



THEMATIC STRATEGY ON SOIL PROTECTION

EEB WORKSHOP



Background

TOWARDS COMMUNICATION- April 2002

SOILS THREATS IDENTIFIED

Erosion

Decline in Organic Matter

Soil Contamination

Salinisation

Biodiversity loss

Compaction

Soil sealing

Floods and landslides

INTEGRATION of soil protection aspects in other policies



CONTENT OF THE THEMATIC STRATEGY

We propose for the TS to be adopted by end 2005

COMMUNICATION

**SOIL
FRAMEWORK
DIRECTIVE -SFD**

**IMPACT
ASSESSMENT
REPORT**



ARGUMENTS FOR BINDING EU ACTION

- ❖ **Soil is a common resource** - non renewable and vital resource of common interest of EU
- ❖ **Distortion of competition in the internal market-** wide differences in national soil protection regimes can create an unbalanced situation for the fixed costs of economic operators
- ❖ **Impacts to other media-** Soil degradation has negative impacts on other areas also considered of common interest (e.g. quality of air and water, biodiversity and climate change)
- ❖ **Transboundary impacts** of soil degradation - costs to restore environmental quality may be borne by a Member State different from the country where the soil degraded
- ❖ **Food safety-** Uptake by food of contaminants in the soil may have an impact on the quality of products which are traded freely within the internal market and pose a risk for human health



STRUCTURE OF THE MAIN BODY OF THE SFD

ARTICLES

- **OBJECTIVES of the Framework Directive**
- DEFINITIONS
- COMPETENT AUTHORITIES to be defined by MS
- **WORKING UNIT for the different threats**
- INTEGRATION of soil aspects in sectoral policies (by MS)
- PRIVATE OWNERSHIP- DUTY OF CARE, for owners to respect and MS to ensure (MS can define further if they wish)
- AWARENESS RAISING for MS to establish structures, improve knowledge transfer etc.
- PUBLIC PARTICIPATION
- COMMITTEE



CONTENT OF SOME ARTICLES OF THE MAIN BODY

Objectives

Establish COMMON PRINCIPLES, prevent the THREATS, preserve SOIL FUNCTIONS, ensure SUSTAINABLE USE

Working unit

RISK AREA for certain threats (erosion, organic matter decline, salinisation, compaction, landslides)

NATIONAL /REGIONAL approach for other threats (contamination, sealing)



SOIL THREATS ADDRESSED BY THE SOIL FRAMEWORK DIRECTIVE

Regional/national approach

CONTAMINATION

SEALING

Risk area approach

EROSION

ORGANIC MATTER DECLINE

SALINISATION

COMPACTION

LANDSLIDES



CONTAMINATION

- **DEFINITION:** contamination posing a risk to human health and environment, taking into account current and intended use.
- **LIST OF POTENTIALLY POLLUTING ACTIVITIES:** to be established on Community level (Annex to the Directive).
- **INVENTORY OF CONTAMINATED SITES** to list all contaminated sites by MS, to be regularly updated.
- **NATIONAL REMEDIATION PLANS** to be established by MS, containing targets, means, and prioritisation, to be regularly revised
- **STATUS REPORT** will be necessary for land where a potentially soil contaminating activity takes place or has taken place.



CONTAMINATION

- **MECHANISMS TO FUND THE REMEDIATION OF ORPHAN SITES** to be established by MS, such as funds or taxes for specific sectors and activities.
- **HARMONISATION OF RISK ASSESSMENT METHODOLOGIES** to be facilitated by the Commission and to be established if necessary under comitology.
- **REPORTING** on inventory of contaminated sites and remediation plans.
- **Modification of IPPC Directive (not now, but at next revision)**
 - Harmonisation of “cessation of activities and return to a satisfactory state”
 - Establishment of soil monitoring during activity of IPPC installations

Common
DEFINITION

Common **LIST OF**
POTENTIALLY
POLLUTING
ACTIVITIES

Establish an **INVENTORY** of contaminated sites

Land Status Report

MECHANISM FOR
« ORPHAN SITES »

Establish a **NATIONAL PLAN FOR REMEDIATION**

REPORT



SEALING

- ❖ TO ENSURE A SUSTAINABLE USE OF SOIL, MS SHALL PROVIDE FOR e.g.
 - rehabilitation of brownfield sites
 - providing for space saving constructions,
 - use of construction products to mitigate effects of sealing

- ❖ REPORTING on measures taken by MS



EROSION, ORGANIC MATTER, COMPACTON, SALINISATION AND LANDSLIDES

IDENTIFICATION OF RISK AREAS by MS

For the 5 threats mentioned above

- MS can use monitoring data or models
- MS can define different risk categories
- risk identification must be based on common scientific principles contained in an Annex (e.g. minimum input parameters for models, model validation, etc.)

