

### Legend

**Rivers**

- Chinchipe River Basin
- Lakes

**Soil Groups**

Symbol	Soil Group
[Orange box]	ARh-Sch Arenosol haplico - Solonchak haplico
[Light orange box]	FLe-RGe Fluvisol eutrítico - Regosol eutrítico
[Light brown box]	LPd-R Leptosol districo - Alforamiento litico
[Dark orange box]	LPq-R Leptosol litico - Alforamiento litico
[Brown box]	RGd-R Regosol districo - Alforamiento litico

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOODS

## Soils Groups Map

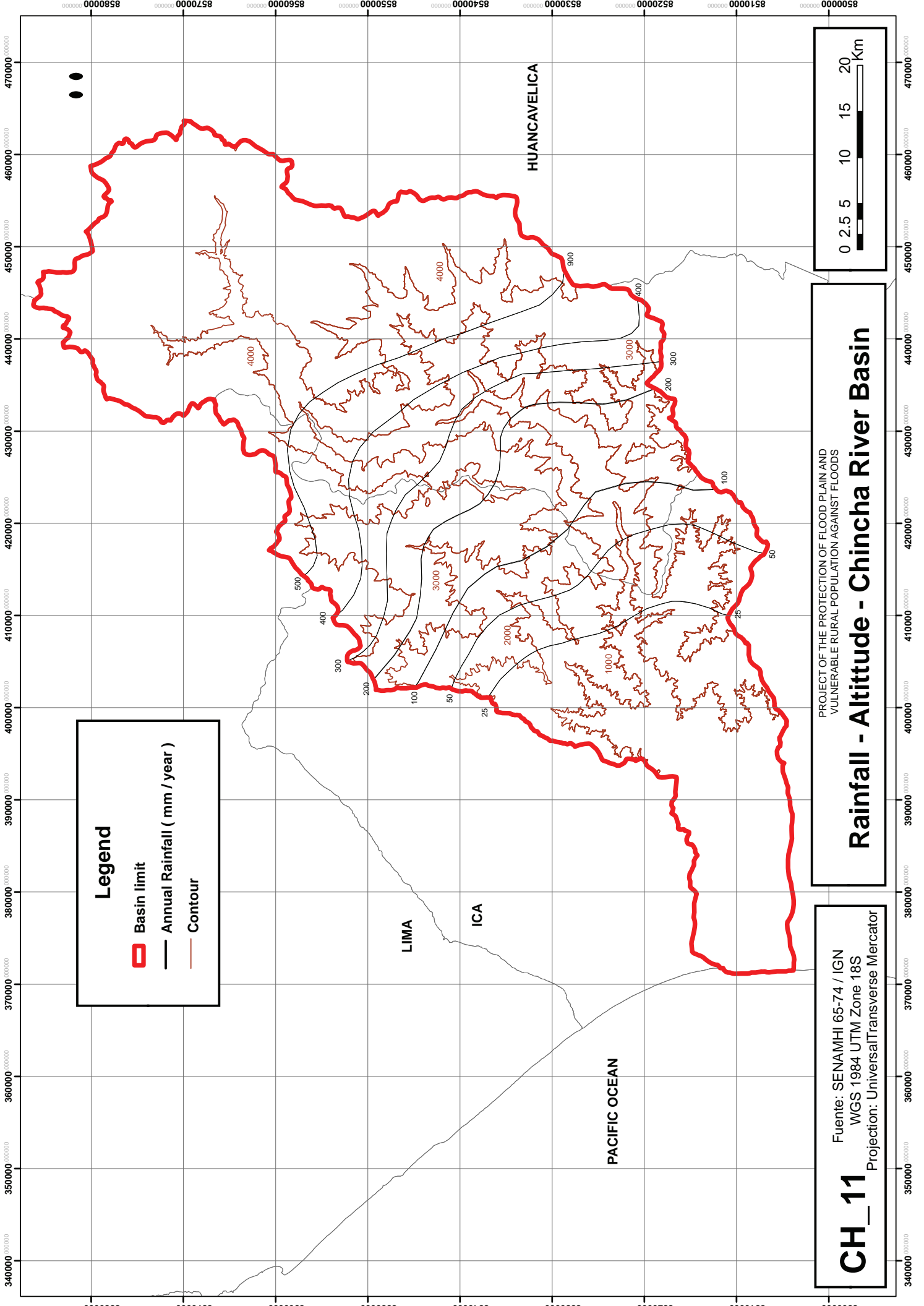
# Chinchipe River Basin

# CH\_10


Fuente : INRENA - 1996  
 JICA Study Team  
 WGS 1984 UTM Zone 18S  
 Projection: Universal Transverse Mercator

Scale : 1 : 350,000

0 3 6 12 18 24 Km

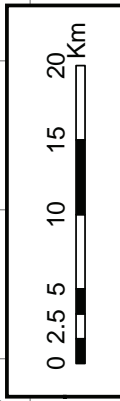


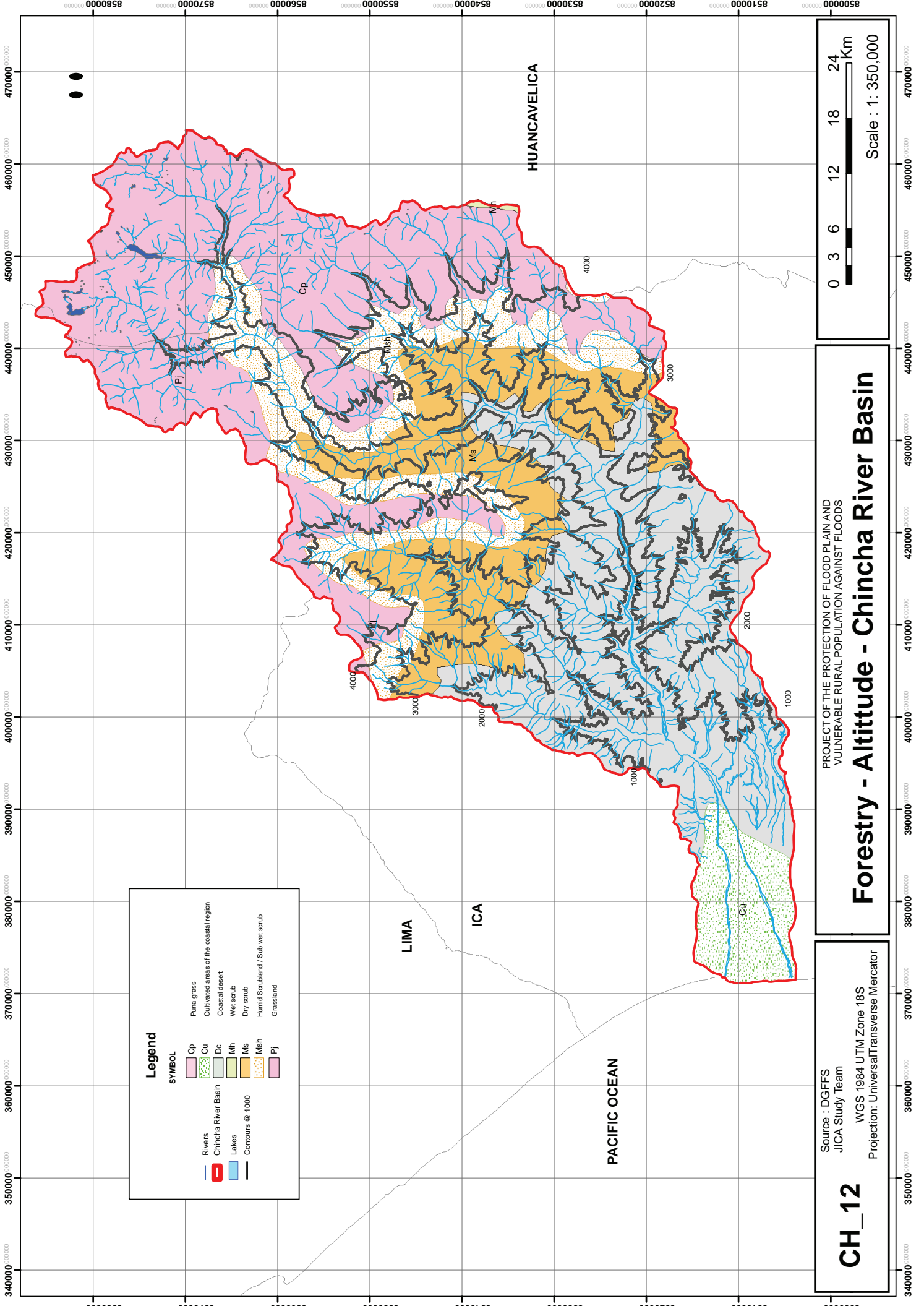
**Legend**

-  Basin limit
-  Annual Rainfall ( mm / year )
-  Contour

**CH\_11**  
Fuente: SENAMHI 65-74 / IGN  
WGS 1984 UTM Zone 18S  
Projection: Universal Transverse Mercator

**Rainfall - Altitude - Chíncha River Basin**  
PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
VULNERABLE RURAL POPULATION AGAINST FLOODS





