

# Achieving Food Security in the Mountains of Pakistan: Towards a Strategic Framework

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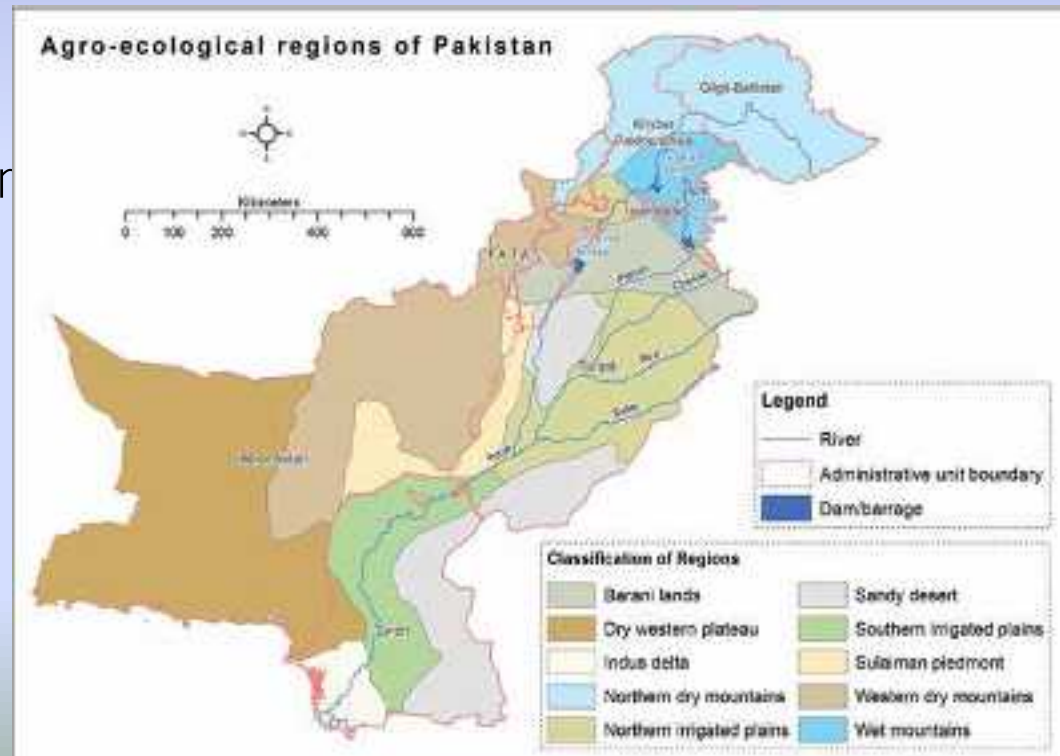
# Background

