

Why we are doing
Coal mining

Coal Mining

- Surface or Open Cast mining
- UG-Under ground mining

Whatever is the way of mining, it destroy the Environment.

Every aspect in Mining and Mineral chain has the potential of endangering Environment.

Ecological disorder caused by different processes may not become visible immediately but the impact would surely be felt by **future generation...**

An overview of Opencast Mine



Eliminates existing vegetation

Displacement/ migration /emigration of People









Under-ground Mining

Some International Practices for rehabilitation (during & after)





Almost gentle slope and height of OB not more than 30 M

We know-what happen in mining

- Change of land use from Forests to others- impact on functions of the Forests.
- Protective
- Productive
- Aesthetic etc

Change in Landscape





Customary Rights of People



Biodiversity-what it means and to whom

Diversity of living organisms: from genes to ecosystems and communities, including between and within species genetic diversity itself.



Removal of Top Soil for opening of new Mine



Loss of Humus- life support system favorable in good Forest





Soil going to chock the river system-from one of OB



Back-filling of mined out soil into mine Pit-for rehabilitation

Top soil is
stored
separately



Top Soil Management-starting of the rehabilitation

For consideration...

1. Complete description as far as possible of the different fauna and flora belonging to given eco-system of the area proposed for diversion instead of mere replication of some major flora and fauna from the Working Plan.

For consideration...

2. As per provisions under Para 4.7 (ii) under FC (Act) **Safety zone** area calculation in the proposal is taken only **7.5. meters** strip. It should be at least **100 M** if the adjoining land is Forests and density is > 0.4

For consideration...

3. U.A may be advised to take up or promote plantation on **farmers/private land adjoining** to the mining lease at least to the extent of forest area diverted

For consideration...

3. U.A may be advised to take up or promote plantation on **farmers/private land adjoining** to the mining lease at least to the extent of forest area diverted

For consideration...

4. U.A may be asked to take up afforestations on the surface land in UG mining (**no right**) and maintain it till the life of the Project, if the density of the growth is less than 0.4.

For consideration...

5. U.A may be asked to take up de-silting of forests/village tanks if situated within 5 Km radius from the Project.

For consideration...

6. NPV being collected must be utilised in order of priority, **starting from the areas adjoining to the areas diverted to outside.**

For consideration...

7. Forest Produce Cess towards development of forest and adjoining areas will help in building the eco-system. This amount to be realised directly to the accounts of the D.F.O/ Nodal Officer.

For consideration...

8. A Habitat Improvement Plan as prepared by the forest department (before submitting the proposal itself) for the areas having good number of wildlife

For favor of consideration...

9- OB(in OC) being created and going to be there for at least 30 to 40 years and simultaneously afforested, may be allowed to be there permanently instead of backfilling.

Preliminaries

- Care is taken for safety zone afforestation
- User agencies are advised to take up or promote plantation on **farmers/private land adjoining** to the mining lease.
- U.A are also advised to **take up afforestations on the blanks in the leased areas.**

Preliminaries

- Construction of toe wall to every deck of the over burden, peripheral trench and check dams siltation ponds etc are the norms for Overburden stabilization.
- A Habitat Improvement Plan as prepared by the forest department is being implemented for the areas having good numbers wildlife

Preliminaries

- Concept of Eco-Forestry is being followed in the areas being reclaimed, instead of economic forestry.



