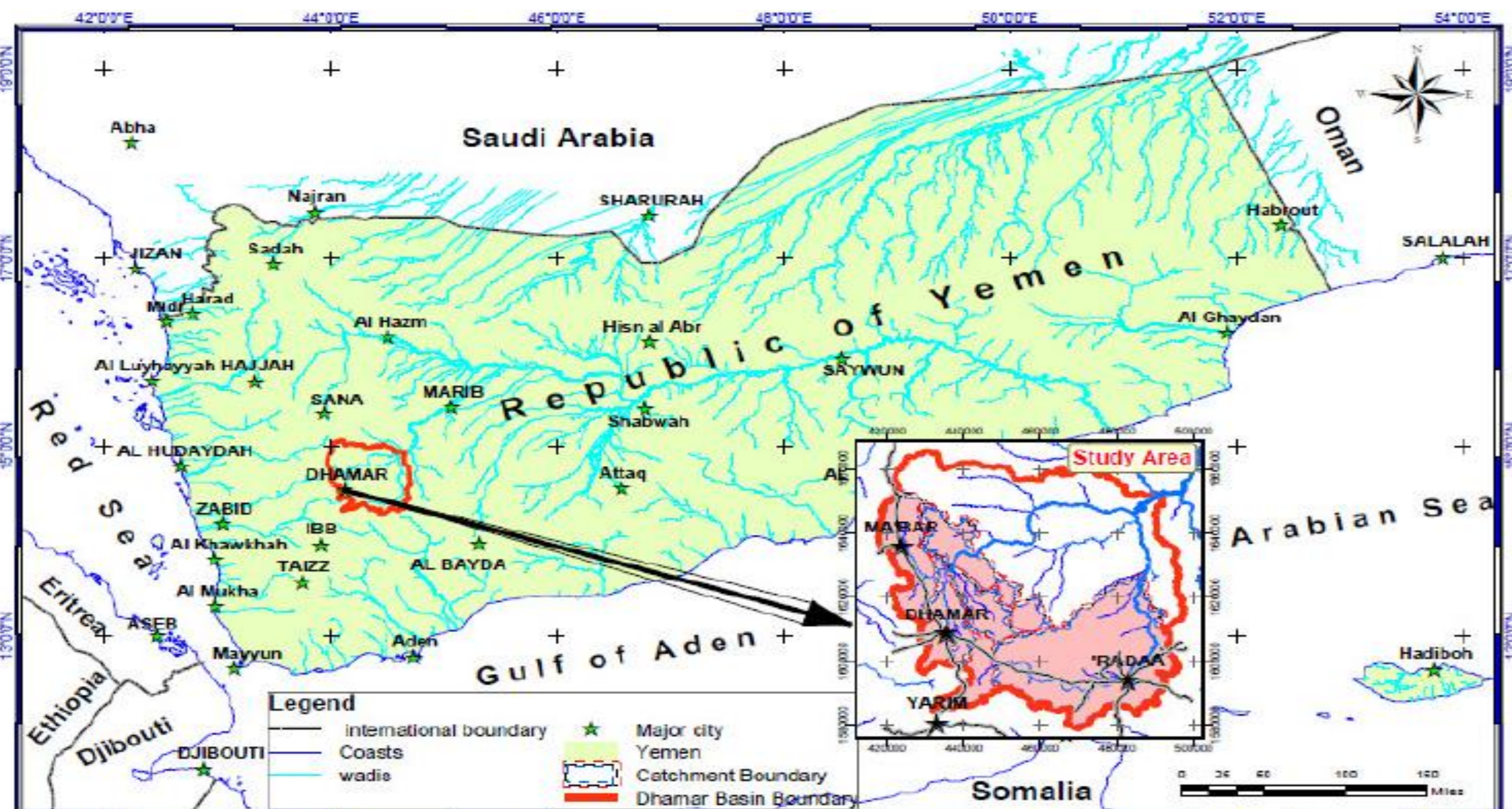


Assessing the influence of climate change on cereal crop production

Case study: Dhamar area
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Problem statement

