

## **FARMER EXPERIENCES AND THEIR PERCEPTION ABOUT THE CLIMATE CHANGE IN BAJAUR AND MOHMAND AGENCIES OF FATA**

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### **Abstract**

Field survey of Bajaur and Mohmand Agencies was conducted to document the farmers' perception about the climatic changes and its impact on crop, livestock, soil and water resources as well as their awareness. Both these agencies are mostly hilly, rainfed with subsistence farming system and fragile security. Focus group discussions (FGD) method was adopted by inviting farmers (40- 70 age group) of three different UCs in each agency. A well-structured Questionnaire Proforma was prepared asking information about farmers' perception about changes in temperature, rainfall over time and space, distribution of rain fall and shifting in seasons over the last 20 years. In addition to it, the farming community provided information about the cropping pattern/sequences, yield, and use of production technologies as well as keeping of animals and the preferences for animals. Information about the land holding, water availability as well as changes in surface and ground water supplies over time were also recorded. An effort was made to get the information about the aforesaid parameters in quantitative terms. The results showed that there is significant change in cropping pattern. Some of the crops have been eliminated or are grown on limited area due to economic reasons. The major crops still are wheat (82 % and 75 % area in Bajaur and Mohmand respectively) and maize (55 % and 50 % area in Bajaur and Mohmand respectively) in both agencies. Opium has been eliminated completely in both agencies. While some of the land that was fallow earlier has become available for cropping because of availability of irrigation water especially in Bajaur agency. Vegetables cultivation and production in terms of acreage and per unit area yield increased significantly due to good seed, use of fertilizers and of course improvement in irrigation water supply. Cows and goats are preferred because of better breeds and enhanced production (milk in case of cows and number of animals in case of goat as it gives birth to 2 to 3 off springs). Increase in number of animals or their preferences and improved crop yield were not ascribed to climate change rather was correlated with improved production technologies that in fact is adaptation strategy. All the respondents agreed that they have noticed changes in temperature, shifting of seasons, variability in rainfall distribution and intensity over time and space. Summer is prolonged (6.25 months) and winter is getting shorter (only 3 months) while spring and autumn have shrunk (about 1.5 and 1.25 months respectively) significantly or in some cases disappeared altogether. The monsoon rains are received about 1 month later while winter rains are received by about 2 to 3 months late compared to the past. The temperature of the three seasons (Winter, Spring and Autumn by 30, 20 and 8% increase in temperature respectively ) increased while the temperature in Summer was felt decreasing (by about 10 %) in both agencies. Water table depth is going down (by about 20 to 30 feet) in both study areas. Land holding is decreasing because of land fragmentation/division among heirs.