



SECTION II
INPUTS USE ASSESSMENT

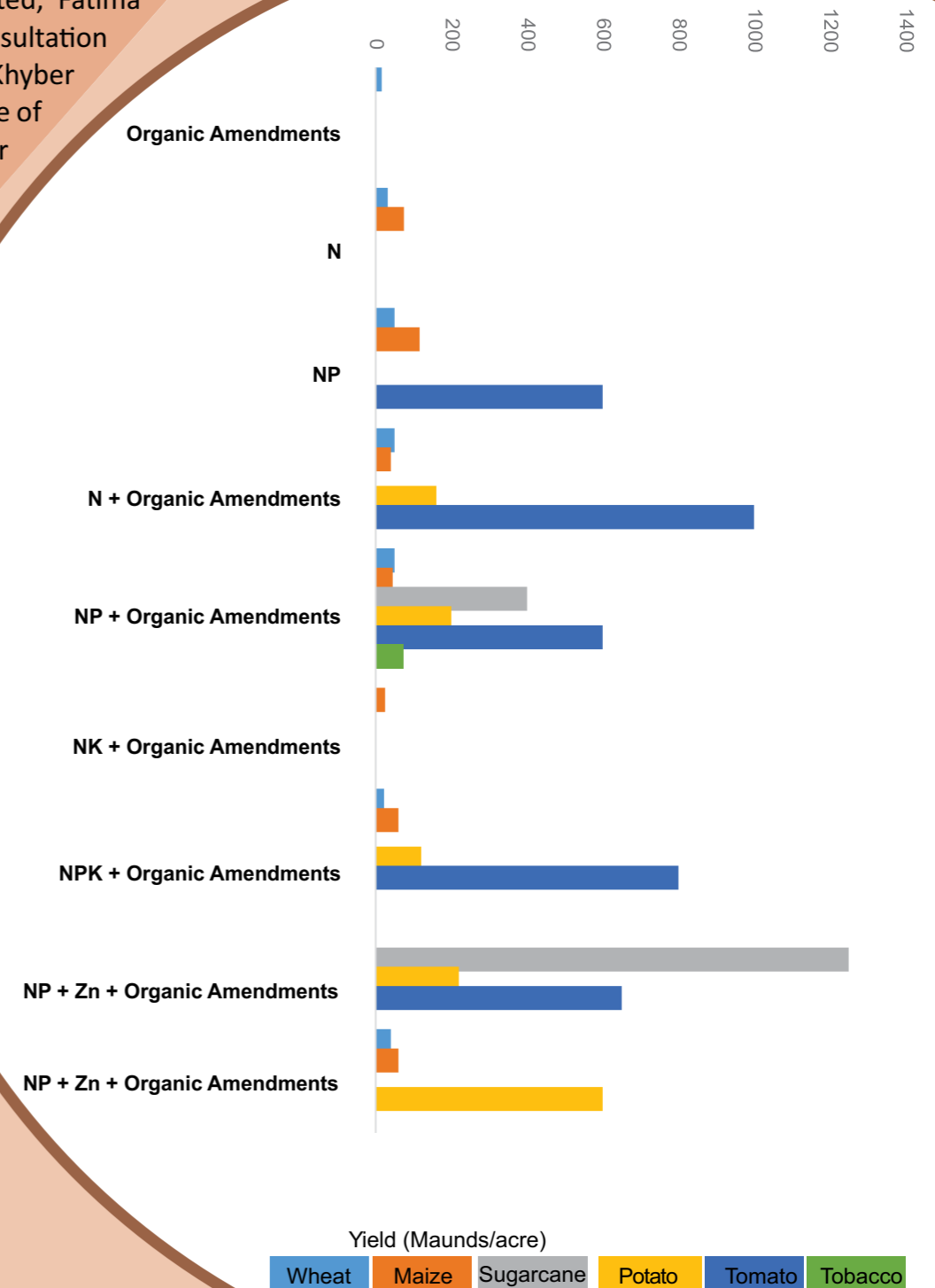
FERTILIZER USE AND CROP YIELD

To assess inputs/fertilizer use at farm level, an Inputs Use Assessment was carried out during 2018 with the involvement of the Khyber Pakhtunkhwa (KP) Agriculture Research and Extension Departments. All national fertilizer companies including Fauji Fertilizer Company Limited, Fatima Fertilizers/Pak Arab Group, and Engro Fertilizers played a vital role in conducting this assessment. A questionnaire was developed in consultation with different stakeholders and farmers' interviews were conducted in twenty-five districts across three Crop Production Zones (CPZs) in Khyber Pakhtunkhwa. Overall, >1500 farmers were interviewed in three CPZs of KP. The information through this assessment pertains to the use of various fertilizers, yield of major crops, major soil constraints hampering productivity, and numbers of farmers availing soil and water testing facility in each CPZ of KP. The validation of such trends in each district/CPZ was based on field surveys, follow up interviews, and interaction with the farmers during commodity based workshops and discussions with public and private sector experts/individuals. The data collected through this Inputs Use Assessment is used to