A good nursery is one of main factor of better rehabilitation

Good nursery- an attempt for success

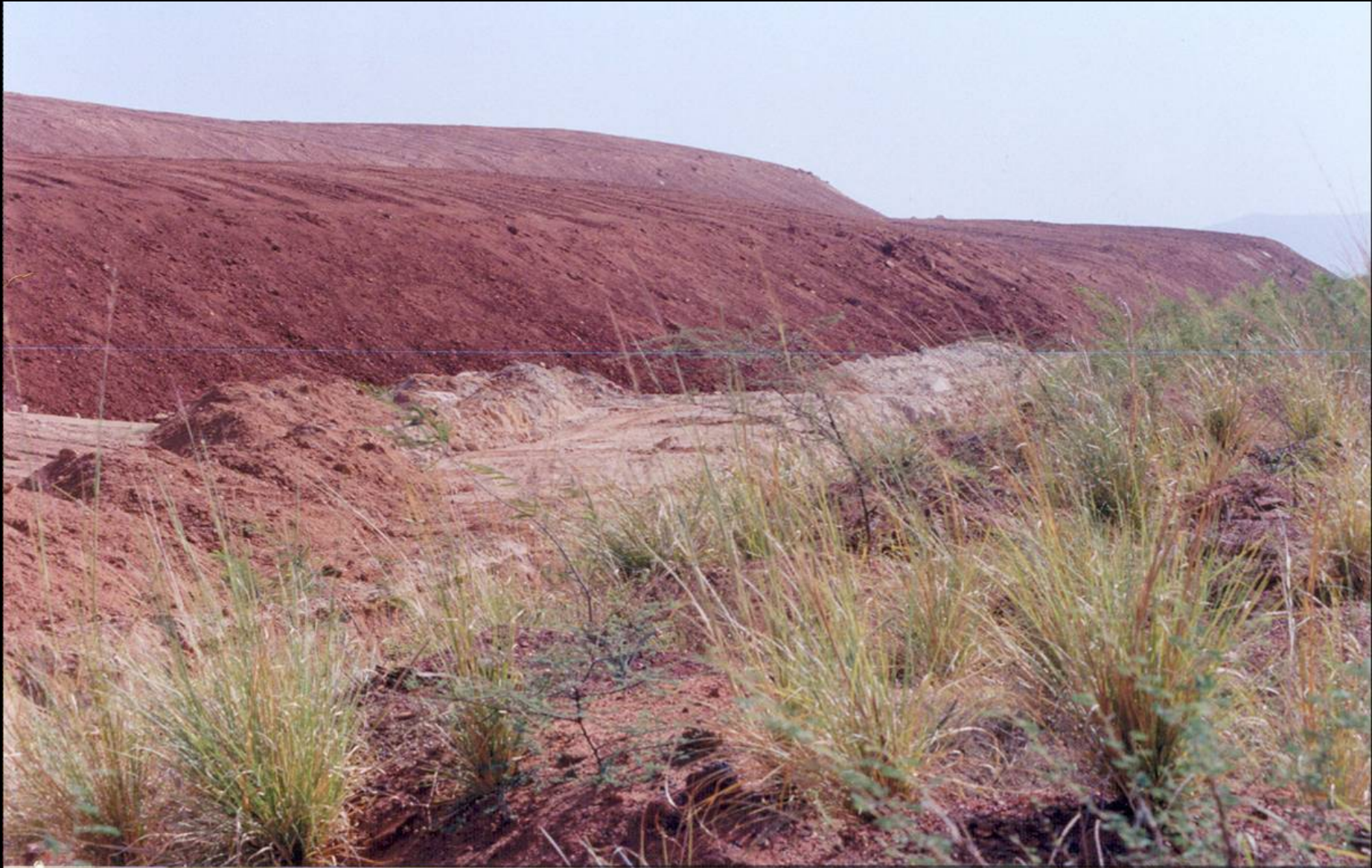


OC-Benches-OB Dumps are formed in graded manner keeping angle of repose as per soil

