

SOIL SURVEY IN  
CATALONIA, SPAIN:  
STEPS TOWARD A  
NATIONAL  
COOPERATIVE EFFORT

# CATALONIA, SPAIN



## PHYSIOGRAPHY

Pyrenees  
mountains

Inter-mountains  
and coastal  
ranges

Ebro basin

## Area:

- 3.210.667 ha
- 7.930.372 acres

## Population:

- 7 million people

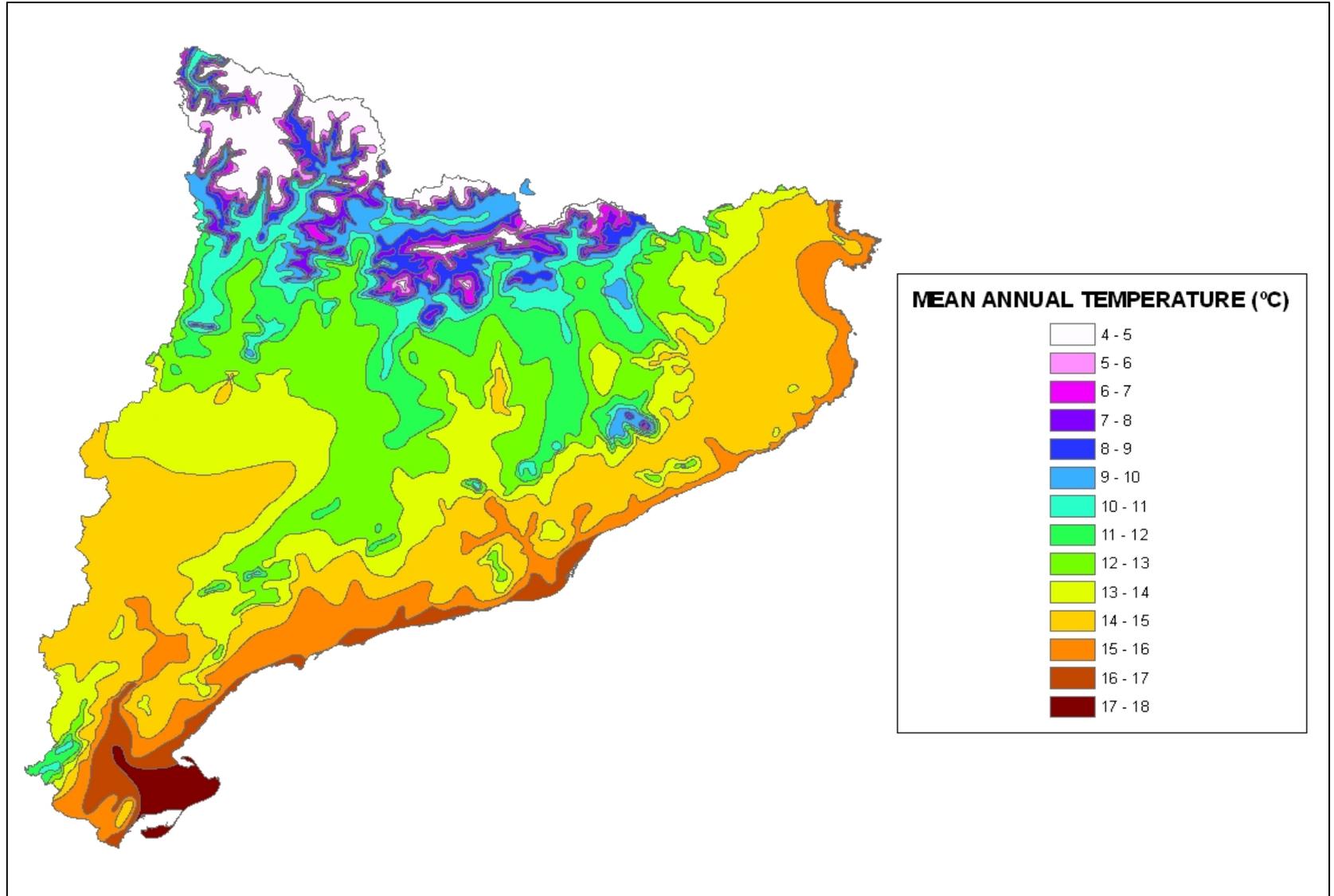
## Land Use:

