

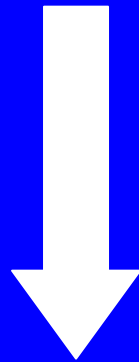


Agricultural Adaptation and Technological Innovation in Nepal

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If climatic constraints are confronted with technologies on demand it will alleviate the inadequacies of climatic resources

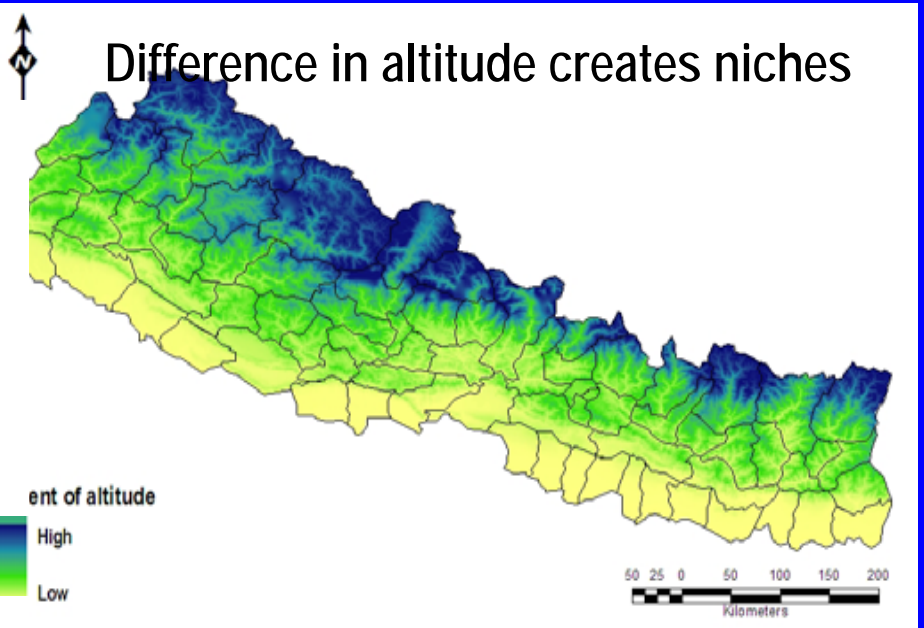


Assist agricultural adaptation to climate change

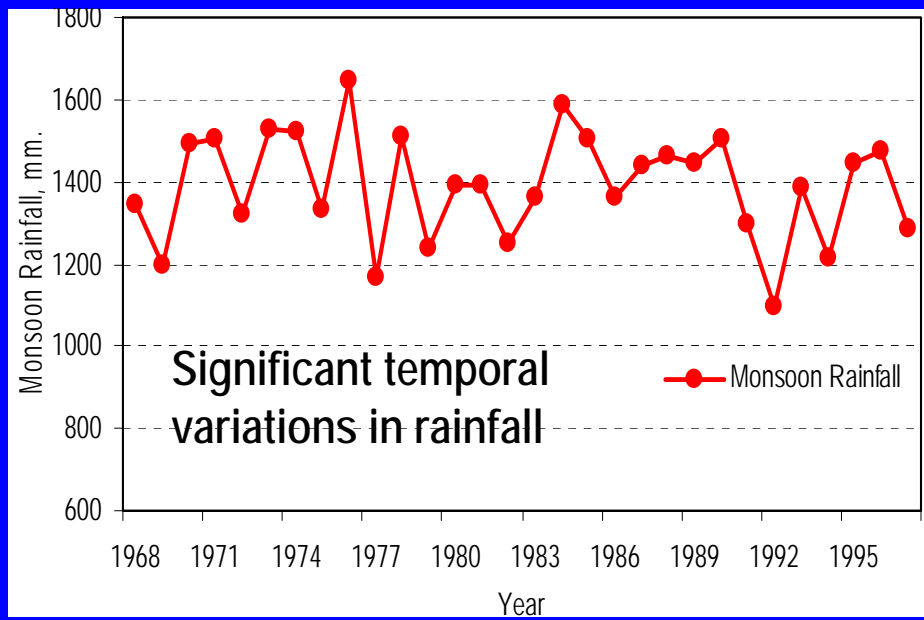
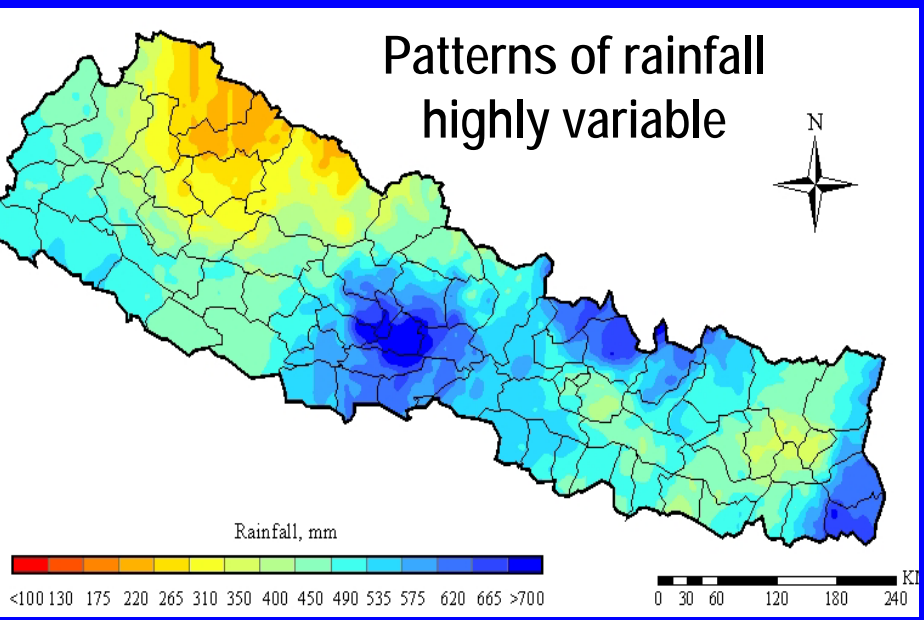


