

Diversity in preference for rice in Asia

Alice G. Laborte

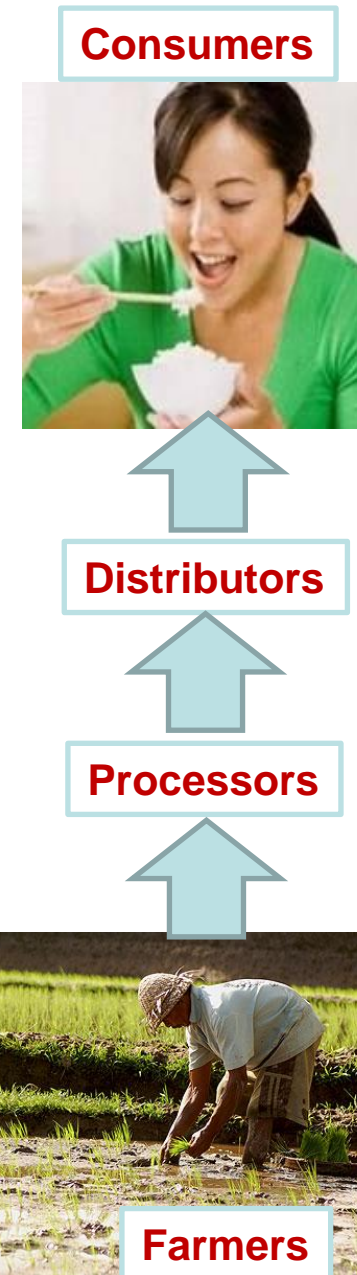
Social Sciences Division



Rice Market Research @ IRRI

Aim: To contribute to enhanced understanding enabling demand-driven and better targeted rice varietal development and deployment

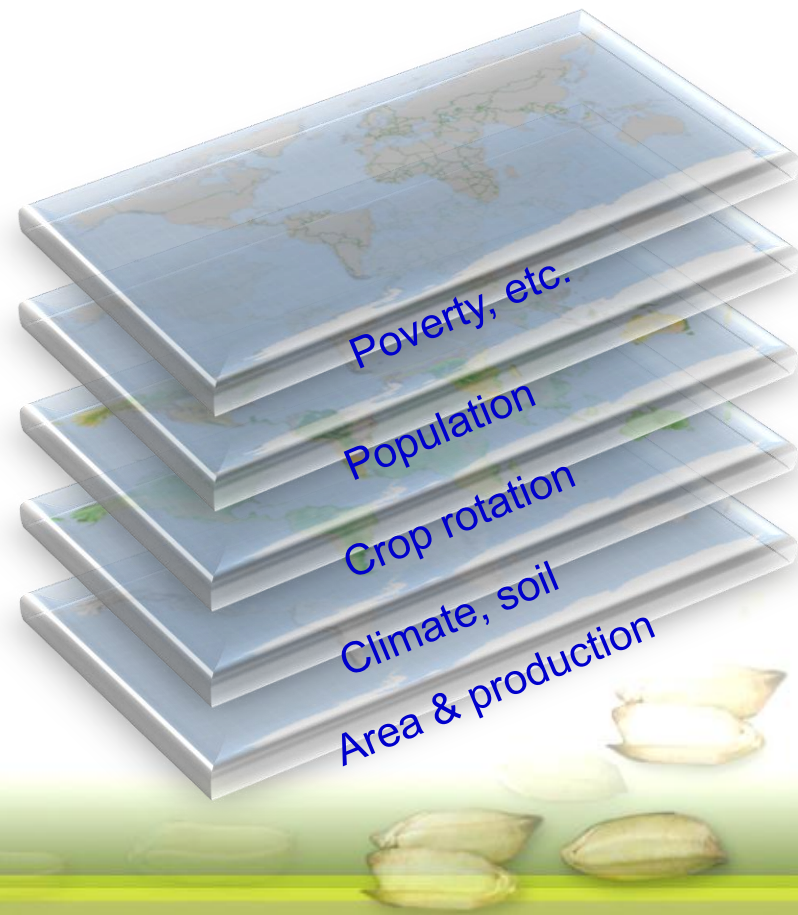
- Analysis of rice preferences of consumers, farmers and other rice value chain actors



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- Analysis of rice preferences of consumers, farmers and other rice value chain actors
- Characterization of rice environments based on agro-ecological and socio-economic factors



Consumer preferences for rice GQ and its geographic variability

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- Understanding of consumer preference is needed for wide adoption of any newly developed rice variety
- Geographic information is needed for better targeting of varietal development and dissemination



Diversity of Global Rice Markets and the Science Required for Consumer-Targeted Rice Breeding

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Abstract

With the ever-increasing global demand for high quality rice in both local production regions and with Western consumers, we have a strong desire to understand better the importance of the different traits that make up the quality of the rice grain and obtain a full picture of rice quality demographics. Rice is by no means a 'one size fits all' crop. Regional preferences are not only striking, they drive the market and hence are of major economic importance in any rice breeding / improvement strategy. In this analysis, we have engaged local experts across the world to perform a full assessment of all the major rice