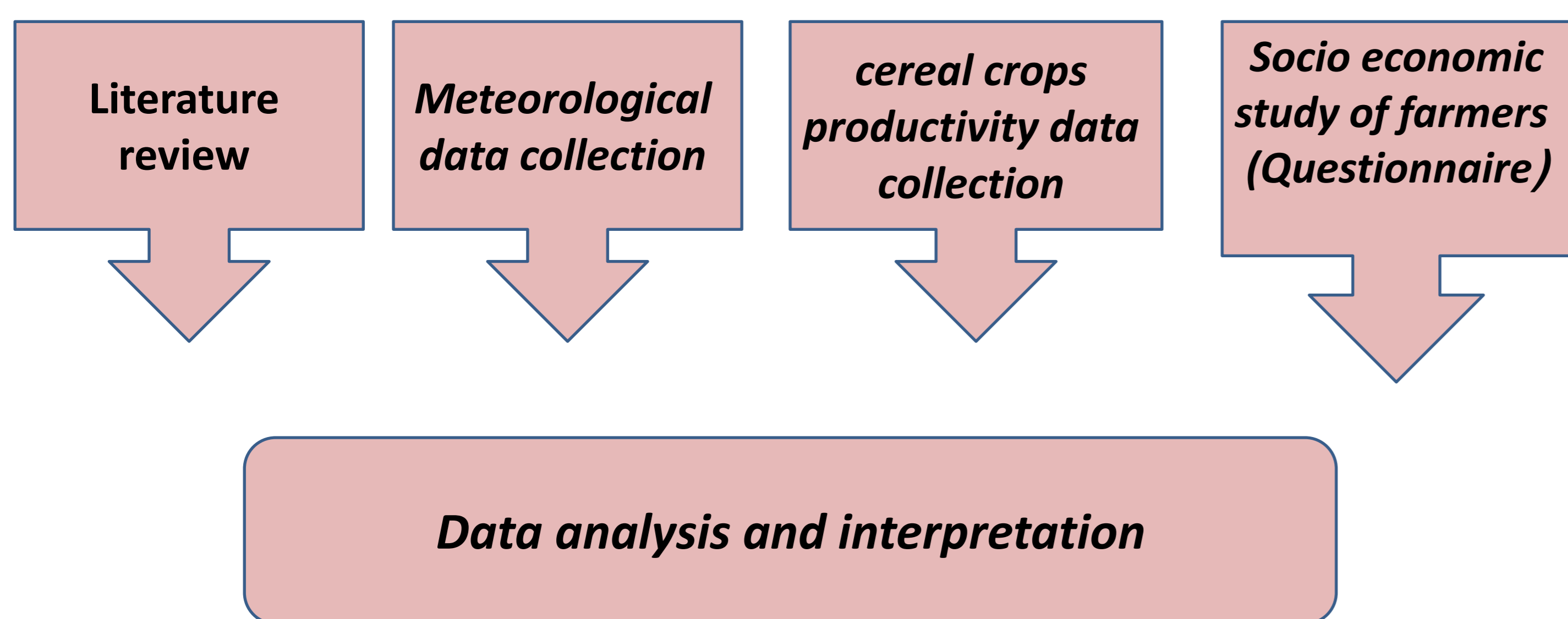
- Yemen is particularly vulnerable to climate change and a variability of impacts because of its current high levels of water stress.
- Agriculture is the main Pillar in Yemen's Economy, hence making it adaptive to any potential climate variability is important.
- There are some observations amongst climate change models that the rainfall is becoming more erratic in occurrence and amount as a result crop production planning becomes more important.
- Models has mentioned that the temperature by 2050 will be raised to more than 2°C, so researches about its effects on agriculture must be done.