prepare fertilizer use maps and/or infographs for major crops across CPZs. The trends of average crop(s) yield under different fertilizer use scenarios obtained by the interviewed farmers are described. The use of potassium (K) and/or micronutrients and organic sources of nutrients in appropriate combination(s) along with N and P is recommended for achieving optimal crop productivity under the prevailing agro-climatic conditions in KP.

KEY INDICATORS

- Major crops grown by Farmers
- Yield of major crops
- Farm Size
- Crop-wise use of fertilizers (Inorganic/chemical fertilizers)
 - Crop-wise use of Urea
 - Crop-wise use of Di-ammonium Phosphate (DAP)
 - Crop-wise use of Sulphate of Potash (SOP) and Muriate of Potash (MOP)
 - Crop-wise use of organic source of nutrients/FYM
 - Farmers availing soil and water test facilities

Laboratory Analysis	Percent Farmers
▪ Soil Test	20%
▪ Water Test	8%
Major Problems	
Soil Water Constraints	>71%
▪ Water Scarcity	> 67%
▪ Salinity	7%
▪ Sodcity	8%
Non Soil Water Constraints	>73%
▪ Pest/Diseases	60%
▪ Seed Quality	>68%
▪ Agri Loan	>34%
Others	
▪ Satisfied with Fertilizer Prices	7%
▪ Satisfied with Commodity Prices	10%
Use of Organic Sources	
▪ Wheat	62%
▪ Maize	38%
▪ Tomato	64%
▪ Tobacco	100%
▪ Sugarcane	100%
▪ Potato	90%
▪ OtherCrops	43%