**Legend**

**SYMBOL**

	Rivers		Puna grass
	Chincha River Basin		Cultivated areas of the coastal region
	Lakes		Coastal desert
	Contours @ 1000		Wet scrub
			Dry scrub
			Humid Scrubland / Sub wet scrub
			Grassland

**CH\_12**

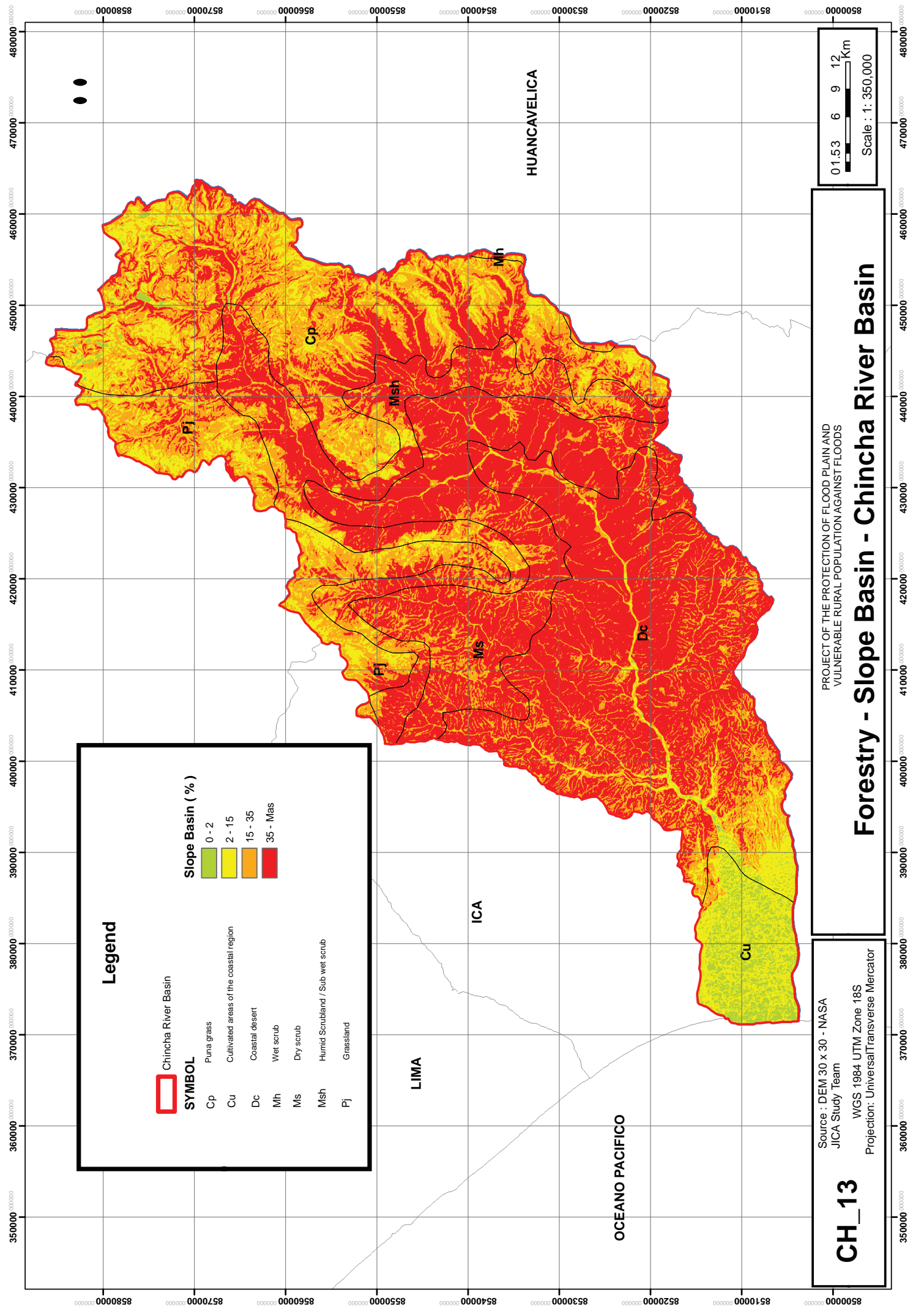
Source : DGFFS  
 JICA Study Team  
 WGS 1984 UTM Zone 18S  
 Projection: Universal Transverse Mercator

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOODS

# Forestry - Altitude - Chincha River Basin

0 3 6 12 18 24 Km

Scale : 1 : 350,000



**Legend**

Chinchu River Basin

**SYMBOL**

Cp	Puna grass
Cu	Cultivated areas of the coastal region
Dc	Coastal desert
Mh	Wet scrub
Ms	Dry scrub
Msh	Humid Scrubland / Sub wet scrub
Pj	Grassland