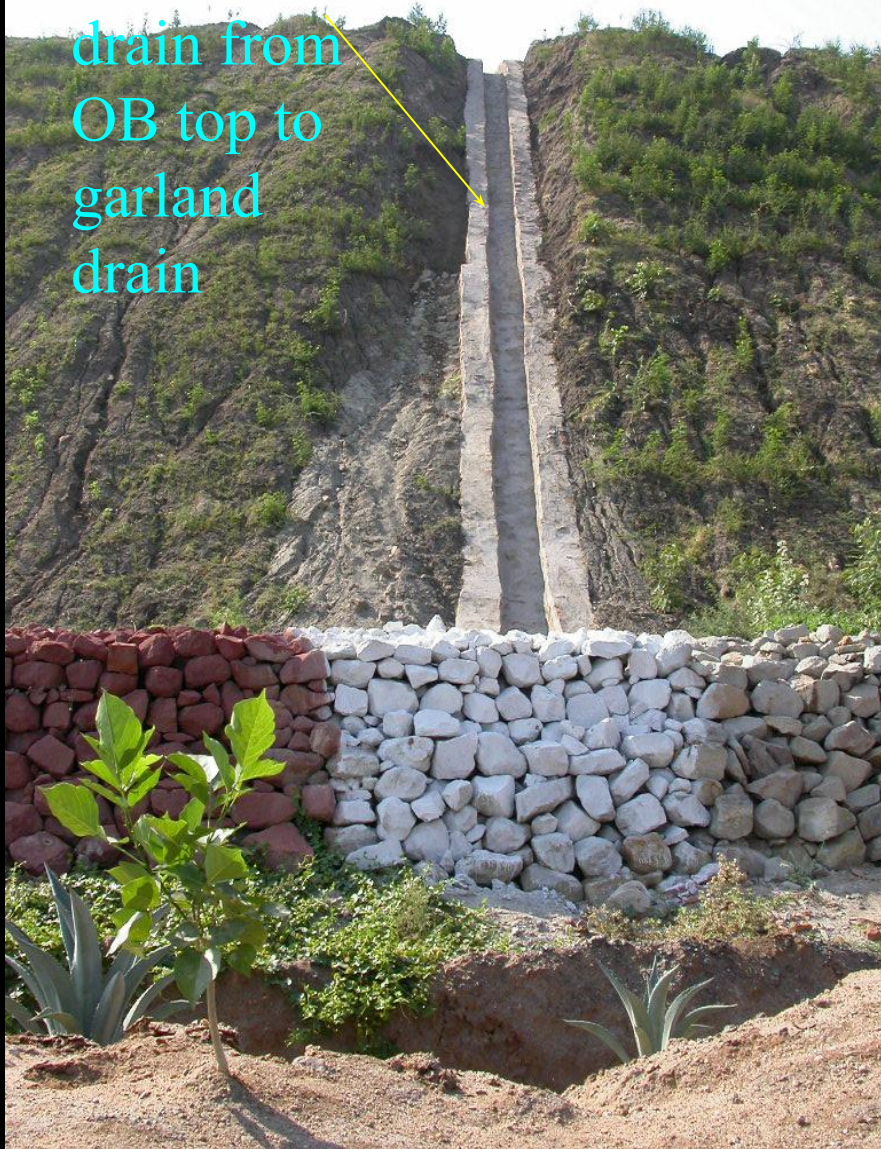




OB Dumps are formed in graded manner keeping angle of repose as per soil



Safe water
drain from
