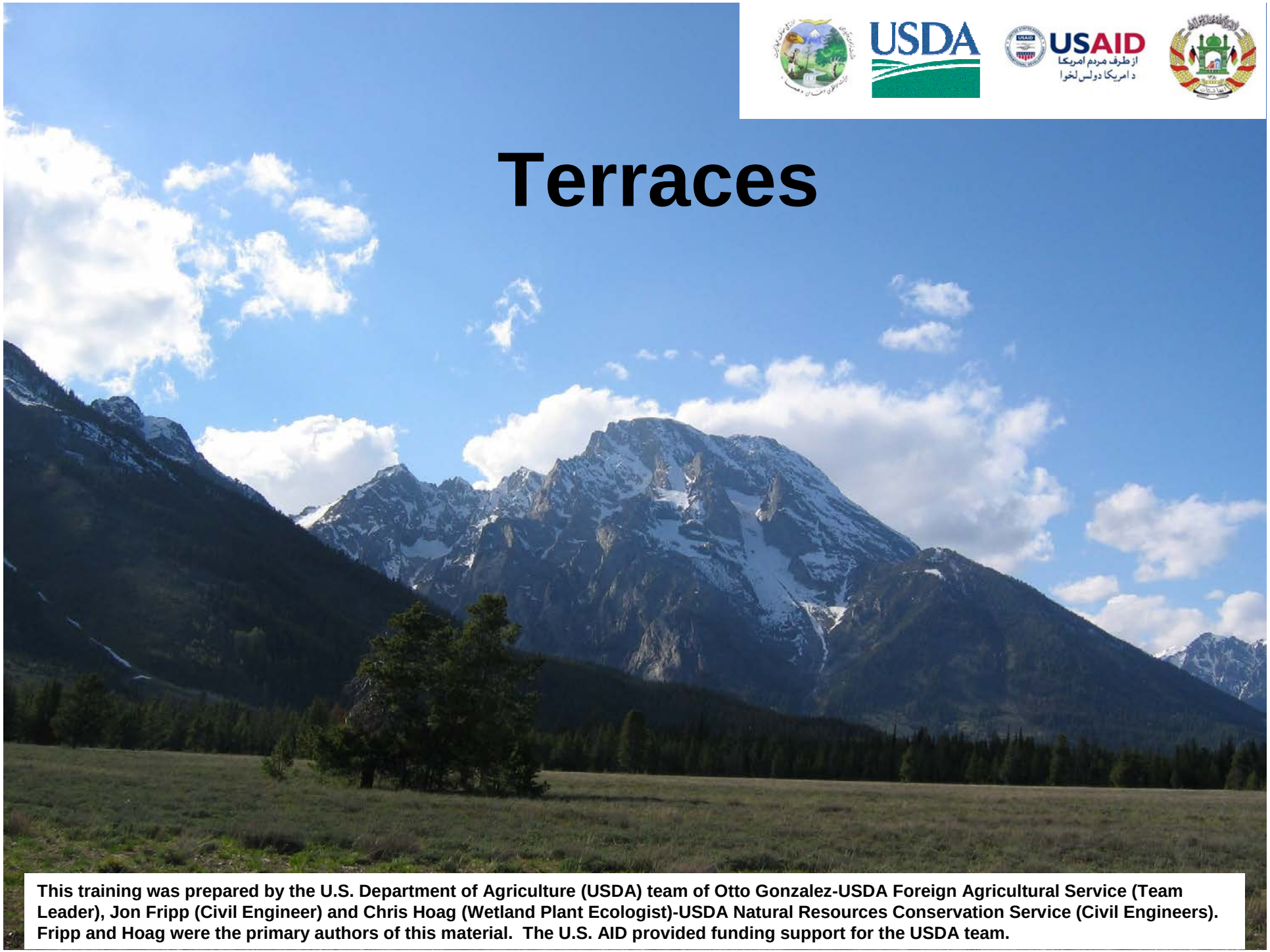