Rice consumption, 2004-09

Country	Region	Kg per capita per year	Million tons per year
China	East Asia	76	103
India	South Asia	70	82
Indonesia	Southeast Asia	126	29
Bangladesh	South Asia	171	25
Vietnam	Southeast Asia	143	12
Philippines	Southeast Asia	125	11
Thailand	Southeast Asia	123	8
Japan	East Asia	56	7
Myanmar	Southeast Asia	143	7
Brazil	South America	35	7

Methodology

- Information provided by members of the International Network for Quality Rice (INQR)



Methodology

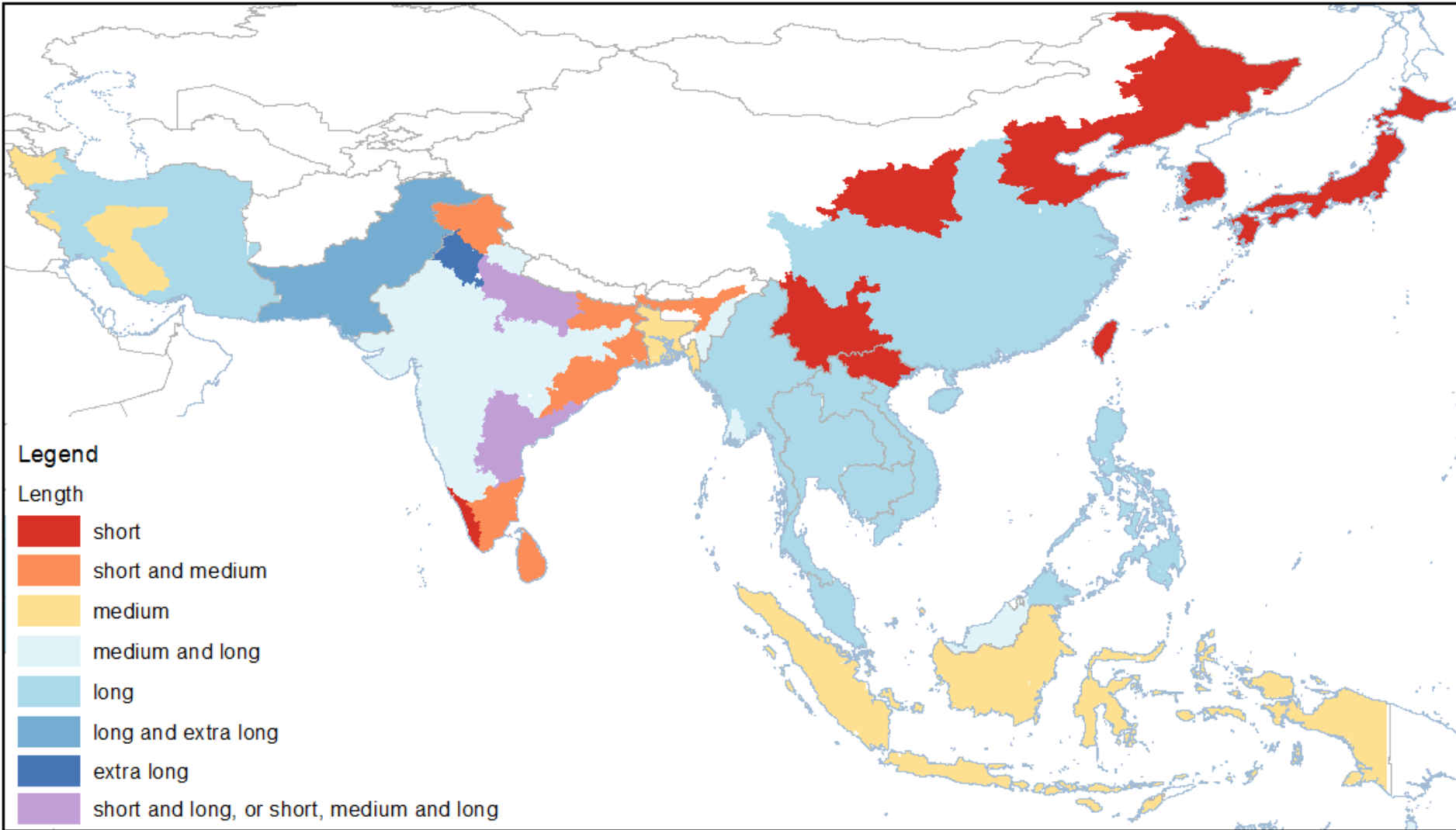
- Information provided by members of the International Network for Quality Rice (INQR)
- Major rice quality trait characteristics of preferred varieties in their regions
- Lab analyses of popular rice varieties :
 - Length and shape
 - Amylose content
 - Gel consistency
 - Gelatinization temperature
 - Aroma



