



# Improving the climate resilience and performance of small and medium scale irrigation





# Introduction

- Study in conjunction with DOI
- Financed by CDKN (DFID)
- Implemented by Mott MacDonald with FMIST, CERD, Adapt-Nepal
- Participatory study with WUAs







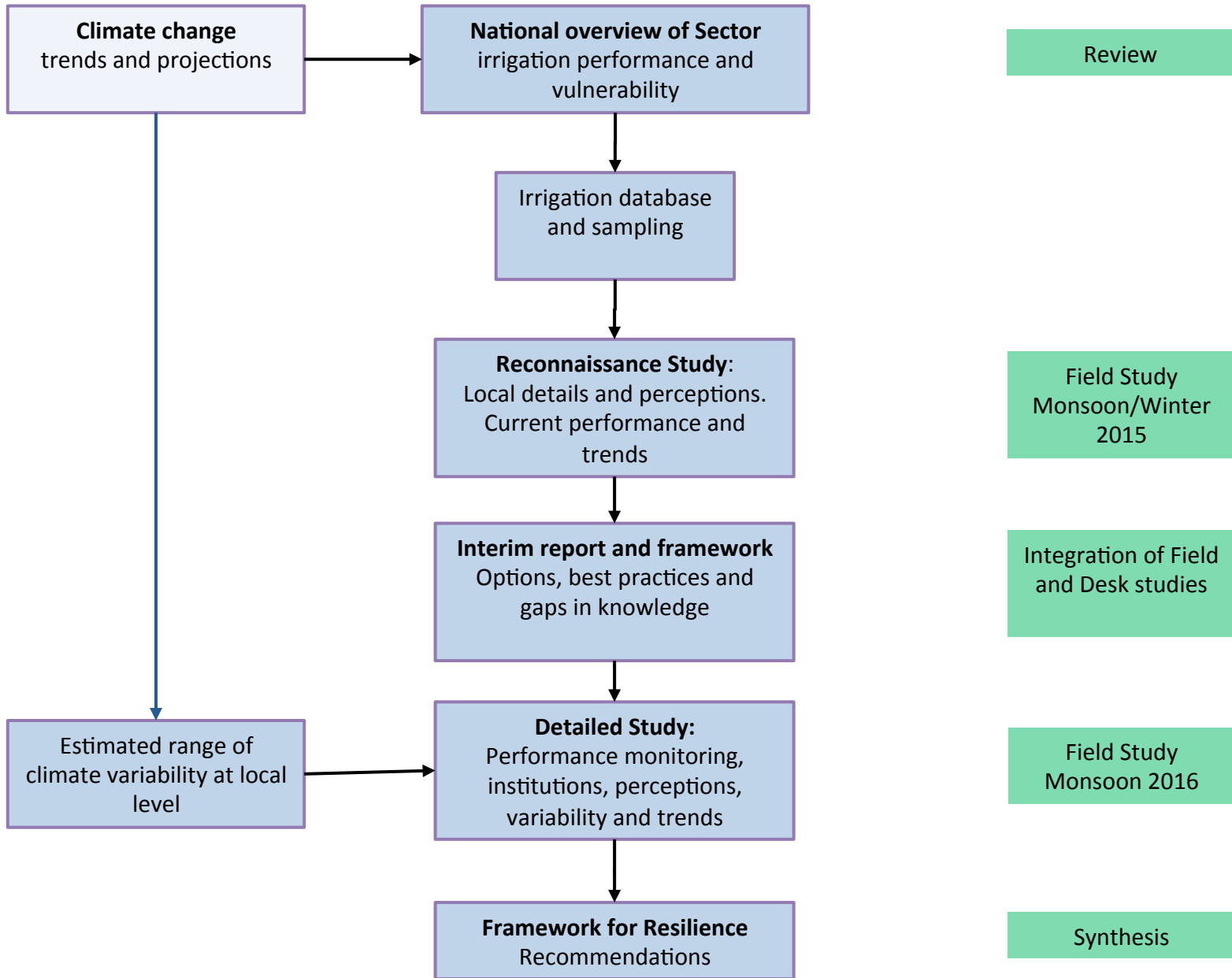
# Background & Objectives

Improving the climate resilience and performance of small and medium scale irrigation