- Forestry: 60%
- Agriculture: 29%
- Urban: 6%
- Miscellaneous: 5%

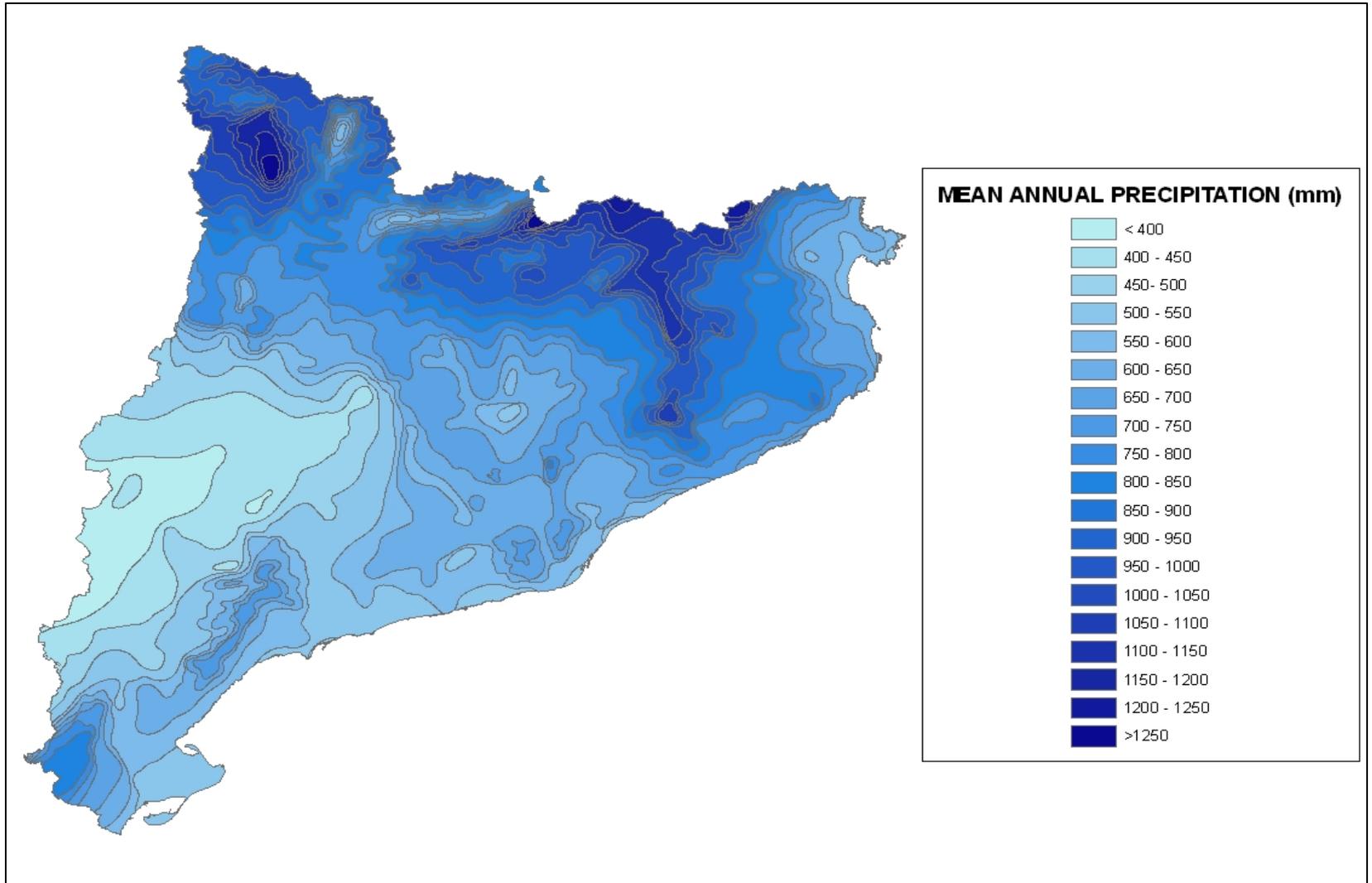
# CLIMATE

- Dry Mediterranean
  - Hot Summers
  - Mild Winters

# MEAN ANNUAL AIR TEMPERATURE



# MEAN ANNUAL PRECIPITATION



# COOPERATIVE EFFORT



## Current Partners:

-IGC

-ICC

-University of Lleida

-Dpt. of Agriculture

# PROJECT OBJECTIVES

- **Soil Mapping of Catalonia**
  - **1:25,000**
  - **1:250,000**
- **Soil Database Development (attributes dataset)**
  - **Threats to Soil - soil erosion, salinitation, desertification, decline in organic matter, sealing, compaction, soil protection, etc.**
- **Soil Information System (spatial dataset)**

# **Methodology**

- Soil Survey Manual**
- National Soil Survey Handbook**
- Soil Classification**
  - Soil Taxonomy**
  - WRB**
- Laboratory Analyses**
  - Spanish official system**