SETTING TARGETS by MS

- for risk areas indicating what MS want to achieve
- these will have to be consulted with the public



EROSION, ORGANIC MATTER, COMPACTION, SALINISATION AND LANDSLIDES

MEASURES TO ACHIEVE TARGET

- to be established by MS
- A non exhaustive list of measures in an ANNEX for sectors such as f.i. farming, forestry, construction work.

MONITORING OF PROGRESS AND REPORTING

- on risk area identification
- on measures taken and their effects

COMMON CRITERIA

Set model or
empirical
MONITORING

Establish
RISK
ACCEPTABILITY

Risk Area **IDENTIFICATION**

Step 2

Establish a **TARGET** for Risk Area

Step 3

Establish the **MEASURES** to achieve target

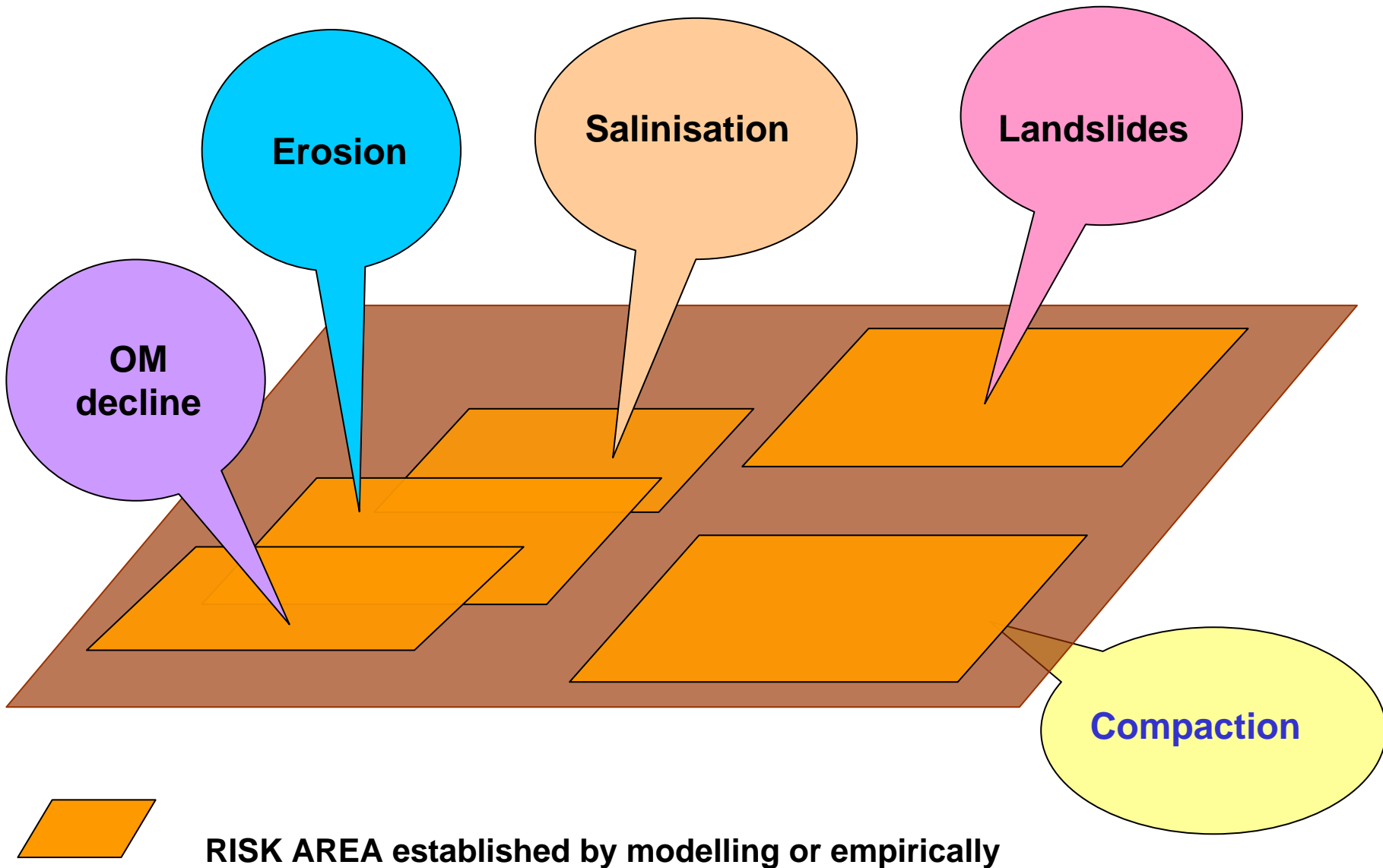
Step 4

REPORT

Step 5



RISK AREA IDENTIFICATION





EROSION

Possible measures for Risk Areas- I

Soil Management

- conservation tillage / mulching
- contour ploughing / appropriate timing of ploughing
- catch and interim crops / winter cover / buffer strips
- terraces
- restricting heavy machinery use
- use of organic soil improvers/exogenous organic matter
- appropriate site preparation techniques for afforestation
- restrictions on some practices of clearfelling of timber

Livestock

- adjusting stocking rates
- adjusting duration and season of grazing



EROSION

Possible measures for Risk Areas- II

Mitigate effects from fires

- regulating controlled burning
- restricting uncontrolled burning.
- growing fire resilient plant communities

Land use changes

- change of arable to grassland
