



# ***Workshop on Climate Change and Groundwater: Law and Policy Perspectives***

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## **Legal Protection for Ecologically Significant Groundwaters under EU Law**

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# Groundwater, Climate Change and Habitats

- Groundwater may provide resilient “reserves” (for human needs) in context of climate variability;
- Groundwater vulnerable to climate variability - changing recharge patterns;
- Role of groundwater in structure and function of habitats, but much uncertainty
- Uncertainty re impacts of climate change on groundwater and its role re habitats



# EU Groundwater Law

- Groundwater Directive (80/68/EEC)
  - Prevent discharge of hazardous substances: pesticides, sheep-dip, solvents, hydrocarbon
  - Limit / control discharge of non-hazardous
  - National implementation by poll. permitting
- Waste Management Law
  - Hazardous waste
- Hazardous Substances Law
  - Management / handling of haz. substances



# EU Groundwater Law

- Dir. 76/464/EEC, Discharges of Certain Dangerous Substances to the Aquatic Environment.
- Dirs. 82/176/EEC, 84/156/EEC Discharge of Mercury by the Chlor-Alkali Electrolysis Industry; Dir. 83/513/EEC Discharge of Cadmium; Dir. 84/491/EEC Limit Values and Quality Objectives for Discharges of Hexachlorocyclohexane; Dir. 86/280/EEC Limit Values and Quality Objectives for Discharges of Certain Dangerous Substances, incl. Carbon Tetrachloride, DDT, Pentachlorophenol; Dir. 88/347/EEC Limit Values and Quality Objectives re Aldrin, Dieldrin, Endrin, Isodrin, Hexachlorobenzene, Hexachlorobutadine, and Chloroform.



# EU Groundwater Law

- Water Framework Directive (2000/60/EC)
  - Art. 4(1)(b)(i): prevent / limit pollution to groundwater; prevent deterioration of status
  - Art. 4(1)(b)(ii): protect, enhance & restore all groundwater bodies; ensure balance b/n abstraction & discharge; achieve good groundwater status
  - Art. 11(3)(j): direct discharges prohibited
  - Groundwater Daughter Dir. (2006/118/EC)
    - Non/hazardous substances in WFD Annex VIII
    - Art 6: covers direct discharges and indirect inputs



# Intro. to Habitats Directive

- Art. 3 – Aims: ‘favourable conservation status’
- Art. 4 – Designation of SACs (“enclaves”)
- Art. 6 – Protection of Natura 2000 Sites (SACs & SPAs)
  - Art. 6(2) – deterioration / disturbance
  - Art. 6(3) - **appropriate assessment\***
- Art. 6(4) “IROPI Exception”, incl. econ/social; priority habitats/species – health, safety, env reasons
- Art. 12 *et seq.* – Protection of Species



# Habitats Directive - Article 6(3)

Article 6(3) provides:

“Any **plan or project** ... likely to have a **significant effect** thereon, either individually or **in combination** with other plans or projects, shall be subject to **appropriate assessment** of its implications for the site in view of the **site’s conservation objectives**. In the light of the conclusions of the assessment of the implications for the site ... the competent national authorities shall agree to the plan or project **only after having ascertained** that it will **not adversely affect the integrity of the site** concerned ...”  
(core protective measure / substantive standard)



# Appropriate Assessment: Process

- Stage 1: Screening – determine whether significant effects likely on Natura 2000 site;
- Stage 2: Appropriate assessment\* – determine possible adverse effects on integrity of Natura 2000 site;
- Stage 3: Assessment of alternative solutions – determine alternatives to project / plan likely to have adverse effects on integrity of Natura 2000 site; or
- Stage 4: Assessment of compensatory measures – determine compensation measures which maintain / enhance coherence of Natura 2000

(2002 EU Commission methodological Guidance)





# Appropriate Assessment: Stage 2 Process: AA

- Step 1: Gathering all relevant information
- Step 2: Prediction of likely impacts
- Step 3: Assessment whether impacts will have adverse effects on integrity of site
- Step 4: Assessment of mitigation measures



# Appropriate Assess. - Step 1

- (1) Gathering of all relevant information:
  - Results of any EIA / SEA processes;
  - Conservation objectives / status of site,
  - Key attributes of Annex I habitats / Annex II species,
  - Key structural and functional relationships\* creating and maintaining site integrity
  - Existing, proposed or approved plans or projects – cumulative impacts



# Appropriate Assess. – Step 2

- (2) Prediction of likely impacts: structured and systemic framework:
  - Direct measurements
  - Flow charts, networks, systems diagrams
  - Quantitative predictive models
  - Geographical information systems
  - Information from previous similar projects
  - Expert opinion and judgment
- Existing baseline conditions of site\*



