



CityChlor Workshop

Paris, 16 November 2010



Groundwater Directive and proposed Soil Framework Directive in relation to contamination with chlorinated solvents

Luca Marmo
European Commission
Environment Directorate-General
DG ENV.B.1 - Agriculture, Forests and Soil Unit
BU-9, 4/89
1049 Brussels
E-mail: luca.marmo@ec.europa.eu



The Groundwater Directive



The current legislative context



- ❖ Directive 80/68/EEC (old GWD) in force until 22.12.2013
 - Focus on discharges (deliberate disposal)
 - To prevent the introduction into groundwater of substances in List I
 - To limit the introduction into groundwater of substances in List II
- ❖ Directive 2000/60/EC (WFD)
 - Prevent the deterioration of the status of all bodies of water
 - Achievement of good status of European waters by 2015
- ❖ Directive 2006/118/EC (new GWD) to be transposed by 16.1.2009
 - Broadens the control of pollutants (moves away from Lists I and II)
 - Tackles inputs, not only discharges (i.e. not restricted to deliberate disposals)



The Groundwater Directive 2006/118/EC



- ❖ It is based on Art. 17 WFD – a daughter Directive
- ❖ Assessing good groundwater chemical status
- ❖ Identifying and reversing significant and sustained upward trends in groundwater degradation
- ❖ Preventing and limiting inputs of pollutants into groundwater



Obligation to prevent/limit input of pollutants



Measures to be taken are to be included in the Programmes of measures pursuant to Art. 11 WFD and are such as to:

A. prevent inputs into groundwater of any hazardous substances

- hazardous substances are defined in Art. 2(29) of WFD as toxic, persistent and liable to bio-accumulate;
- in identifying such substances, Member States shall in particular take account of hazardous substances in points 1 to 6 of Annex VIII of WFD, and substances in points 7 to 9, where these are considered to be hazardous;

B. limit inputs into groundwater of any non-hazardous substances to present an existing or potential risk of pollution (from Annex VIII and others):

- so as to ensure that such inputs do not cause deterioration or significant and sustained upward trends in the concentrations of pollutants in groundwater;
- taking into account established best practice: Best Environmental Practice and Best Available Techniques specified in the relevant Community legislation.



Substances in Annex VIII WFD



1. Organohalogen compounds and substances which may form such compounds in the aquatic environment.
 2. Organophosphorous compounds.
 3. Organotin compounds.
 4. Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment.
 5. Persistent hydrocarbons and persistent and bioaccumulable organic toxic substances.
 6. Cyanides.
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7. Metals and their compounds.
 8. Arsenic and its compounds.
 9. Biocides and plant protection products.



Environmental Quality Standards



For inland surface water – excerpts from Annex X WFD (Dir. 2008/105/EC):

Chloroalkanes	1.4 - MAC		Hexachlorocyclohexane	0.04 - MAC
1,2-dichloroethane	10 - AA		Pentachlorobenzene	0.007 - AA
Dichloromethane	20 - AA		Pentachlorophenol	0.4 - AA
Hexachlorobenzene	0.05 - MAC		Trichlorobenzenes	0.4 - AA
Hexachlorobutadiene	0.6 - MAC		Trichloromethane	2.5 - AA