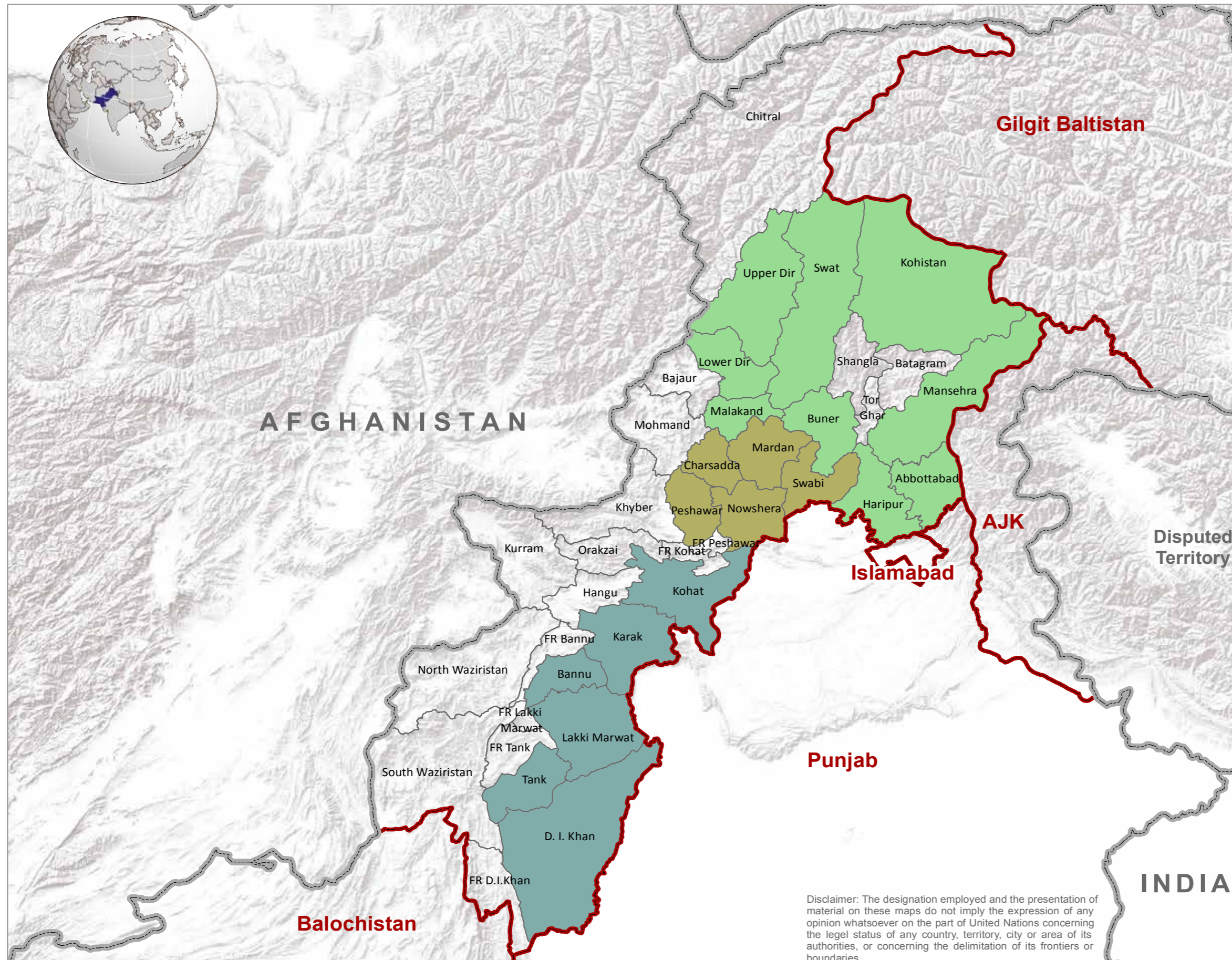
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MAJOR CROP PRODUCTION ZONES IN KHYBER PAKHTUNKHWA



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Map Legend

Administrative limits

- International boundary
- Provincial boundary
- District boundary

Major crop production zones

- North zone
- South zone
- Central zone
- No significant data

About Map

The map shows 3 cropping zones in the province.

