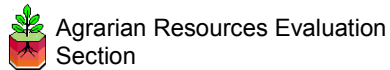


*Pamplona, February 08*

# EUROPEAN SOIL PROTECTION POLICY

Miguel Donézar Díez de Ulzurrun



*Pamplona, February 08*

- 1.- INTRODUCTION
- 2.- SOIL DEGRADATION PROCESSES
- 3.- PICTURES SHOWING EXAMPLES
- 4.- OBJECTIVES OF EU DIRECTIVE
- 5.- CONCLUSIONS

Pamplona, February 08

## 1.- INTRODUCTION

- Necessity for Soil Protection
- Human activity vs natural processes
- Other effects of Soil Degradation
- Immediate European Directive

Pamplona, February 08

## 2.- SOIL DEGRADATION PROCESSES

8 types of soil threats.

- Erosion
- Organic matter decline
- Contamination
- Sealing
- Compaction
- Loss of biodiversity
- Salinization
- Flooding and landslides

*Pamplona, February 08*

## Erosion



Some natural processes are more intensive in arid lands.

*Pamplona, February 08*

## Erosion



Water erosion in cropped arid lands. It's evident too the scarcity of organic matter in the surface layer of the soil

*Pamplona, February 08*

## Erosion



Loss of the superficial layer in an agricultural field. In this case, erosion goes together with soil compaction.

*Pamplona, February 08*

## Erosion



Effects of soil erosion in a cropped field. The gullies have been built up in one year.

*Pamplona, February 08*

## Soil Contamination



Contaminated site near an industrial area.

*Pamplona, February 08*

## Soil Contamination



Acumulation in a field of different kinds of wastes

*Pamplona, February 08*

Sealing



Loss of good agricultural lands because the expansion of urban, industrial and infrastructural areas.

Sealing



Pamplona 1929

*Pamplona, February 08*

Sealing



Pamplona 2006

*Pamplona, February 08*

Sealing



Tudela 1956

## Sealing

*Pamplona, February 08*



Tudela 2006

## Loss of biodiversity

*Pamplona, February 08*



The landscape becomes very homogeneous and monotonous because of agricultural practice.



*Pamplona, February 08*

## Salinization



Salinization usually goes together with bad drainage conditions.

*Pamplona, February 08*

## Flooding



Problems in the roads

*Pamplona, February 08*

## Flooding



Water runs with a lot of sediments.

*Pamplona, February 08*

## Landslides



Mass movements are more frequent in soils without vegetation

*Pamplona, February 08*

## Landslides



Mass movements can damage roads too

*Pamplona, February 08*

## 4.- OBJECTIVES OF EU DIRECTIVE

- Stop soil degradation and improve its health
- Inventory of affected areas
- Define targets for risk areas
- Establish a Soil Monitoring System

*Pamplona, February 08*

## 5.- CONCLUSIONS

- Soil health is threatened by human activity
- Soil is a non-renewable resource and must be protected
- Several land use policies are involved