Five of eight administrative units are mainly mountainous

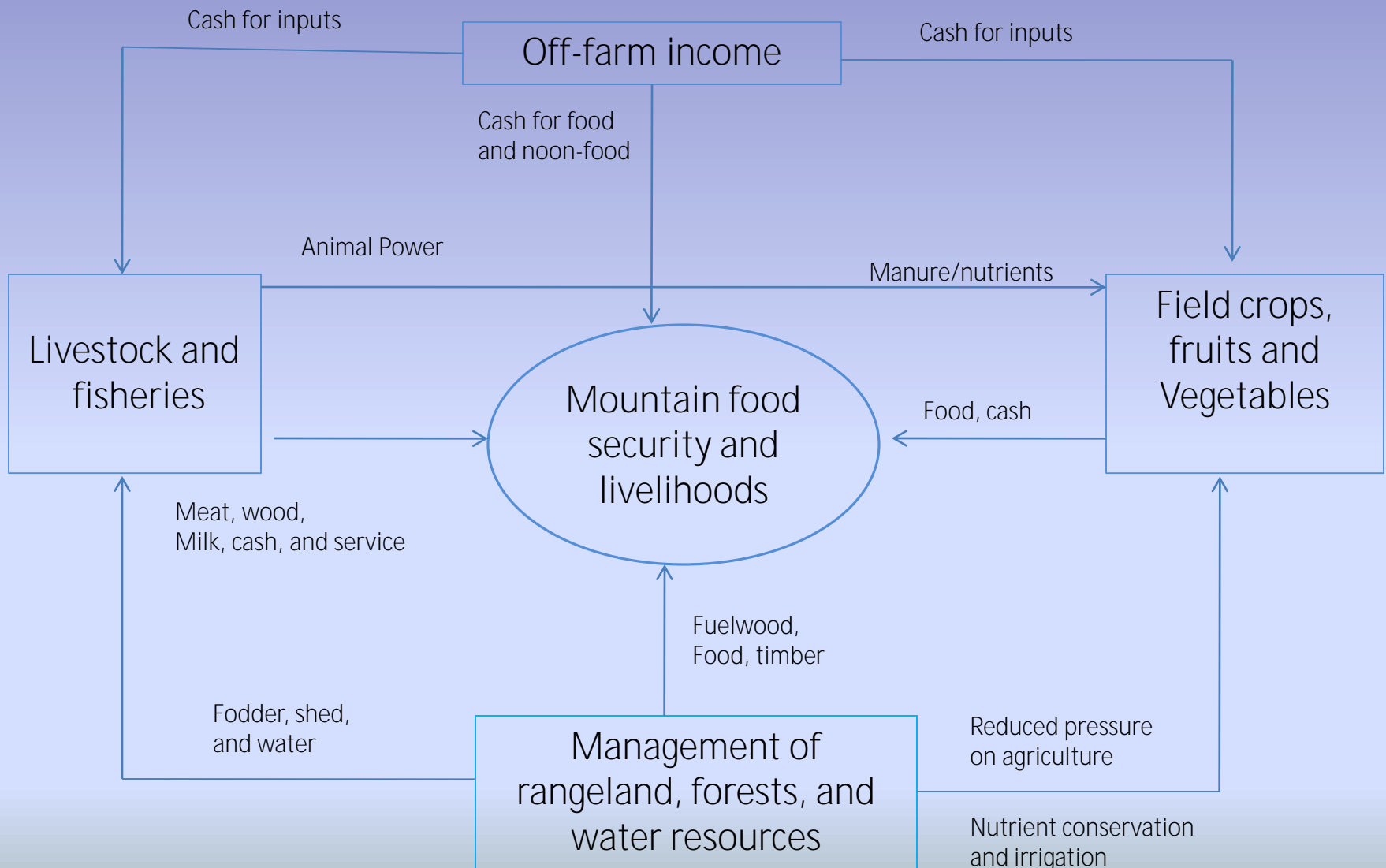
- Baluchistan,
- FATA
- KP
- AJK
- Gilgit Baltistan (GB)

Pakistan's Mountainous areas

- Rich in natural resources (water forests, pasture, minerals)



# Sources of Mountain Food and Livelihood Security



# Food security Situation in Mountainous Area

- Overall Pakistan ---- self-sufficient in food dietary energy availability
- There is regional variation due to
  - Topographic situations
  - Socioeconomic conditions
  - Physical conditions
- Depletion of the natural resource base across the Hindu Kush Himalayan (HKH)
- Loss of ecosystem service (Soil nutrients, water and biomass) ---
  - Decline in food productivity
  - Increased vulnerability
  - Climate change is adding new challenges
- Mountain areas have higher levels of both poverty and food insecurity
  - More than half population in mountain Administrative Units is food insecure, except AJK.
  - Nineteen of the 20 most food insecure district in Pakistan are in mountains.
  - Deficient in production of cereals and pulses (50-60% of the average calorie intake)

# Food security in the mountains and plains of Pakistan

Administrative Units		Local food production		Food accessibility Index	Food insecure population	Food insecurity index
		Net food availability (kcal/day/capita)	Food deficit/ Surplus			
Mountains	Balochistan	1779	-24	1.7	61.2	4.5
	FATA	496	-79	0.1	67.7	0.3
	KPK	1677	-29	2.7	56.2	5.3
	AJK	540	-77	0.8	46.9	2.2
	GB	1280	-46	0.6	52.4	1.0
Plains	Punjab	3022	+29	3.4	38.5	8.7
	Sindh	2563	+9	3.0	44.3	7.1
Pakistan total		2562	+9	-	48.6	-

# Food Insecurity Issues in Mountains

- Lack of institutional support to intensify HVA
- Under develop input and service market
- Low level of local capacity to promote and adopt technologies
- Poor market and value addition infrastructure --- high post harvest losses
- Biophysical and socioeconomic constraints limit exploitation of potential
- Accelerated deforestation; soil erosion,
- Desertification; loss of biological diversity
- Degradation of rangelands and pastures
- Increased outmigration and decreased interest of the younger generation in farming.