Unit: µg/l; AA: annual average; MAC: maximum allowable concentration

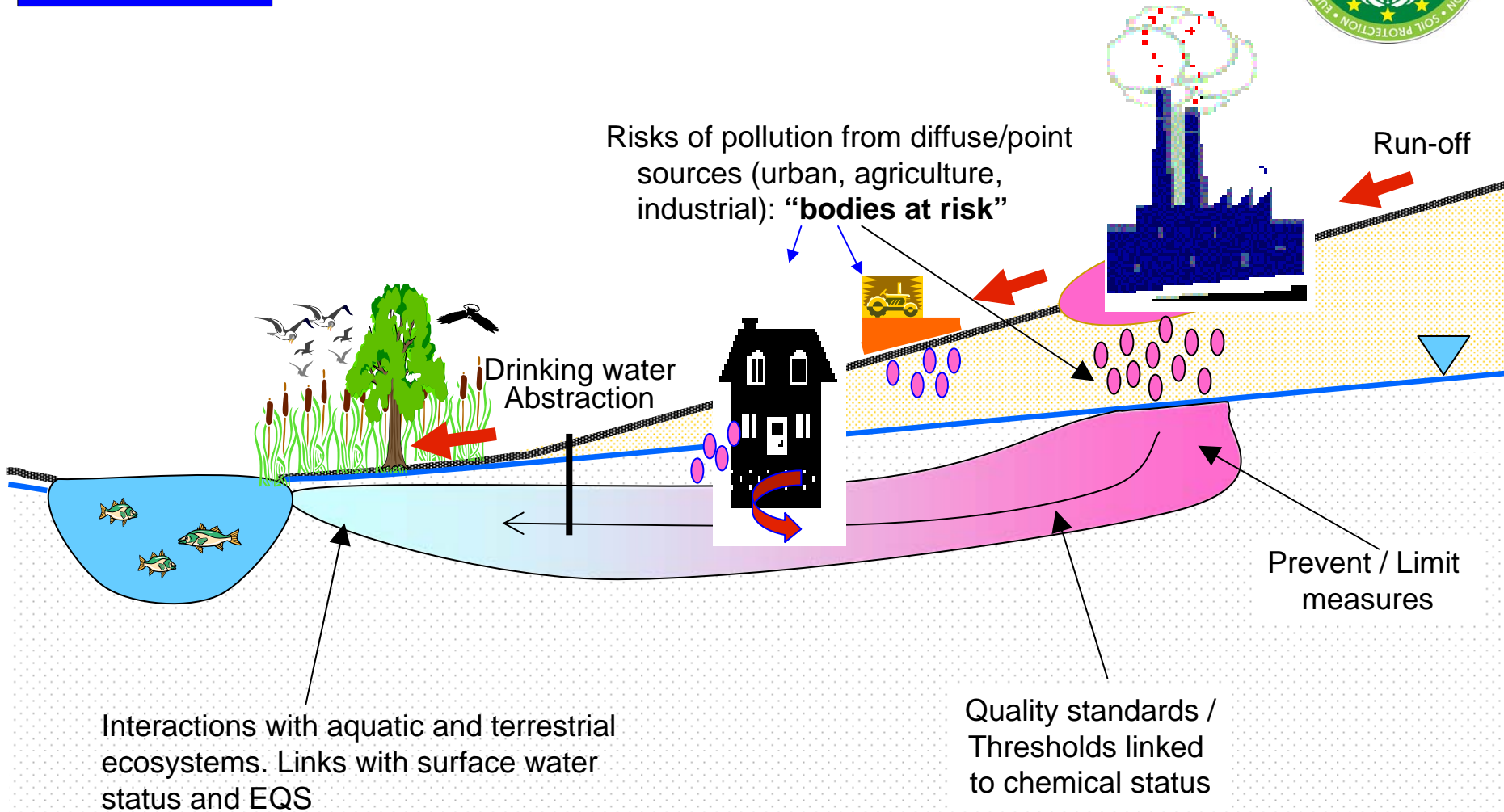
For groundwater – from Annex I GWD:

Nitrates	50 mg/l
Pesticides	0.1 µg/l 0.5 µg/l (total)

There are no other EU-wide EQS, instead MS have to establish threshold values in their river basins for pollutants that cause risk of pollution



To sum up...





The contamination aspects of the proposed Soil Framework Directive COM(2006)232, 22.9.2006



Objective(s) and operational measures



❖ Objectives:

- Protection of soil functions
- Sustainable use of soil

Proposed addition by Council

❖ Operational measures:

- Identification of contaminated sites
- Adoption of national remediation strategies



List of potentially soil-polluting activities



Latest version discussed in the Council
WPE under ES Presidency (March 2010)

- ❖ Seveso installations
- ❖ Airports
- ❖ Former military sites
- ❖ Dry cleaners
- ❖ Landfills of waste
- ❖ Pipelines for dangerous substances
- ❖ IPPC installations
- ❖ Ports
- ❖ Petrol and filling stations
- ❖ Mining installations
- ❖ Waste water treatment plants

Indicative only



Identification of contaminated sites



1st step (within five years)

