



## Growth of resource geography and Scope of Water Resources Geography: A Review

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### Abstract

In view of increasing specialization in geography during the second half of the 20th century, importance has been accorded to independent study of resources, as a result of which different branches of geography have come up. Among them Water Resources Geography is an important one.

**Key words:** Water, Resources, Geography, specialization etc.

### Introduction

Etymologically, 'resource' refers to two separate words —'re' and 'source' —that indicate any thing or substance that may occur unhindered many more times. The term 'Resource' had no special significance till the early part of the twentieth century.

As a result of technical development, man has increased the use of water in different forms, which has led to quantitative and qualitative deterioration of water resources. In such a context, while giving importance to distribution, use and conservation of available water in nature, Association of American Geographers (AAG) has included Water Resources Geography as an independent branch in the series.

Study of water resources has been done since ancient past. In the ancient Vedic era, Greek and Roman geographers had described the use and conservation of water resources. This study remained of normal importance till mediaeval times because there was balance between its availability and use. During the renaissance period, many discoveries and inventions took place and resources were identified in various countries. The Industrial Revolution that took place in the 18th century resulted in excessive exploitation of water resources in the whole world. At that time, study of water resources was done as a part of Physical Geography

### Definition of Water Resources Geography:

*“Water Resources Geography is the study of nature, spatial distribution, utilization and conservation of water on the earth. It consists of all the phenomena of hydrological cycle that passes through all the spheres: hydrosphere, atmosphere, lithosphere and biosphere on the earth.”*

### Growth of resource geography

The beginnings of geographical knowledge may be traced back to the rise of human civilization and culture. Initially however, the scope of geography was not well defined. While searching food, clothing and shelter, man explored forests, water bodies, arable land, etc. Thus, he got acquainted with the resources and the areas of those resources. This was perhaps the beginning of resource geography, though as a branch of geography, it grew much later. As said earlier, geography developed into 2 main branches- physical and human. Under geography of prime necessities of life, he included



food, clothes and shelter, while agriculture, animal husbandry, hunting and mining were the subject matter of geography of exploitation of the earth. American geographer E.Huntington included physical conditions e.g. water bodies, soil, minerals, animals, plants etc. and human responses as reflected in his material needs, occupation etc. Later, several specialized branches of geography evolved in order to study and analyze the inhabitants of the earth. Economic geography was developed in the latter half of the 19th century, as a branch of human geography. It studies and analyzes resources and human activities and their interactions in the various regions.

Environmentalism is an important subject matter of human geography. The concept of determinism and possible discussed the relationship between man and his environment. Indirectly, though, the two concepts highlighted the importance of resources and their utilization. In the early part of the 20th century, scholars like Carl Sauer, Hartshorne, Jones etc. Presented their views on economic geography and gave importance to natural resources, their utilization, agriculture, mining, manufacturing and conservation of resources. New branches of geography evolved because of a growing tendency of specialization. Economic geography developed in Germany, while the British and American scholars like Chisholm, White beck, Smith etc. attached more importance top commercial geography.

After the world war 2, special importance was given to the human resources and optimum use of natural resources. Resource appraisal and their utilization were given special attention because of their importance for the economic progress of the country. The increasing mechanization and technological development after the world war 2 was reflected in the development of means of transport and communications, productions, utilization and conservation of resources research and development activities in industrialization etc. All these developments enriched the field of resource geography. It has become a new field which has included the management science within it. Resource geography is also a branch for the study of new type of evolution in generic management practices which has brought a resource specific research and trainings.

New dimension in study of resource study is the social injustice aspect of its appropriation by few at the cost of several ‘unpeople’ Geography needs to have in its discourse the injustice involved in spatial variation in resource ownership. With social justice and inequities on one hand the divide widened and ownership of resources became skewed many a times

### **Scope of Water Resources Geography:**

#### **1. Study of Geographical Distribution of Water Resources in the World:**

It studies the comparative position of spatial distribution of all water resources in nature except oceans, ground surface, sub-surface and groundwater. The study includes how much and in what forms the water becomes available in micro forms in glaciers, rivers, lakes and water reservoirs and in what forms their uses are made by man.

#### **2. Study of Functioning of Hydrological Cycle:**

Balanced distribution of water in the hydrosphere, atmosphere (water vapour), lithosphere, and biosphere becomes possible only through the hydrological cycle in nature.



Its study is the main subject matter of Water Resources Geography. This also includes the study of sub-cycles and effect of man on them.

### **3. Study of Qualitative Aspect of Water:**

It also includes the study of qualitative deterioration of water due to water pollution and mixing of undesirable elements in water because of reducing availability of fresh water.

### **4. Study of Water-Borne Problems:**

Many problems are created due to uneven distribution of water by man. The important ones among them are salinity, alkalinity, fluoride, arsenic, and water logging. These new problems are also studied in Water Resource Geography.

### **5. Study of Water Management in Flood-Prone and Drought-Prone Areas:**

This includes the study of providing sustainable base for water excess, flood-prone, and scarce, water affected drought- prone areas.

### **6. Study of Uses of Water by Man:**

Apart from for own domestic use, man uses water available in nature for economic use in various forms mainly for agricultural and industrial uses. Because of continuously increasing demand for water in these spheres, this subject has gained importance. For this reason, the cyclical use of water has also become important.

### **7. Geographical Study of Watershed:**

Since the last decade, particularly since 1994, watershed is considered as a geographical unit for water management because it involves activities of physical and ecological regeneration. It is a community participation programme which includes various activities of water conservation.

### **8. Study of Effects of Natural Calamities on Distribution and Availability of Water:**

Materialistic culture of man has brought many changes in nature in the 20th century. The effect of this culture can be seen on the distribution and quantitative aspect of water. Among them climatic changes, global warming, melting of snow and acid rain etc. are important.

### **9. Study of Water Crisis and Water Conservation:**

Water crisis has been created since the last century due to population increasing at a fast rate. Along with the study of main reasons for water crisis, study of finding solutions is also an important subject matter. Simultaneously, a strategy has to be evolved which can conserve water in different forms. At present, stress is being laid on sustainable management of water, whose origin is considered to be a report 'Limits to Growth by a research group headed by Denis Meadoz in 1968. Published in 1972, it stressed on improving the quality of life by preventing deterioration of resources, including water, and thereby creating a healthy environment.

### **Conclusion**

Due to the increasing demand and decreasing availability of water during the 20th century, study of Water Resources Geography was started as a separate subject in different countries of the world to save the people from the resulting crisis and to give sustainable basis to the use of water. Many environmentalists started calling the earth



famous as ‘Blue Planet’ as ‘Endangered Planet’ in view of the decreasing availability of water. They believe that due to the worldwide water crisis, many species on earth are on the verge of extinction.

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