New EU environmental standards for Large Pigs and Poultry Farms: building consensus between stakeholders

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Outline of this presentation

1 – The Industrial Emissions Directive (IED)

2 – The Sevilla process

3 – The IRPP review process and the IRRP BAT conclusions

4 – IRPP BREF: recommendations for future work
1 - The Industrial Emissions Directive (2010/75/EU)
Industrial Emissions Directive 2010/75/EU (IED)

- Key instrument for minimising consumption and the emissions of industrial activities in Europe

- General framework:
  - prevent and, if not feasible, reduce pollution
  - high level of protection for the environment as a whole
  - permit based on Best Available Techniques (BAT)

BAT are determined by a Technical Working Group steered by the JRC (EIPPCB) and documented in BREFs

‘BAT conclusions’ are secondary legislation
Annex I to IPPC and IED Directive

Wide range of industrial activities listed:

- **Energy industries**
- **Production and processing of metals**
- **Mineral industries**
  cement, lime, glass, ceramics
- **Production of chemicals**
- **Waste management industries**
  Several recovery or disposal operations
  Incineration
- **‘Other’ industries:**
  Pulp and paper, textile processing
  Tanning of hides and skins
  **Intensive farming of pigs and poultry**, slaughterhouses and animal by-product processing, food drink and milk processing, surface treatment using solvents

~ 20 000 IPPC farms in Europe
Environmental scope of the IED

- emissions to air
- emissions to water
- waste prevention and recovery
- energy & water use
- vibration
- noise
- heat
- odour

Environmental scope of the IED:

- emissions to water
- waste prevention and recovery
- energy & water use
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- heat
- odour
Definition of **BAT** in the IED

**Best**  
Most effective in achieving a **high general level** of protection of the environment **as a whole**

**Available**  
Developed on a scale which allows implementation in the relevant industrial sector, under **economically and technically viable conditions**

**Techniques**  
Both the technology used and the way in which the installation is **designed, built, maintained, operated and decommissioned**

Note: in determining BAT, special consideration should be given to the criteria listed in Annex III of the IED
Role of BAT conclusions in IED permitting

**BAT conclusions** are the reference for setting permit conditions

Permits to contain **emission limit values** (ELVs) to ensure that, under normal operating conditions, emissions do not exceed BAT-associated emission levels (BAT-AELs)

Derogation from BAT-AELs is only allowed in specific and justified cases

- Need to demonstrate that costs are disproportionately higher than benefits due to local/installation-specific situations
- Member States report to the public/Commission on use of derogations
2 - The Sevilla process

A complex **consensus-building** exchange of information with numerous **stakeholders** and underpinned by **sound techno-economic information** that has been enshrined into law by:

**Commission Implementing Decision 2012/119/EU**
New EU Environmental Standards for Large Pigs and Poultry Farms

The ‘Sevilla process’

Industry

Environmental NGOs

TWG kick-off meeting

Draft 1 (D1)

Draft 2 (D2) *

Final TWG meeting

Final draft

EU Member States + EFTA and Accession Countries

European Commission/EIPPCB

Comments

• Forum opinion on BREF
• Adoption of BAT conclusions through the IED Art. 75 Committee

* D2 optional
Total duration:
• 24 – 29 months (without D2)
• 29 – 39 months (with D2)

Bulk of info. needed (incl. questionnaires)
3 - The IRPP review process and the IRPP BAT conclusions
## Overview of the IRPP BREF review process

<table>
<thead>
<tr>
<th>Main steps</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWG reactivation</td>
<td>March 2008</td>
</tr>
<tr>
<td>Kick-off meeting</td>
<td>June 2009</td>
</tr>
<tr>
<td>Data collection of information (deadline)</td>
<td>February 2010</td>
</tr>
<tr>
<td>Draft 1</td>
<td>March 2011</td>
</tr>
<tr>
<td>Commenting period (deadline)</td>
<td>May 2011</td>
</tr>
<tr>
<td>Draft 2 (including draft BAT conclusions)</td>
<td>August 2013</td>
</tr>
<tr>
<td>Commenting period (deadline)</td>
<td>October 2013</td>
</tr>
<tr>
<td>Final TWG meeting</td>
<td>November 2014</td>
</tr>
<tr>
<td>IED Forum meeting</td>
<td>October 2015</td>
</tr>
<tr>
<td>IED Committee meeting</td>
<td>October 2016</td>
</tr>
</tbody>
</table>
Collection of data and information

• Initial information collection on key environmental issues and techniques applied

• Data collection (from 10 EU Member States):
  ▪ 212 questionnaires received (February 2010) from the TWG and other information provided at a later stage were taken on board
  ▪ 775 pieces of emission data (ammonia, dust, odour)
  ▪ 229 pieces of excretion data (total N, total P)

