HP-IDP

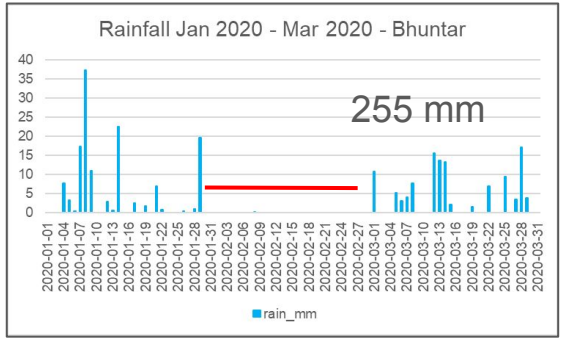
Planning framework for water budgeting

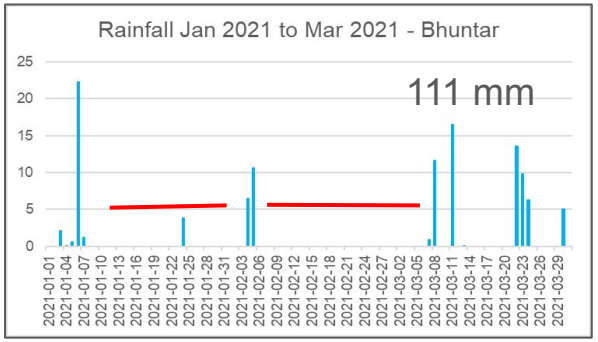
29th August 2024

Key issues

- **Traditional crops** (maize, wheat),
- Less water requirement, **subsistence farming**
- Distributed monsoon and post-monsoon rainfall

- Shift towards **vegetables, high density** apples etc. and **commercial** farming
- **Increased water demand** at crucial times
- Climate change: erratic monsoons, uncertain winters, stressed summers
- **Protective irrigation crucial**