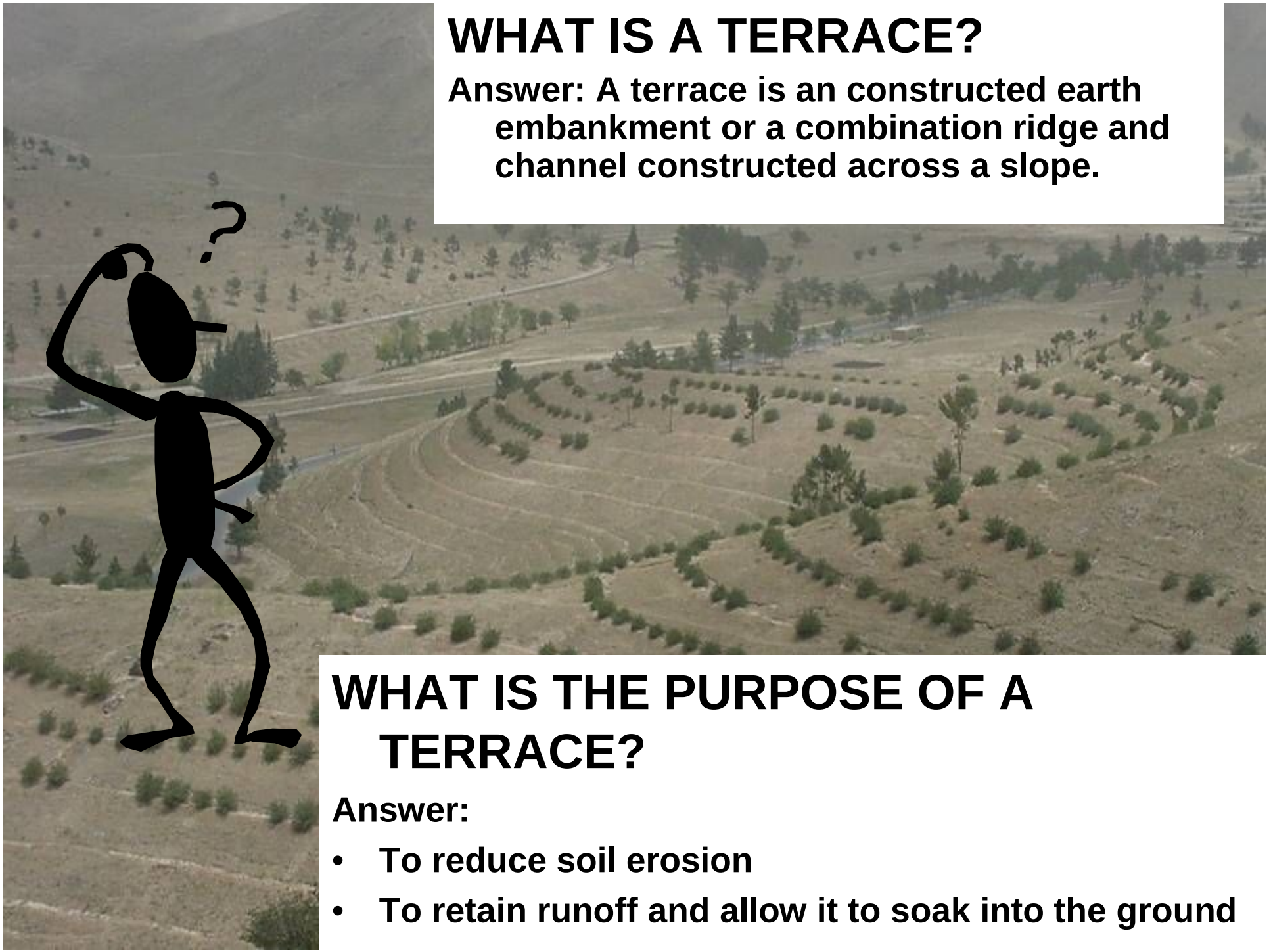
Terraces