If farmers & their supporting institutions have appropriately responded to present climatic constraints then they are generally better prepared to adapt to changing climate

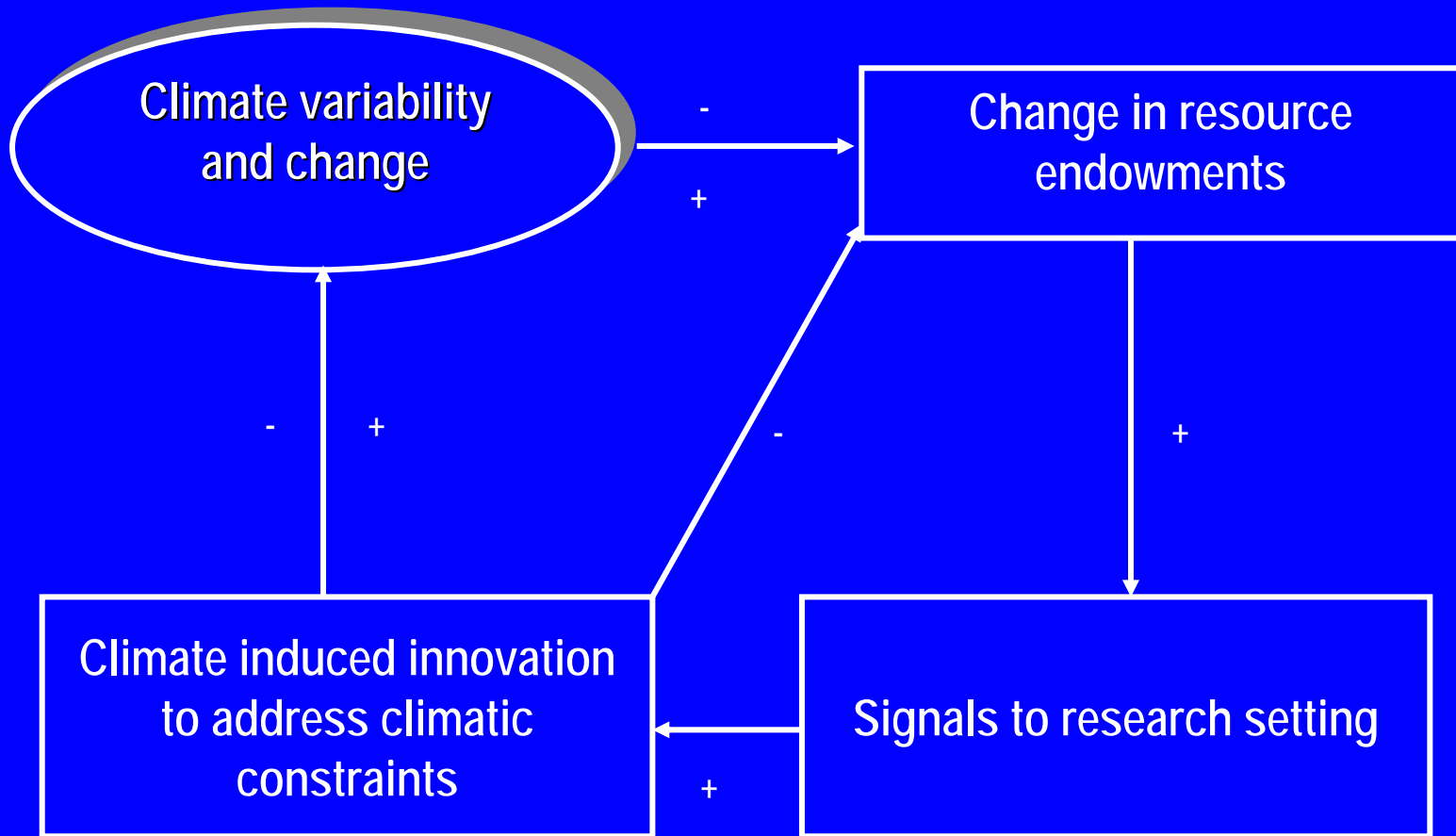




Does differences in climatic resources prompt the innovation of location-specific technologies that alleviate climatic limitations in rice based cropping system of Nepal?