**Slope Basin (%)**

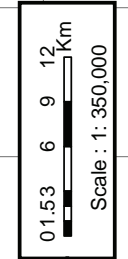
0 - 2
2 - 15
15 - 35
35 - 45

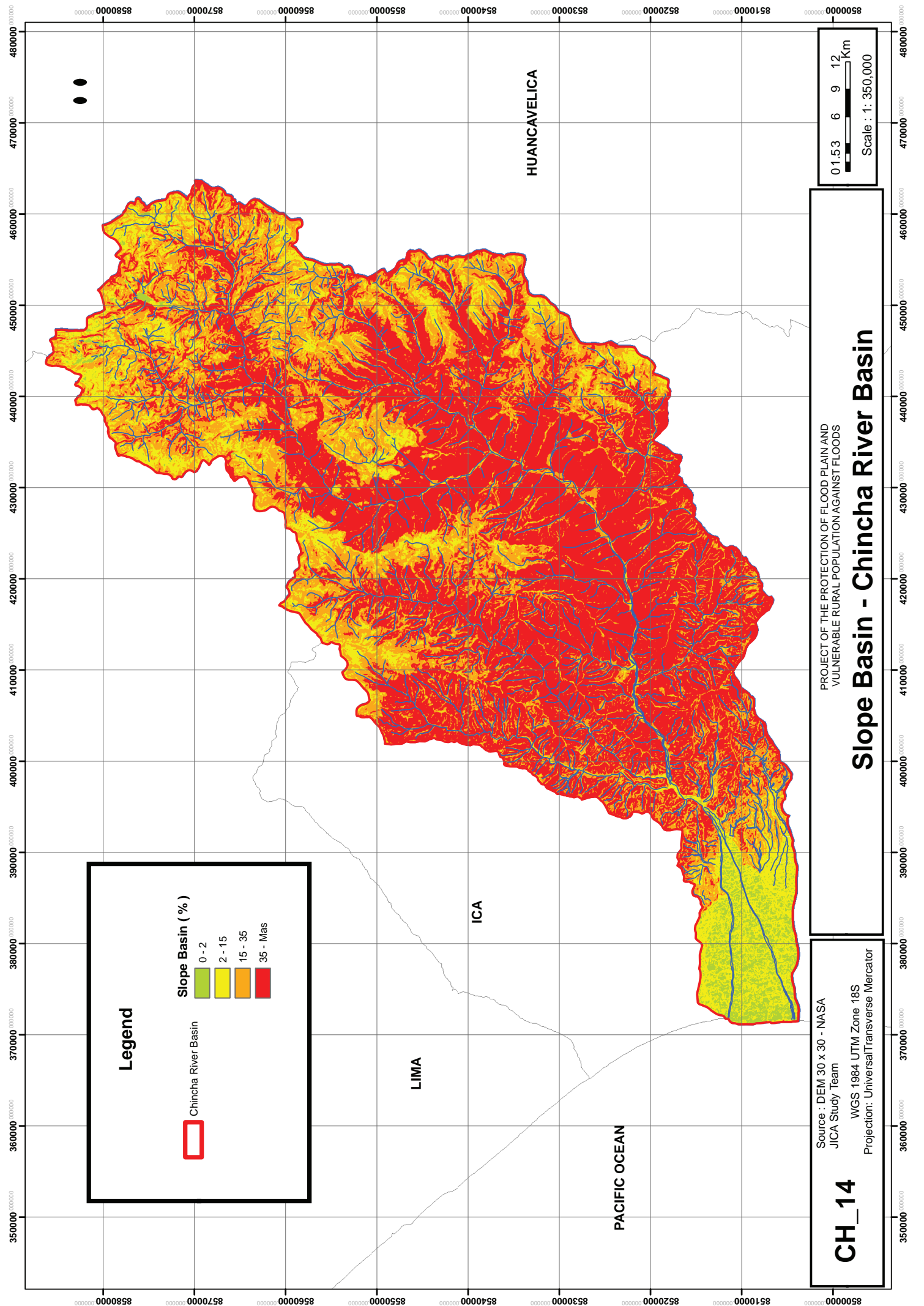
**CH\_13**

Source : DEM 30 x 30 - NASA  
 JICA Study Team  
 WGS 1984 UTM Zone 18S  
 Projection: Universal Transverse Mercator

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
 VULNERABLE RURAL POPULATION AGAINST FLOODS

**Forestry - Slope Basin - Chinchu River Basin**





**Legend**

Chincha River Basin

**Slope Basin (%)**

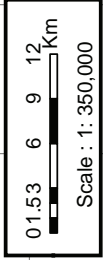
- 0 - 2
- 2 - 15
- 15 - 35
- 35 - Mas

**CH\_14**

Source : DEM 30 x 30 - NASA  
 JICA Study Team  
 WGS 1984, UTM Zone 18S  
 Projection: UniversalTransverse Mercator

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
 VULNERABLE RURAL POPULATION AGAINST FLOODS

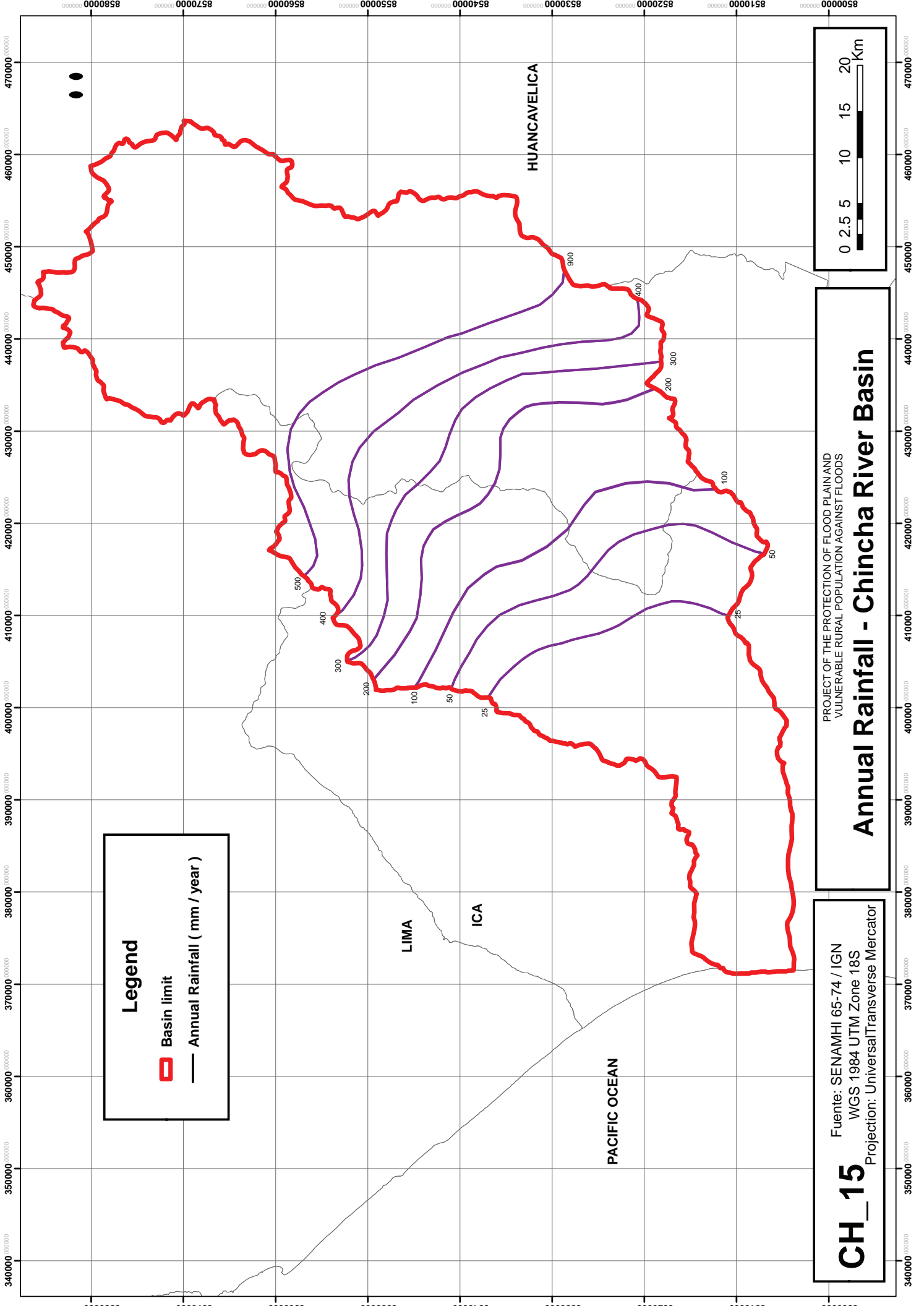
**Slope Basin - Chincha River Basin**



8500000 8510000 8520000 8530000 8540000 8550000 8560000 8570000 8580000

350000 360000 370000 380000 390000 400000 410000 420000 430000 440000 450000 460000 470000 480000

8500000 8510000 8520000 8530000 8540000 8550000 8560000 8570000 8580000



**Legend**

- ▭ Basin limit
- Annual Rainfall ( mm / year )