This training was prepared by the U.S. Department of Agriculture (USDA) team of Otto Gonzalez-USDA Foreign Agricultural Service (Team Leader), Jon Fripp (Civil Engineer) and Chris Hoag (Wetland Plant Ecologist)-USDA Natural Resources Conservation Service (Civil Engineers). Fripp and Hoag were the primary authors of this material. The U.S. AID provided funding support for the USDA team.



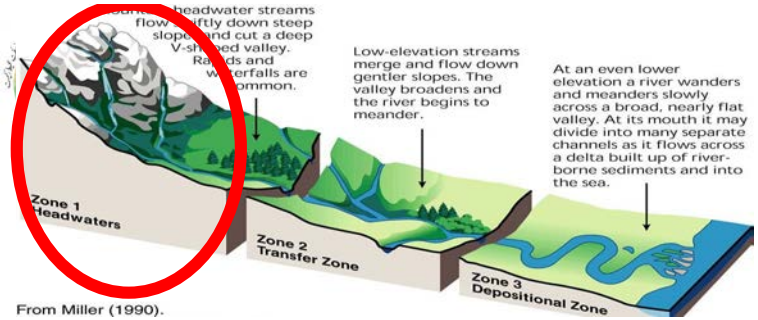
WHAT IS A TERRACE?

Answer: A terrace is an constructed earth embankment or a combination ridge and channel constructed across a slope.

WHAT IS THE PURPOSE OF A TERRACE?

Answer:

- **To reduce soil erosion**
- **To retain runoff and allow it to soak into the ground**



Terraces or Hillside Ditches are a good rehabilitation technique for the following conditions:

- In the collection Zone
- Where soil erosion by water is a problem
- Where there is a need to conserve water
- Where soils and topography are such that terraces can be constructed with reasonable effort
- Where excess runoff is a problem

TERRACE or HILLSIDE DITCH DESIGN CRITERIA

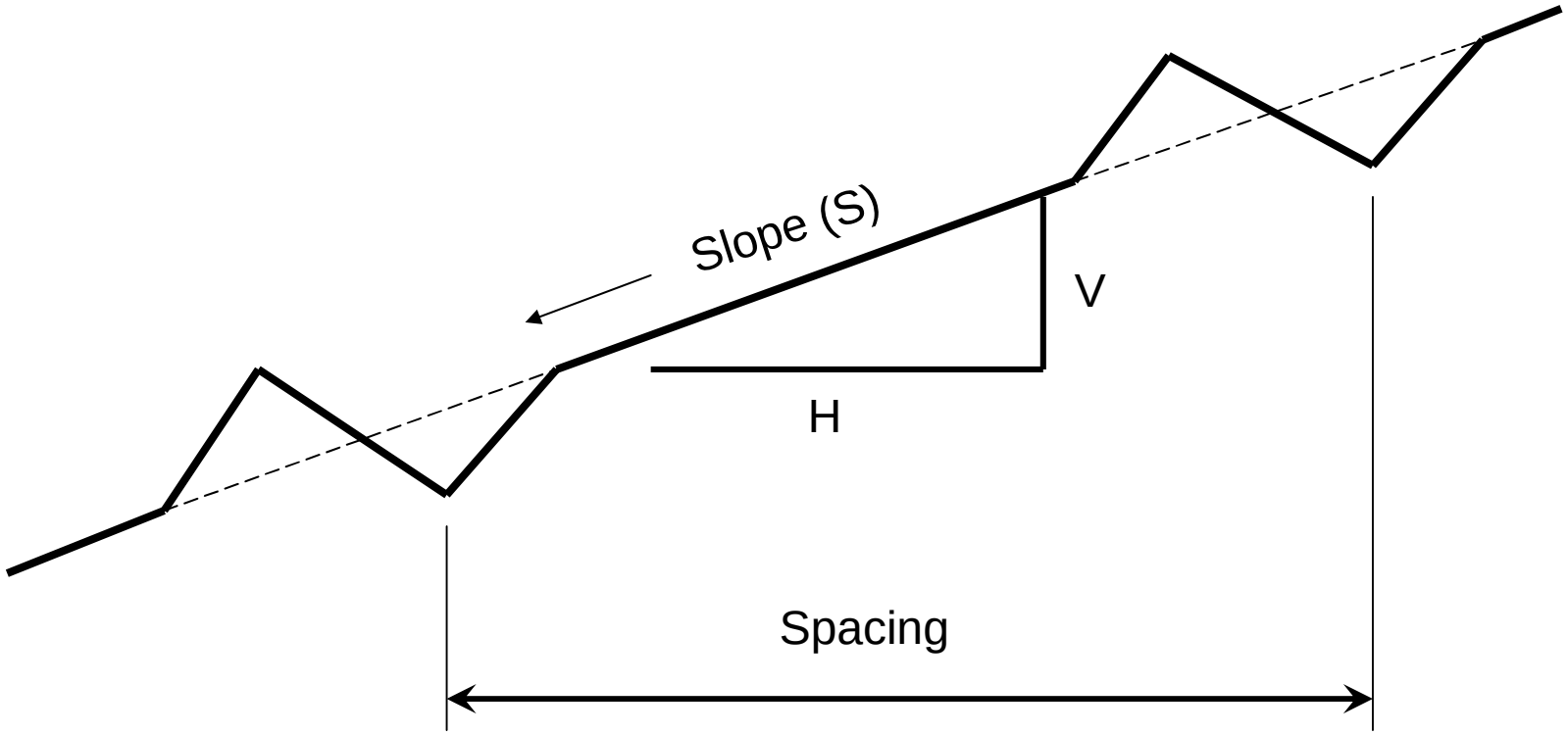
- Terraces need to be located correctly
- The distance or spacing between the terraces should be correct
- Terraces need to be deep enough
- Terraces should include plugs