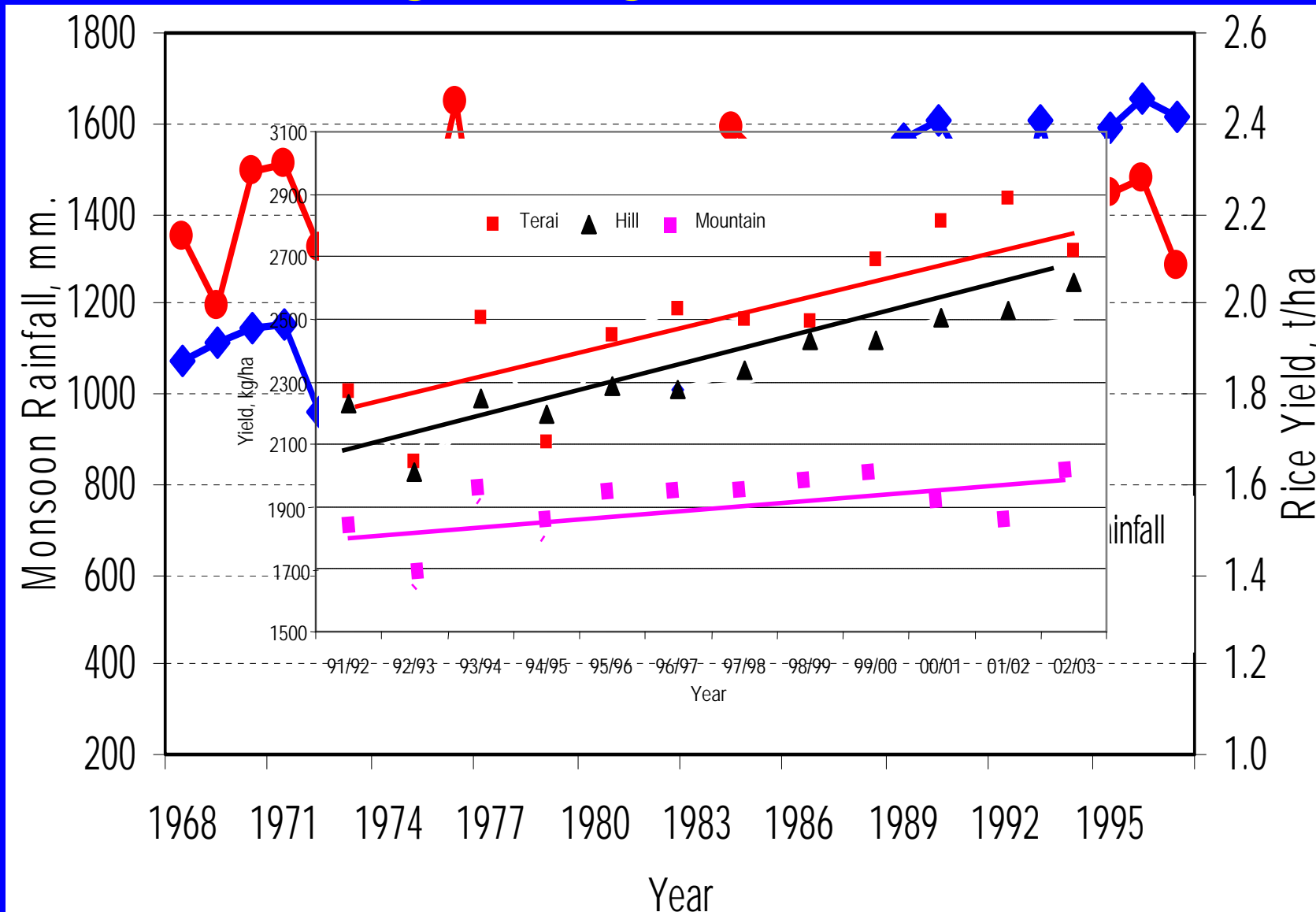
climate-induced innovation



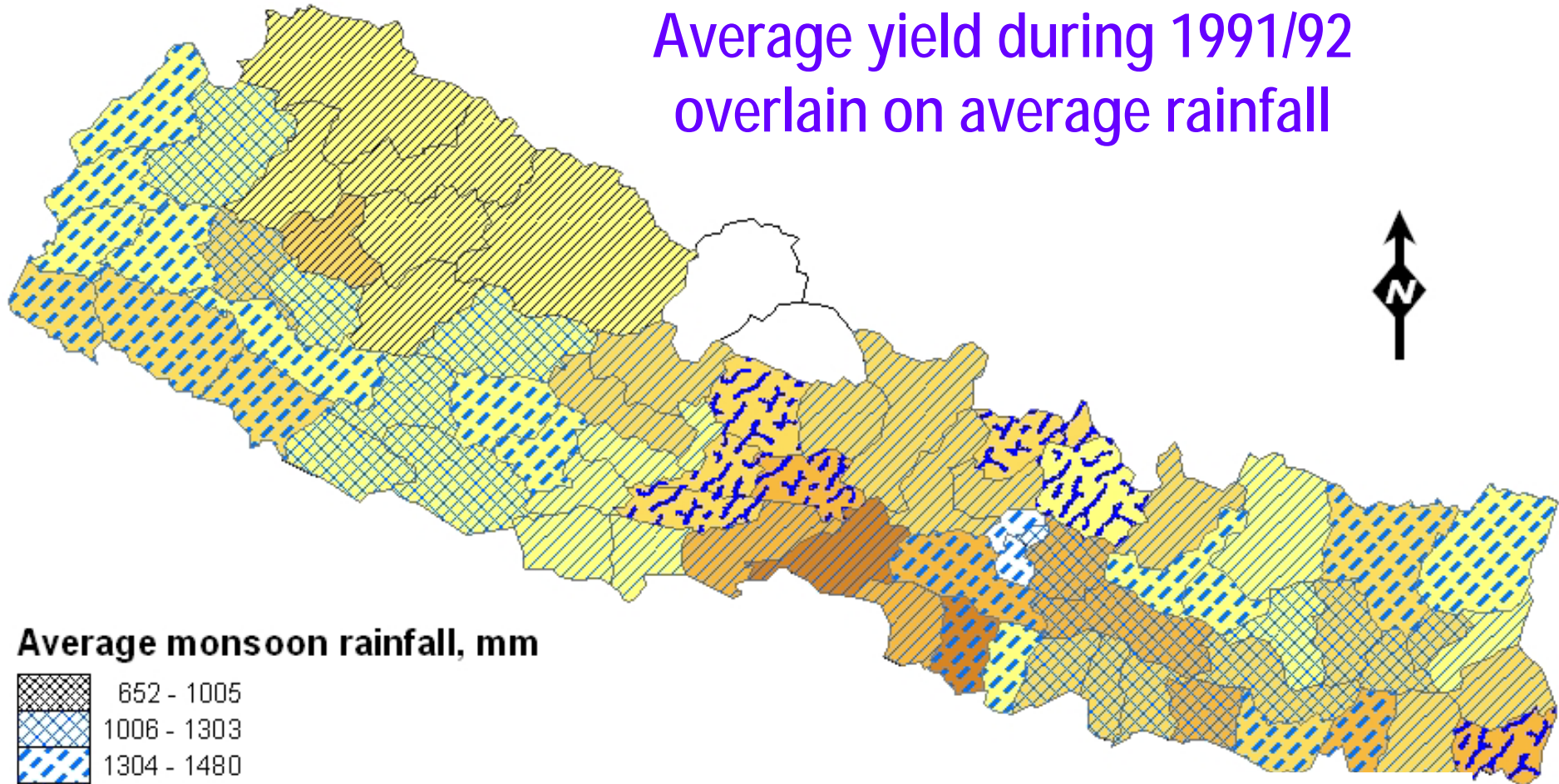
+ = positive change, - = negative change



