Session 6: Statistics of Land Degradation

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DEFINITION

Land degradation: reduction or loss of the biological or economic productivity and complexity of rain-fed cropland, irrigated cropland, or range, pasture, forest, or woodlands resulting from natural processes, land uses or other human activities and habitation pattern such as land contamination, soil erosion and the destruction of vegetation cover.

DEFINITIONS

- **Soil erosion: Wind and water erosion (sheet, rill and gully) of soil can be measured as net loss and applied to one of four categories: light; moderate; strong; and extreme. Alternatively, erosion can be measured visually or derived on the basis of reduced productivity.**

- **Salinization: The net increase in salt concentration in the top soil leading to declining productivity or biodiversity. Salinization can be a result of the clearing of native vegetation, the overuse of irrigation, or the evaporation of saline groundwater.**

- **Desertification: The process of land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations (e.g. drought) as well as direct and indirect human activities (e.g. overgrazing, intensive agricultural cultivation).**

TABLE L 2
AREA AFFECTED BY SOIL EROSION

Priority	Category	Unit	1980*	1990*	2000*	2002*
	Light erosion (1)	km^2				
	Moderate erosion (2)	km^2				
	Strong erosion (3)	km^2				
	Extreme erosion (4)	km^2				
!	**Total area affected by soil erosion (5) = (1)+(2)+(3)+(4)**	km^2				
	of which: Agricultural land	km^2				
	Forest and other wooded land	km^2				
	Dry open land with special vegetation cover	km^2				
	Open land without, or with insignificant, vegetation cover	km^2				

5 -TOTAL AREA AFFECTED BY SOIL EROSION

$$(5) = (1) + (2) + (3) + (4)$$

Sum over all four categories

- 1 ~ Light erosion
- 2 ~ Moderate erosion
- 3 ~ Strong erosion
- 4 ~ Extreme erosion

OF WHICH:

L-1 (1) Agricultural land
L-1 (6) Forest and other wooded land
L-1 (11) Dry open land with special vegetation cover
L-1 (12) Open land without, or with insignificant, vegetation cover

TABLE L 3
(1) TOTAL AREA AFFECTED BY SALINIZATION
(1) = (2)+(3)+(4)+(5)

Sum over all four categories

- **2 ~ Agricultural land**
- **3 ~ Forest and other wooded land**
- **4 ~ Dry open land with special vegetation cover**
- **5 ~ Open land without, or with insignificant, vegetation cover**

Priority	Category	Unit	1980*	1990*	2000*	2002*
!	**Total area affected (1) = (2)+(3)+(4)+(5)**	km²				
	Agricultural land (2)	km²				
	Forest and other wooded land (3)	km²				
	Dry open land with special vegetation cover (4)	km²				
	Open land without, or with insignificant, vegetation cover (5)	km²				

TABLE L 4
(1) TOTAL AREA AFFECTED BY DESERTIFICATION
(1) = (2) + (3) + (4)

Sum over all three categories.

- **2 ~ Dry sub-humid areas**
- **3 ~ Semi-arid areas**
- **4 ~Arid areas**

Category	Unit	1980*	1990*	2000*	2002*
Total area affected (1) = (2) + (3) + (4)	km^2				
Dry sub-humid areas (2)	km^2				
Semi-arid areas (3)	km^2				
Arid areas (4)	km^2				