OB top to
garland
drain



Gully
plugs



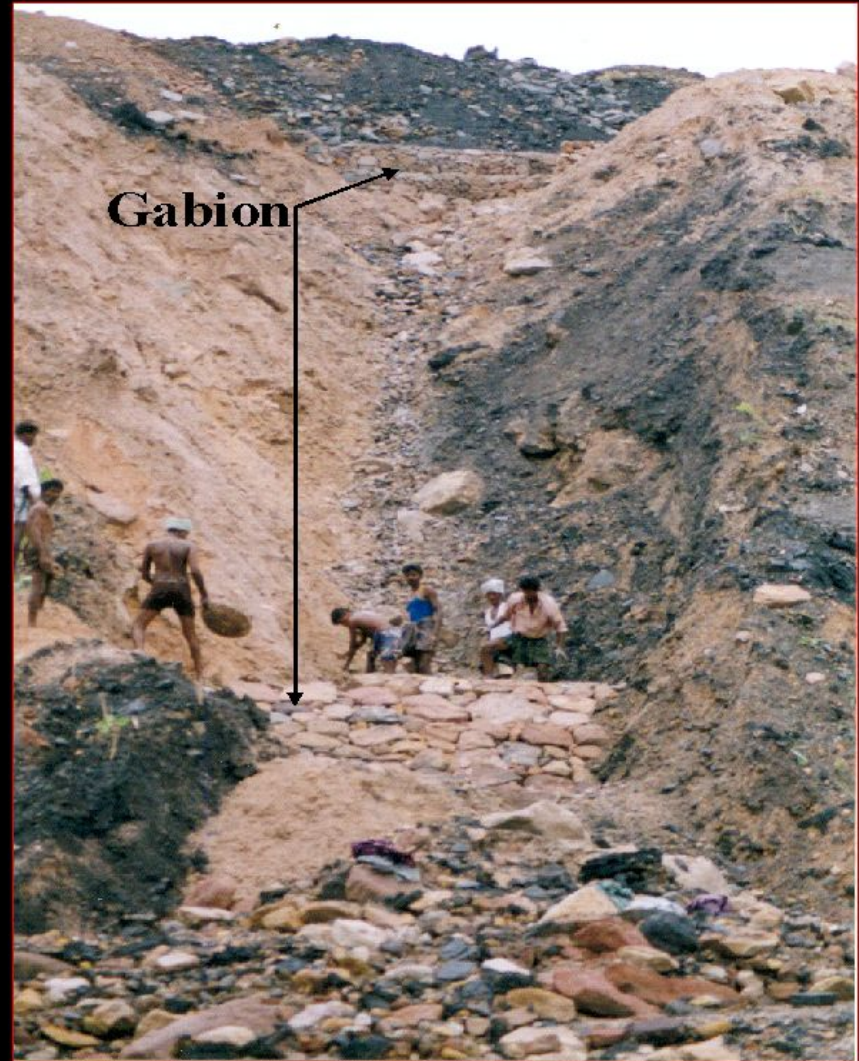
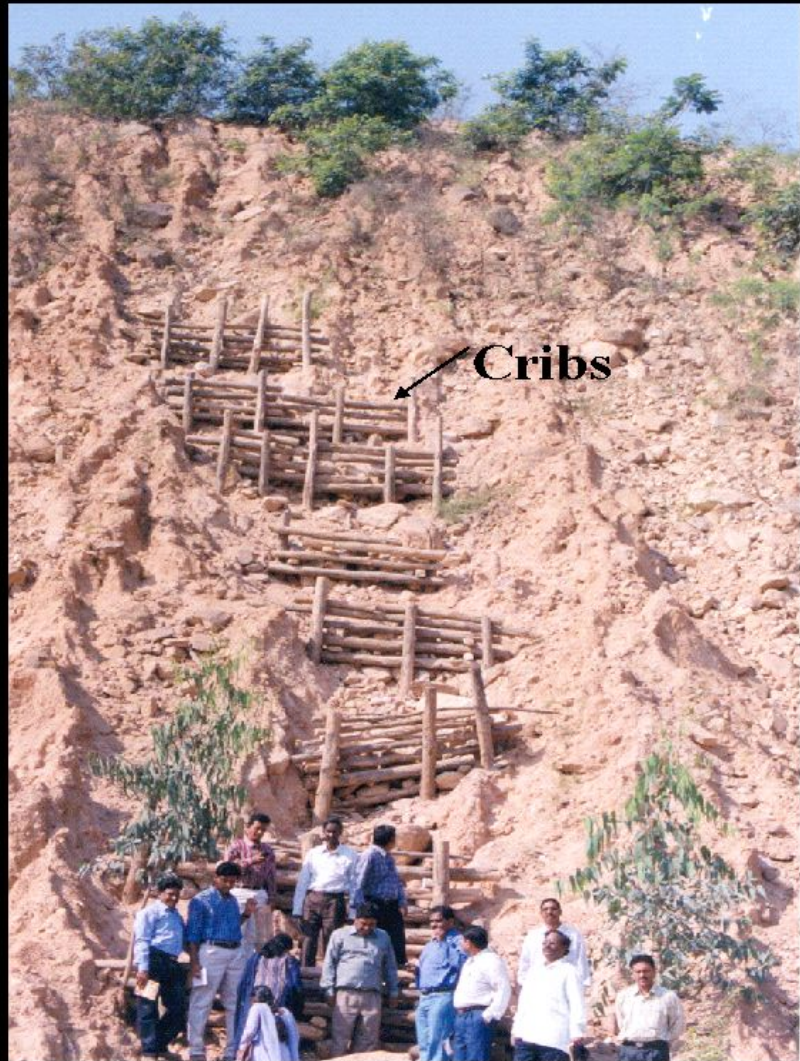
Toe wall