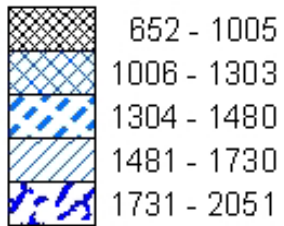
Rice productivity trends across country and three ecological regions, 1991/92-2002/03



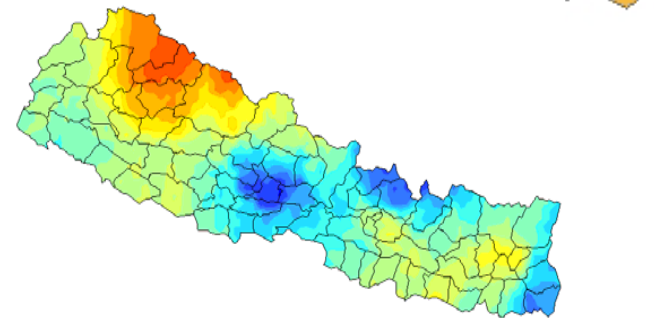
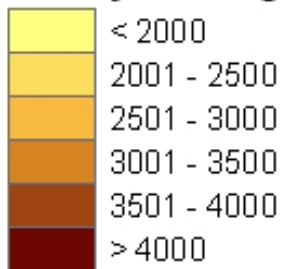
Average yield during 1991/92 overlain on average rainfall