Objective

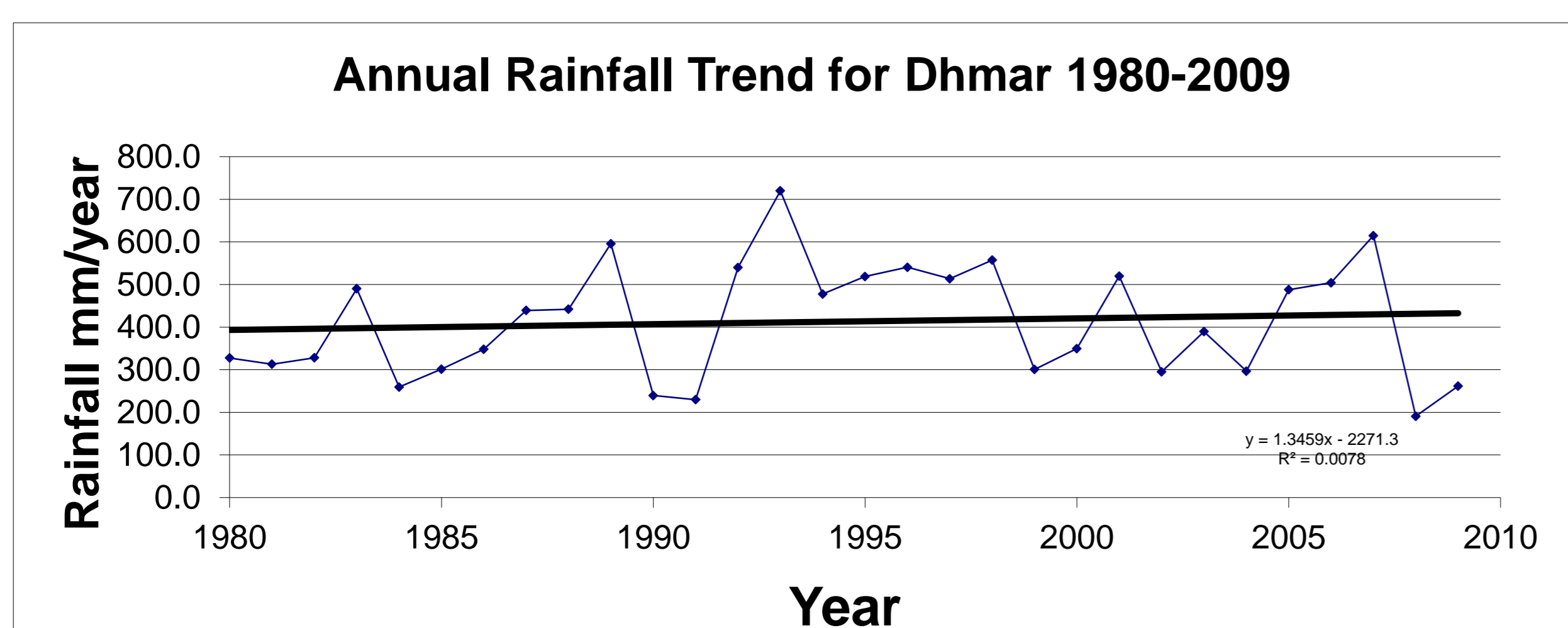
Determine the potential impacts of climate change on field cereal crops and yield and to recognize suitable adaptation methods which could be applied in Dhamar and similar areas.