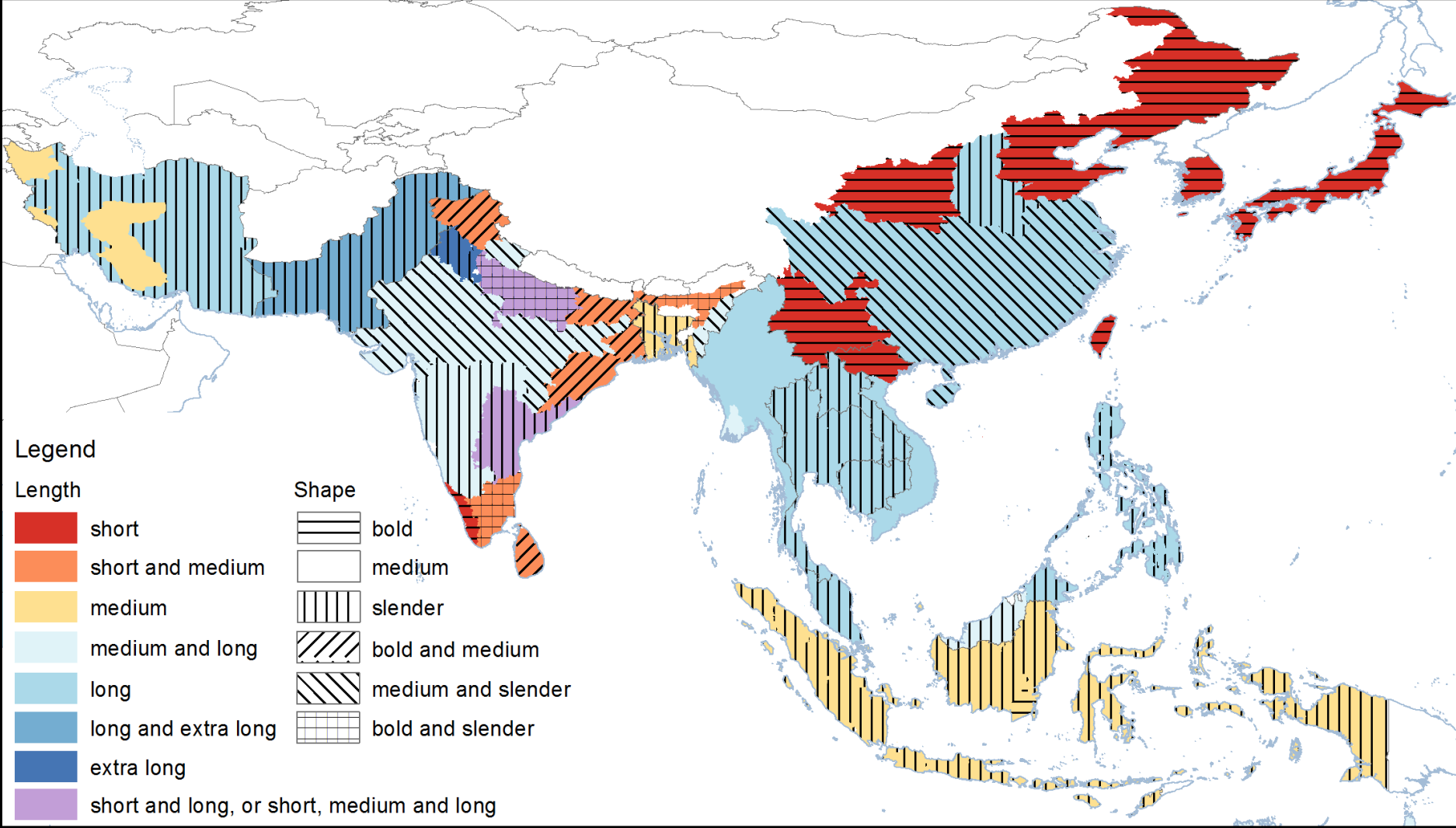
Spatial units depicting level of detail of data