Average monsoon rainfall, mm

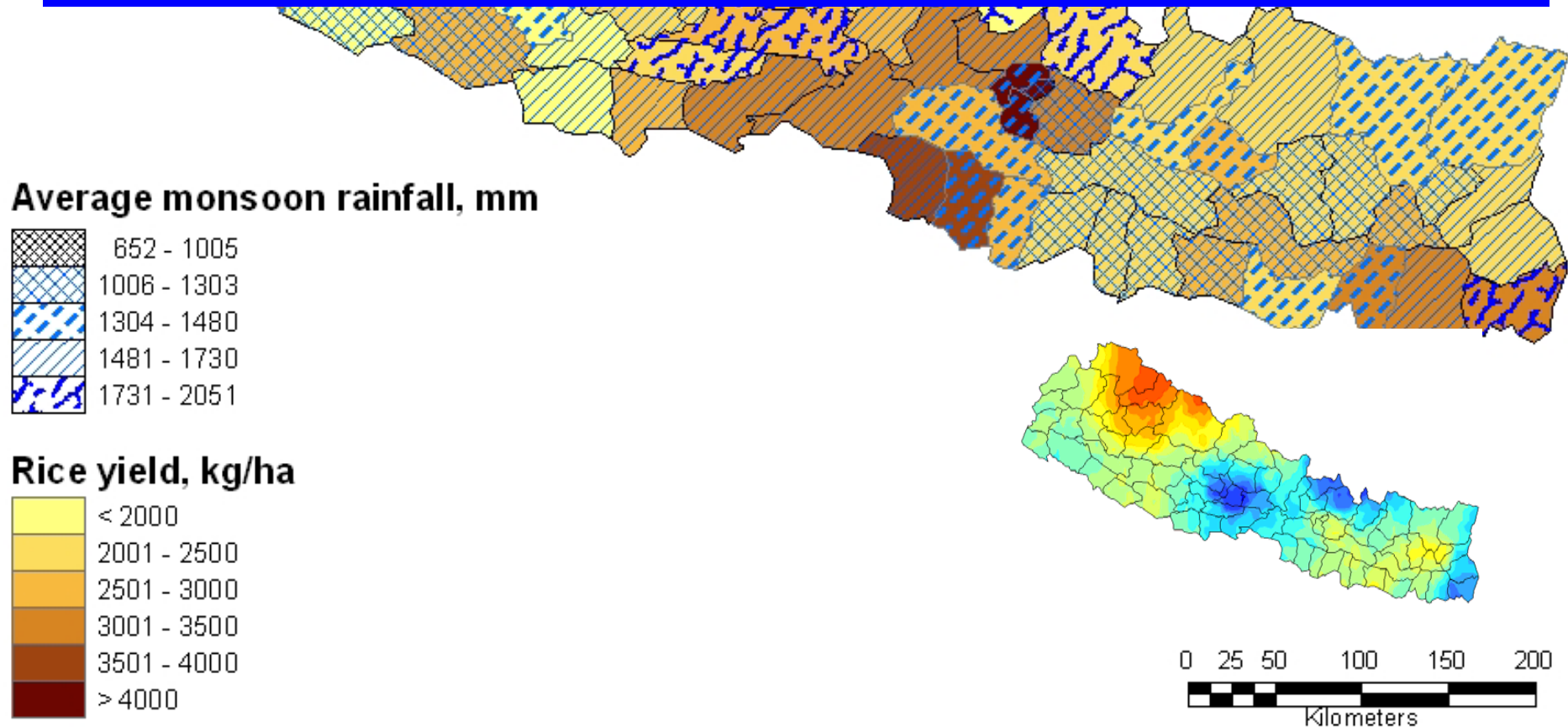


Rice yield, kg/ha



Average yield during 2002/03 overlain on average rainfall

Over a period of time the initial difference in productivity across the districts of Nepal diminished