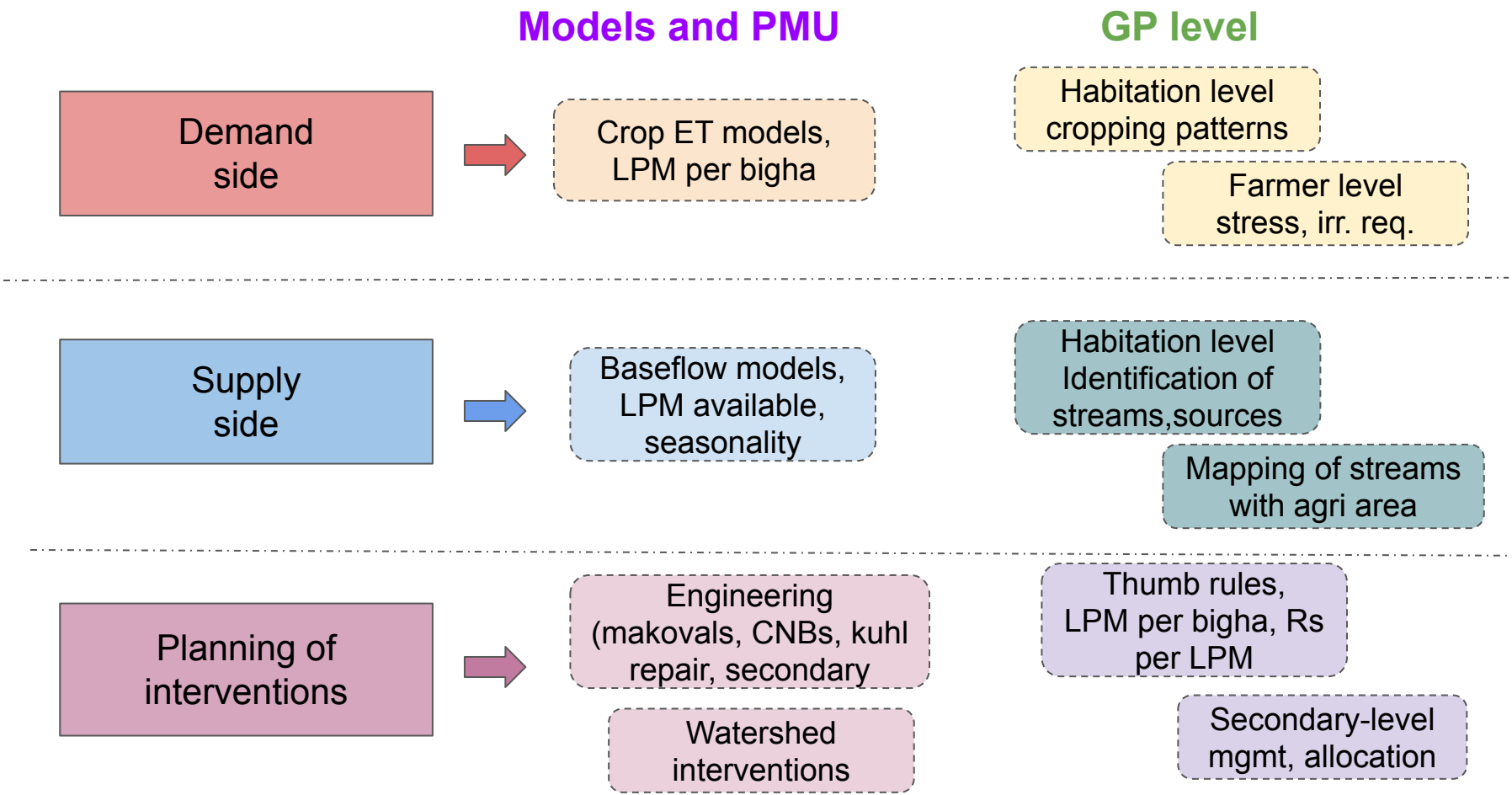




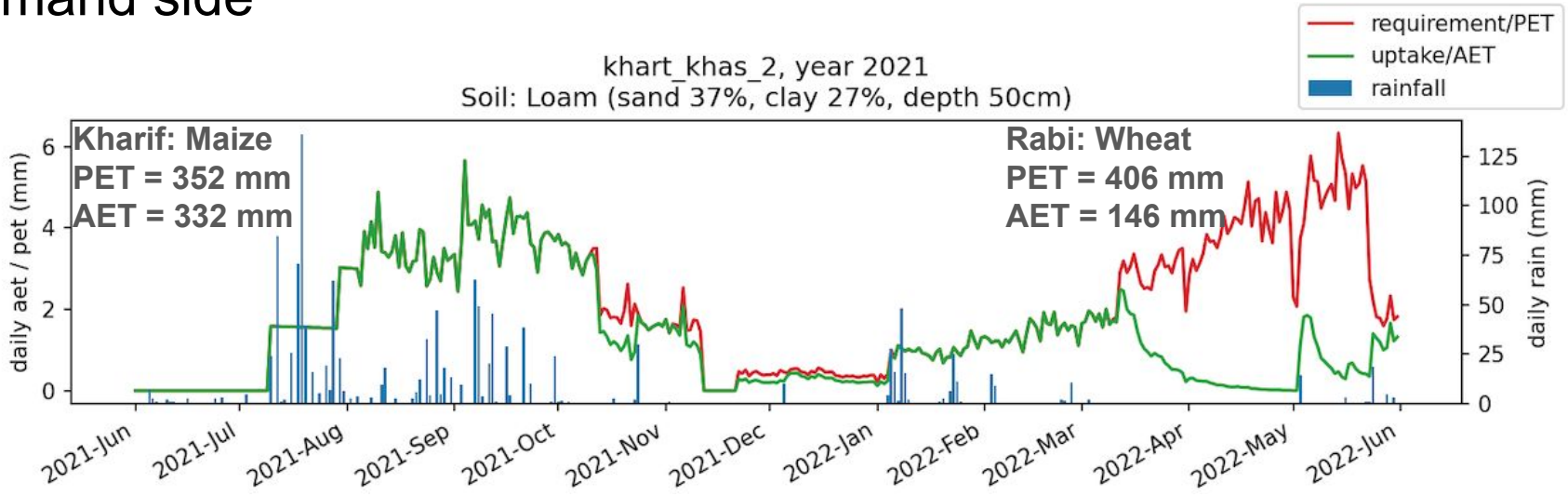
Crop	Rainfed Yield (quintal per bhiga)		Irrigated Yield (quintal per bhiga)
Wheat	1		2 - 3
Tomatoes	5-10		20-30
Cabbage	10-20		50-70
Apple (High Density)	Can't be done		50 - 60