Date: 12 Dec, 2018

Created by: IM UNIT, FAO Pakistan

Map Number: PAK_Soil_Fertility_Atlas_KP_Zones_Crop_Production_20181212_1000

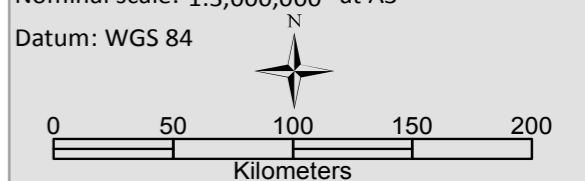
Data Sources

GAUL, Inputs Use Assessment FAO, 2018

Map Scale and Datum

Nominal scale: 1:3,000,000 at A3

Datum: WGS 84

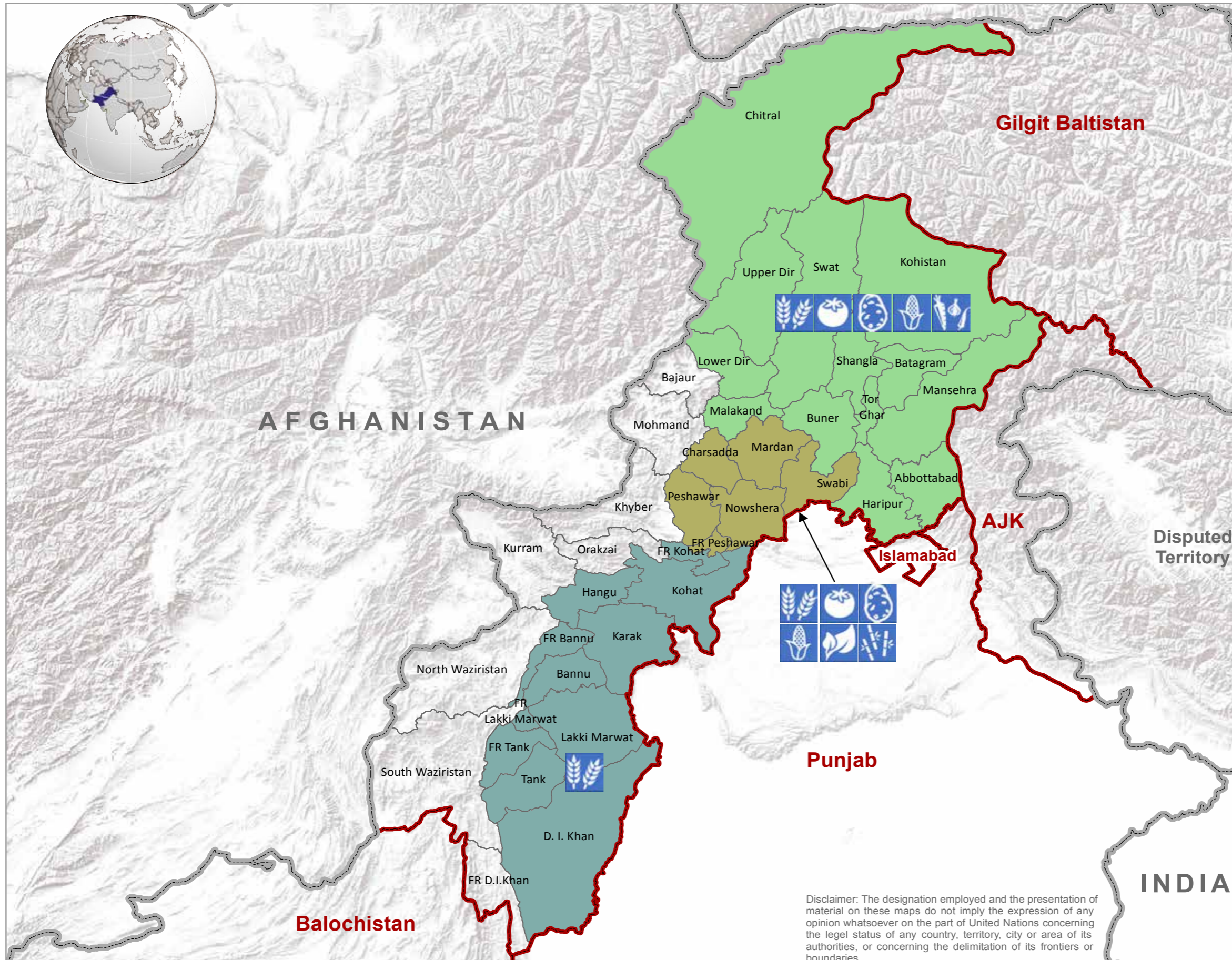
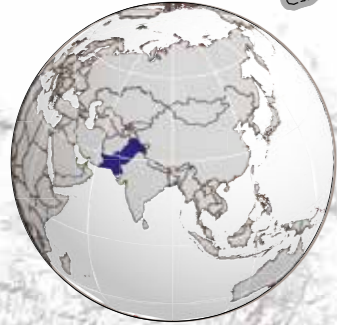