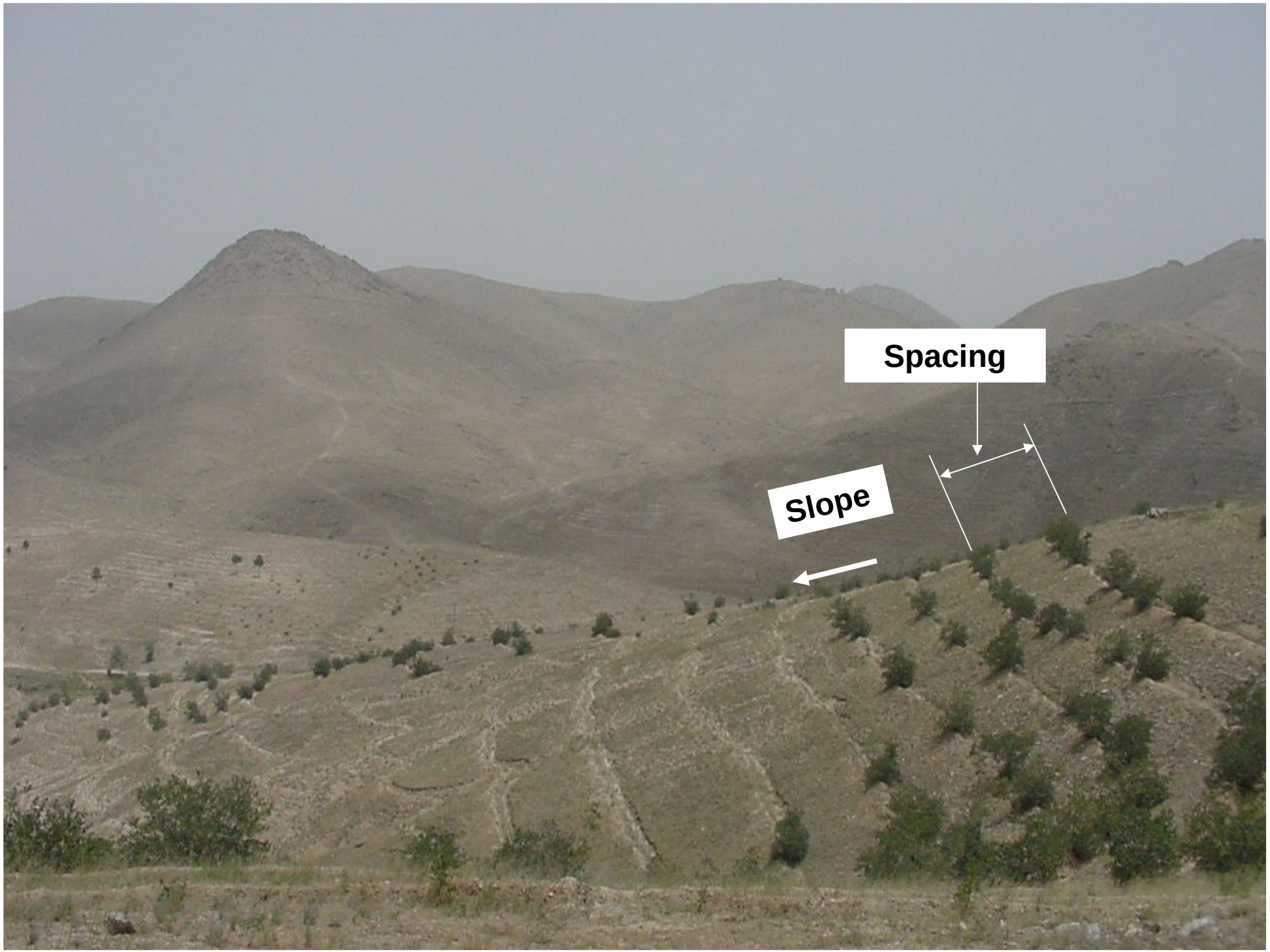
This introduction is going to cover the basics
You may want to get more detailed training

