

## **Department of Geography, 05/05/2023:-**

### **Report on “Field trip to study the landslide at Dam site of NHPC Gerukamukh of Dhemaji district, Assam”**

#### **Introductions and Study area :-**

A landslide occur when part of a natural slope is unable to support its own weight. The speed of the movement may range from very slow to rapid. The mass of moving material can destroy property along its path of movement and cause death to people and livestock. Landslides are frequently made worse by human development and research exploration. On 28 April 2023, the 6<sup>th</sup> semester major students of Department of Geography organize a field trip to study the landslide at Dam site of NHPC Gerukamukh of Dhemaji district, Assam to fulfill the requirements of their disaster management based project work in their CBCS curriculum. Occurring of landslides on a dam site are of paramount importance in ensuring the safety and stability of the dam, protecting the surrounding environment and mitigating potential risks.

#### **Objective:-**

- The main objective of this project was to developed understand of “Disaster Management, Natural hazards, risk and vulnerability among the students
- To find out the course of landslides occurred on or around the dam site and to develop strategies to prevent, manage, or mitigate their potential impact.
- To make the students aware about the safety risks of landslides to the Dam site, its structure, foundation and associated infrastructure.

#### **Methodology:-**

Primary data were collected by personnel interview from the authority of NHPC Gerukamukh office and other officials and engineers. Field visits were made to observed the Landslide site and impacted area. To fulfill the objectives of the study both primary and secondary data has been collected from numerous sources.

#### **Observation and findings:-**

- The timeline of damage at the project site reveals a worrying pattern
  - May 2020: Landslides hit the dams right bank following prolonged
  - June 2020: Heavy flooding damaged the diversion tunnels and the coffer dyke.
  - July 2020: The guard wall collapsed again and flood waters overflowed the dam.
  - August 2021: The guard wall collapsed again and flood waters overflowed the dam.
  - April 2022: The guard wall collapsed yet again. The CEA sought independent safety audits before monsoon.
  - June 2022: The roof of the head race tunnel came unstuck, killing one worker.
  - September 2022: Torrential rain broke part of the dam tunnel. A creator-like sinkhole was created landslides damaged diversion tunnels. The guard wall gave away and flood waters entered the powerhouse.
  - October 2022: A major landslide hit the diversion tunnels.

- April 2023: Yet another landslide above the diversion tunnels.
- The locals and many students unions cum NGO were protesting to stop this NHPC project since from the early stages in 2005 but this project able to gets its final environment clearance in 2019.
- While interview with a NHPC authority he said that ‘Landslide did not impact any project components or structure and would not further delay in commissioning the unit by June 2023’. Which is a big area of concern though they were implementing some landslide prevention and mitigation strategies .

**Outcome:-**

Student were able to gets lots of valuable information about NHPC Gerukamukh Dam. They observed the impact of landslides on the Dam and concerned about the future and present safety risk to the Dam site and people and environment in and around it. This project work gives the students an exposure to learn by personal interaction and observed the ground reality.

**Photo Gallery:-**