- afforestation of degraded land and land at risk of degradation
- restricting construction works on particularly vulnerable sites
- choice of crops/crop rotations



ORGANIC MATTER DECLINE

Possible measures for Risk Areas I

Soil Management

- conservation tillage / mulching
- catch and interim crops / winter cover / buffer strips
- use of organic soil improvers/exogenous organic matter
- incorporation of crop residues

Livestock

- adjusting stocking rates



ORGANIC MATTER DECLINE

Possible measures for Risk Areas II

Mitigate effects from fires

- regulating controlled burning
- restricting uncontrolled burning.
- growing fire resilient plant communities

Land use changes

- change of arable to grassland
- reduce deforestation
- choice of appropriate crops/crop rotations
- increase of water table to restore cultivated peat soils



COMPACTION

Possible measures for Risk Areas

Soil management

- change from agriculture to forestry
- conservation tillage
- cultivation at optimal soil moisture
- deep ploughing/depth loosening
- drainage to improve soil strength

Machinery

- restricting excessive heavy machinery use
- low pressure tyres

Livestock

- adjusting stocking rates
- adjusting duration and season of grazing



SALINISATION

Possible measures for Risk Areas

Soil Management

- use of appropriate irrigation techniques and equipment
- use of appropriate water quality
- drainage of irrigated land
- use of acid fertilizers
- use of organic soil improvers (e.g. compost)
- Washing the soil