2nd step

3rd step



Active site



Non-active site



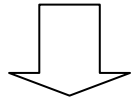
Chemical analysis



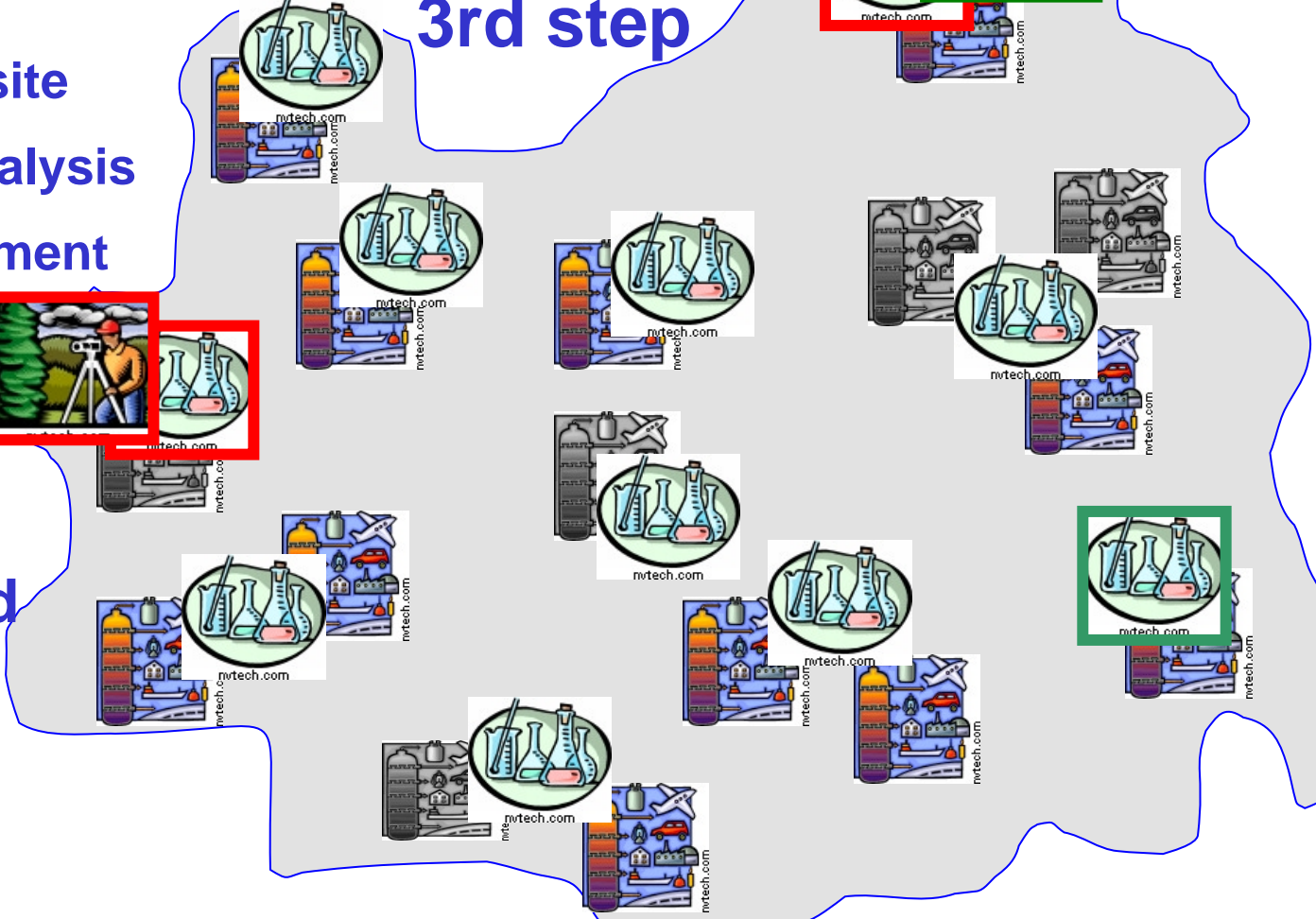
Risk assessment