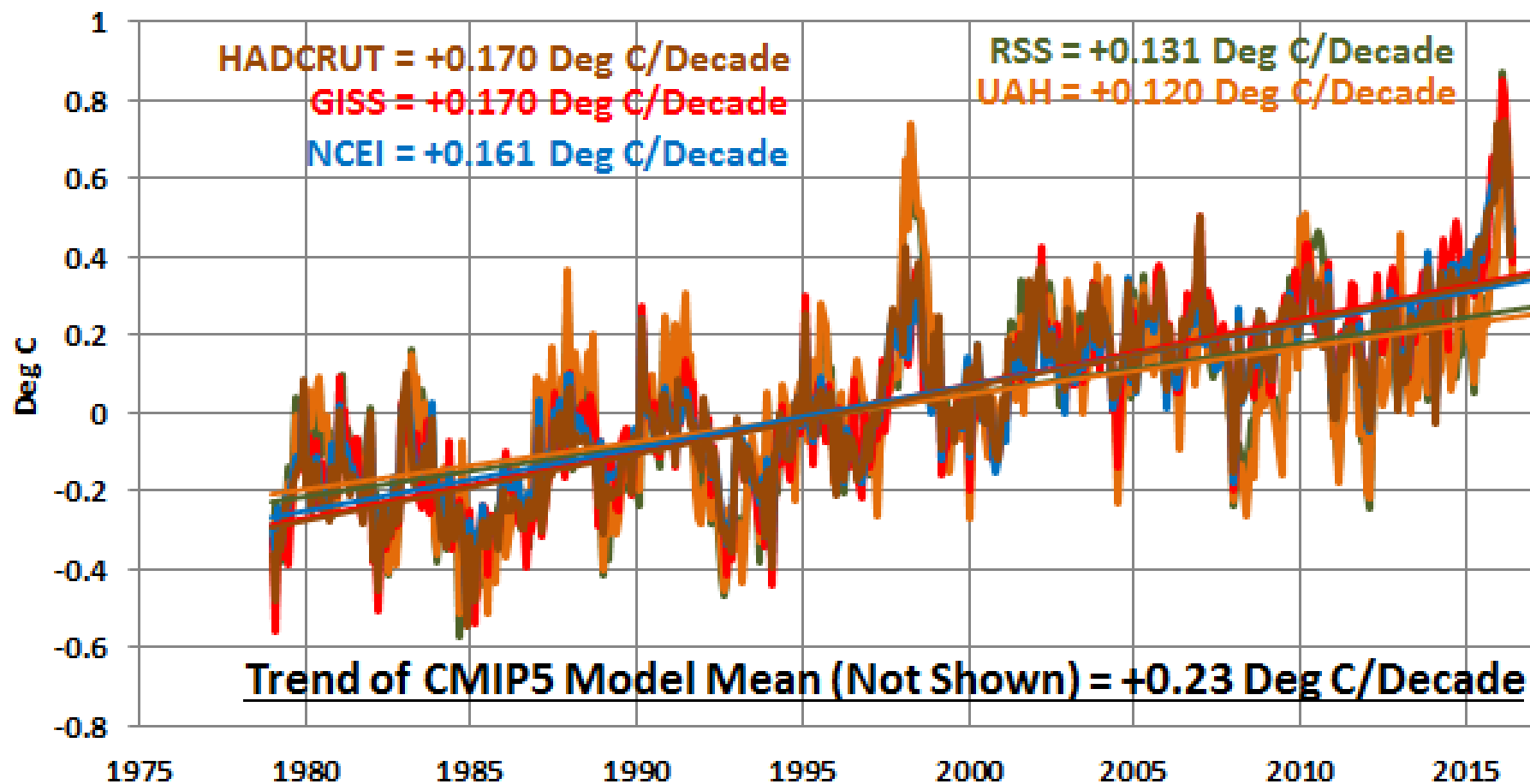
# Objectives

- Improve the approach and methodology for planning and delivery of efficient, effective, equitable and climate-resilient irrigation systems.
- Assess processes, institutions and policy for irrigation development, management and resource governance.
- Provide framework to increase the climate resilience and effectiveness of small and medium scale irrigation systems.
- Ensure framework is well understood by the relevant governing and implementing parties.



