CARRIER ORIENTED COURSE ON RAINWATER HARVESTING

Department of Geography

Arts, Commerce, Science & Computer Science College Ashvi KD Tal.Sangamner.

About the Course

Last few years the climate change is emerging as foremost challenge and this refers to any change in climatic variables. Rainfall is the key climatic variable, which is highly erratic in nature and can have long-term inferences in respect of its quality and quantity of water. Most of the water resources are rapidly exploited without recharging as a result the scarcity is also rapidly increasing. So to tackle the water scarcity hazards, there is an urgent need to boost the ground water through suitable groundwater resources management. The management of ground water through artificial recharge of rain water by following roof top harvesting has now been accepted world-wide as a cost-effective method to boost ground water in areas having low rainfall and overexploitation without recharging ground water. Rain water harvesting is one of the oldest and easy techniques to collection and storage of rain water at surface or in sub-surface aquifers, before it is lost as surface run-off. The augmented resource can be harvested in the time of need. Artificial recharge to ground water is a process by which the ground water reservoir is augmented at rate exceeding that under natural conditions ofreplenishment.

Sustainability of drinking water sources has become one of the major issues of rural drinking water supply sector. In this endeavor, role of government sector is being shifted from actual implementing authority to that of a facilitator. Since rainwater harvesting and artificial recharge can play a major role in providing sustainability to drinking water sources, such activities can be taken up on a large scale by local communities as various kinds of rainwater harvesting structures through ages have been proved to be quite useful to the society constructed in different parts of the country worldwide.

Objectives

The objective of the course is to develop an understanding and competence in GIS.

1. To understand the importance of rainwater harvesting for water supply and learn about different types of rainwater harvestingsystems.

2. To understand the advantages and limitations of rainwater harvestingsystems.
3. To enhance availability of ground water and utilize rain water for sustainabledevelopment.
4. To understand weather phenomena: winds, humidity andprecipitation.
5. To calculate the amount of rainwater that can be harvested from a given rainwater harvesting system.
6. Apply practical skills to generate, integrate, analyze and visualize spatial data related with rainfall andrunoff.

Job Opportunities

1. Serve as conservator in Soil, Agriculturaldepartments.
2. Serve in forest department as forestconservator.
3. Work in water resourcesmanagement.
4. Work inNGOs.
5. Technical Assistant in industry or researchcenter
6. Self employment: Running a small scale industry or consultancy office forRainwater Harvesting

Syllabus

Introduction to Rainwater Harvesting, Types and components of rainwater harvesting, Fundamental concepts of rainwater harvesting, Watershed Management for rainwater harvesting,Practicals on Slope Measurement, Measurement of Store and flowing water, Project/Field Visit to rainwater harvesting sides e.g. Panodi and KumbharwadiVillage.

Course Outcome

1. Understand the fundamentals concepts related to watershed, significances of watershed development, demarcation of watershed, types of watershed according to area andshape
2. Study about the physical parameters of watershed, channel geometry and basinmorphology.
3. Understand the hydrological parameters, rainfall, aerial precipitation, evaporation and transpiration, infiltration, run off anddrainage.
4. Understand the watershed development planning and sample of watershed management and planning for appropriate development of watershed management for water conservation and development.

Faculty:

The classes shall be conducted by the faculty of ACS & CS College AshviKd

Duration of the Course:

- **Certificate: Three HundredHours**
- **Diploma: Three HundredHours**
- **Advanced Diploma: Three HundredHours**

Scheme ofStudy: Theory - 60%, Practical -40%

No. of times offered inayear: Once

Fees:	**Nil**

MaximumParticipants:	**20 Students**

Certification: **All successful students shall be awarded a certificate.**