Contaminated site



National Inventory

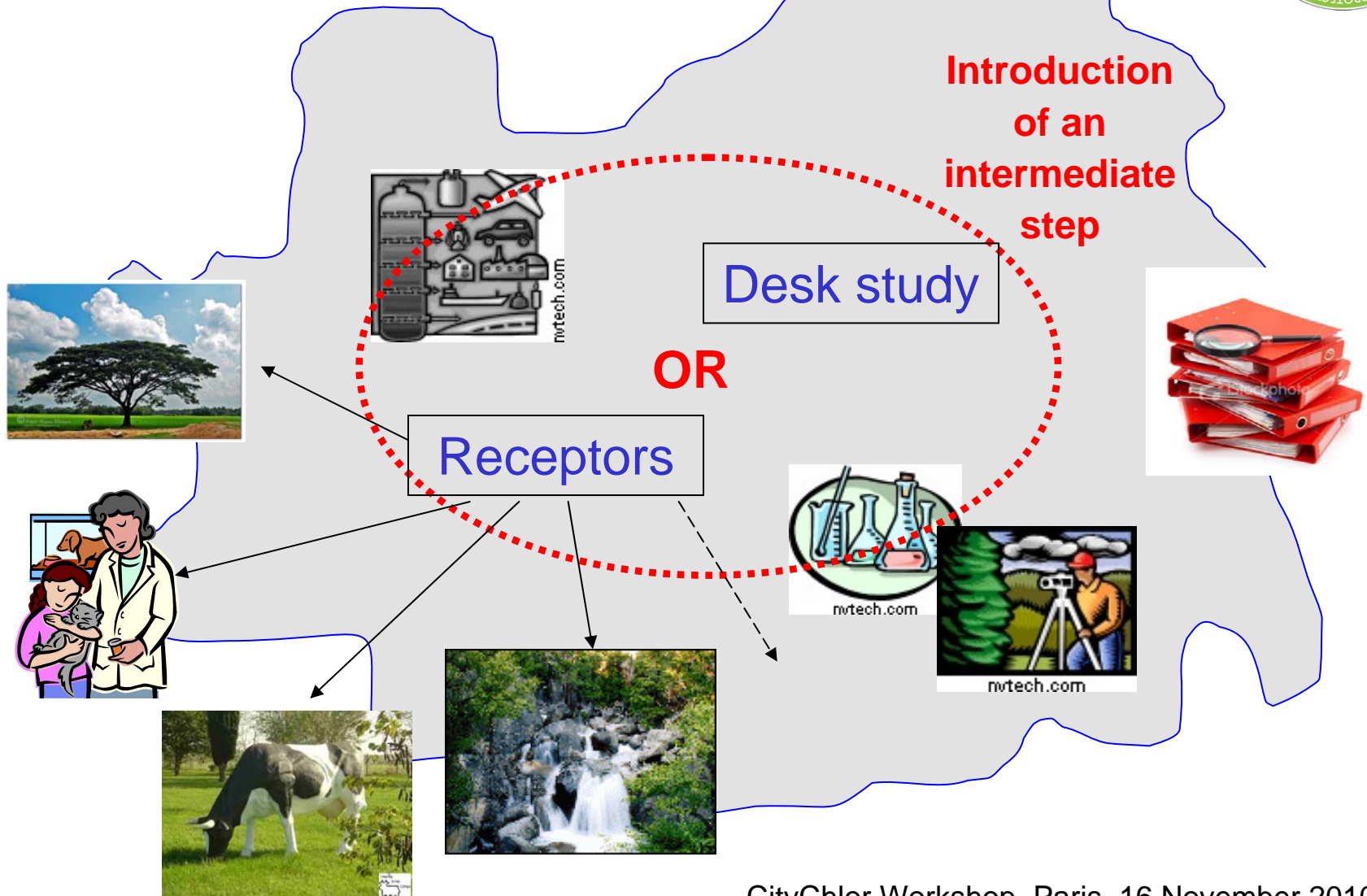




Identification of contaminated sites



ES Presidency text (March 2010)





