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*Shaping Lives...
Empowering Communities...*

Soil and water Conservation Engineering

Presented By-

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Land Capability Classification for Indian Ravine Lands

	<i>Land form</i>	<i>Land slope (%)</i>	<i>Distance from gully rim (m)</i>	<i>Land capability class</i>
1.	Table lands	0 to 1	beyond 60	I
2.	Table lands	1 to 3	beyond 60	II
3.	Table lands and wide humps in between gullies	0 to 3	6 to 60	III
4.	Table lands	3 to 10	beyond 6	IV
5.	Table lands	10 to 15	beyond 6	V
6.	Marginal lands between the gully rim and table lands	0 to 15	within 6	VI
7.	Table land	15 to 25	—	VI
8.	Very small, medium gullies	—	—	VI
9.	Table lands	25	—	VII
10.	Deep and narrow gullies	—	—	VII



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Land Capability Classification for Western & Eastern Ghats

<i>Description</i>	<i>Class</i>
Slope 1 to 2%, deep soil	I
Slope 2 to 10%, deep soil	II
Slope 10 to 15%, deep soil	III
Slope 16 to 33%, deep soil	IV
Slope 0 to 2% in swamps, flooded, ill drained area	IV
Slope 0 to 33%, shallow soils, rock out crops, denuded hill rocks, areas with severe erosion hazard, danger of flooding and involving poor drainage	V, VI and VII
Slope greater than 33% with deep soil	
Precipitous slopes, badly eroded hill rocks, saline alkaline soils, flooded and poor drained areas	VIII



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Treatment Oriented Land Capability Classification

1. Class of slope	Range
Gentle slope	less than 7°
Moderate slope	7 — 15°
Strong slope	15 — 20°
Very strong slope	20 — 25°
Steep	25 — 30°
Very steep	> 30°
2. Soil depth	
Class of soil depth	Range (cm)
Deep	more than 90
Moderately deep	50 — 90
Shallow	20 — 50
Very shallow	less than 20



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Limitations of Different LUCC

<i>Practices</i>	<i>Class-I</i>	<i>Class-II</i>	<i>Class-III</i>	<i>Class-IV</i>
A <i>Soil conservation practices</i>				
(Agronomical)				
Contour cultivation	N	Y	Y	Y
Contour strip cropping	N	Y	Y	Y
Stubble mulching	N	Y	Y	Y
Conservation crop residues	Y	Y	Y	Y
Crop rotation	Y	Y	Y	Y
Cover cropping	Y	Y	Y	Y
Green manuring	Y	Y	Y	Y
Liming	Y	Y	Y	Y
Fertilizing and Manuring	Y	Y	Y	Y
B <i>Mechanical practices</i>				
Contour bunding	N	Y	Y	Y
Graded bunding	N	Y	Y	Y
Bench terracing	N	N	Y	Y
C <i>Drainage</i>	N	Y	Y	Y
D <i>Reclamation of saline and Alkali soils</i>	N	Y	Y	Y
E <i>Ley farming</i>	N	N	N	Y

N → denotes not suitable

Y → denotes yes suitable.



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Limitations of Different LUCC

1. **Class I.** land has not any limitation, can be safely used for all practices, starting from very intensive cultivation to wild life. Since this land has sufficient capability to produce good crop yield, therefore predominantly recommended for very intensive cultivation only and not recommended for other practices like grazing, forestry or wild life purposes.
2. **Class II.** land comprises some limitation, by virtue of which it is not recommended for very intensive cultivation purposes.
3. **Class III.** land has greater limitations than the class II land regarding fertility, slope, subject to erosion and risk of damage etc., as a result not allowed for intensive as well as very intensive crop cultivation, but can be used for crops, provided that the plant cover should be maintained.
4. **Class IV.** lands involve severe limitations compared to class III land, therefore they are not recommended for intensive crop cultivation, but cultivated occasionally; normally hay or pasture crops are grown.

