

## Statement of Research

Water management is a big challenge for our country as this water is going out of our boundaries so we have to build capacities to manage these resources and now our government is also commitment to manage and store water by planning and construction of small and big dam projects, rehabilitation of existing canals and construction and lining of canals to reduce water losses in different parts of country.

As we know water is the basic need of our life used for drinking, cooking, irrigation, hydropower generation, and is needed in huge quantity for the industries like steel, chemicals cement, fertilizers, petrochemicals, electricity, paper, food etc. for the following reasons: Cooling, generation of power, cleaning purpose, fire protection, air conditioning.

Afghanistan is one of the countries which is surrounded by mountains and don't has access to sea waters. The water and energy becomes a big concern for our country however Afghanistan is a richest country in the region in terms of water resources but so far effective management and use of these resources for development of economy is not done. As we know globally around 20% of energy is produced by hydropower which is a sustainable way for generation of power the capacity of water resources is estimated to be 75 billion cubic meters of which 55 billion cubic meter is surface water and remaining is groundwater, studies shows that the amount of surface flow in different rivers of Afghanistan decreased from 65 to 40% of annual flow due to climate change, the climate is arid to semi-arid which makes more sensitive to water losses due to high evaporation.

70% of the population has no access to electricity and annual consumption is 100 KWH of which 18.21% of electricity is generated by hydropower and remaining 80.98% is imported from Uzbekistan, Tajikistan, Turkmenistan also around 80% of population is busy with the agriculture so in this time it is needed for proper management of these water resources in agriculture and hydropower generation as the both has direct impact on country's economy.

The solution for this problem is to make policies and take action for the management of water resource (surface and groundwater) , proper modeling and understanding of five major basins of country ( Kabul, panj amu, shamal, harirod, helmand), feasibility studies for small and big dam projects and funding.