Intermediate objectives of the identification procedure



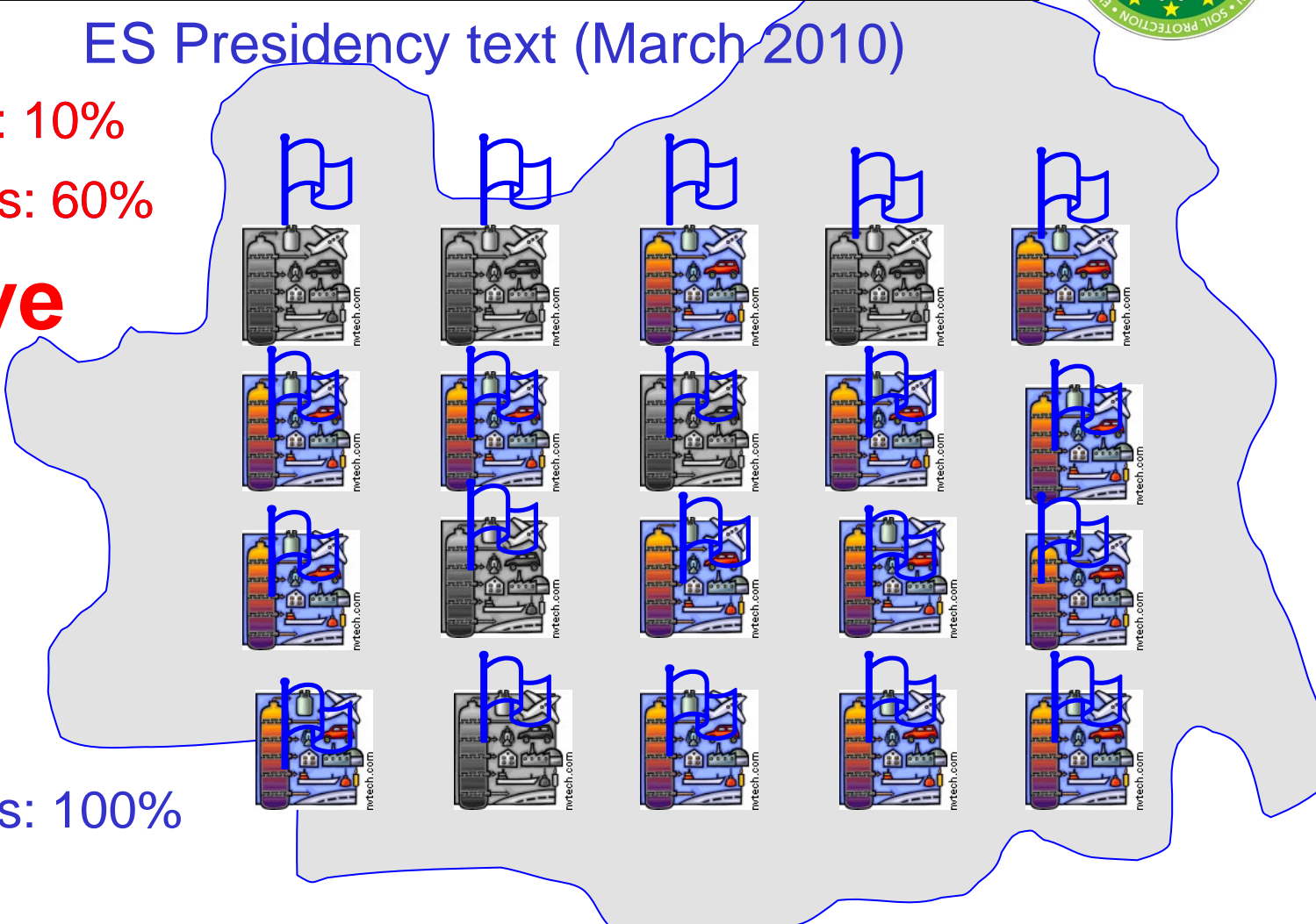
ES Presidency text (March 2010)

Within 5 years: 10%

Within 15 years: 60%

Indicative only

Within 25 years: 100%



 : Investigation concluded to determine if a site is contaminated



National Remediation Strategies



- ❖ Member States must ensure that contaminated sites are **remediated** (no deadline fixed)
- ❖ Draw up a National Remediation Strategy within seven years, including:
 - remediation **targets**
 - a **prioritisation**, starting with those sites which pose a significant risk to human health
 - a **timetable** for implementation
 - **funds** allocated



Remediation



Remediation:

Actions on the soil aimed at the **removal, control, containment or reduction** of contaminants, taking account of its **current use and approved future use**, no longer poses **any significant risk to human health or the environment**

ES Presidency text
(March 2010)

Introduction of cost benefit aspects +
land use restrictions as remediation



Soil Status Report



ES Presidency text (March 2010)

- ❖ Concerns potentially polluted sites **in national list**
- ❖ To be made when **selling or land use changes**
- ❖ By the **owner**, prospective **buyer or third party**
- ❖ To be produced by an **authorised body**
- ❖ **Copied** to the competent authority
- ❖ Contains:
 - Background history of the site
 - Results of ~~soil~~ chemical analyses
 - Concentration levels ~~posing~~ a risk as adopted by MSs



Update on the negotiations on the Soil Framework Directive



European Parliament



- ❖ Resolution of 13 November 2007 on the **Soil Thematic Strategy**:
 - Supports the Commission in its general approach
 - Underlines the importance of climate change mitigation, biodiversity loss and desertification

- ❖ First reading of 14 November 2007 on the **Soil Framework Directive**:
 - Adopted with a majority of 2/3 of MEPs
 - Maintains the basic structure of the Commission proposal and its key elements
 - Provides more flexibility for some provisions and strengthens others



Council



Twenty-two Member States **in favour**, but...

... there is a **blocking minority** formed by AT, DE, FR, NL, UK, for reasons of

- ❖ **subsidiarity** (AT, DE, NL)
- ❖ **proportionality/costs/methods** (FR, UK)



Recent related developments:

❖ Review of the IPPC Directive



The Industrial Emissions Directive (formerly IPPC)



- ❖ Formal adoption expected in December 2010
- ❖ Transposition by Member States expected two years later
- ❖ Major changes as far as soil is concerned:
 - Introduction of periodic **monitoring** of soil (and groundwater)
 - Establishment of a **baseline report** prior to operating the installation/first update of permit
 - Obligation to remediate the site to its original state upon closure of the installation (**no-degradation approach**)



Thank you for your attention!



<http://ec.europa.eu/environment/soil/index.htm>