Methods

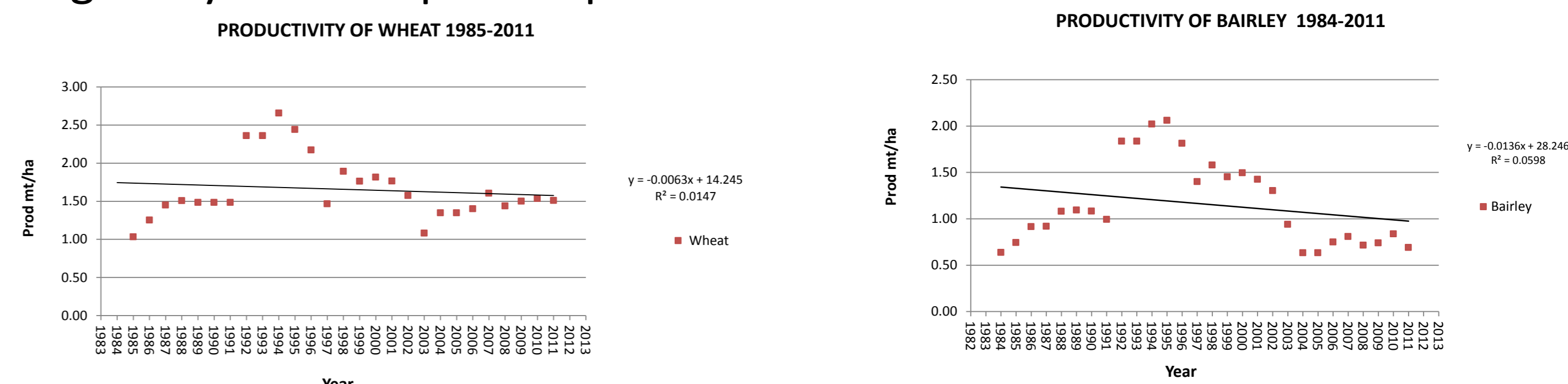


Results and Conclusions

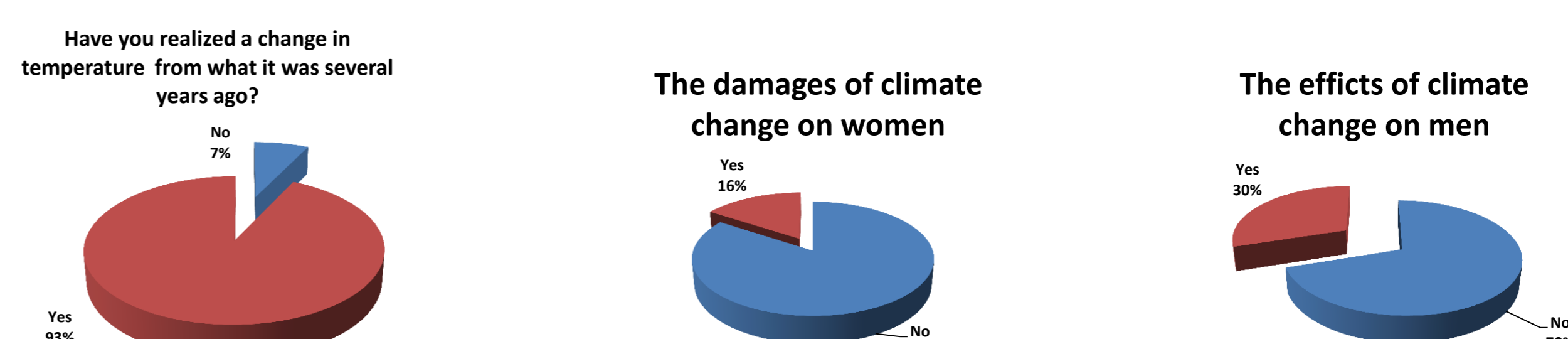
- The annual rainfall trend line shows a weak increasing trend in the total analyzed period, although changes are different for each month (The direction of change is fluctuated)