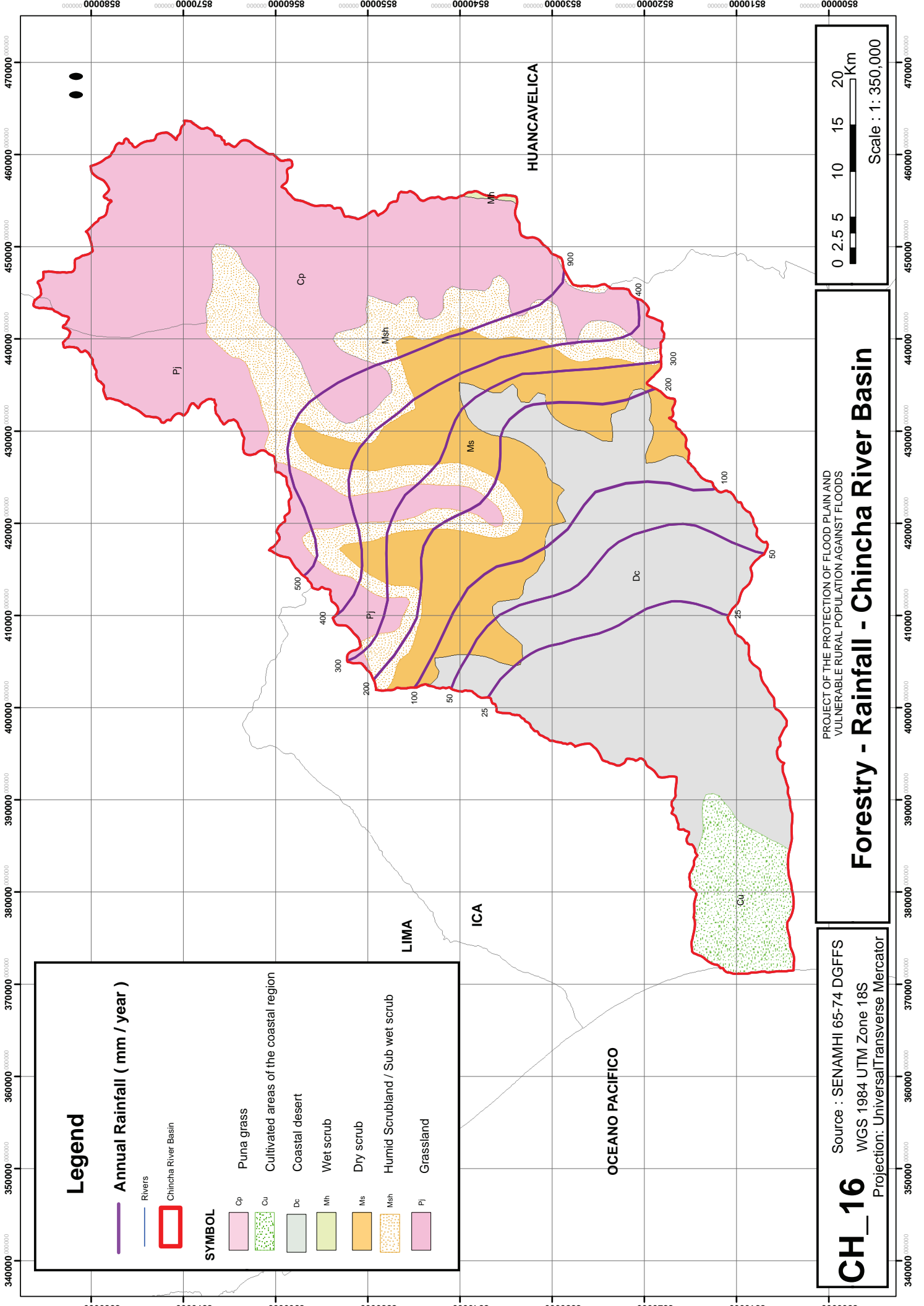
**CH\_15**

Fuente: SENAMHI 65-74 / IGN  
 WGS 1984 UTM Zone 18S  
 Projection: Universal Transverse Mercator

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
 VULNERABLE RURAL POPULATION AGAINST FLOODS

**Annual Rainfall - Chincha River Basin**

Scale bar showing distances in Kilometers (Km): 0, 2.5, 5, 10, 15, 20.



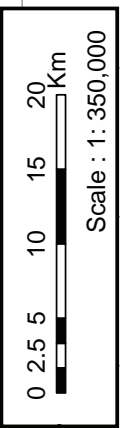
### Legend

**Annual Rainfall ( mm / year )**

- Rivers
- Chincha River Basin

**SYMBOL**

- Cp Puna grass
- Cu Cultivated areas of the coastal region
- Dc Coastal desert
- Mh Wet scrub
- Ms Dry scrub
- Msh Humid Scrubland / Sub wet scrub
- Pi Grassland

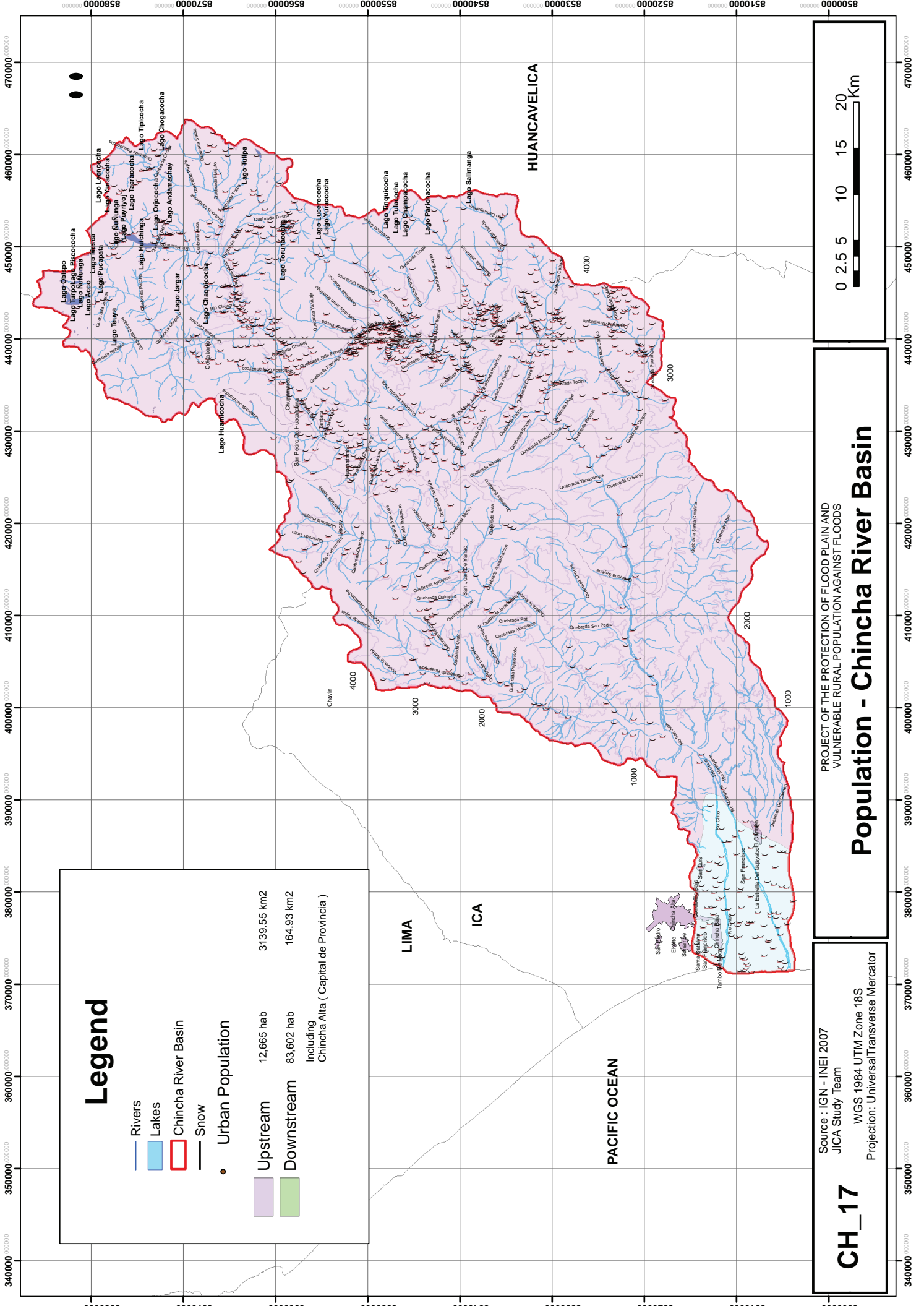


PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOODS

## Forestry - Rainfall - Chincha River Basin

**CH\_16**

Source : SENAMHI 65-74 DGFFS  
 WGS 1984 UTM Zone 18S  
 Projection: Universal Transverse Mercator



### Legend

- Rivers
- Lakes
- Chincha River Basin
- Snow
- Urban Population

	Upstream	12,665 hab	3139.55 km <sup>2</sup>
	Downstream	83,602 hab	164.93 km <sup>2</sup>

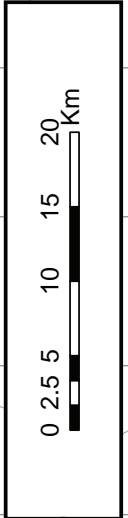
Including Chinchita Alta ( Capital de Provincia )