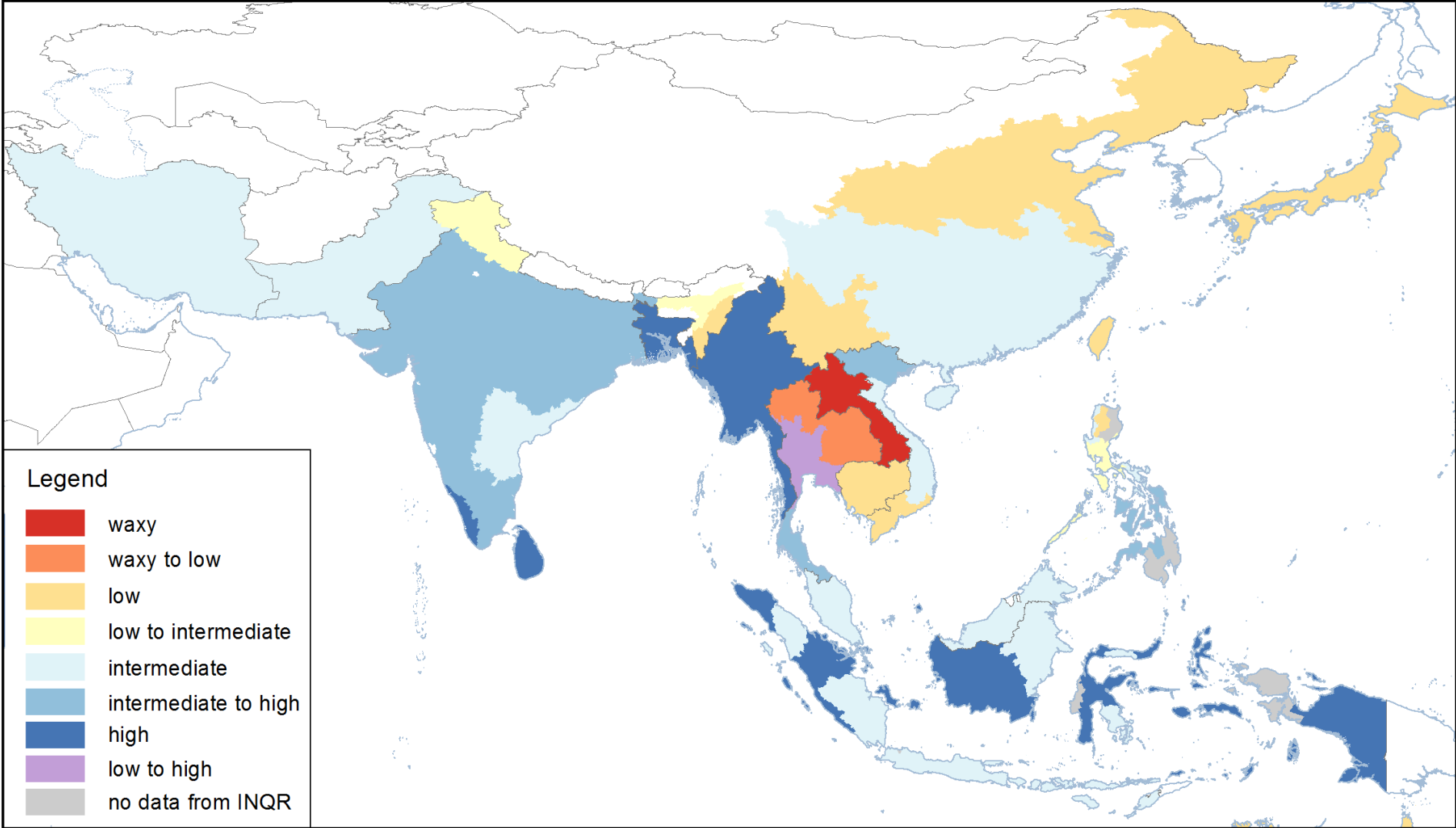
Grain length of preferred rice varieties



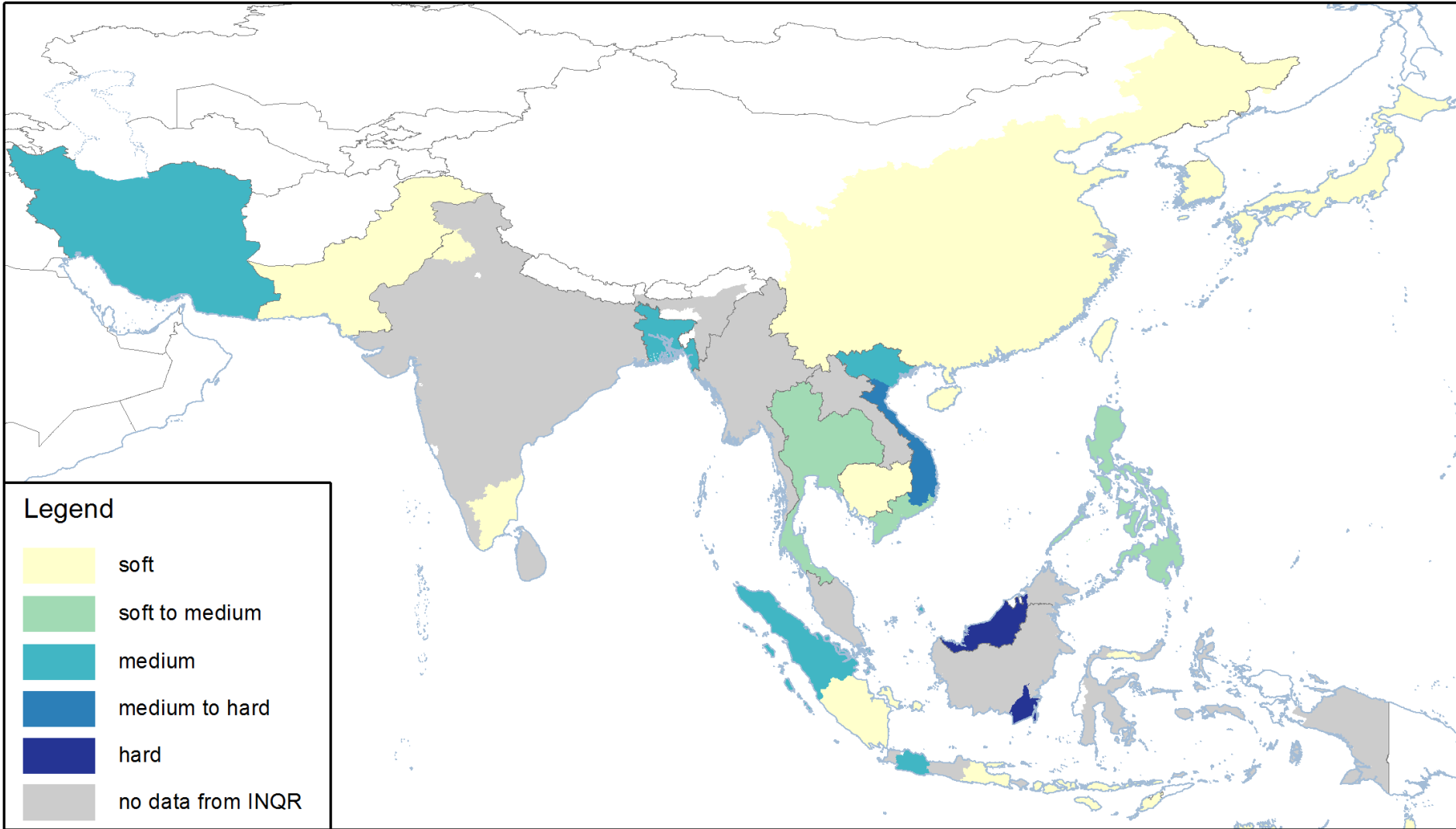
Grain length and shape of preferred rice varieties