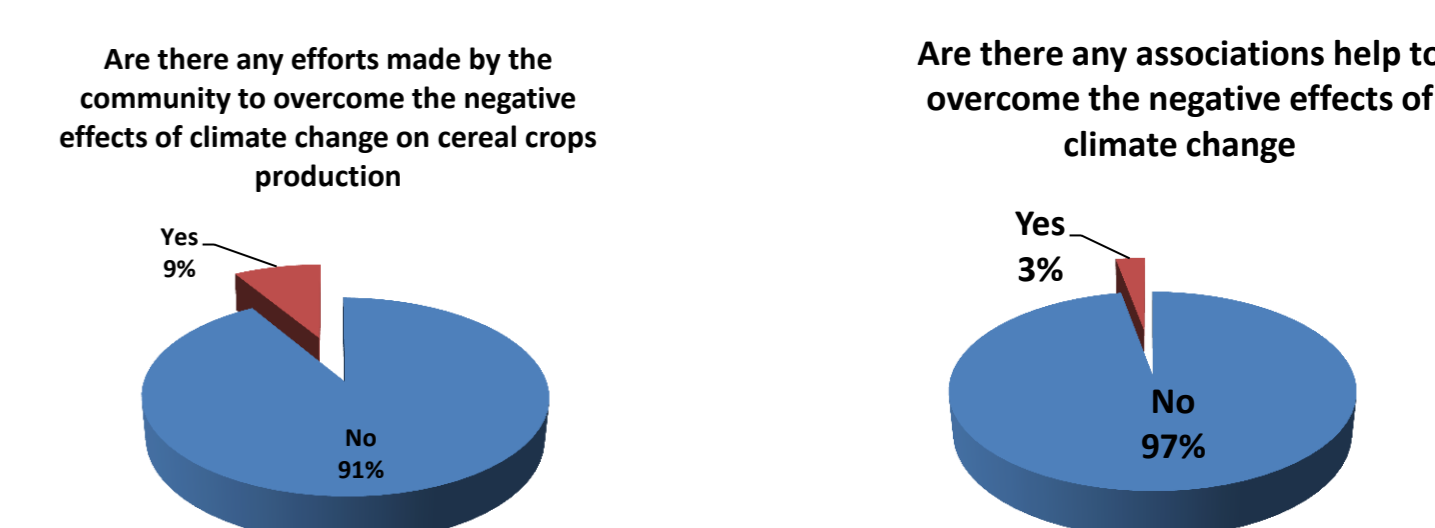
- It appears that the effects of climate change on crop production in Dhamar varies from crop to crop as example crop yield for wheat reduced slightly and for barley reduced with high amounts which refer that effect of climate change vary from crop to crop



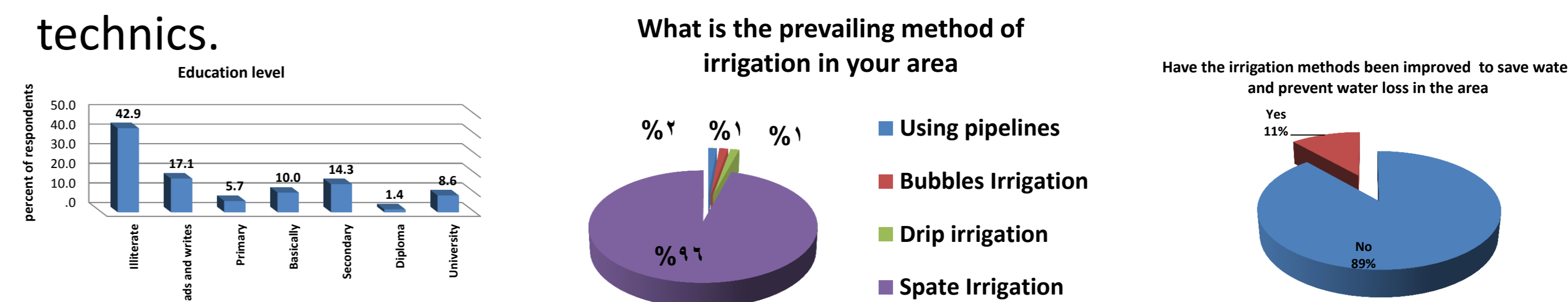
- The result of assessment proved that there is weakness in farmers awareness regarding the effects of climate change on agriculture activities although majority of farmers observed the increasing of temperature and rainfall variability from their long term observation.



- The research study proved that the local community of Dhamar has no enough awareness on action plans that could be applied to overcome the negative effects of climate change on agricultural activities to release adaptation of the community within the changes occurred in climate.



- There are obstacles face transferring of modern agricultural technics to Dhamar farmers. As most of farmers are at low education level and have doubt on effectiveness of modern agricultural technics, most of them are afraid to transfer their agricultural process from traditional to modern technics.



Recommendations

- Increase farmers awareness on importance of modern agricultural technics on reducing of groundwater (as green houses, drip irrigation, fertigation and plastic mulching).
- Transfer all diesel subsidy to subsidize modern agricultural techniques and make it available for simple farmers to own it.
- Improve agricultural processes as using of improved seeds which has less sensitivity to water stress and provide high yield quantity and quality.
- Improve traditional water harvesting technics to be adopted with effects of climate change (flood and drought) such as storage dams, diversion dams and ponds.
- Development of rain-fed areas with adaptation of rain fed-crops

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MORE INFO

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