# Appropriate Assess: Step 3 'Integrity Criteria'

- Assessment of adverse effects on site integrity hrt conservation objectives (EU Guidance)
  - Integrity of Site Checklist (Ecological Factors)
    - Delays / interrupts progress re conservation objectives
    - Disrupts key factors re favourable conditions\*
    - Interferes with population, balance, distribution, density of key species
    - Vital aspects of structure and functioning of site\*
    - Area of key habitats
    - Diversity of the site
    - Habitat fragmentation
    - Loss / reduction of key ecological features\*



# Appropriate Assessment – Legal Procedure & Substance

- Integrity of the Site
  - Case 127/02 Waddenzee
    - Only authorise ‘where no reasonable scientific doubt remains as to the absence of such effects’ ???
  - Case 239/04 *Commission v. Portugal*
    - Significantly high overall impact, high negative impact on avifauna within SPA, authority not entitled to authorise
    - Authority had choice of authorising under Art.6(4)
  - Case C-304/05 *Commission v. Italy*
    - Lacked definitive conclusions
    - Large no. of conditions / protection requirements
    - Assessments to be carried out ‘progressively’
    - Lack complete, precise, definitive findings capable of removing all reasonable scientific doubt as to effects



# ‘Integrity’ – Legal Substance

- *Sweetman v An Bord Pleanála* (H.C.) [2009]
  - A ‘localised severe impact’ doesn’t preclude decision that integrity of site not affected
  - Focus on the integrity of the specific site, not general status of habitat types or species
  - Not an absolutist position, proportionality
  - “integrity”: whole or complete, resilience and ability to evolve, capacity for self-repair and renewal, minimum external support needed
- Studies – uncertainty re integrity, mitigation,
- S.C. referral of ‘integrity’ question to CJEU



# CJEU Reasoning in *Sweetman*

- Teleological Interpretation: not to be interpreted in isolation, must consider wider context of Habitats Dir.
  - ‘favourable conservation status’ [Art. 2 obj.]
    - Maintain site ‘constitutive characteristics’ at FCS
    - Inferred ‘conservation objective of site’
    - Especially re permanent or long-lasting loss of priority habitat types\*
  - Precautionary principle
- BUT**
- No consideration of ‘integrity check-list’ !



# CJEU Reasoning in *Sweetman*

- Precautionary Principle: rigorous regard to PP, integrated into Art. 6(3) [AG & CJEU]
  - Not in Habitats Directive – *Waddinzee* case
  - ‘indispensable to effective implementation’ – *effet utile* doctrine – filling lacunae (purposive approach)
  - ‘contextual’ variant of teleological approach
  - ‘guidance function’ of EU env. principles (*Bettati*)

## **BUT**

- Precaution linked to scientific uncertainty
- Precautionary principle must rely on ‘best available scientific knowledge’, e.g. ‘integrity check list’
- Proportionality? Guidance: COM(2000) 1





# CJEU Reasoning in *Sweetman*

- Comparative Linguistic Analysis (AG)

- English, French, Italian, German, Dutch versions: ‘essential unity’, ‘wholeness’, ‘soundness’ of constitutive characteristics (AG 54 approved by Court, no *de minimis*)

## **BUT**

- Relevant scientific information - e.g. Art 4
- ‘favourable conservation status’ – highly technical scientific concept under Art. 1(e)
- CJEU: determination re Art. 6(3) ‘in light of best scientific knowledge in the field’ para 40



# CJEU Reasoning in *Sweetman*

- ‘Policy Decision’
  - (Extreme) purposive version of teleological approach: ‘death by a thousand cuts’
  - Going beyond usual teleological approach
  - Going beyond *effet utile* doctrine (filling lacunae)
  - ‘No role in determining “integrity”’ – but AG criticises contrary view (‘based closely on literal wording’) on this very basis
- **BUT**
  - Cumulative assessment required under Article 6(3); teleological interpretation?
    - 2002 Commission Methodological Guidance



# Conclusions: CJEU Over-reach

- Judicially creative interpretation of “integrity” that is very strict and inflexible, policy-driven – ignoring considerations of proportionality of scientific impact [2002 Commission Methodological Guidance]
- Breadth of ‘IROPI Exception’ under Art. 6(4) – ‘not insuperable obstacles’ (AG)
- Legislative reform? 1979 Wild Birds Dir: *Santona*; *Lappell Bank*; *Leybucht*



# Conclusions: Groundwater

- Constitutive characteristic of Natura 2000 site:
  - Key ecological features
  - Structure and functioning of site
  - Key factor re favourable conditions
- Even small-scale depletion may impact on “integrity” of site – ‘death by 1000 cuts’
- Significance of scientific knowledge of ecological role of groundwater in site (potential ecological role)
- Uncertainty – precautionary assumptions re ecological role of groundwater in site (potential ecological role)
- Uncertainty - precautionary assumptions re impact of climate change on groundwater and thus on habitats