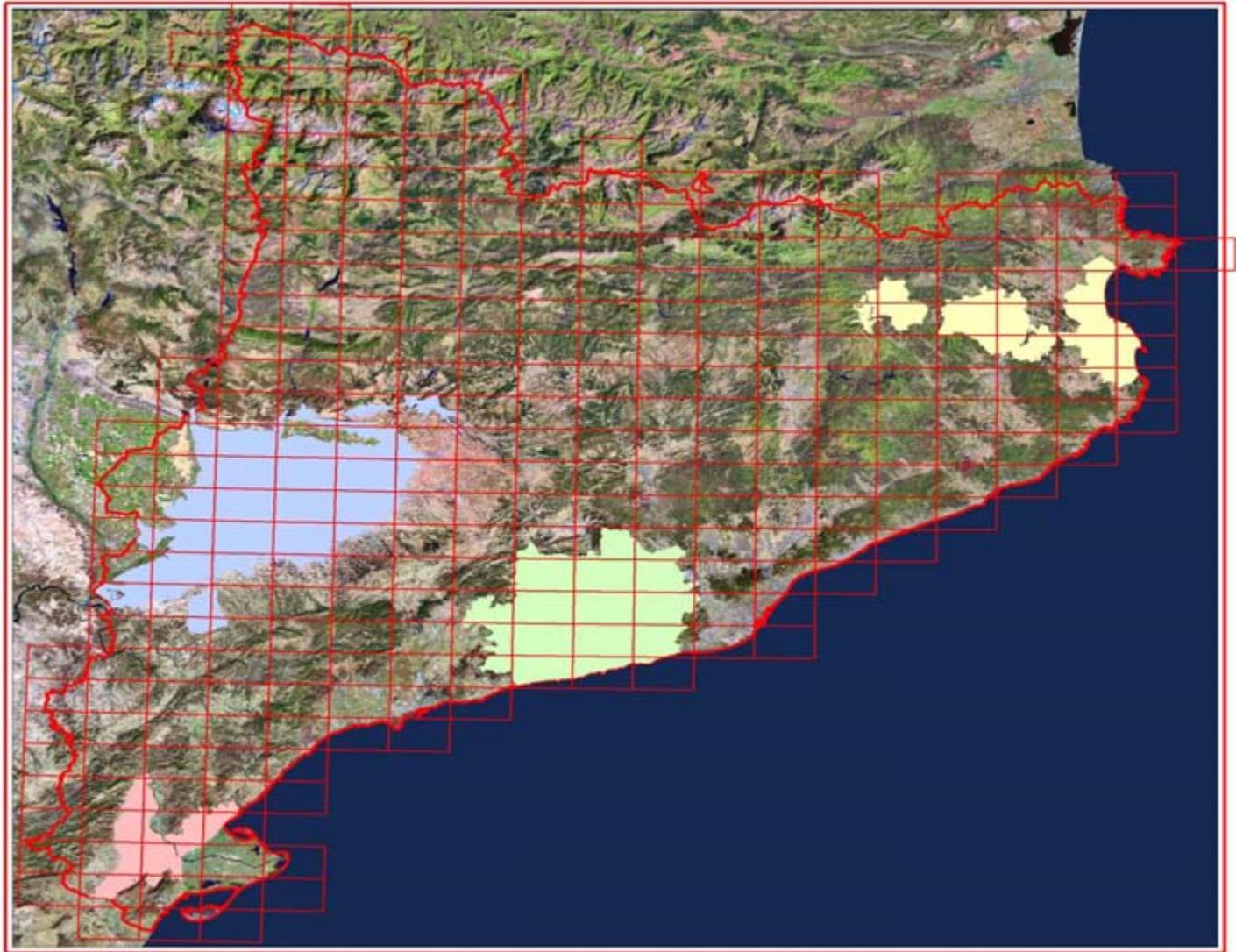
# ORDER 2 MAPPING



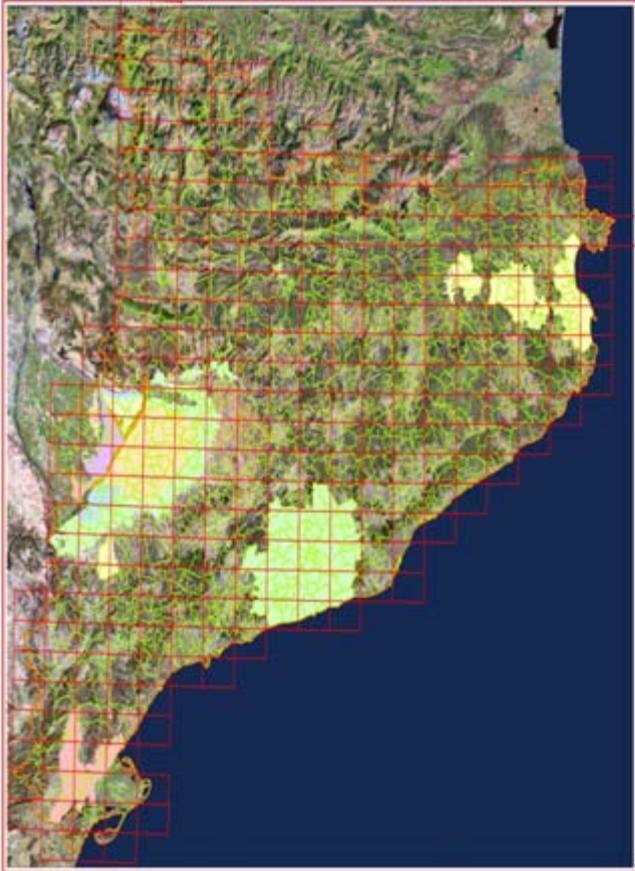
**SCALE 1:25.000**

**304 maps**

# PRIORITY AREAS



# MAPPING APPROACH



## IGC staff

- SS Quality Assurance
- Map Finishing

## External Consultants

- Soil mapping
- SS Quality Control
- Database development

# **SOIL MAP REPORT: MANUSCRIPT**

## **- MAIN REPORT**

- INTRODUCTION**
- HOW TO USE THIS SOIL MAP**
- DESCRIPTION ON THE STUDY AREA**
- THE SOILS: LEGEND AND MAP UNITS**
- SOIL PROPERTIES AND CHARACTERISTICS**
- SOIL FORMATION**
- SOIL CLASSIFICATION**

## **- ANNEXES TO THE MAIN REPORT**

- METHODOLOGY**
- CRITERIA FOR SOIL SURVEY DESCRIPTION**
- DESCRIPTION OF THE SOIL SERIES**
- CHEMICAL ANALYSES**
- HYDROLOGICAL CHARACTERIZATION**
- PROFILES FORMS**



# POLITICAL DIVISIONS



**41 maps**



# GENERAL SOIL MAP



- Scale at 1:250.000
- Linked to the standards of the European Union (EU 1:250.000 project)