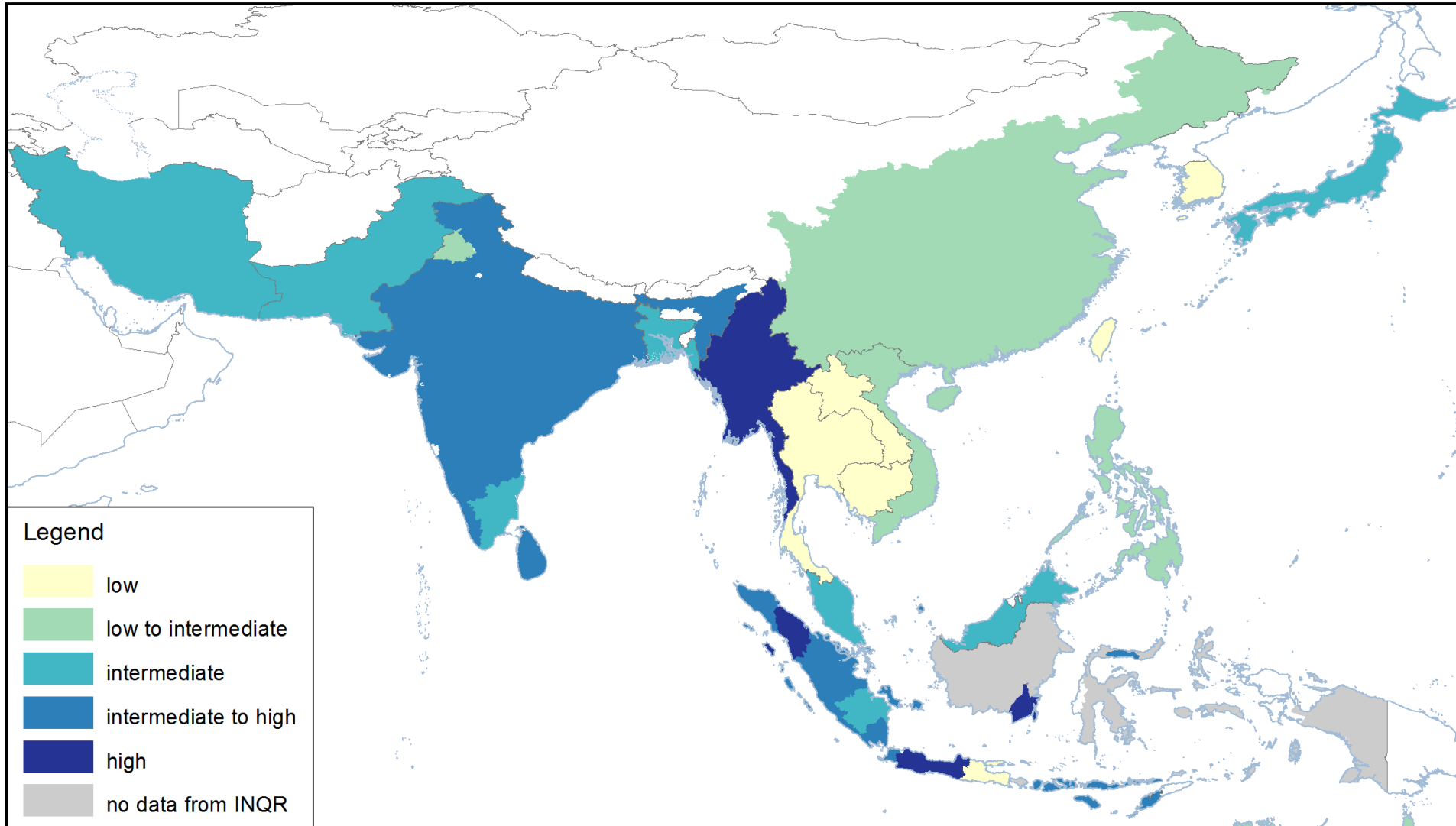
Amylose content of preferred rice varieties