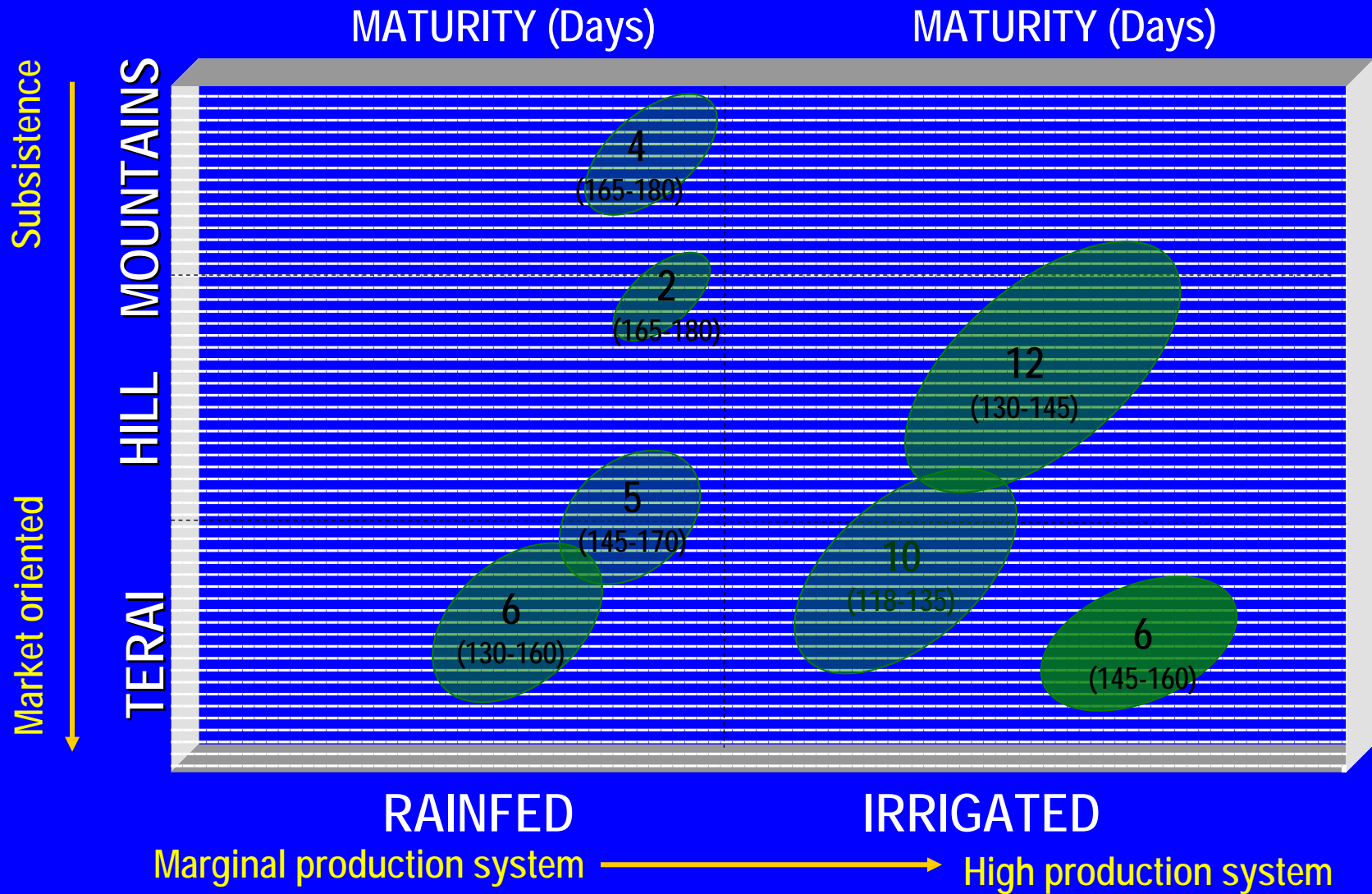




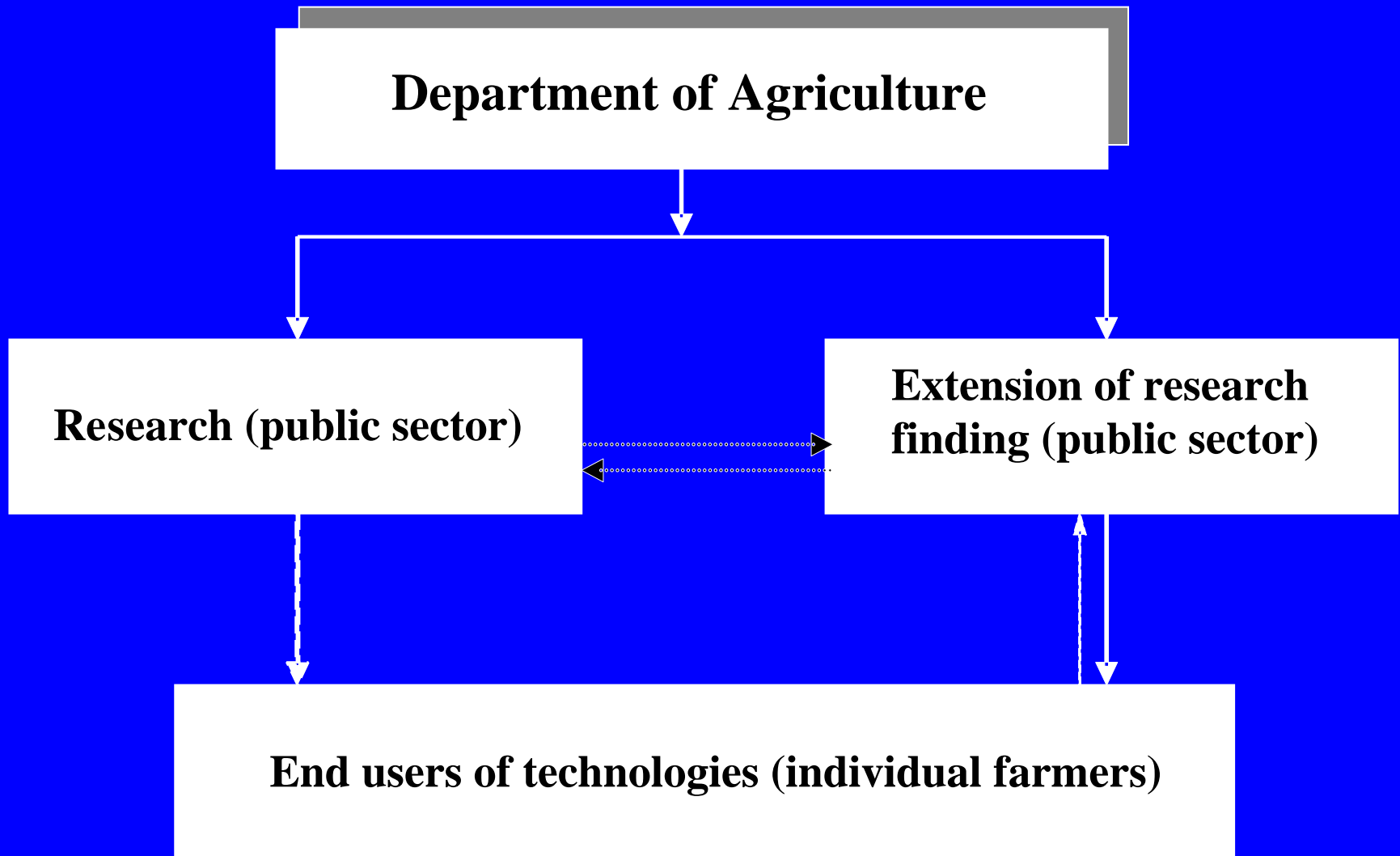
How technological responses have addressed climatic constraints to enhance rice productivity in climatically diverse regions of Nepal?



