





CLIMATE CHANGE IMPACT ON FOOD SECURITY IN HKH REGION OF PAKISTAN

By

Dr. Tariq Hassan

Pakistan's Mountainous Areas

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

Livelihood based on:

- **Subsistence Agriculture**

- Limited cultivated land
- Small holding
- Livestock and horticulture main sources of livelihood

- **Non-farm Activities**

- Remittances
- Small business & Wage labour,
- Tourism
- Collection of medicinal plants

Rich Natural Resources – Deficit in Food

Area	Net food Availability (kcal/day/capita)	Food Deficit	Food Insecure Population %
Balochistan	1779	-24	61.2
FATA	496	-79	67.7
KPK	1677	-29	56.2
AJK	540	-77	46.9
GB	1280	-46	52.4

Food Security Challenges

Relatively unstable and low productive Agriculture:

- ▶ Limited amount of arable land,
- ▶ Harsh climate,
- ▶ Difficult terrain, and
- ▶ Unfavourable biophysical conditions :
inaccessibility, fragility, and vulnerability

Climate Change in Pakistan

- ▶ Visible changes in hydrological cycle have been observed in the form of
 - ▶ Changing precipitation pattern
 - ▶ Droughts
 - ▶ Water availability periods
 - ▶ Frequency and intensity of heat waves
 - ▶ Precipitation events
 - ▶ Weather-induced natural disasters.

Climate Change in Pakistan

- ▶ Average annual temperature over Pakistan increased by 0.6 °C during the last century, with the temperature increase over northern Pakistan being higher than over southern Pakistan (0.8 °C versus 0.5 °C)

Climate Change Impact

- Most affected are water resources
- ▶ Sudden mudslides and rock falls which frequently block roads and irrigation Channels
- ▶ Increased the risk of drought and floods due to increase in mean temperature
- ▶ The changing weather pattern has changed cropping pattern, crop diseases, nutritional value and yield of crops

Hence Agriculture is further stressed

Migration Facts

- ▶ Migrant HH Views (82% had no other option)
- ▶ Migration Destination (96.8% Internal)
- ▶ Migration By Gender (94% Male)
- ▶ Migrant Occupation (70% tertiary, 25% Secondary, 5% Primary)
- ▶ Migrants Earning (93% > than origin of migrant)
- ▶ Satisfaction of Migrant Households (73% satisfied)
- ▶ Spending of Remittances (70% within own communities)

Determinants of Migration and their Importance

- ▶ Economic (Very Important)
- ▶ Environmental (Fairly Important)
- ▶ Social (Less Important)
- ▶ Political (Not Important)



Thanks