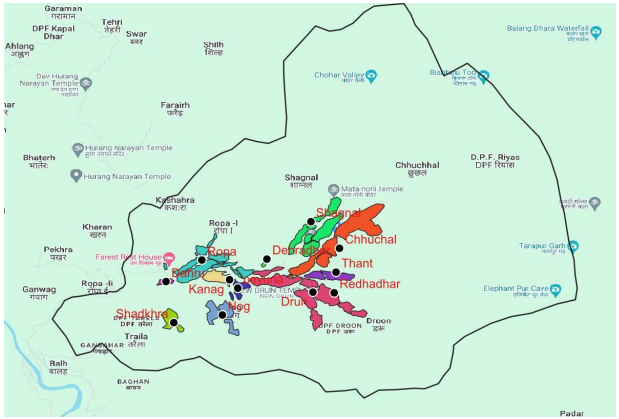
high incomes
→ high investments
→ high yields
→ irrigation

What is in the HP-IDP pipeline

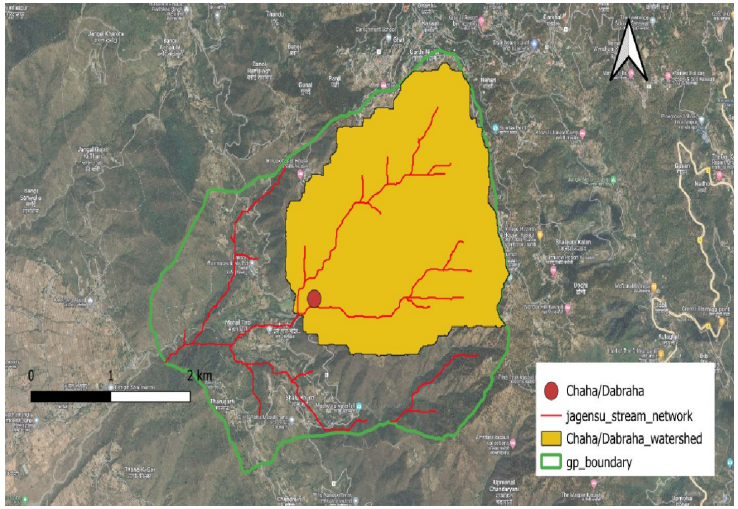


Demand side

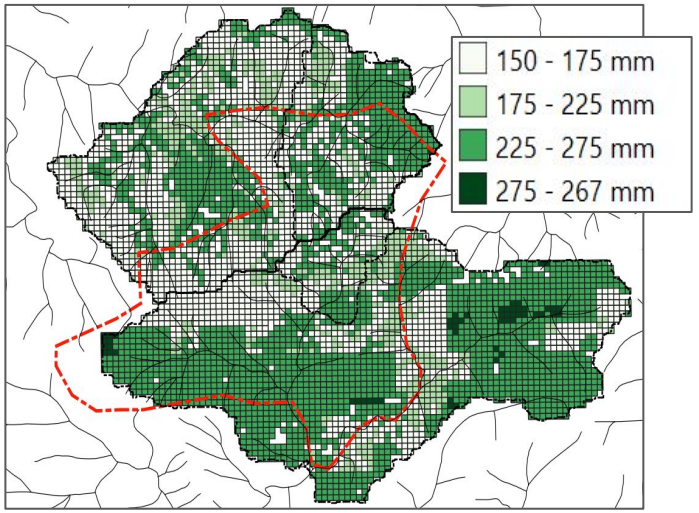




Ward	Habitation	HHs	Kharif	Rabi	Total Land in Bigha	LPM rabi
Nog	Payona	8	Makki	wheat, onion,	32	**48**
Ropa	Ropa	45	Makki	Wheat	270	**324**
Drun	Thant	9	Makki	Wheat, garlic	27	**40.5**
Chhuchal	Chhuchal	43	Makki	Wheat, garlic	387	**581**
Shagnal	Shagnal	26	Makki	Wheat	156	**234**