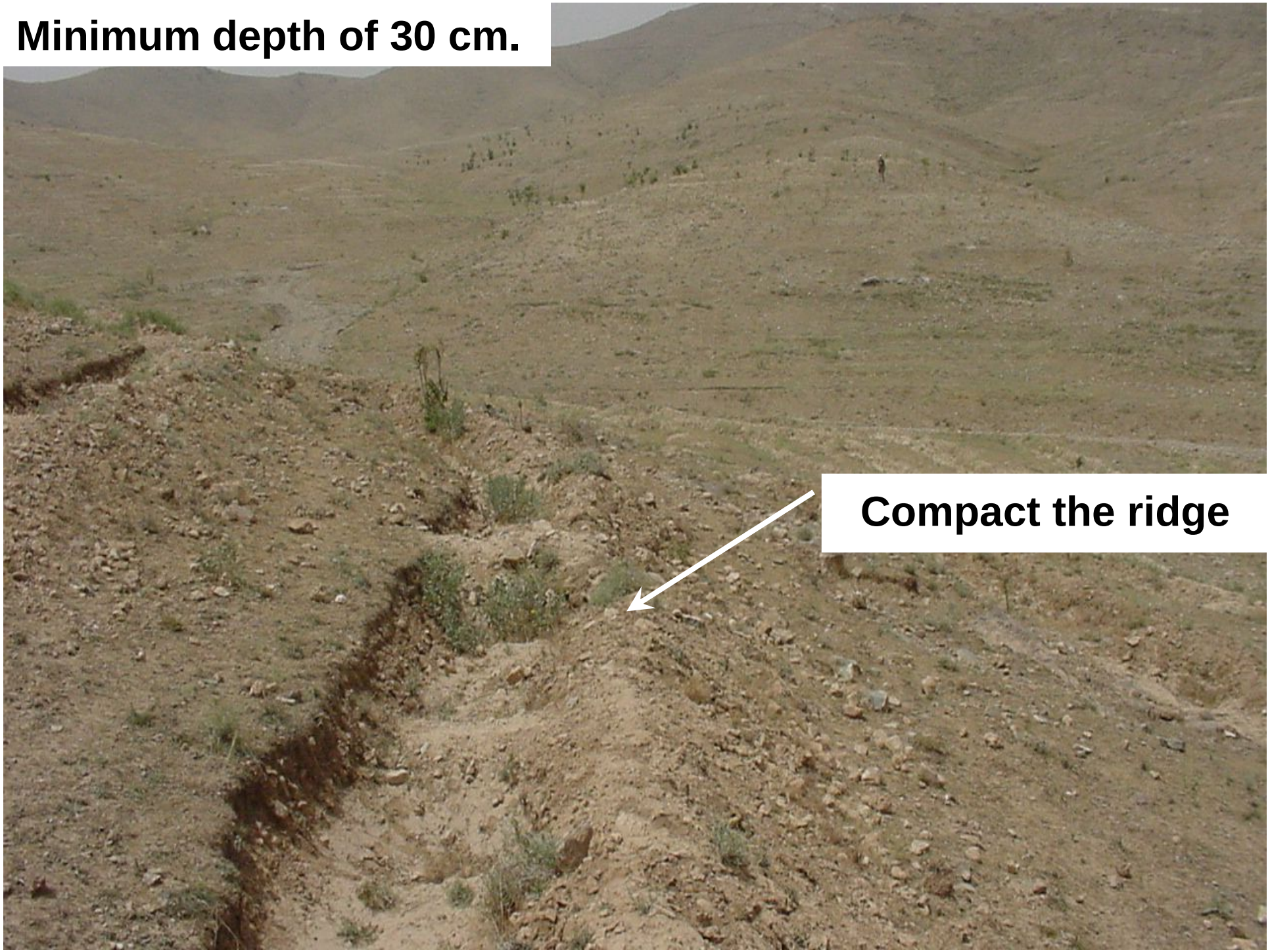
•Terraces should follow a contour.
•Channel slope should be **level or flat** (on a contour).
•A flat slope will reduce erosion in the terrace and will allow the water to soak into the ground for plants.
•If the terrace is not flat, the water will flow downhill and you will have to provide a stable outlet.