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ZONE WISE MAJOR CROPS IN KHYBER PAKHTUNKHWA



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Map Legend

Administrative limits		Zones	
	International boundary		North zone
	Provincial boundary		South zone
	District boundary		Central zone

Major crops		
	Wheat	
	Tomato	
	Potato	
	Others	

About Map

The map shows three distinct cropping zones in KP based on the diversified array of ecologies. Wheat is the common crop grown in all three cropping zones. Main crops in south zone are pulses, fodders, and groundnut. In central zone, maize, tobacco, sugarcane and orchards of peaches, citrus and plum are economically important crops. Nonetheless, there is a lesser tendency to grow vegetables. On the other hand, commonly cultivated crops in the north zone are vegetables. For a simpler presentation of a zone, adjacent districts are clubbed sharing boundaries and agro-ecological conditions.

Date: 20 Dec, 2018

Created by: IM UNIT, FAO Pakistan

Map Number: PAK_Soil_Fertility_Atlas_KP_Zonewise_Major_Crops_20181212_1000

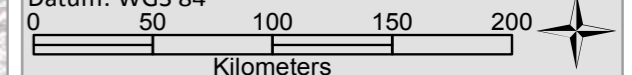
Data Sources

GAUL, Inputs Use Assessment FAO, 2018

Map Scale and Datum

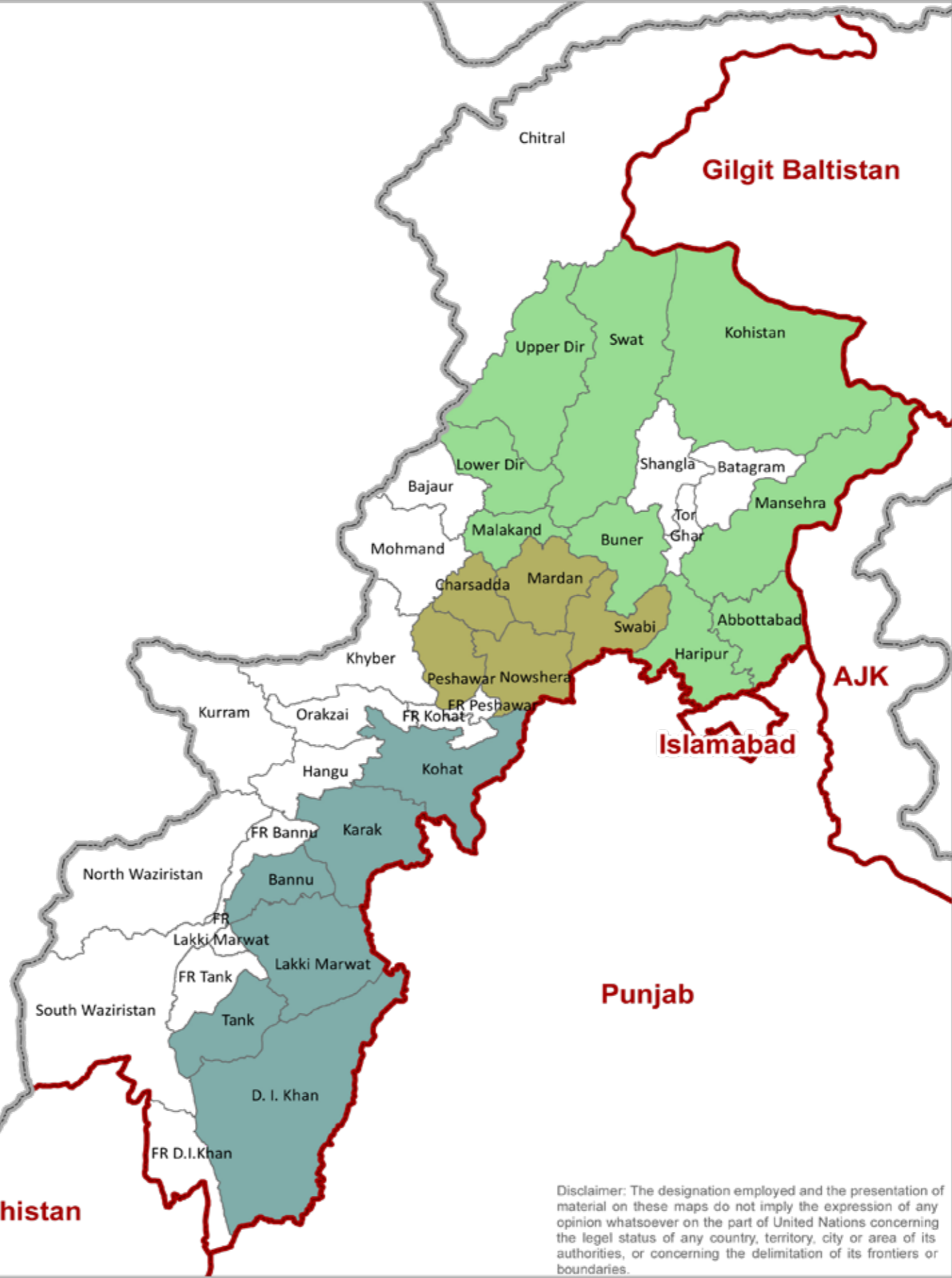
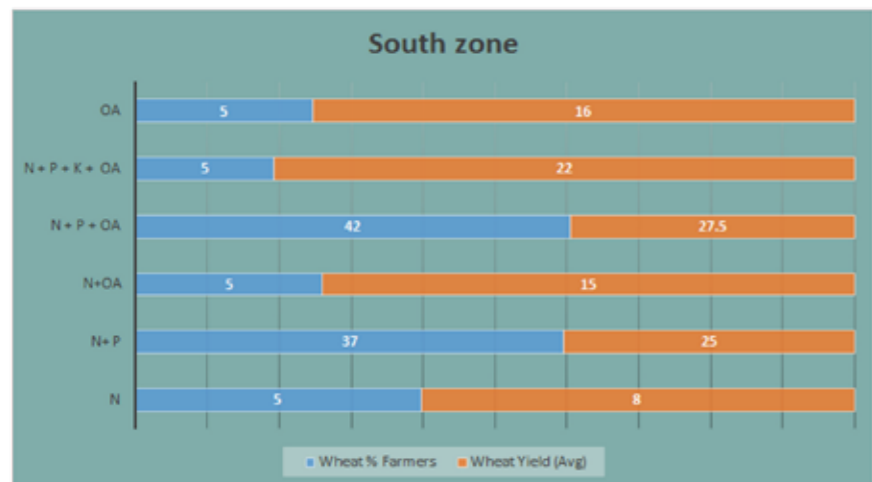
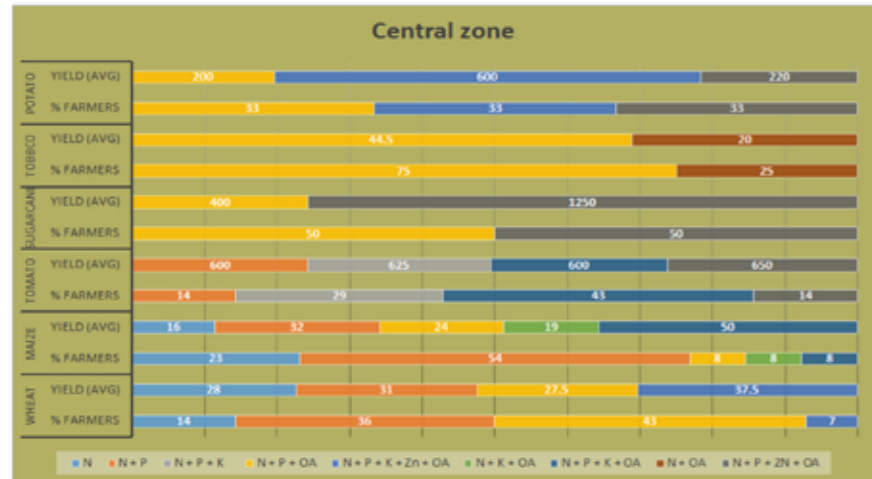
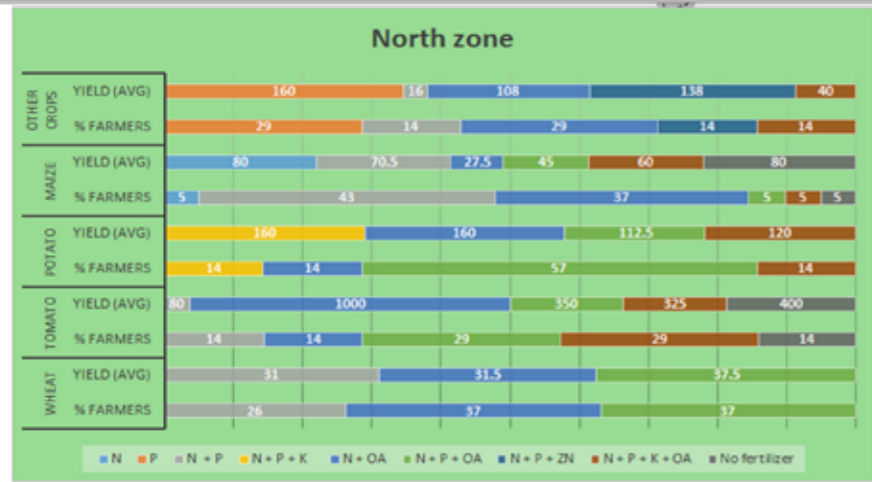
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Datum: WGS 84