Land use changes

- change from arable to grassland
- choice of crops/crop rotation



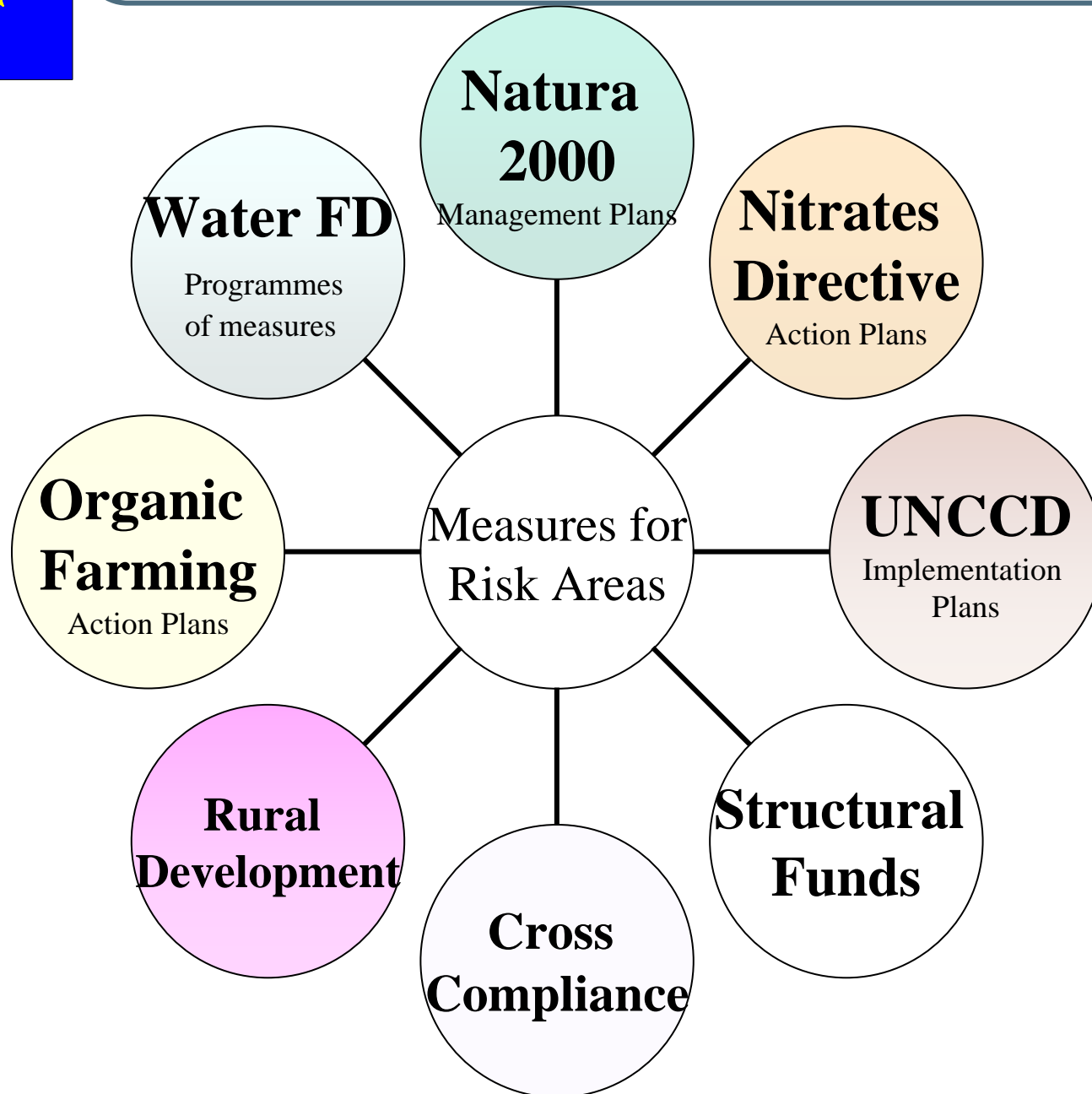
LANDSLIDES

Possible measures for Risk Areas

- Land use restrictions (e.g. restricting constructions in some agricultural or forest land)
- Protective measure in existing construction areas
- Codes for construction (e.g. criteria for excavation, construction, and grading)
- Use of early warning systems
- Establishing and maintaining landscape elements such as terraces, hedgerows, groves