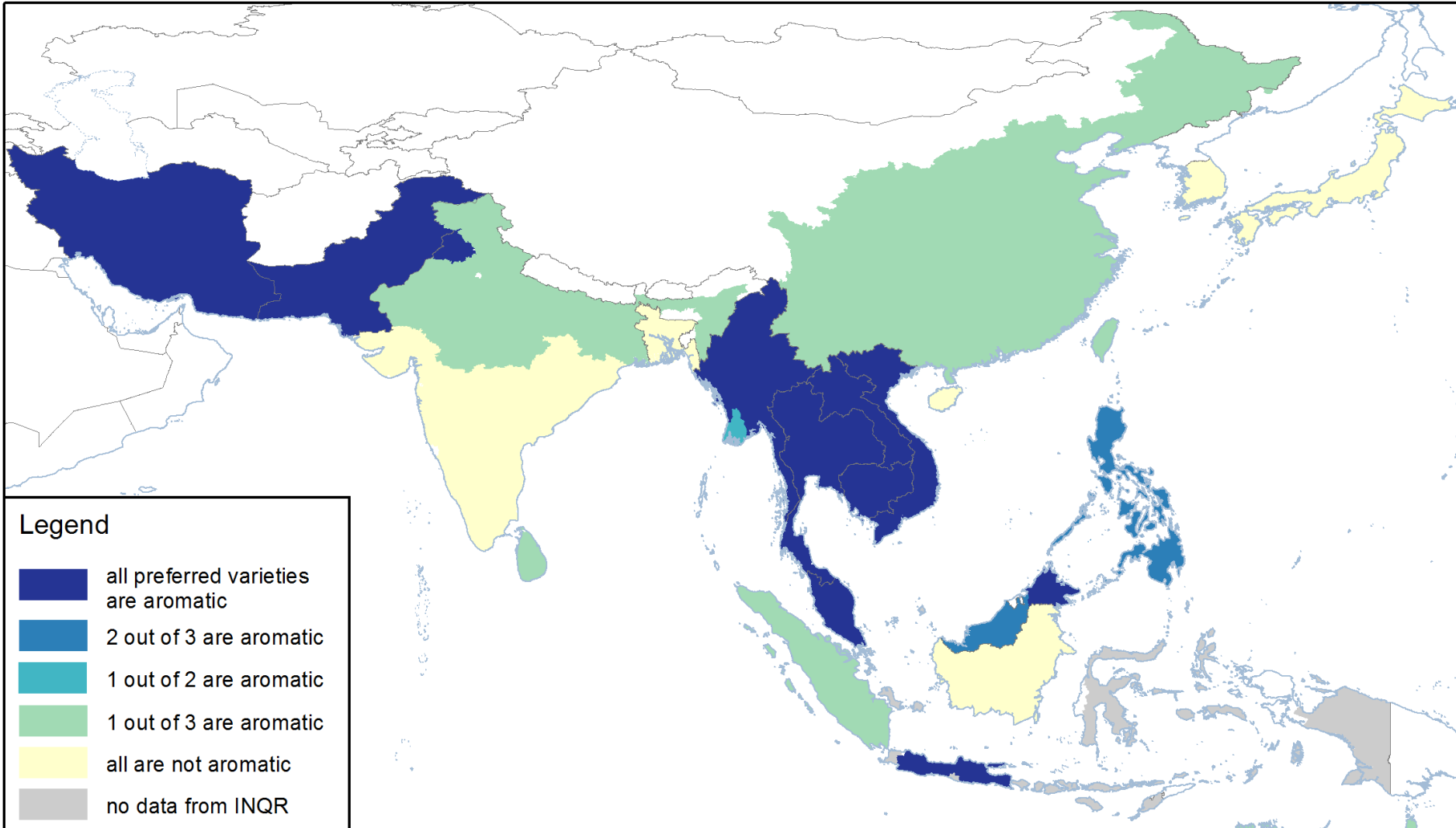
Preference for texture based on gel consistency









Gelatinization temperature of preferred varieties



Preference for aromatic rice



Legend

-  all preferred varieties are aromatic
-  2 out of 3 are aromatic
-  1 out of 2 are aromatic
-  1 out of 3 are aromatic
-  all are not aromatic
-  no data from INQR