**CH\_17**

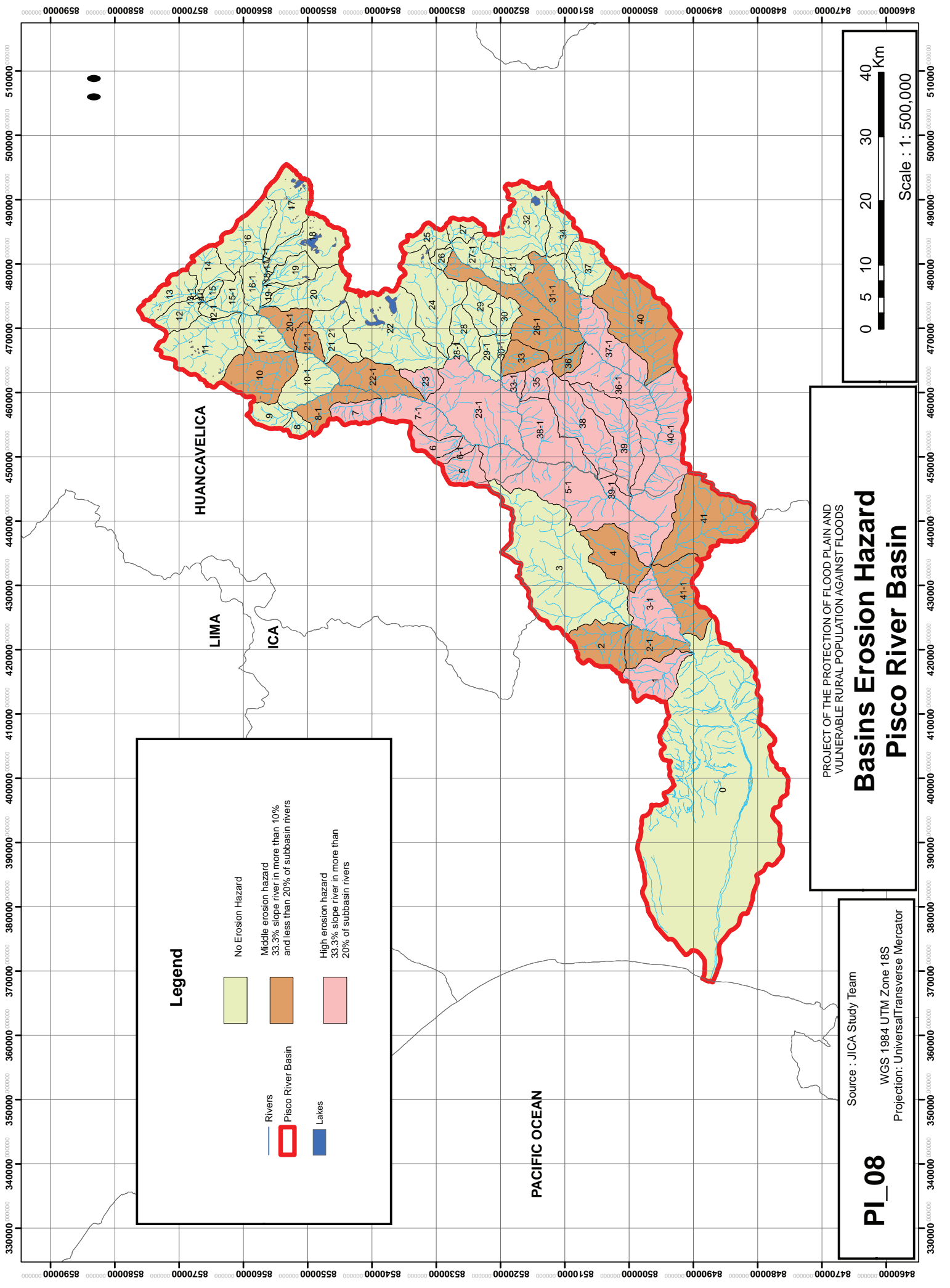
## Population - Chincha River Basin

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOODS







Source : IGN - INEI 2007  
 JICA Study Team  
 WGS 1984 UTM Zone 18S  
 Projection: Universal Transverse Mercator







**Legend**

	No Erosion Hazard
	Middle erosion hazard 33.3% slope river in more than 10% and less than 20% of subbasin rivers
	High erosion hazard 33.3% slope river in more than 20% of subbasin rivers
	Rivers
	Pisco River Basin
	Lakes