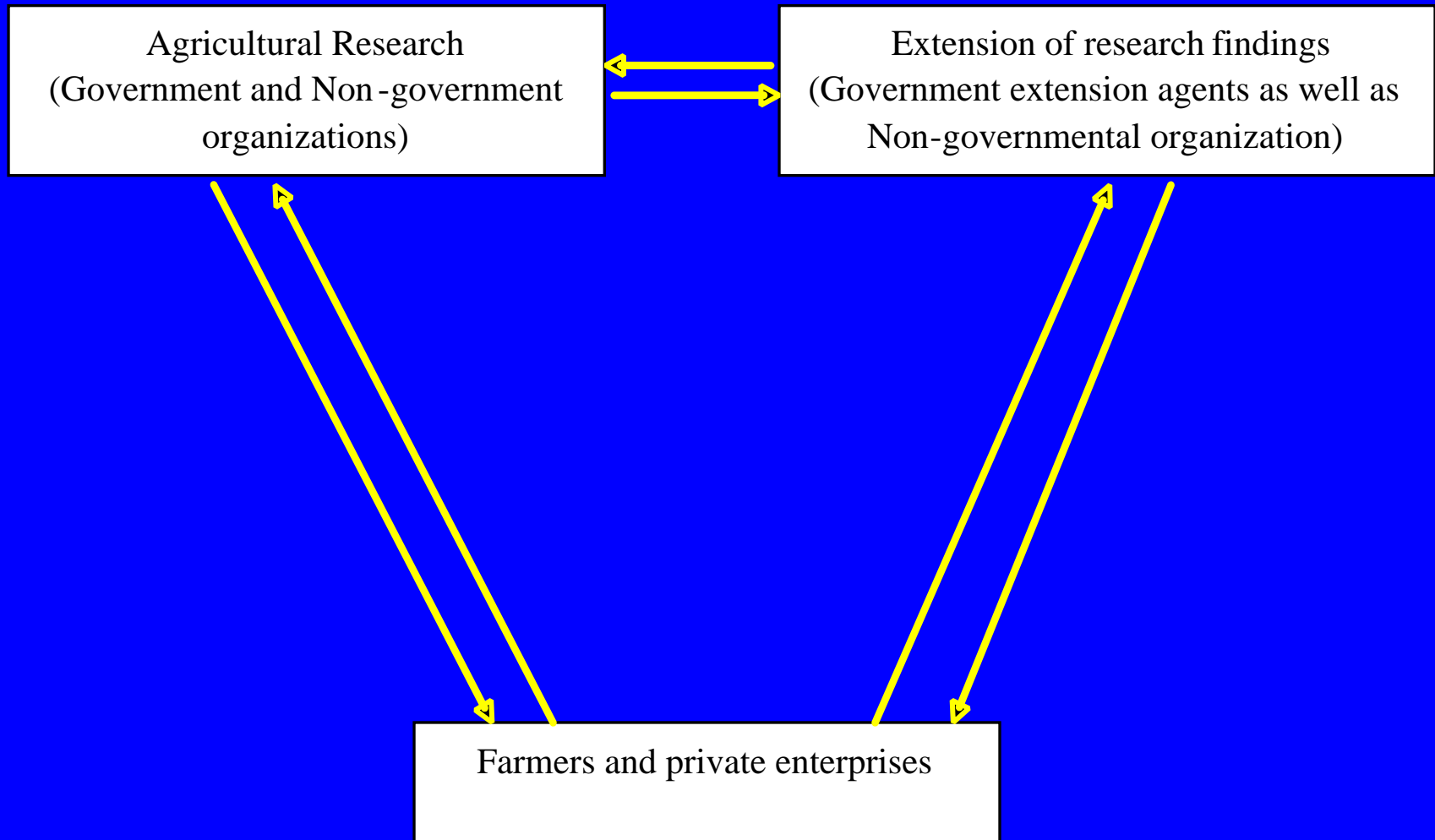
Improved rice varieties released



Framework of agricultural research and development: before 1990



Agricultural research and development framework: post 1990s



Innovations of location-specific technologies accompanied by change in policies may have been responsible for higher rice productivity among the districts with marginal climate



Considerable efforts would be required to prepare farmers to deal with climate related impacts in agricultural landscape



Agronomic approaches (e.g. crop diversification, mulch farming, cover cropping, agroforestry, relay cropping) may prove appropriate again



A key element to respond is to increase soil organic matter which can absorb and retain the excess



Mulch farming can prevent soil erosion and preserve soil moisture



On farm biodiversity may increase the resilience to changing environmental conditions and other stresses



Conservation farming is one of the promising adaptation options



Conclusions

Both empirical and qualitative assessment indicate that Nepal's research establishment is engaged in and committed to address the constraints of climate

Targeted innovations bodes well for the future of country's agricultural development, and also offers insights into agricultural adaptation to climate change



Thank you