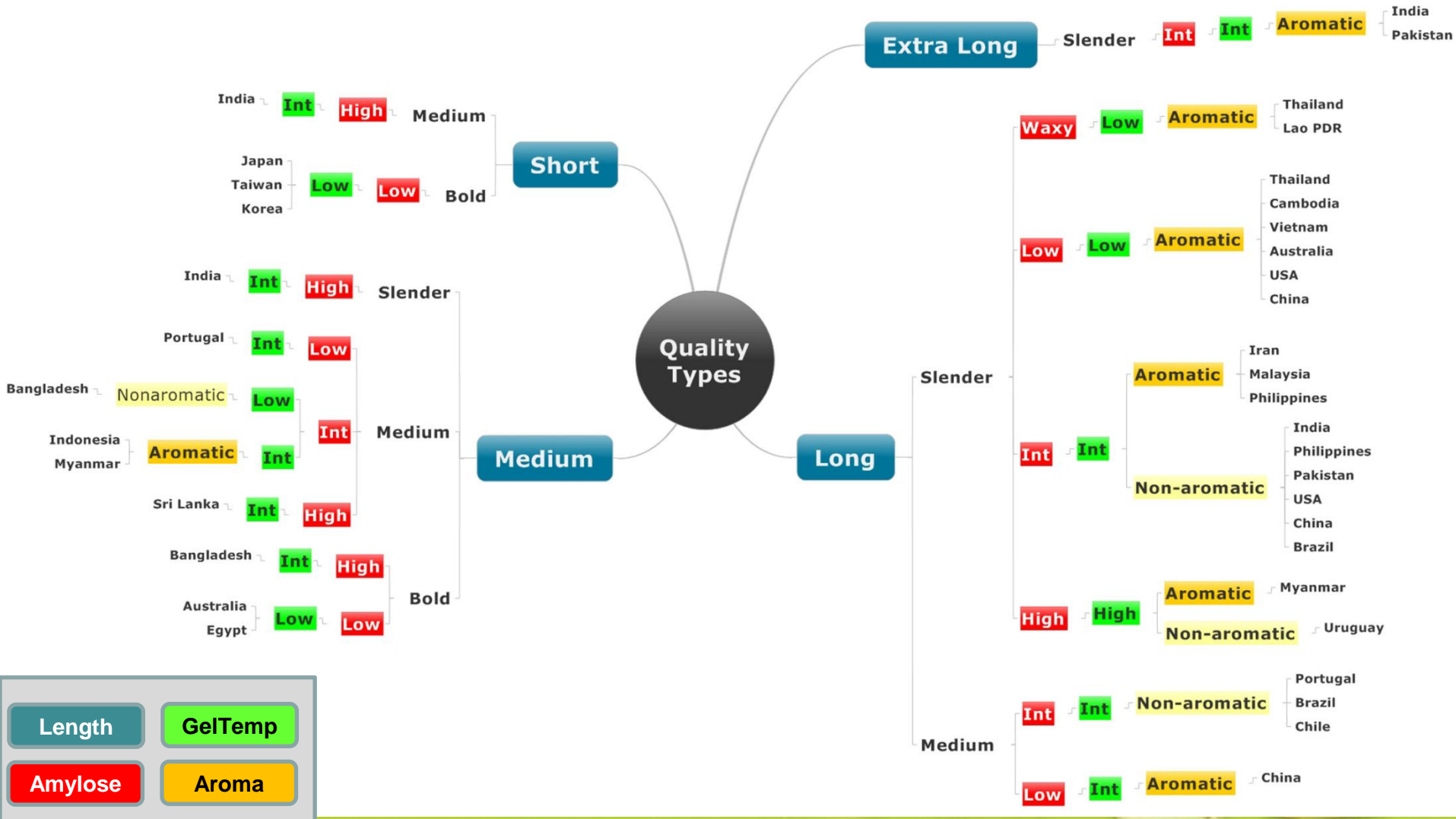


Preferred traits in other rice-growing countries

Country	Length	Shape	Amylose	Aroma	Gel Con	Gel Temp
Australia	Medium and long,	Medium	Low	1 of 3		Low and intermediate
Egypt	Medium and long,	Slender and medium	Low			
Ghana	Medium and long,	Slender	High	1 of 3	Soft and intermediate	Low and intermediate
Uganda	Medium and long	Slender and medium	Intermediate and high	1 of 3	Soft and intermediate	Intermediate to high
Senegal	Medium and long,	Slender and medium	High		Soft	Intermediate and high
Portugal	Long and medium	Slender and medium	intermediate			Intermediate and high
Suriname	Extra-long,	Slender	High			Low
Chile	Short and long,	Bold	Intermediate			Low
Colombia	Long	Slender	High			Low and intermediate
Brazil	Long		Intermediate and high		Intermediate	Intermediate and high
Uruguay	Long	Slender	Intermediate and high			Low and intermediate
USA	Medium and long	Slender and medium	Low and intermediate			Low and intermediate