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MAJOR NUTRIENTS USE SCENARIO AND CROP YIELDS



Map Legend

Administrative limits

- International boundary
- Provincial boundary
- District boundary

Major crop production zones and crops

- North zone
- South zone
- Central zone
- No significant data

About Map

Date: 12 Dec, 2018
 Created by: IM UNIT, FAO Pakistan
 Map Number: PAK_Soil_Fertility_Atlas_KP_Major_Nutrient_20181212_1000

Data Sources

GAUL, Inputs Use Assessment FAO, 2018

Map Scale and Datum

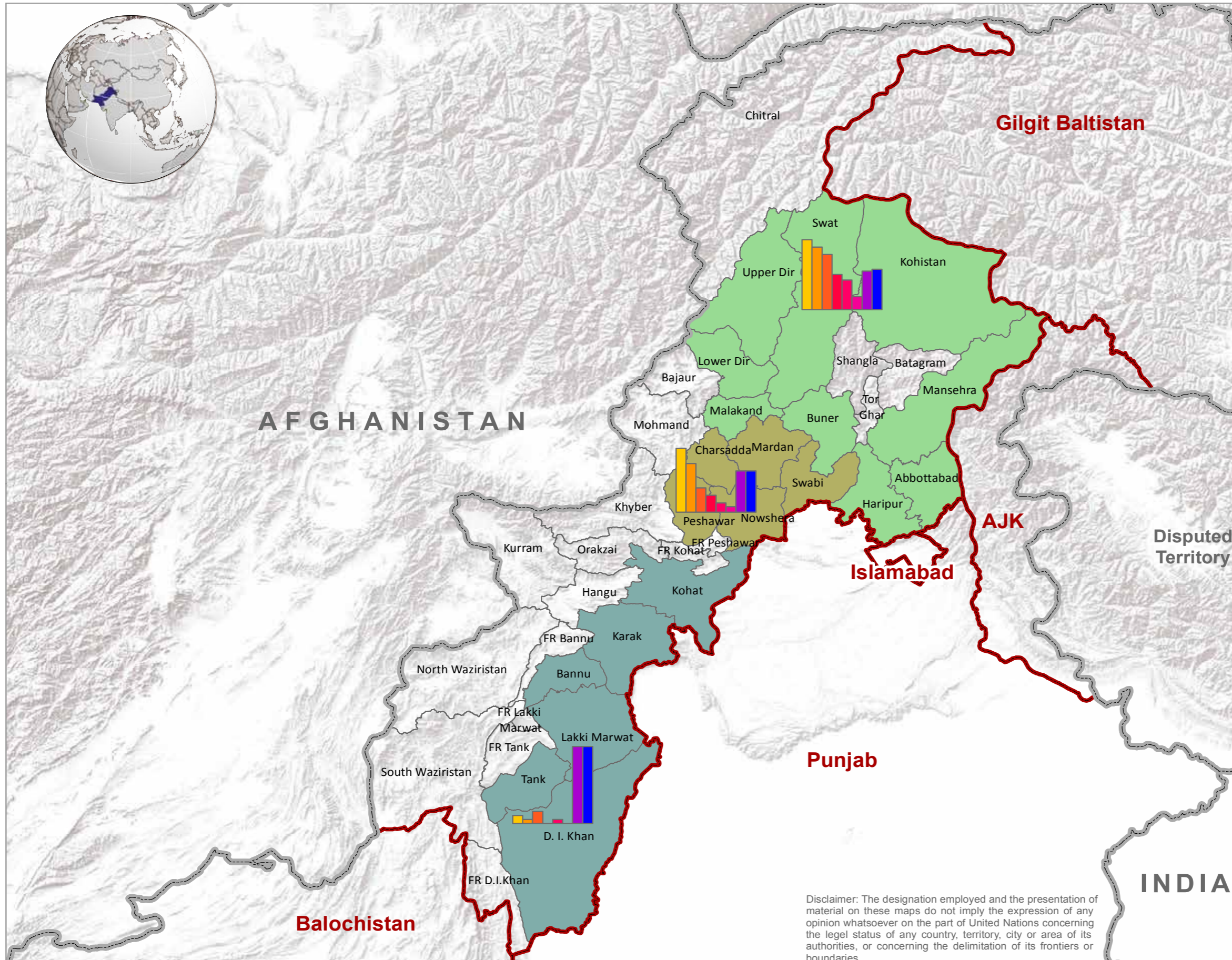
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MAJOR NON SOIL AND WATER RELATED CONSTRAINTS IN KHYBER PAKHTUNKHWA



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Map Legend

Administrative limits

- International boundary
- Provincial boundary
- District boundary

Constraints

- Non Soil Water
- Related Constraints
- Pest/Disease
- Seed Quality
- Agri Loan
- Satisfied with Fertilizer Price
- Satisfied with Commodity Price
- AES Consultation
- AES Accessibility

Zones

- North zone
- South zone
- Central zone
- No significant data

About Map

The map shows 3 cropping zones in the province.

Date: 12 Dec, 2018

Created by: IM UNIT, FAO Pakistan

Map Number: PAK_Soil_Fertility_Atlas_KP_Zones_Crop_Production_20181212_1000

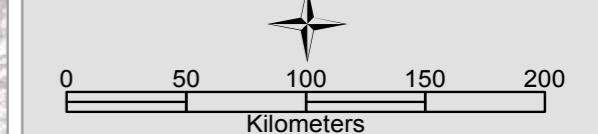
Data Sources

GAUL, Inputs Use Assessment FAO, 2018

Map Scale and Datum

Nominal scale: 1:3,000,000 at A3

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