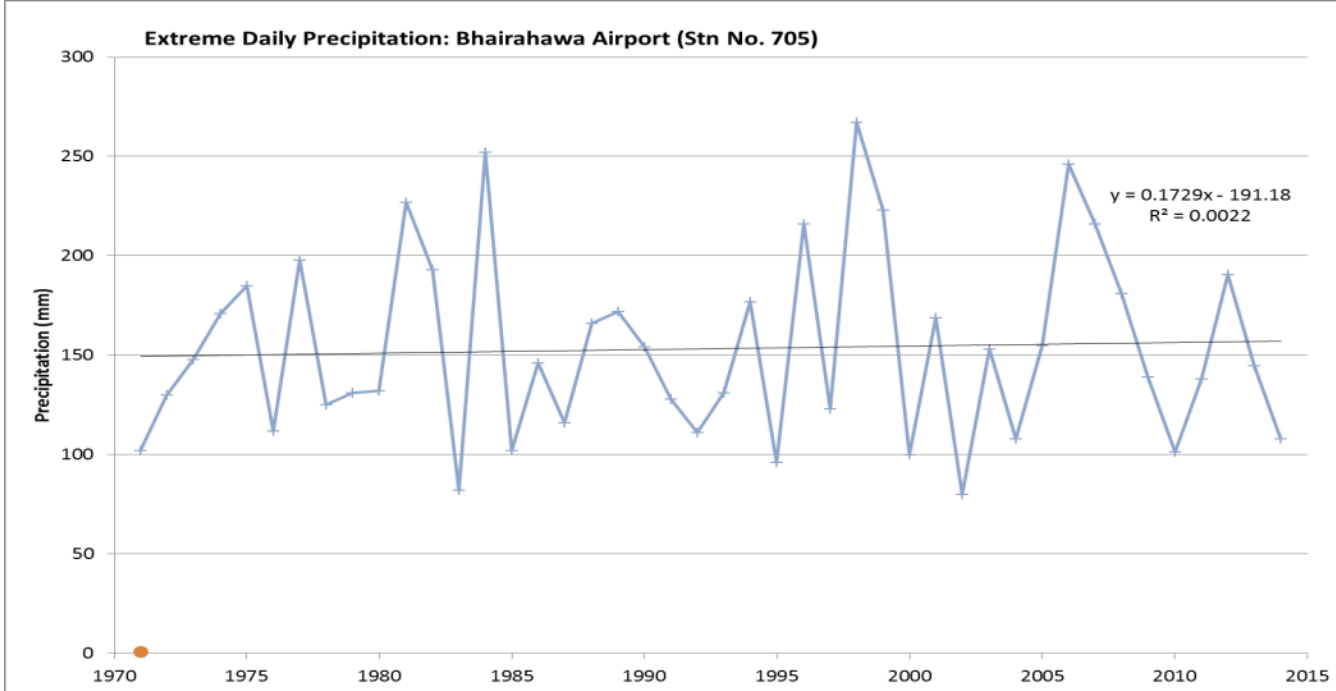
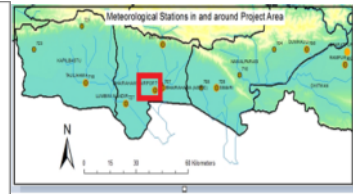
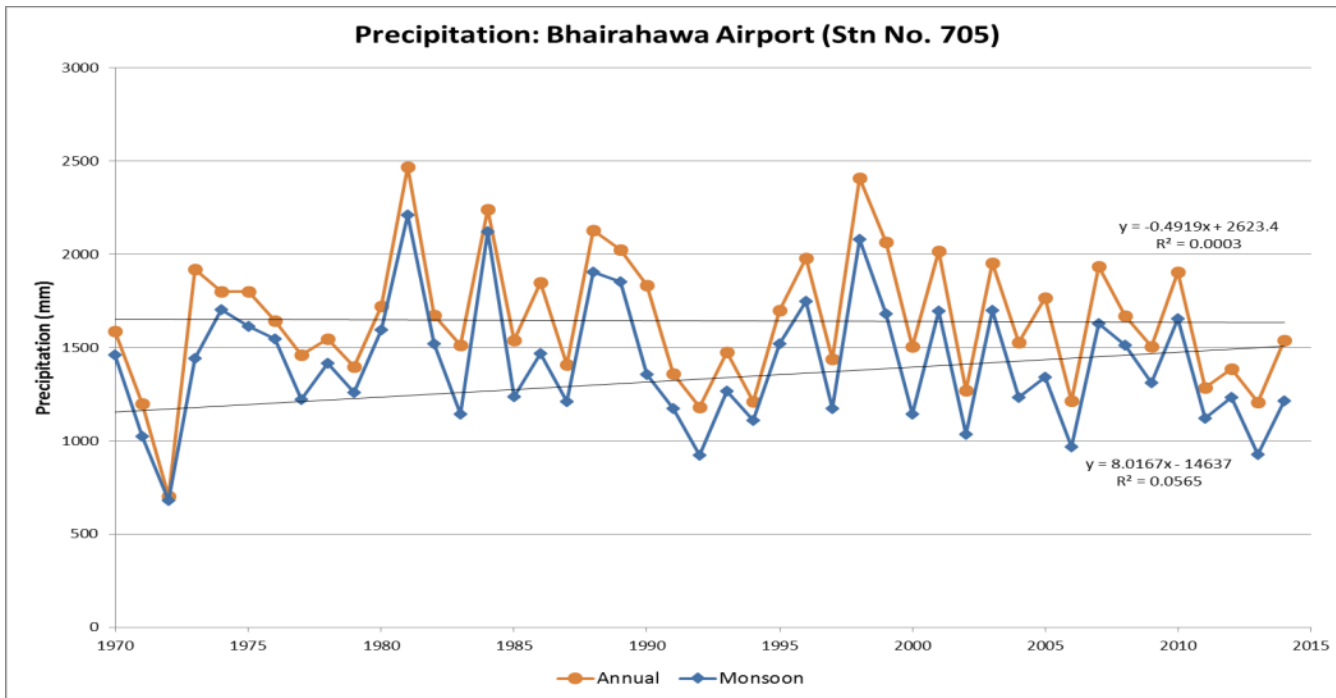
# Recent Global Temperature Trends