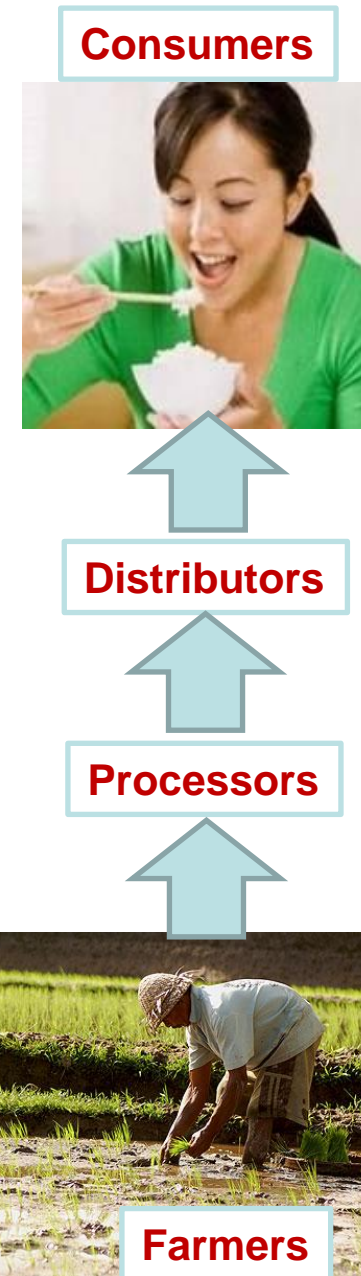


GQ combinations of most preferred varieties

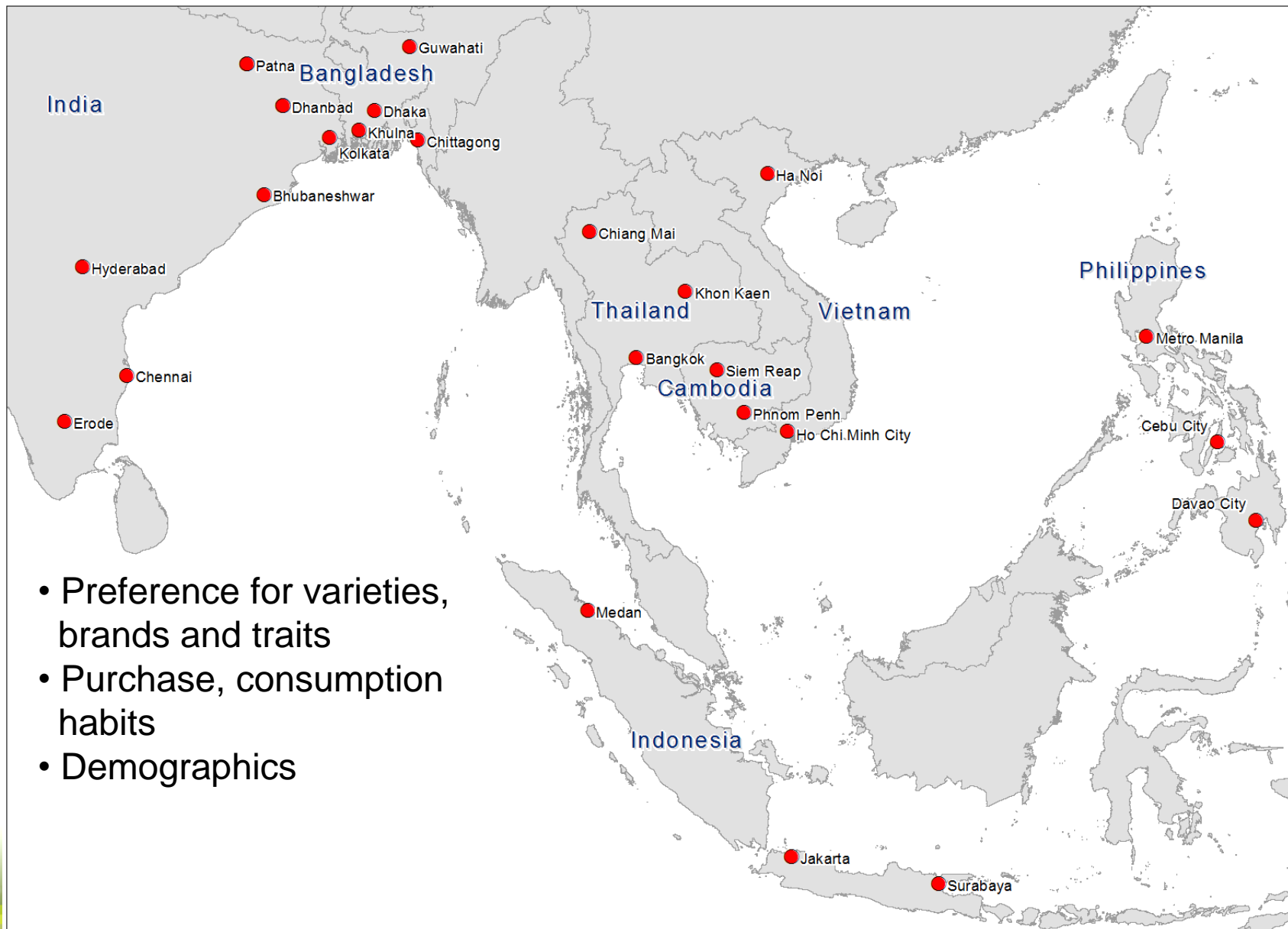


On-going & planned activities

- Surveys on consumers, focus group discussions with farmers and interviews with other rice value chain actors



Consumer surveys in 24 key cities in 7 countries in S & SE Asia



- Preference for varieties, brands and traits
- Purchase, consumption habits
- Demographics

Survey on rice value chain actors

(farmers, paddy traders, processors, wholesalers, retailers, exporters)

- Completed: Philippines, Thailand, E India, S Vietnam
- Rice preferences of producers and other actors in the rice value chain
- Supply chain constraints for varietal/technology adoption
- Needed policy measures to support efficient value chain operation



Planned activity

- Define market segments and estimate potential market size for different traits and their combinations

Example: Estimate of demand for GQ combinations

million t
milled rice

Region	Aroma	Gel consistency	Amylose content	Grain length / shape								
				bold	medium	bold	slender	no data	medium	long medium, slender	slender	extra l. slender
East Asia	non aromatic	soft	low	51.7						5.6	9.9	
			intermediate						33.9			
			no data						1.3			
South Asia	aromatic	soft	intermediate									
			intermediate to high								2.0	
			no data									
	non aromatic	soft	intermediate to high									
			intermediate						24.9			
			no data									
			low to intermediate									
		intermediate										
		intermediate to high								1.8		
		high		2.1	1.8							

Market Research Team @ IRRI