• 11 site visits in 6 Member States (DE, DK, FR, IE, NL, UK)

• 710 references included in the final BREF (to be published around summer 2017)
Example of data collection

FARROWING SOWS - NH₃ emissions from an animal house

<table>
<thead>
<tr>
<th>Animal category</th>
<th>Quality of data</th>
<th>BAT 32</th>
<th>Country</th>
<th>Reference</th>
<th>Contextual Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farrowing sows</td>
<td>Conclusion by analogy</td>
<td>Derived from measurements</td>
<td>Measured data</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key:
- BREF 2003
- EUCE
- BE
- IT
- NL
- DE
- FR
- UK
- NL
- ES
- a0
- a12
- a2
- a15
- a3
- a4
- b
- c1
- c2
- c3
- a12

Data values:
- 508, 186, 186, BREF 2003
- 614, 159, 171, 261, 172, 614, 640, 130, 132, 133, 134, 125, 126, 128, 129, 135, 170
Scope of the IRPP BREF

The BREF concerns the activities specified in point 6.6 of Annex I to Directive 2010/75/EU, namely:

6.6. Intensive rearing of poultry or pigs:
(a) with more than 40 000 places for poultry;
(b) with more than 2 000 places for production of pigs (over 30 kg), or
(c) with more than 750 places for sows.
Key features of the IRPP BAT conclusions

- 34 BAT conclusions covering nutritional management, animal rearing and manure management
- For the first time at the EU level, limits are set for ammonia emissions from animal housing and for excretions of nitrogen and phosphorus for six categories of pigs or poultry
- Also for the first time, conclusions on monitoring (N/P excretion; ammonia, dust, and odour emissions; process parameters)
- Conclusions to reduce emissions of dust, odour and noise
- Other conclusions on efficient use of water and energy
**Example of BAT conclusion (1/3)**

BAT 30 (*). In order to reduce ammonia emissions to air from each pig house, BAT is to use one or a combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Animal category</th>
<th>Applicability</th>
</tr>
</thead>
</table>
| a | One of the following techniques, which apply one or a combination of the following principles:  
  i) reduce the ammonia emitting surface;  
  ii) increase the frequency of slurry (manure) removal to external storage;  
  iii) separate urine from faeces;  
  iv) keep litter clean and dry. | ... | ... |

*16 techniques to choose from*
## Example of BAT conclusion (2/3)

<table>
<thead>
<tr>
<th>Technique</th>
<th>Animal category</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>b  Slurry cooling.</td>
<td>All pigs</td>
<td>Not applicable when: - heat reuse is not possible; - litter is used.</td>
</tr>
<tr>
<td>c  Use of an air cleaning system, such as:</td>
<td>All pigs</td>
<td>May not be generally applicable due to the high implementation cost. Applicable to existing plants only where a centralised ventilation system is used.</td>
</tr>
<tr>
<td>- Wet acid scrubber;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Two-stage or three-stage air cleaning system;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bioscrubber (or biotrickling filter).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d  Slurry acidification.</td>
<td>All pigs</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>e  Use of floating balls in the manure channel.</td>
<td>Fattening pigs</td>
<td>Not applicable to plants equipped with pits that have slanted walls and to plants that apply slurry removal by flushing.</td>
</tr>
</tbody>
</table>
Example of BAT conclusion (3/3)

BAT-AEL for ammonia emissions to air from each pig house

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Animal category</th>
<th>BAT-AEL (1) (kg NH₃/animal place/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia expressed as NH₃</td>
<td>Mating and gestating sows</td>
<td>0.2–2.7 (²) (³)</td>
</tr>
<tr>
<td></td>
<td>Farrowing sows (including piglets) in crates</td>
<td>0.4–5.6 (⁴)</td>
</tr>
<tr>
<td></td>
<td>Weaners</td>
<td>0.03–0.53 (⁵) (⁶)</td>
</tr>
<tr>
<td></td>
<td>Fattening pigs</td>
<td>0.1–2.6 (⁷) (⁸)</td>
</tr>
</tbody>
</table>

(*) Full text of BAT 30 is published in Commission Implementing Decision 2017/302
**IRRP BREF: recommendations for future work**

- Urgently improve the quality and comparability of the emission data reported by using monitoring methods based on national or international protocols (e.g. VERA protocol).
- Collect ammonia emission data from manure storage and landspreading.
- Collect information on monitoring of dust and on the determination of emission factors specific to the various housing systems.
- Study information on the relationship between nutrition and odour emissions from pig housing.
- ... AND MANY MORE
Thank you for your attention

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