Terrace spacing depends on slope.

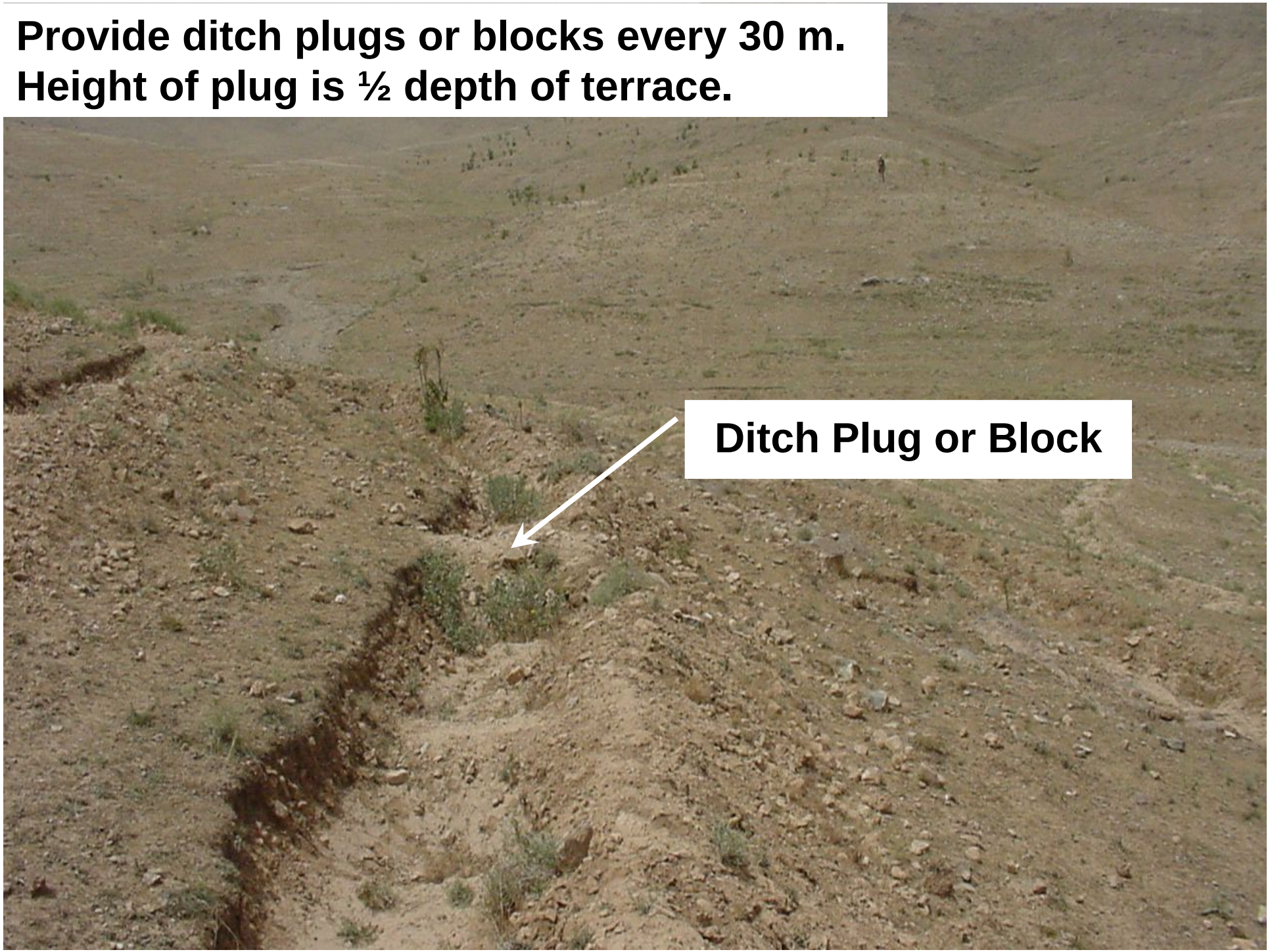
Average Slope In percent	V:H	Maximum Spacing (meters)
12 or less	1V:8H or less	12
12 to 25	1V:8H to 1V:4H	10
25 to 40	1V:4H to 1V:2.5H	8