(Reference Period: 1981-2010)

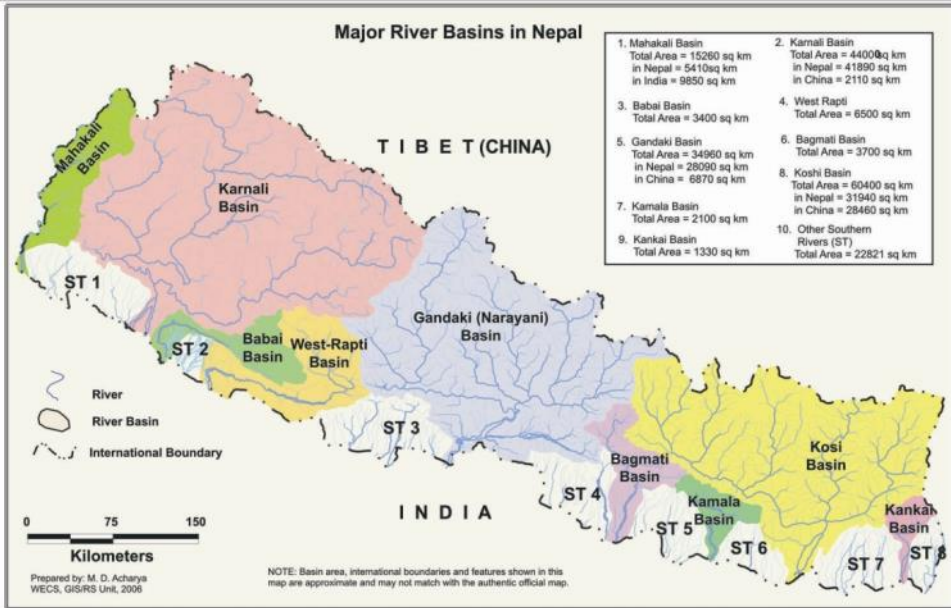


Source: Tisdale (2016)

Jan 1979 to Jun 2016



### Major River Basins in Nepal



# Irrigation in Nepal

## Small and Medium Irrigation (900,000ha)

- 620,000 ha from surface water
  - 410,000 ha in tarai
  - 320,000 ha in small 'southern' basins
- 280,000 ha from groundwater