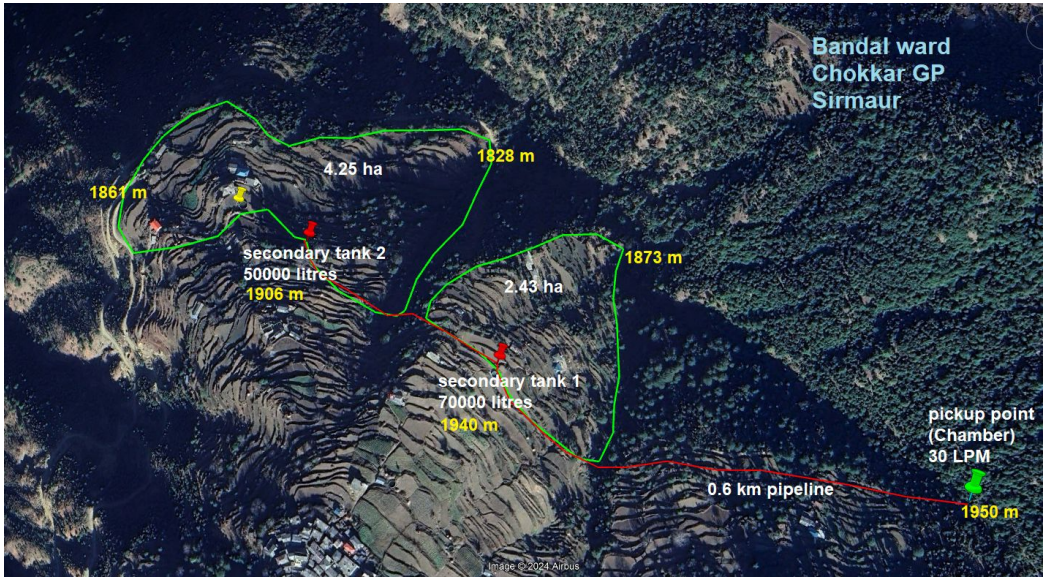
The Supply Side



Stream	Post monsoon flows (lpm)	Area (ha)	Avg elevation(m)	Forest area (%)	LPM per ha
MA1	22	45	893	7	0.48
KK1	150	163	660	59	0.92
JA1	390	332	1424	67	1.17
KK2	72	55	680	46	1.33
RO1	115	55	1933	70	2.50
RO2	90	27	1829	50	3.33

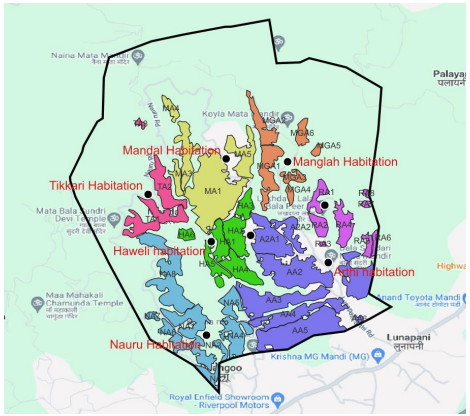
Interventions

Irrigation requirement during crucial times	
For wheat	**1 LPM per bigha**
For garlic , onions,	**2 / 3 LPM per bigha**
Translates to	
Rs. 4000 /- for wheat, Rs. 10000/- for garlic	
LPM per bigha → Rs. per LPM	



Proposal

- Planning framework for GP / compartment based on scientific NRM principles
  - Modernize SOPs for climate change
  - Stabilize yields and increase profitability
- Build consortia of academic institutes (NIT Hamirpur, IIT Mandi and others)
  - Train state officials and topical studies
  - Maintain and upgrade repository of datasets and models
- Engage community and improve development outcomes
  - Better response to climate change
  - Better maintenance of local assets and data - Village Handbook



HP-IDP project provides a launching platform

What are the benefits of the proposal

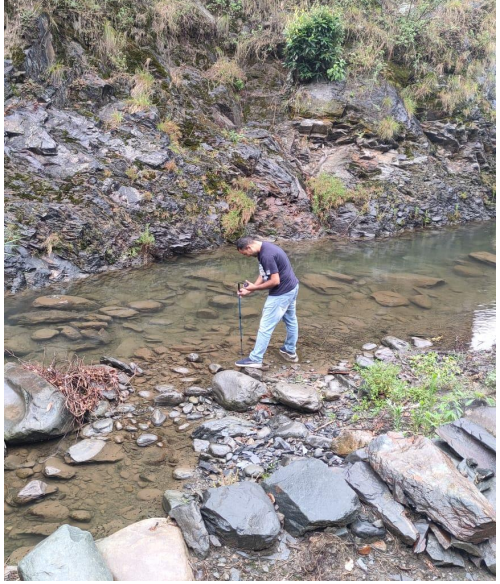
For the project

- Watershed planning
- Design and planning of water harvesting structures
- Crop planning
- Better Allocation of resources
- Profitability and cost-benefit analysis
- Trainable and scalable for GPs

Beyond the project

- Disaster management, peak flows, better engineering norms
- Long term landscape planning
- Convergence of IPH, Forest and Agriculture, Land records
- Tracking data and development outcomes
- Better design and planning of schemes

Thank you



Backup slides

The intervention unit as the unit of design