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
VULNERABLE RURAL POPULATION AGAINST FLOODS

## Basins Erosion Hazard

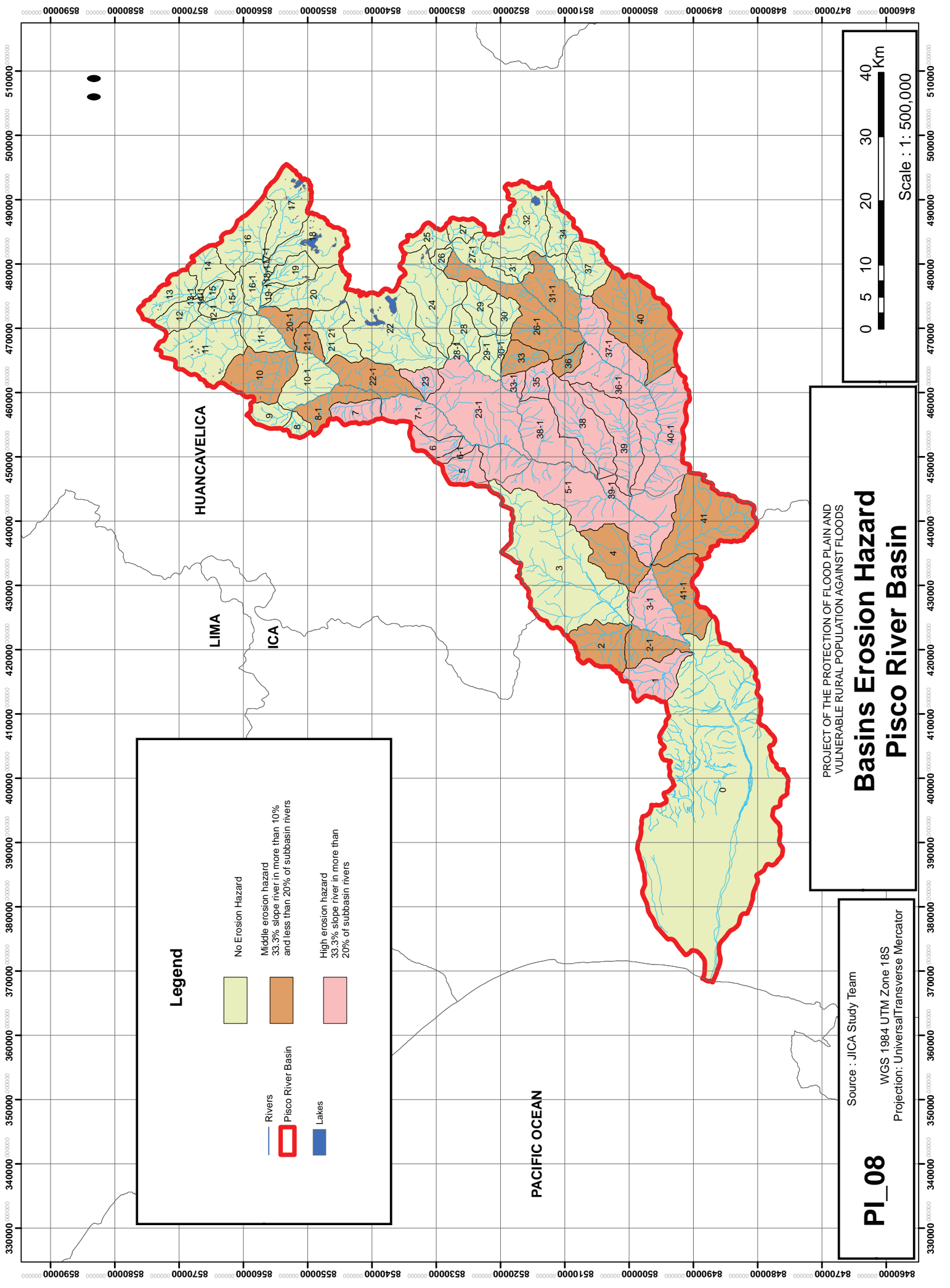
### Pisco River Basin

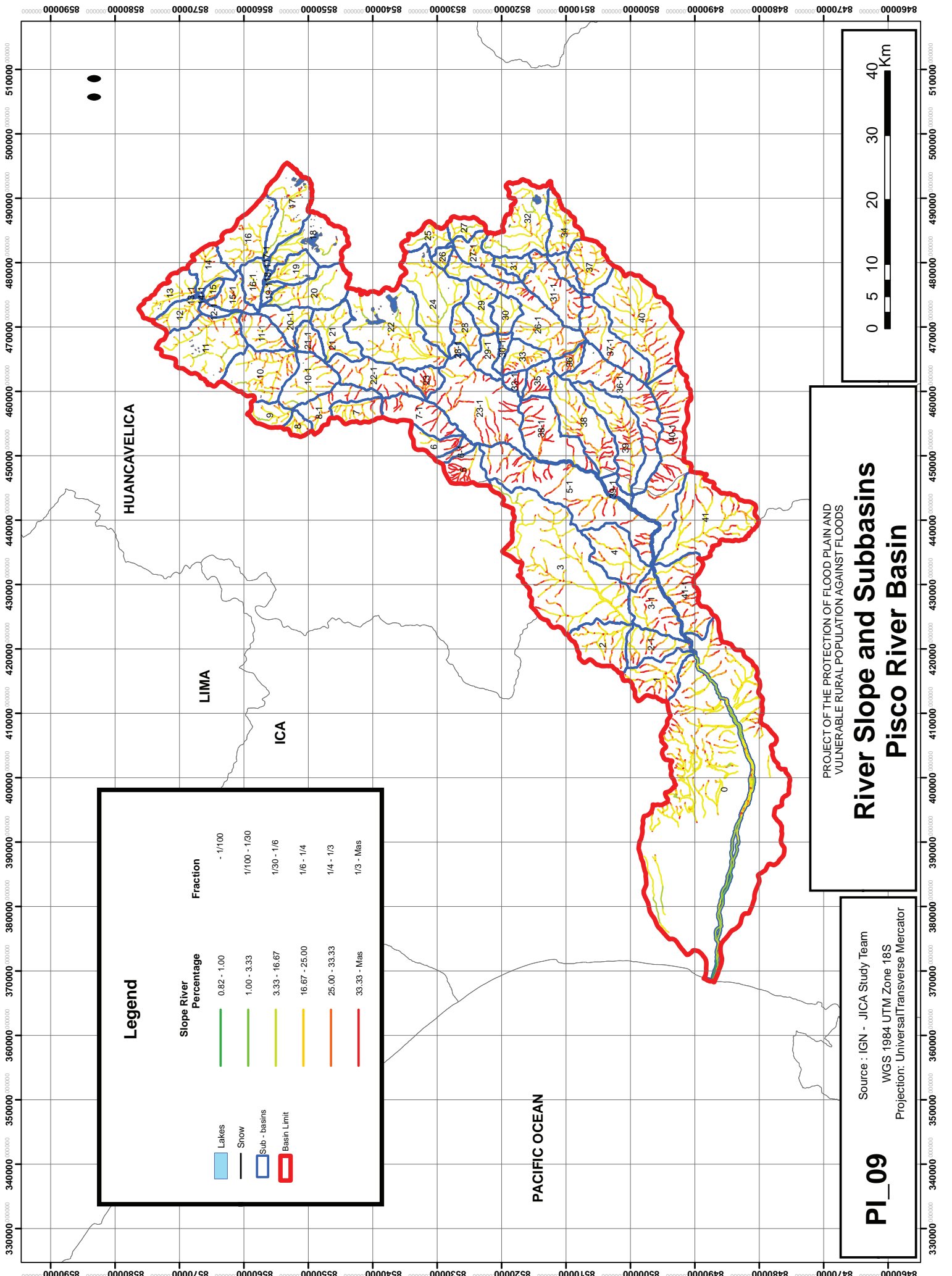
**PI\_08**

Source : JICA Study Team  
WGS 1984 UTM Zone 18S  
Projection: Universal Transverse Mercator

0 5 10 20 30 40 Km

Scale : 1: 500,000





### Legend

Slope River Percentage		Fraction
<span style="color: green;">█</span>	0.82 - 1.00	- 1/100
<span style="color: lightgreen;">█</span>	1.00 - 3.33	1/100 - 1/30
<span style="color: yellow;">█</span>	3.33 - 16.67	1/30 - 1/6
<span style="color: orange;">█</span>	16.67 - 25.00	1/6 - 1/4
<span style="color: red;">█</span>	25.00 - 33.33	1/4 - 1/3
<span style="color: darkred;">█</span>	33.33 - Mas	1/3 - Mas

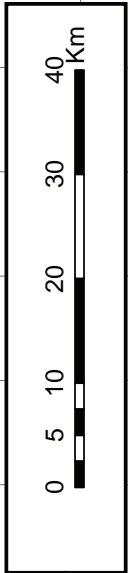
<span style="color: blue;">█</span>	Lakes
<span style="color: black;">█</span>	Snow
<span style="border: 1px solid blue;">█</span>	Sub - basins
<span style="border: 1px solid red;">█</span>	Basin Limit

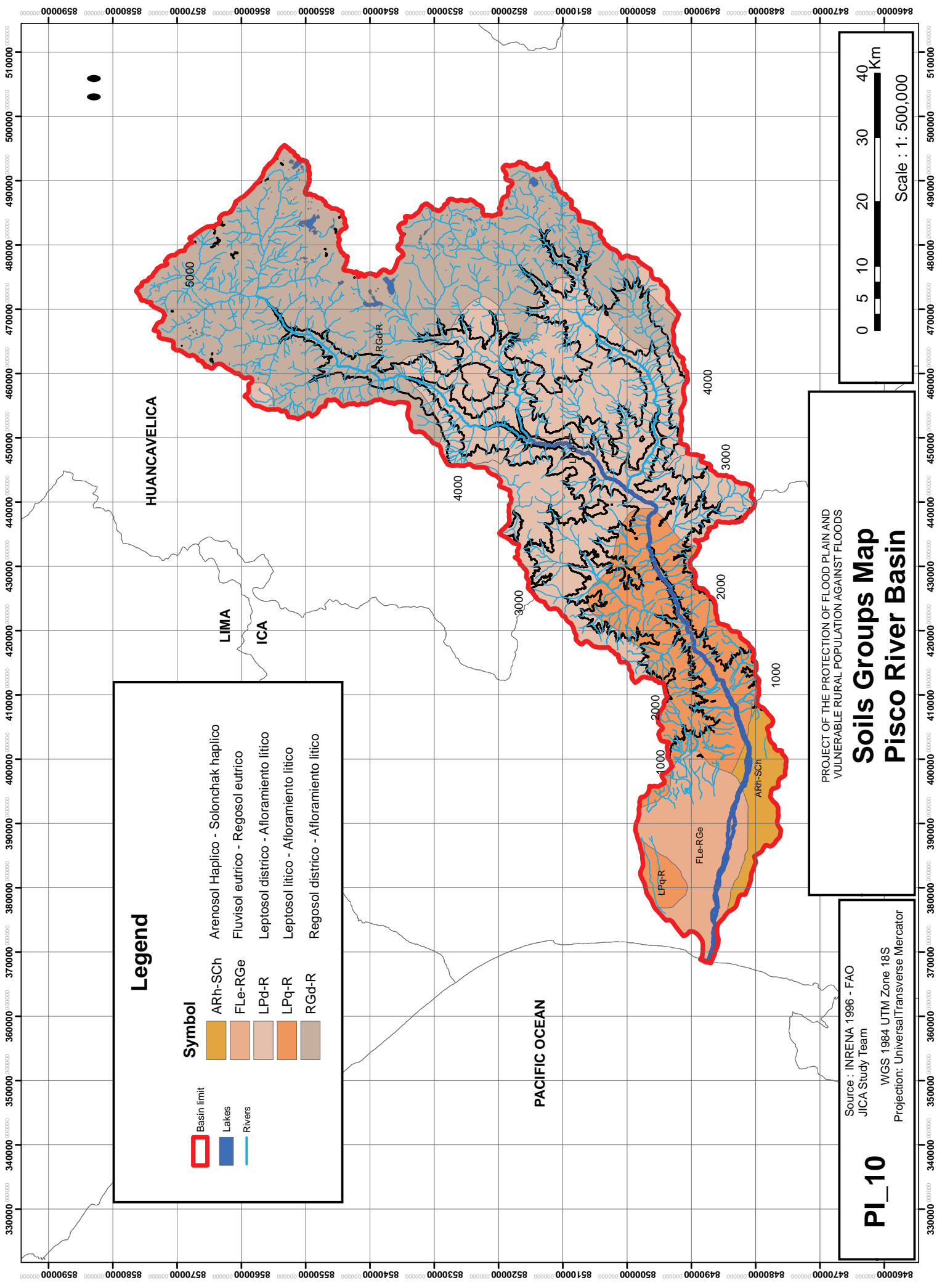
PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
VULNERABLE RURAL POPULATION AGAINST FLOODS