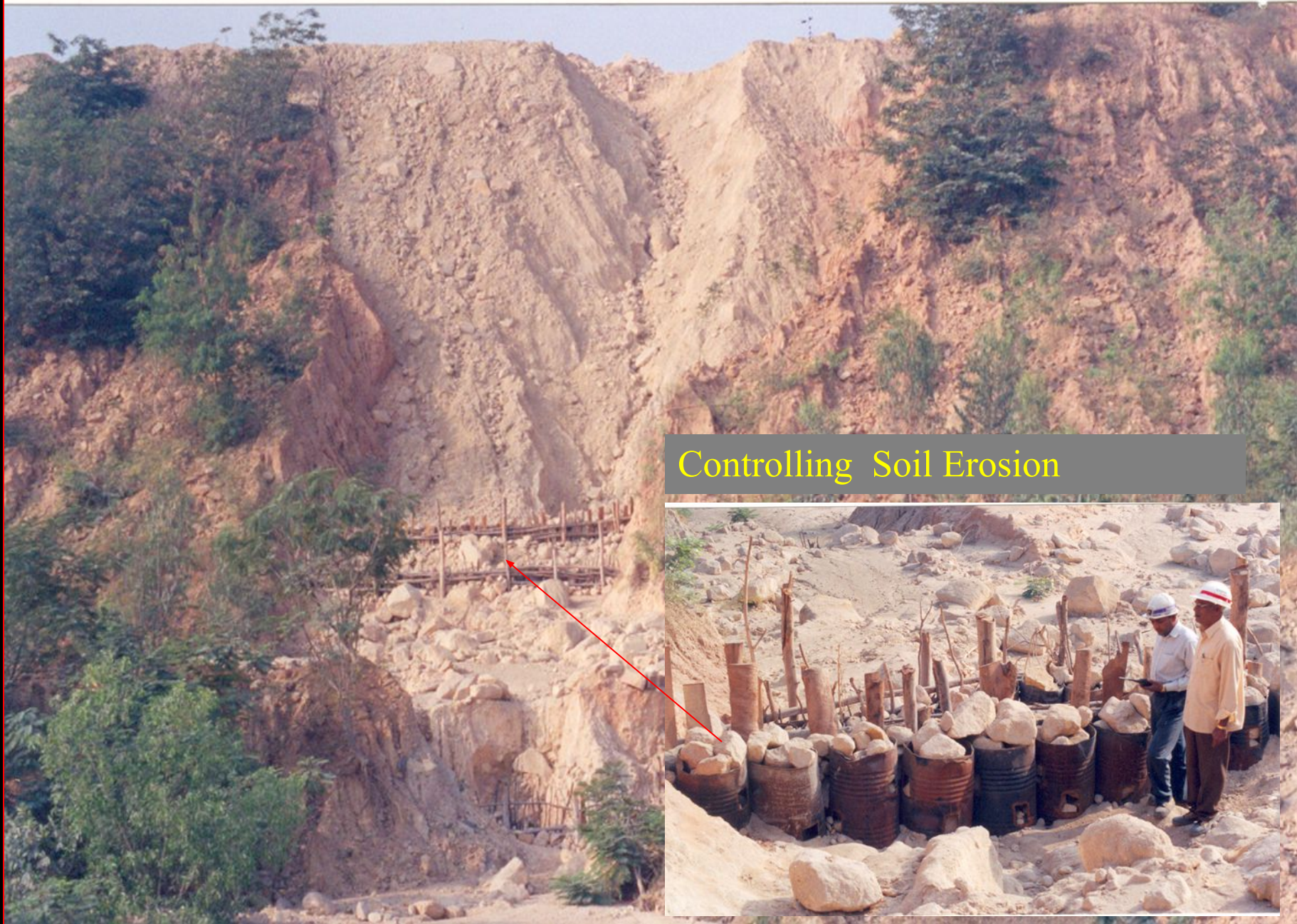
Garland
drain

Greens



Engineering aspects of Bio-Engineering





Controlling Soil Erosion





Gully treatment: Before and After



Planting on slopes



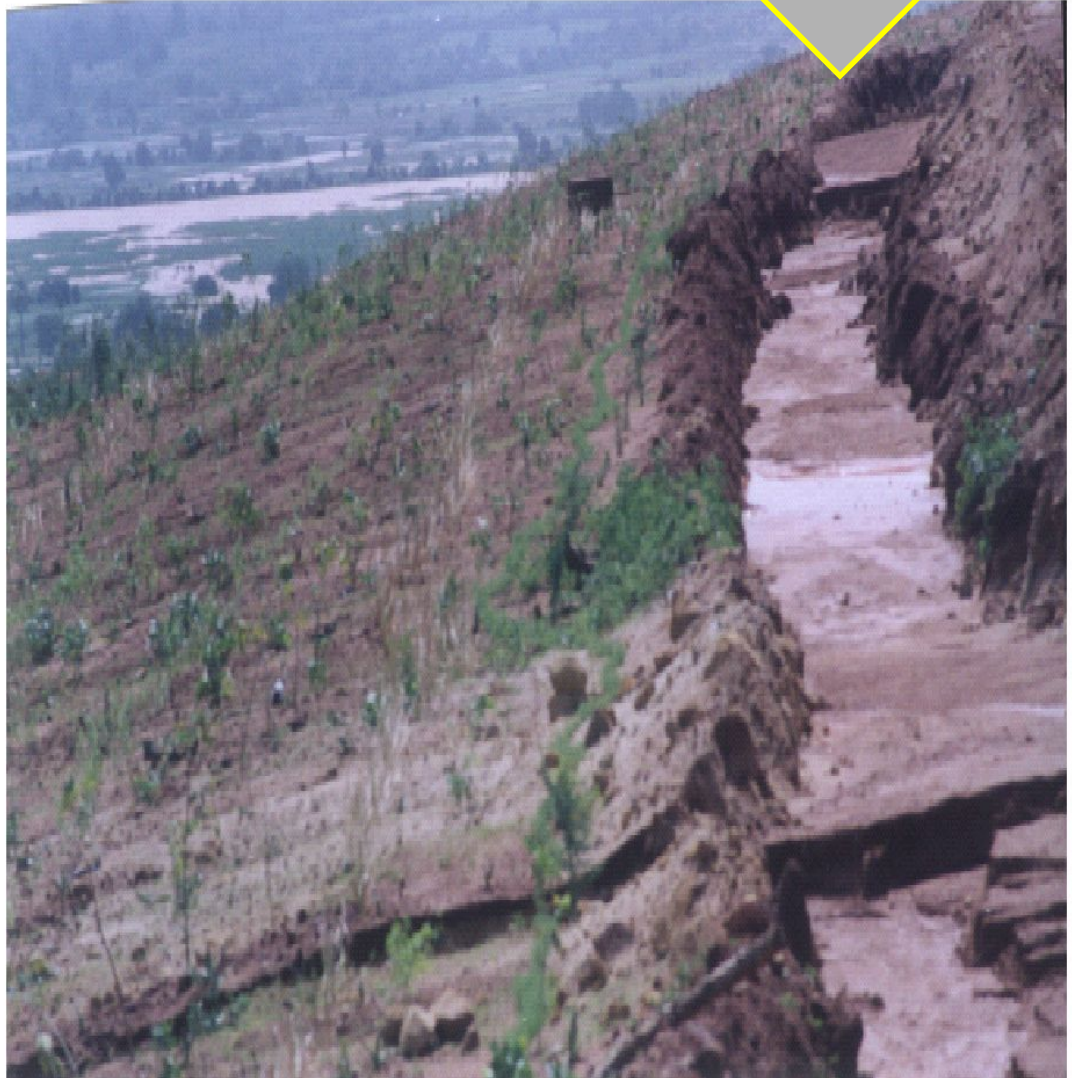
OB Dumps are formed in graded manner keeping angle of repose as per soil and safe disposal water drains are dug as per contours



Safe Disposal of Rain Water:

It is essential to drain away the rain water safely from OB dumps to garland drains.

The water-drains on the base of each deck connected to the drains on the slopes, control rain water from overflowing over the slopes which cause severe soil erosion.





Isolated heaps of Soil-A measure for better establishment of Plants

Planting cuttings of Vitex, Ipomea, Viteveria slips (**Choice of species**)-
Intensive Treatment



Intensive treatment for better slope stabilization



Vetiveria for arresting soil erosion



PLANTATION NAME- DUDDHICHUA 2013 O.B DUMP
PROJECT RANGE - DUDDHICHUA
PLANTATION YEAR-2013



PLANTATION NAME- DUDDHICHUA 2014 O.B DUMP
PROJECT RANGE - DUDDHICHUA
PLANTATION YEAR-2014



ककरी परियोजना वर्ष २०१६ रोपावनी



खड़िया परियोजना वर्ष २०१५ रोपावनी



ककरी परियोजना
वर्ष २०१२ रोपावनी

