

## **Rivers of Sahyadri: Mandovi and Zuari.**

Welcome students to this paper titled Physical Geography of India. This course is for Third Year B.A. students of Geography, studying in semester V and the paper code is GED102.

In today's class we will be discussing rivers of the Sahyadri: the Mandovi and the Zuari. This is a module of Unit II: The Peninsula River system. I am Charmaine A. Lewis e Pereira, Assistant Professor in Government College of Arts, Science and Commerce, Quepem, Goa..

### **Outline**

In today's class we will be discussing the River systems in Goa, i.e. the Mandovi River system.

### **Learning outcome**

After going through this module, you will be able to assess the Zuari and Mondavi Rivers as perennial rivers. You will also be able to relate about the tidal influence of rivers and how these rivers play a very important role in the formation of salt pans. Thirdly, you will be able to understand the concept of an estuary. Besides that, you will also understand the geological structure and how it influences the drainage pattern in the state.

### **Introduction**

You must have already studied about Peninsular Rivers. They consist of East flowing Peninsular Rivers and West flowing Peninsular rivers. Let us learn about the Mandovi River system in Goa. River Mandovi and Zuari are both Peninsular rivers which are flowing towards the west and drain into the Arabian Sea.

### **Mandovi River System**

River Mandovi is referred to as Madei. This river rises in the Sahyadris in Karnataka. It is considered to have the largest drainage basin. The total length of this River system is nearly 81 kilometers. Besides this it has tidal interference up to Ganjem village. There are several islands like the Divar Island, the Charao Island, which are located in its course. This river flows towards the West to drain into the Arabian Sea. It is also referred to as an estuary.

### **The tributaries of River Mandovi**

The river has many tributaries, but some of the noted well known ones which traverse the state are the Mapusa drainage. The Khandepar river, the Calem, Nanode, Kumbhtol Patwal, Khotodem, Kotrachi, Zarme, Advai, Ragoda, Volvonta, Cudne, Sinquerim. A very important fact about this river is that it is a navigable river, which means that it can be used for water transport. Secondly, it undergoes tidal influence. And Thirdly this river is a perennial river, which means that there is water in this river throughout the year. It does not dry up during any season.

A glance at the map explains the river system in Goa. We can identify the Mandovi river system with all its tributaries, which transverse the entire state of Goa. Secondly in the South we have the Sanguem River system, which is also transversing the southern talukas of Goa and it drains into the Arabian Sea.

### **Zuari River System**

The second river system is the Zuari River system. It is the southern counterpart of the Mandovi river system. The source lies within Goa. It has a length of nearly 67 kilometers and it flows through the talukas of Sanguem, Quepem, Salcette, Ponda, Marmagao and Tiswadi. Like the Mandovi River system, this river too is a navigable river. Secondly, it is a tidal river and Thirdly it is a perennial River. This river is called the Sanguem river up to Sanguem. There are two major streams i.e. Ugem and Guleli join at Sanguem to form the river Zuari. The river Zuari also has several tributaries, but some of the well known ones are Ugem, Panchamal Nallah, Guleli, Netorli, Cumbhari Nallah, Chirkanali Nallah, Kushavati, Gocoldem Nallah, Cavorem Nallah and Santana.

### **Conclusion**

Rivers are known to be the cradle of civilization. In the past, human civilizations and settlements have always preferred settling down near rivers due to the availability of water and therefore the rivers have played a very important role in the beginning of civilizations. In the case of Goa, the Goan rivers sustain the Goan ecosystem. Thirdly, these rivers are very well known for waterfalls, especially in the upper reaches. For example, the Dudhsagar waterfalls. They are also a source of potable water. Besides, they have a tidal influence and this tidal influence plays a very important role in the formation of Salt pans and thus helps the salt industry. The river systems also are very significant for the fishery and the hatchery industry. The transportation and the tourism industry also thrives on the existence of these rivers. In fact, we have the National Waterways Plan which is in operation in the state of Goa, wherein the rivers are being used as national waterways.

### **Reference**

For further references you can refer to these two books : Advanced Geography of India authored by Dr. Alka Gautam and Fish, Curry and Rice by Claude Alvares.

Thank you.