## River Slope and Subbasins Pisco River Basin









**PI\_09**

Source : IGN - JICA Study Team  
WGS 1984 UTM Zone 18S  
Projection: UniversalTransverse Mercator





### Legend

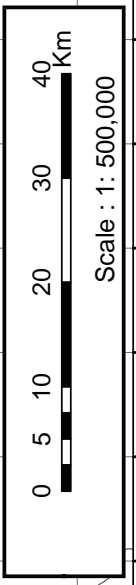
- |   |             |   |         |   |
|---|-------------|---|---------|---|
|  | Basin limit |  | ARh-SCh | Arenosol Haplico - Solonchak haplico    |
|  | Lakes       |  | FLe-RGe | Fluvisol eutrico - Regosol eutrico      |
|  | Rivers      |  | LPd-R   | Leptosol districo - Afloramiento litico |
|   |             |  | LPq-R   | Leptosol litico - Afloramiento litico   |
|   |             |  | RGd-R   | Regosol districo - Afloramiento litico  |

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOODS

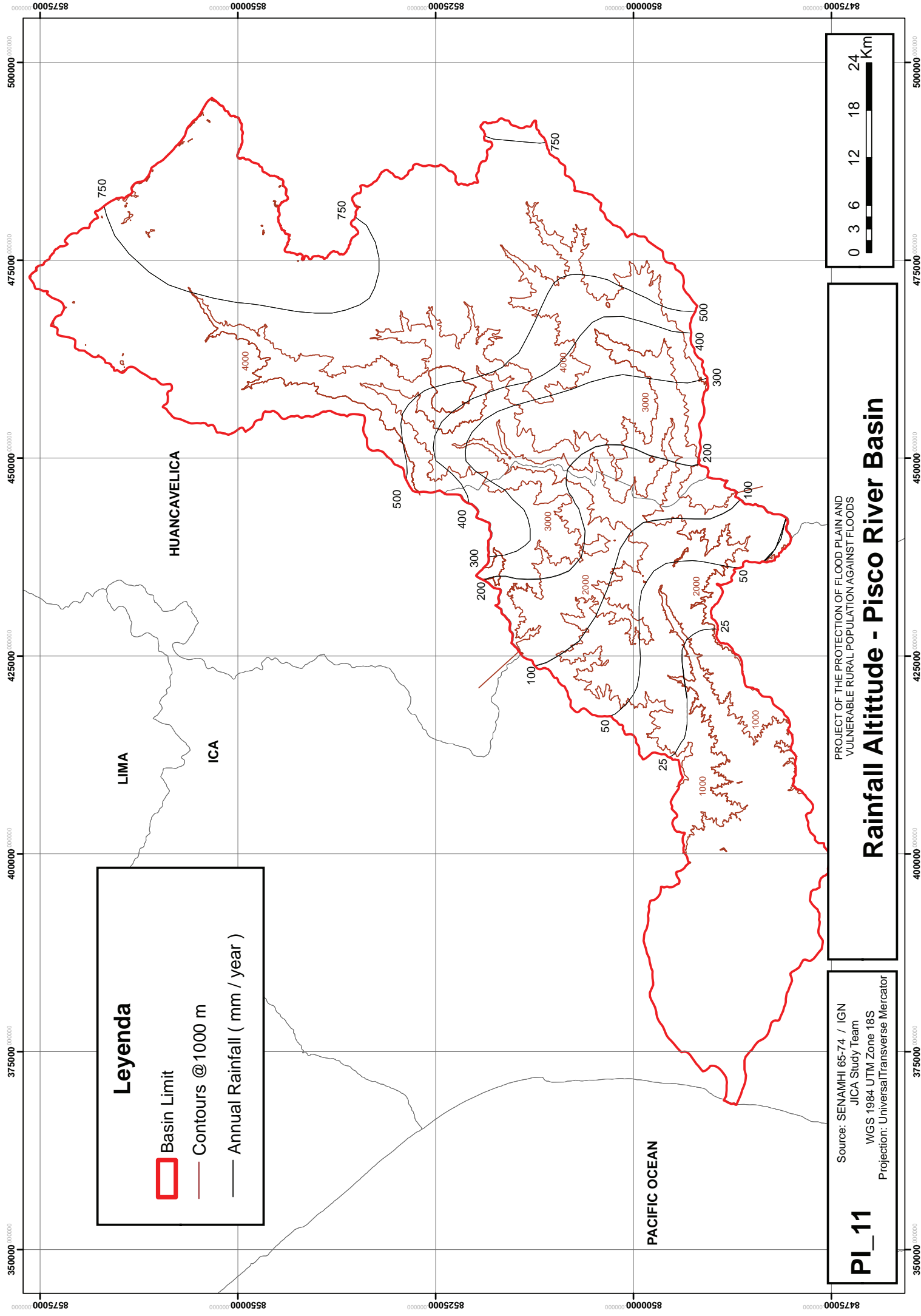
## Soils Groups Map

### Pisco River Basin

Source : INRENA 1996 - FAO  
 JICA Study Team  
 WGS 1984 UTM Zone 18S  
 Projection: UniversalTransverse Mercator

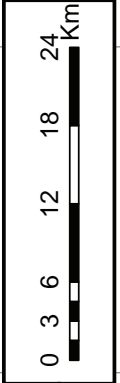


PI\_10



**Leyenda**

- Basin Limit
- Contours @1000 m
- Annual Rainfall ( mm / year )