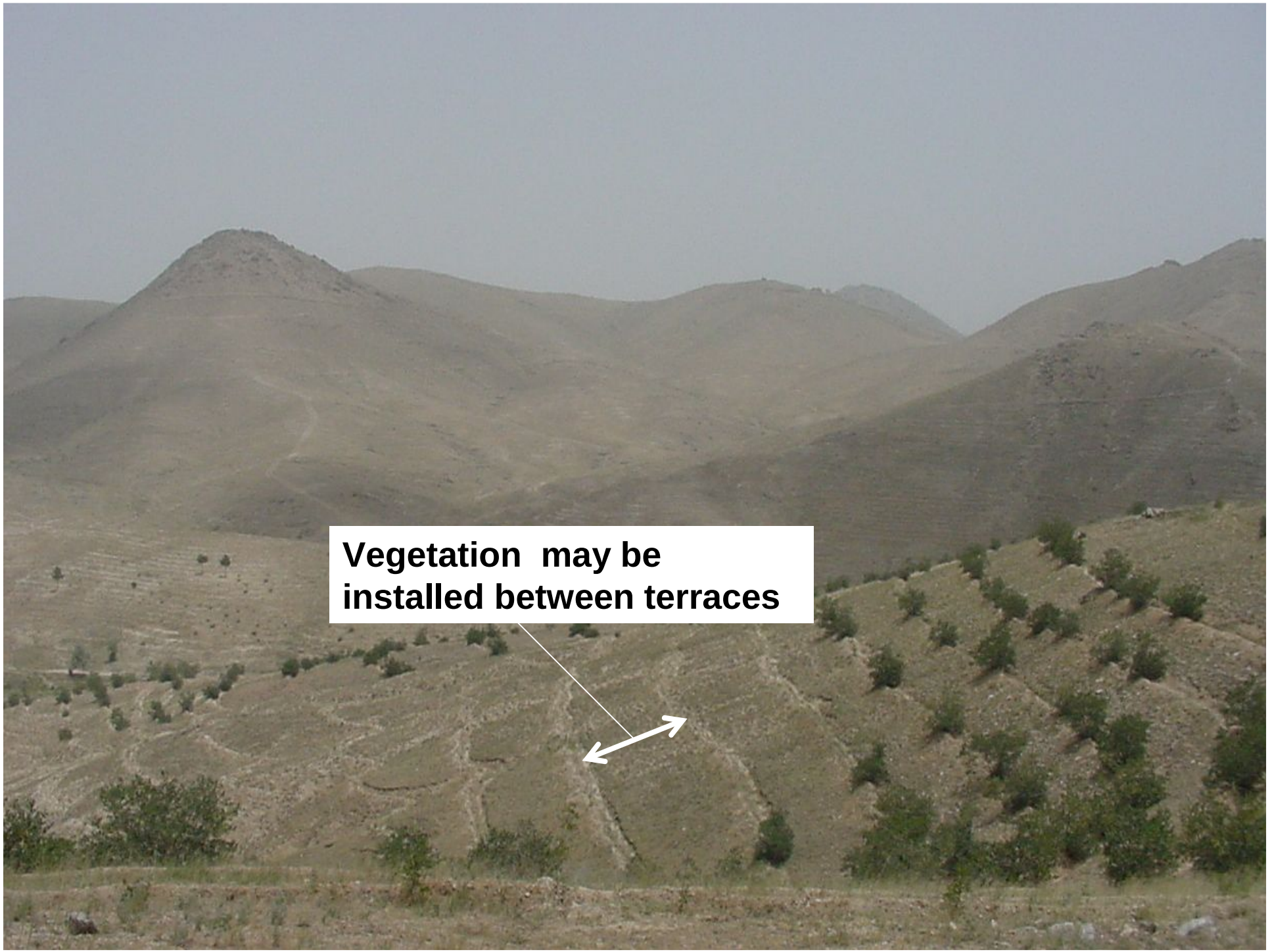

Spacing
Slope


Minimum depth of 30 cm.
Compact the ridge

Provide ditch plugs or blocks every 30 m.
Height of plug is ½ depth of terrace.



Vegetation between terraces will reduce soil erosion and water runoff


Vegetation may be
installed between terraces