# **CHALLENGES & OPPORTUNITIES**

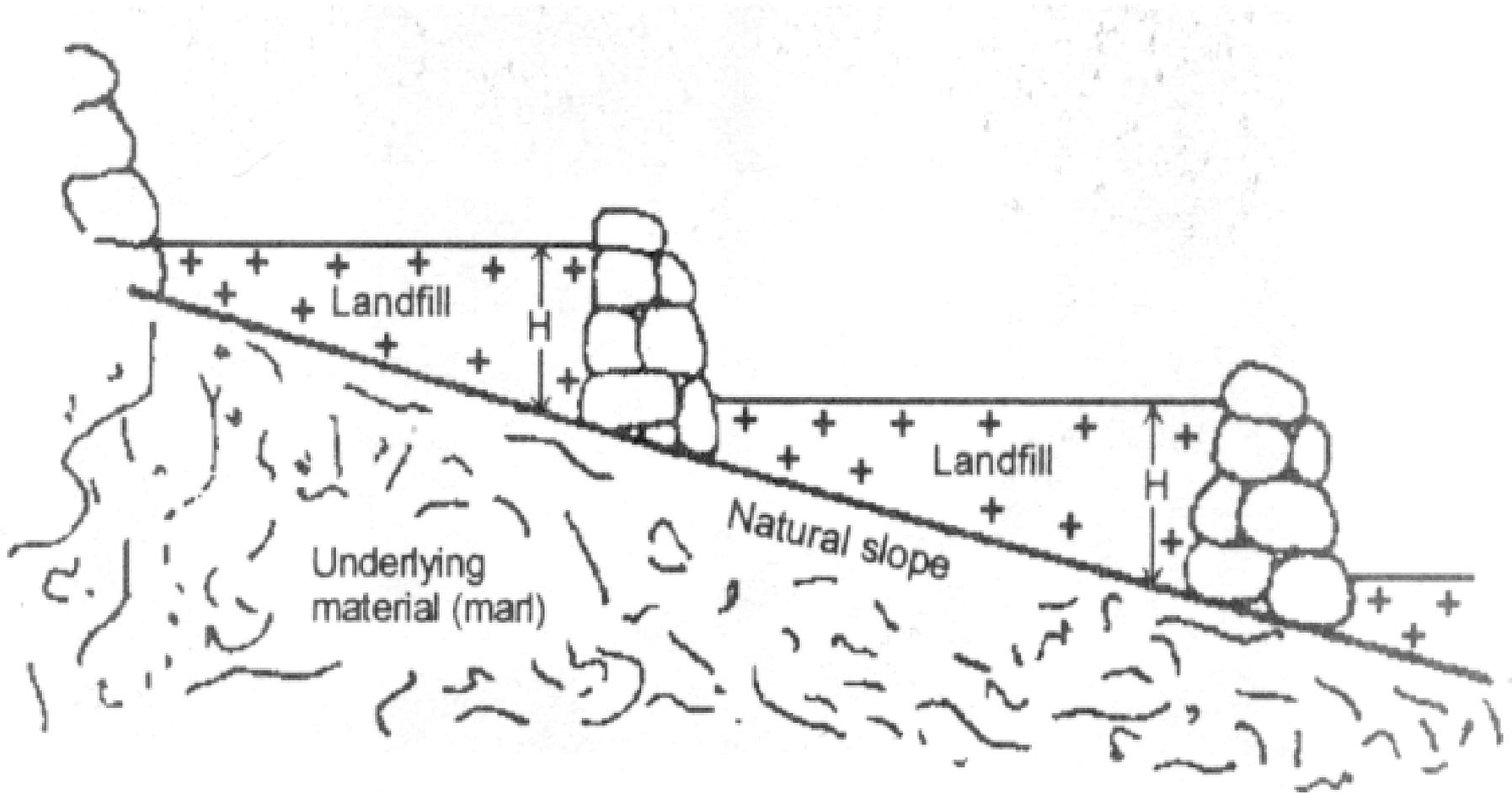
- Soil moisture regimes**
- Antropogenic soils**







# Bench Terraces



# **NEXT STEPS**

## **- HOW TO MAKE AVAILABLE SOIL INFORMATION**

- GENERAL PUBLIC**
- OTHER POTENTIAL USERS**

## **- ENGAGEMENT OF OTHER ORGANIZATIONS TO FORM A NATIONAL COOPERATIVE SOIL SURVEY PROGRAM**



**MUCHAS GRACIAS!!**