

**Table 8-3 Countermeasures to be Applied to the Sutil
and Duro River Basins**

Countermeasure	Land use	Net Effect (ha)			Remarks
		Sutil	Duro	Total	
1. Terrace	Pasture	1,500	500	2,000	50% of AP
	Crops	6,000	2,000	8,000	60% of AC
	sub-total	7,500	2,500	10,000	
2. Road and drainage	Pasture & crops	150km	50km	200km	0.02km
3. No-tillage	Crops	3,000	1,000	4,000	30% of AC
4. Agronomic practice	Crops	3,000	1,000	4,000	30% of AC
5. Forestation	Pasture & crops	1,500	500	2,000	

Remarks: Runoff prevention effect against soil, TN and K by terracing was calculated based on the result of the study implemented in Parana State by JICA in 1995.

Note : AP=Actual area of artificial pasture, AC= Actual area of upland crops

**Table 8-4 Effect of Soil Erosion Countermeasures in the Sutil
and Duro River Basins**

Item	With project	Without Project	Effect	Effect/Benefit
Terraced arable land (ha)	8,713	713	8,000	1) Sustaining of agricultural productivity 2) Improvement of water quality 3) Reduction of production cost
Terraced pasture (ha)	2,000	0	2,000	
Total soil loss(ton/y)	2.7 × 10	4.0 × 10	1.3 × 10	
Erosion in arable land (ton/y)	9.1	144.0	134.9	
Erosion in pasture (ton/y)	5.4	120.8	115.4	
Nutrient loss of TN (kg/ha/y)	0	20.0	20.0	
Nutrient loss of K (kg/ha/y)	0	2.3	2.3	
Reforestation area (ha)	8,820	6,820	2,000	

Remarks: Runoff prevention effect against soil, TN and K by terracing was calculated based on the result of the study implemented in Parana State by JICA in 1995.