

Ch-1 - Introduction

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★ Necessity of Water Resource management.

(संरक्षित ससाधन सञ्चालन).

(May 2007, Dec 2007, March 08, Dec 08, 09).

⇒ Water is a precious thing given by nature.

⇒ No life is possible without water, It has a unique position amongst other natural sources.

⇒ Distribution of Water on Earth

Oceans & Seas 97 %

Ice 2 %

Ground water 0.75 %

lake, river 0.25 %

100 %

} 1 %
Drinking water.

⇒ 71 % of the earth is covered by water.

⇒ Every year 81% of total rainfall flows into seas/oceans through rivers which is not useful to men.

⇒ In India, rainfall is irregular & its distribution is uneven.

⇒ Due to overpopulation water supply agencies are unable to cope up the demand from surface sources, that's why it has led to digging of tube wells.

⇒ Therefore, for domestic uses, industrial uses, health, electricity generation, transportation etc. management of water resource is necessary.

⇒ Reasons for increasing water demand.

→ Increase in population

→ Urbanization

→ High standard of life-style.

→ Over irrigation

→ Industrialization,

→ Lack of proper planning.

→ Lack of awareness of society.

→ pollution (water).

→ Lack of recycling of water.

Aspects of Water Resource Management.

संश्लेषण (संश्लेषण) शीर्ष

(Dec 2007, 09, June 2012).

1/ Flood Control (या संश्लेषण).

→ Reduction of flood damage.

→ River Regulation.

→ Recharging of ground water

→ Construction of

a) Dams

b) Storage Reservoirs

c) Flood walls etc.

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→ 27. Irrigation (பசிர்ப்பு).

→ To increase agricultural Production.

→ To construct

→ Dams

→ Reservoirs

→ wells

→ Canals etc.

→ 37. Hydroelectric Power (ஹைட்ரோ எலக்ட்ரிக் சக்தி).

→ Construction of

→ Dams

→ Reservoirs

→ Power plants.

→ 47. Navigation (கொள்வழி).

→ Water Navigation is cheaper & pollution free, than other navigations.

→ Construction of

→ Dams

→ Reservoirs

→ Canals

→ Harbour Improvements.

→ 57. Domestic & Industrial Water Supply (கொள்வழி மற்றும் தொழிலாளர் மிஷன் யூசர்).

→ Domestic water is used for Drinking, Bathing, recreational works etc.

→ Industrial water is used for Iron Industry, Chemical Industry, etc.

→ 67. Water Shed development

Objectives of watershed development are.

- Conservation & Improvement of soil.
- Sediment Reduction
- Run-off retardation, etc.

→ 77. Recreation (आनंद)

→ Object is to provide recreational facilities for the health & welfare of the people.

→ Includes,

Reservoirs

Swimming Pools

Boating & Water sports.

→ 87. Fish & Wildlife preservation
(आरक्षण - वन्य जीव)

→ Objectives are

→ Improvement of habitat for fish & wild-life.

→ Preservation of loss of fish & wild-life.

→ Expansion of commercial fishing.

→ 97. Drainage of Rainwater.
(कार्मिक विभाग द्वारा किया गया)

→ Water can be tapped because of various reasons like urbanization, haphazard development, lack of drainage lines etc.

→ So, drainage system must be planned effectively.

→ 107. Artificial precipitation

→ 117. Employment.

→ 127. New water resources policies etc.

★ Role of Various Agencies in W.R.M

विविध संस्थाओं की भूमिका

(May 2009, 2013).

⇒ 17. Agriculturalists

27. Geologists

37. Meteorologists

47. Scientists.

57. Chemists
67. Biologists
77. Economists
87. Social workers.
97. Politicians
107. Water Quality control Authority.
117. General Public
127. NAO's
137. ISRO
147. Mechanical Engineer
157. Electrical Engineer.
167. Civil Engineer.
177. Industries.

* Steps to Reduce Shortage of water in drought prone area.

కృత్రిమంగా సాగునీటిని వినియోగించే ప్రాంతం
మౌలిక. (June 2012)

- To collect information regarding available sources of water around drought prone area.
- Collect details regarding type of water source, quantity of water available, quality of water etc.
- Planning in advance.
- To study the possibility of water to supply from canal or pipeline.
- To construct check dams to induce ground water recharge.
- To make provision of ground water through bore holes.
- In emergency to supply water by tanks.
- To make cut off in domestic & industrial water supply.

→ To make cut-off in agricultural water supply.

→ To explain importance of water to people.

→ To create awareness regarding conservation.

→ To make arrangement and attempts for reduction of water losses and wastage such as evaporation, leakage, infiltration etc.