# Potential and Opportunities

- Water Resources and Hydro Power Potential for Agriculture
- The northern mountains --- main sources of surface water --- Provide basis for irrigation and hydropower
- Potential for hydropower ---- 60,000 MW (11% is exploited) mostly lies in the mountainous areas
  - 41% in KPK,
  - 35% in GB,
  - 1% in AJK.
- New hydropower project Diamer Basah (in GB), Dasu (in KPK) and Bunji (in GB) will also contribute to agricultural productivity in plains also
- Potential for the production of a wide variety of fruits, nuts, off-season vegetables, seeds and medicinal plants
- Potential of mountain niche products through
- Exploiting potential by classification of mountain ranges into crop subzones
  - GB four sub zones; Double Cropping, Marginal Double Cropping, Single Cropping, Alpine Pasture
  - Baluchistan seven agro-ecological subzones in terms of cropping practices and climatic factors – fit for HVA and livestock

# Fruits and nuts

- Balochistan contributes
  - Apple (73.4%)
  - Apricot (58.2%)
  - Cherry (47.0%)
  - Grapes (88.3%)
  - Peach (33.6%)
  - Pomegranate (64.8%)
  - Plum (45.9%)
  - Almond (88.3%)
- KPK contributes
  - Fig (24.5%),
  - Louqat (42.7%)
  - Peach (53.9%)
  - Pear(81.8%)
  - Persimmon (95.7%)
  - Plum (43.8%)
  - Walnut ( 53.4%)
  - Apple (14.4%)
- FATA and GB contribute
  - Apricot (37.2%)
  - Cherry (53.0%)
  - Fig(24.5%)
  - Mulberry (77.1%)
  - Walnut (46.6%).





# Off-season vegetables and medicinal plants

- Seed potatoes and vegetable seed
- High Potential for:
  - Beans, cucumber, ladyfinger, onion, peas, spinach, and tomato
  - Medicinal and aromatic plants
  - Other high –value products including seabuckthorn, wild thyme, black cumin, chamomile, stevia, and salajeet.

## Livestock and livestock by-products

- About two-third of the mountain area - - is rangeland
- Livestock is a key source of peoples' livelihood
  - Food items --- milk, butter, and meat
  - Valueable by-products like wool, hair and hides etc.
- Highly treasured genetic pool – high adoptability with high productive performance



## Non-farm income

- Important to fill production gap through purchase/import from plains
- Forest products provide additional income opportunities
- Potential for the production of products such as embroidery, woodcarvings, shawls, blankets, carpets, baskets, gemstones, and many other

## Migration

- Remittances --- enhance income opportunities --- food access.
- Overseas migration from FATA, KPK, and AJK ---- suggesting that inflow of remittances in these AUs is substantial --- major share in livelihood
- Creation of Investment opportunities for migrants/remittances
  - Employment generation
  - Value addition and processing
  - Export