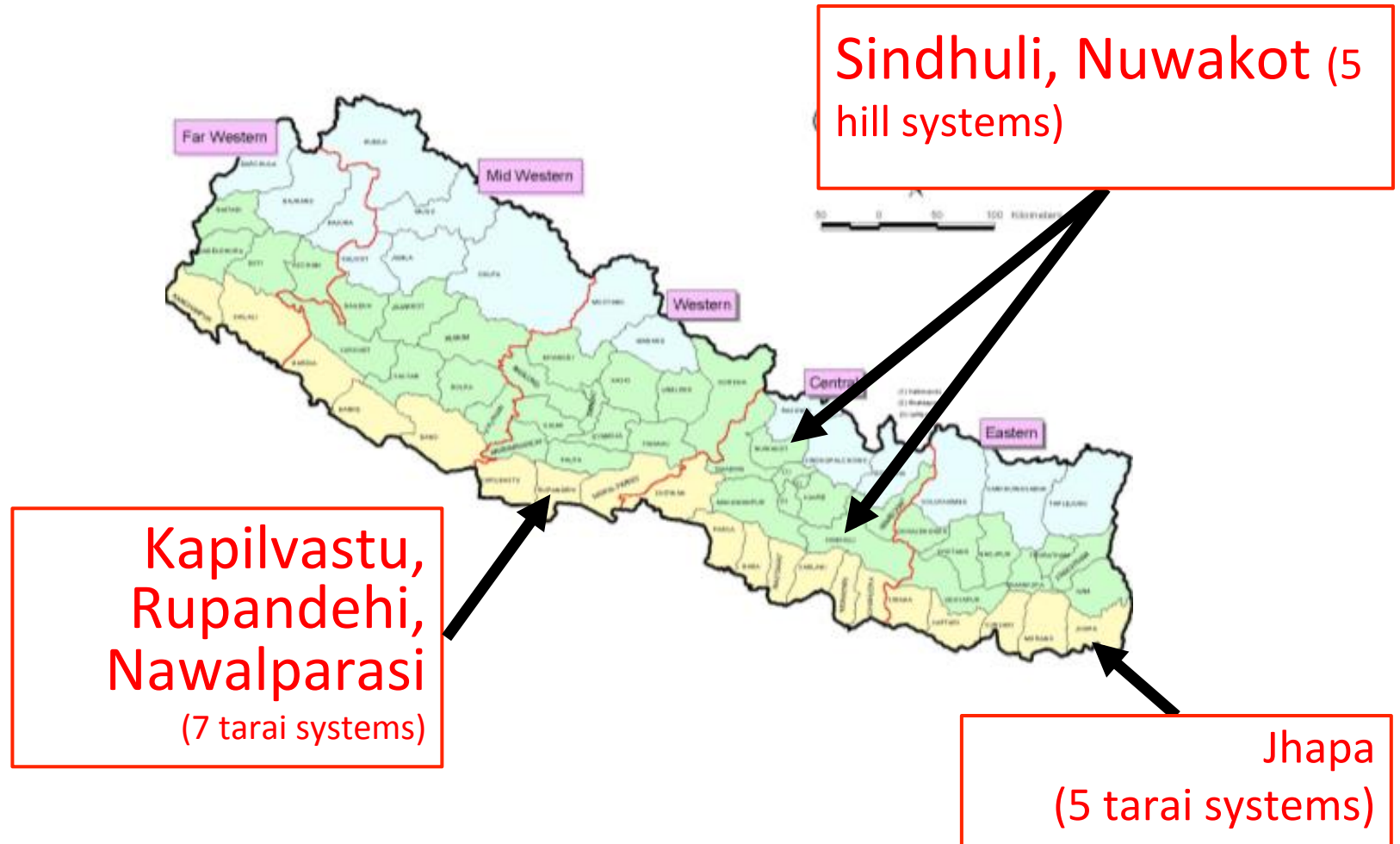
AEZ	Total Irrigable Area	Major & Large Surface Irrigation			Total Small and Medium (AMIS+FMIS incl. GW)	TOTAL Irrigated Area (ha)
		FMIS	AMIS	Total		
Tarai	1,337,581	36,300	280,933	317,233	677,764	994,997
Hills	368,541	2,630	2,910	5,540	176,774	182,314
Mountain	59,718				50,042	50,042
Sub-total	1,765,840	38,930	283,843	322,773	904,580	1,227,353
% total irrigated area		3%	23%	26%	74%	100%

Small < 10ha in hills; <100ha in hills  
 Medium 10-500ha in hills; 100-2,000ha in tarai





# Field Study Location



# Detailed Field Studies:

- Climate data and projections
- Consultations and literature review
- Local studies (infrastructure, FGD, HHQ)
- Performance monitoring
- Local institutional assessments

## Leading to:

- recommendations for policy, design and management