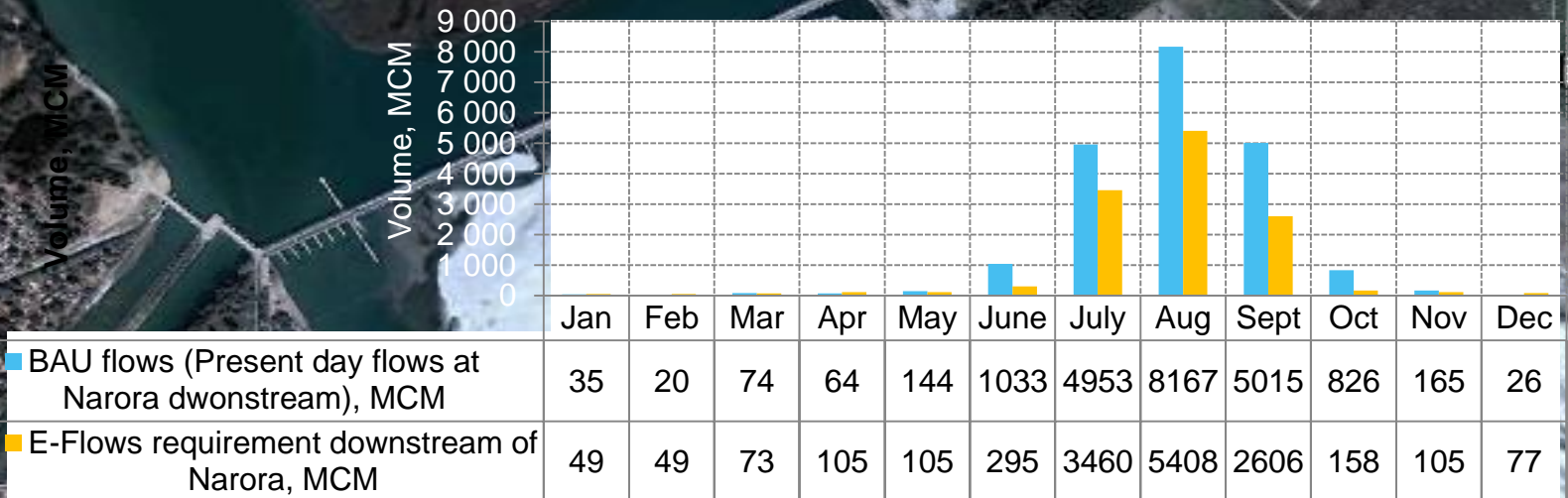
# Narora Barrage

11/7/2002 5:30:00 am

LGC: (12 districts)

CCA: 1.16 Million Hectare

*E-Flows gap: 15-50 MCM  
(December to April)*



Source: IIT Kanpur

# Proposed framework



*Promoting agricultural Package of practices*



*Water use efficiency*

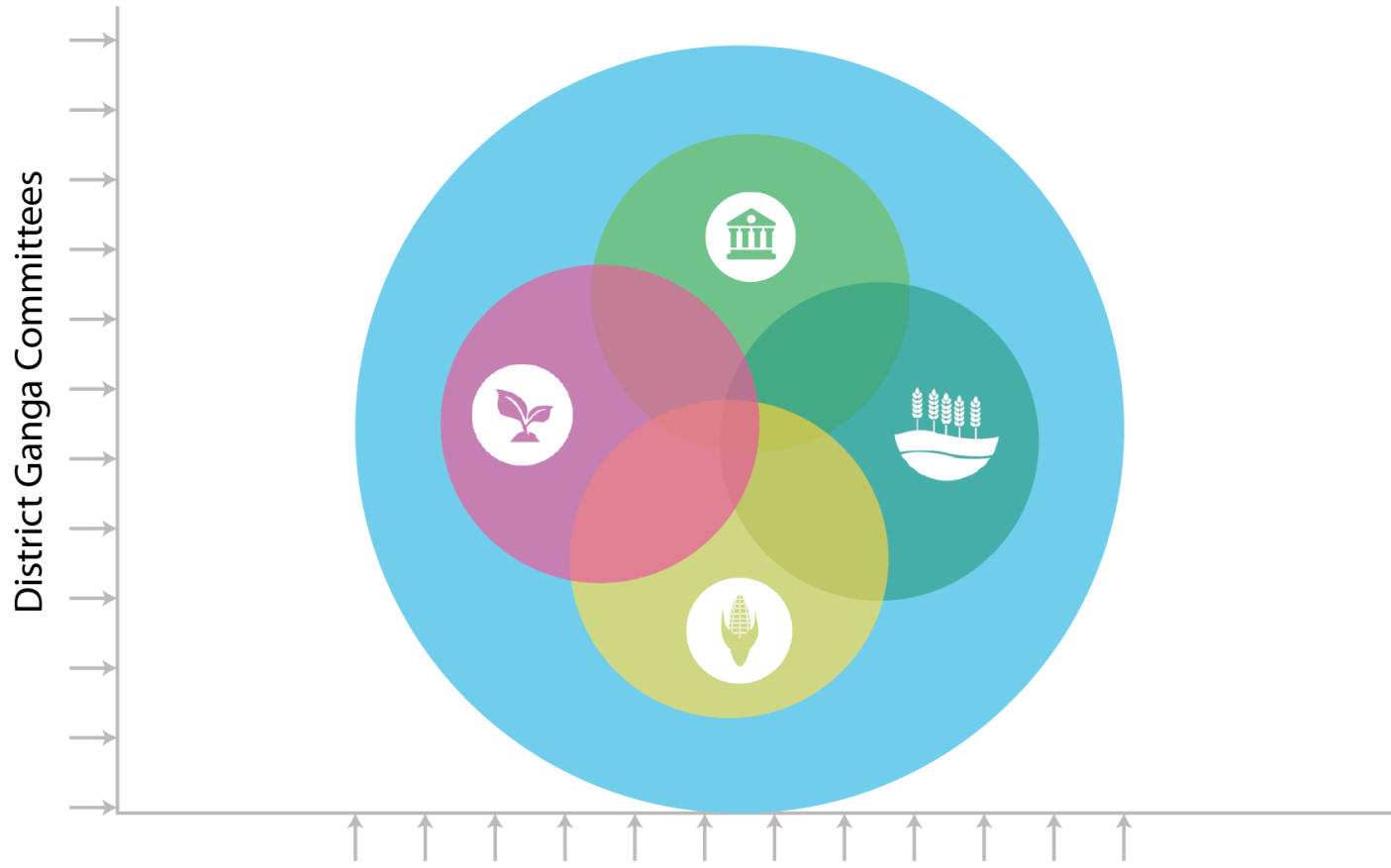


*Alternate cropping pattern*








*Redesigning the Ganga Gram yojna*

# PROPOSED APPROACH



District Ganga Committees

Uttar Pradesh Participatory Irrigation Management Act

-  Ganga Grams
-  Package of Practices(PoPs)
-  Water-use Efficiency
-  District Irrigation Plans(DIP)
-  Alternative Cropping Patterns

# Key takeaways

- Tradeoffs are manageable. E-Flows restoration is possible
- Proof of concept on integration of agriculture, water management through Ganga Grams
- Aquifer management (Surface and ground water interactions) & modifying reservoir operations need further studies