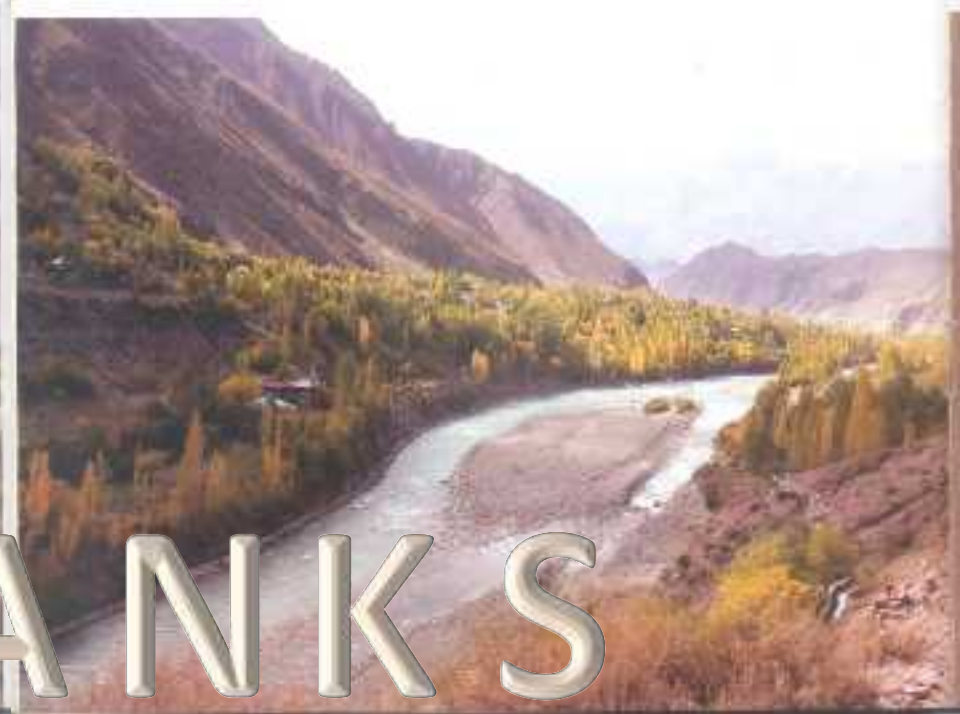
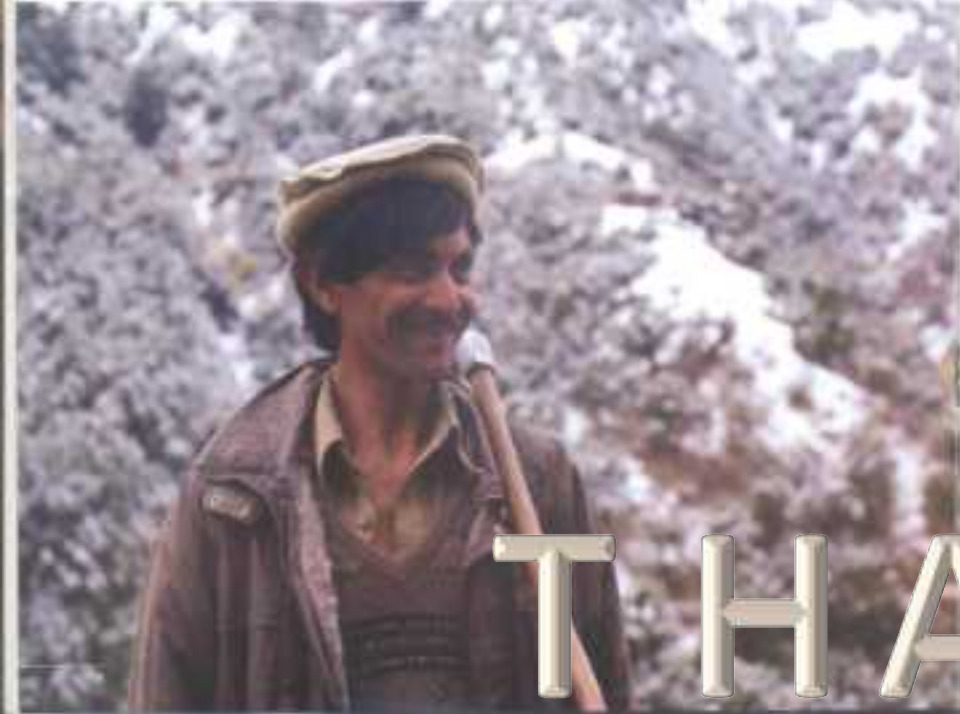
# Towards a Framework for Food Security

- A framework is needed to address the issue taking into account
  - Diversity in agroecological potential
  - Access to institutional services
    - A holistic approach
      - Coordinated, multidisciplinary, multidimensional and site specific
      - Achieve food security through livelihood security
      - Conservation, access and optimal utilization of productive resources

# Policy Framework

## Area-specific approaches based on agro-ecological potential and access to markets and services

Agro-ecological potential and suitability		Access to markets, information, and institutional services	
		Good	Poor
	High	<p>Areas with high potential and good access to markets and services</p> <p><u>Exploiting the existing potential</u> as much as possible through <u>land use</u> intensification, efficient <u>water use</u>, crop diversification, <u>commercial dairy</u> and growing of cash crops.</p>	<p>Areas with high potential but poor access to markets and services</p> <p><u>Removing the marketing constraints</u> for high value crops and <u>developing infrastructure</u> and <u>institutional support</u> for fruit processing , storage, commercial dairy farming, irrigation and land management.</p>
	Low	<p>Areas with low potential but good access to markets and services</p> <p><u>Improving the use of existing facilities</u> to <u>promote non-farm activities</u>, and providing <u>economic incentives</u> and <u>appropriate regulations</u> to promote the <u>sustainable use and management of resources</u>.</p>	<p>Areas with low potential and poor access to markets and services</p> <p>Subsistence use of resources and <u>facilitation of outmigration</u> to <u>reduce the dependence on local resources</u> and ensure food security.</p>



THANKS



# General Approaches

- Developing local food system
- Strengthening existing institution support
- Developing an organized marketing system
- Developing storage and processing facilities
- Enhancing export competitiveness
- Developing an organic certification system
- Strengthening the existing agricultural and marketing information system
- Encouraging the productive use of resources
- Managing water resources for irrigation and hydropower
- Community engagement in natural resource management
- Non- farm income opportunities for youth in mountain areas
- Reducing vulnerability of the farm resource base