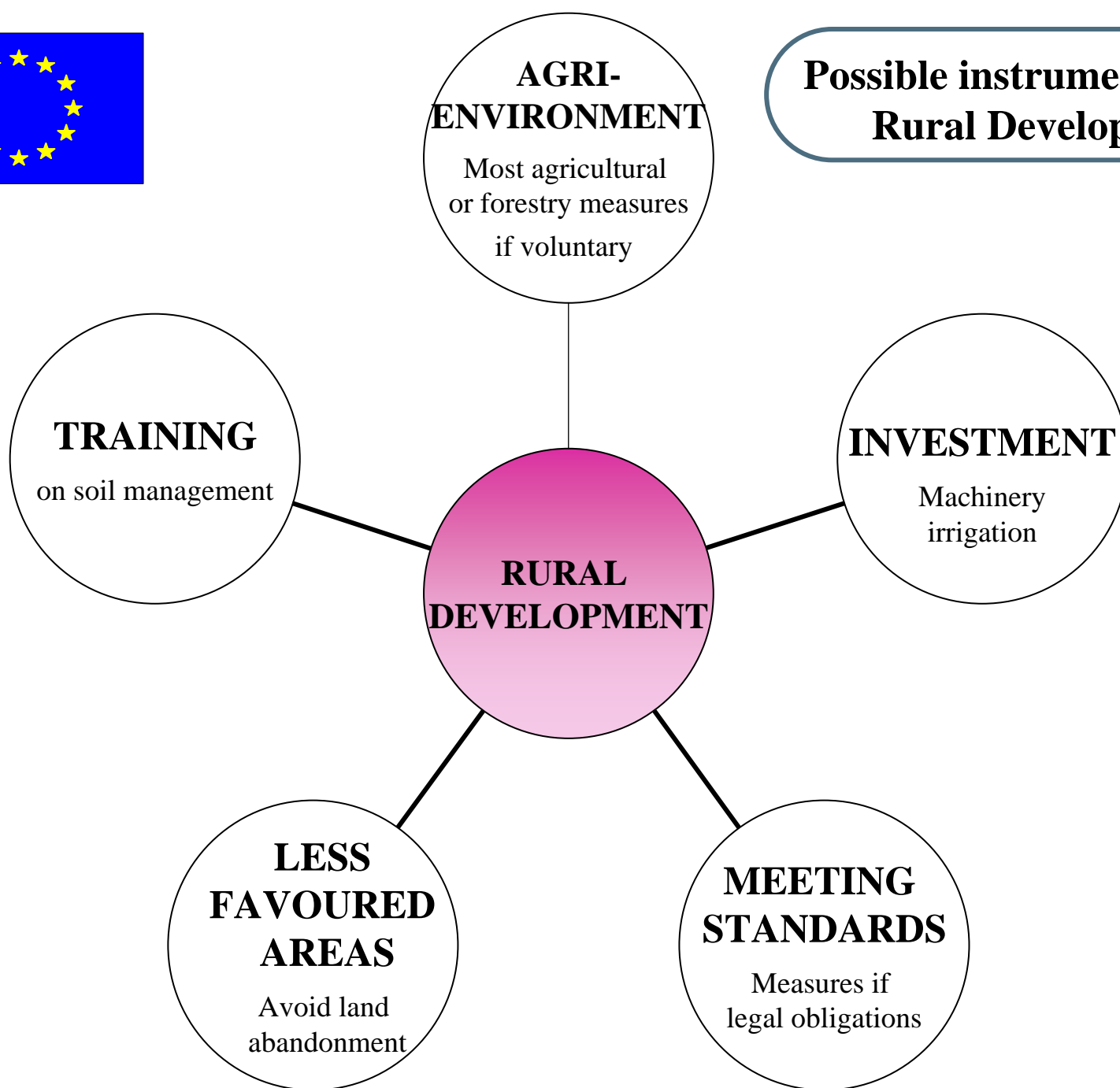


Activities/programmes supporting the programme of measures





Possible instruments under Rural Development





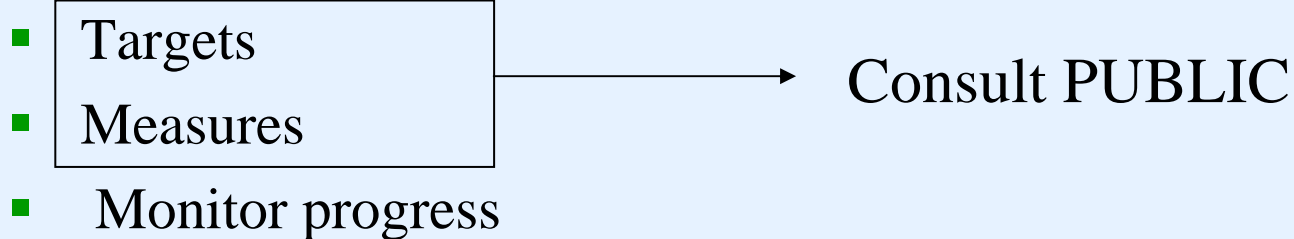
SUMMARY- General approach

❖ The objective is to protect soil functions and ensure sustainable use of soil.

For all other threats

❖ Make an inventory/identify Risk Areas

❖ Make Programmes



❖ Report on progress and efficiency

For sealing

MS are encouraged to provide for a sustainable use of soil by encouraging space saving activities/technologies