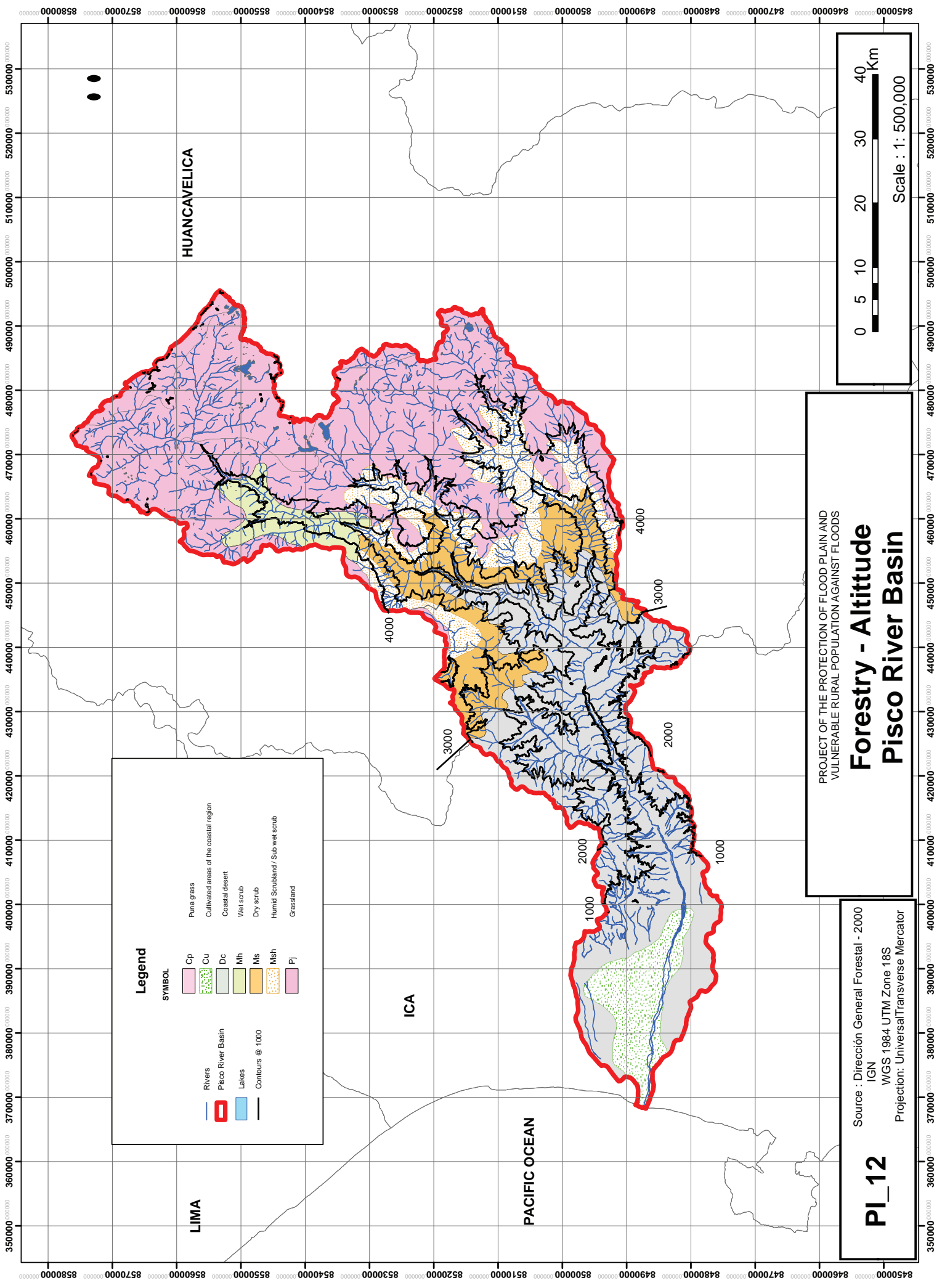


PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
VULNERABLE RURAL POPULATION AGAINST FLOODS

## Rainfall Altitude - Pisco River Basin

**PI\_11**

Source: SENAMHI 65-74 / IGN  
 JICA Study Team  
 WGS 1984 UTM Zone 18S  
 Projection: Universal Transverse Mercator



**Legend**

SYMBOL	
	Rivers
	Pisco River Basin
	Lakes
	Contours @ 1000
	Puna grass
	Cultivated areas of the coastal region
	Coastal desert
	Wet scrub
	Dry scrub
	Humid Scrubland / Sub wet scrub
	Grassland

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND VULNERABLE RURAL POPULATION AGAINST FLOODS

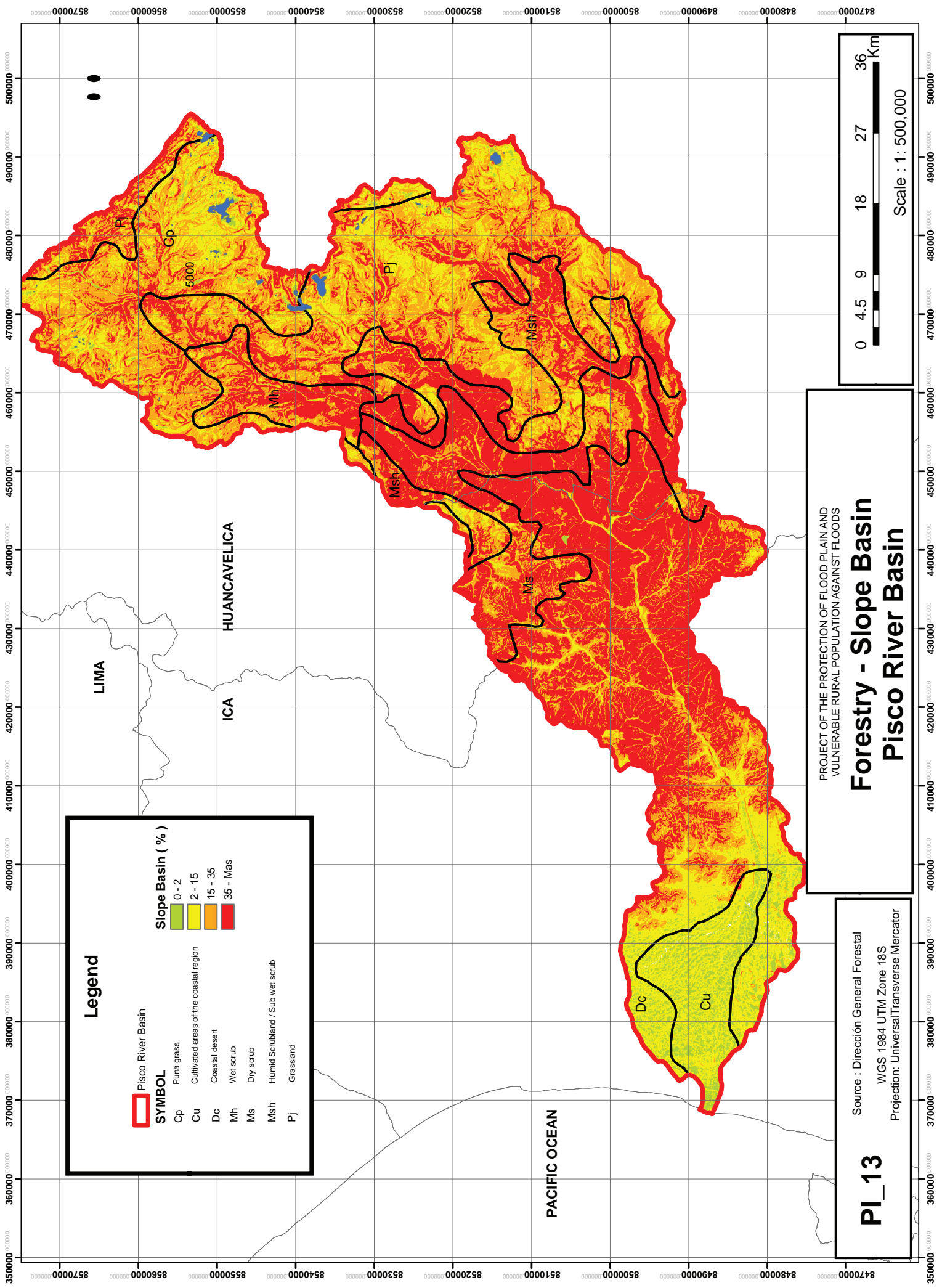
## Forestry - Altitude Pisco River Basin

**PI\_12**

Source : Dirección General Forestal - 2000  
IGN  
WGS 1984 UTM Zone 18S  
Projection: UniversalTransverse Mercator

0 5 10 20 30 40 Km

Scale : 1 : 500,000



**Legend**

Pisco River Basin

**SYMBOL**

Cp	Puna grass
Cu	Cultivated areas of the coastal region
Dc	Coastal desert
Mh	Wet scrub
Ms	Dry scrub
Msh	Humid Scrubland / Sub wet scrub
Pj	Grassland

**Slope Basin ( % )**

	0 - 2
	2 - 15
	15 - 35
	35 - Más

PROJECT OF THE PROTECTION OF FLOOD PLAIN AND  
VULNERABLE RURAL POPULATION AGAINST FLOODS

## Forestry - Slope Basin Pisco River Basin

**PI\_13**

Source : Dirección General Forestal  
WGS 1984 UTM Zone 18S  
Projection: UniversalTransverse Mercator

