

Workshop on the UNECE Framework Code of Good Agricultural Practice for Reducing Ammonia Emissions

Edinburgh, 12-13 November 2014

Minutes

1. Welcome and introduction of speakers from co-chair of TFRN (Mark Sutton)

2. Welcome from DG ENV (Peter Meulepas)

Mr Meulepas sets out the broad context of the revision of the framework code and the process of adoption. It is hoped that this Framework Code will provide a stimulus for countries to update existing national codes of good practice, or where there are none to develop national codes for the first time. It is helpful at this stage to bring together agricultural experts, policymakers and others to exchange on best practice and experiences, to support dissemination and build support for the code. It is hoped that this document will provide further confidence that significant ammonia reductions are possible in practice.

3. The Revised Framework Code in context (Mark Sutton, TFRN co-chair)

Mr. Sutton describes drivers for limiting ammonia air pollution. Terms of reference are set out (UNECE, LRTAP, Gothenburg Protocol, National Emissions Ceiling Directive), the scope of work for the TFRN and key actions taken to limit ammonia emissions. The context for the updating of the Framework Code and key elements of the revised Framework Code are described. Wider challenges include developing the global context and successfully communicating nitrogen issues to a general audience.

4. Overview on the Revised Framework Code (Shabtai Bittman, EPMAN co-chair)

Mr. Bittman presents an overview of the revised ammonia framework code for good agricultural practice. It is intended to be a living document that allows for new technology and it is for guidance only, and is intended to support parties to establish their national advisory codes as required by Annex 9 to the Gothenburg Protocol. Comments on the June 2014 revision draft of the Framework Code were received from COPA –COGECA (European Farmers Union), National Farmers Union of England and Wales, Switzerland, Italy and Poland.

Several comments and concerns were raised during and after the introductory presentations on the revised framework code. These included inter alia the specific nature of the framework code, its relation to existing EU regulations and the NH₃ guidance document, trade-offs of certain measures listed in the framework code (e.g. safety, GHG emissions), the content and level of detail that the framework should provide, the targeted audience of the framework code and the level of ambition proposed in the framework code. In their replies DG ENV and the co-chairs of TFRN and EPMAN emphasized that the framework code is in line with the already adopted NH₃ guidance document from 2012, that it is 'advisory' in nature with no binding character and intended to be a living document. Regarding the concern raised on trade-offs, actually current thinking is increasingly

emphasizing that better ammonia management will contribute to substantial co-benefits (for climate, air, water, biodiversity etc) through improving nitrogen use efficiency, . It was also made clear that framework code is a tool to help countries to develop their own national codes and as such not directly targeting the farmers.

5. Examples of implementing national codes of agricultural practice

a. Germany – Gabriele Wechsung (German Federal Environment Agency)

Consideration of the national context includes the development of percentages of animal numbers, farm sizes by number of animals, percentage shares of types of housing systems, storage systems, the type of application systems used and how these have changed over time. In conclusion, there are significantly decreasing cattle numbers and increasing poultry numbers. Pig numbers are increasing too.

Total emissions have decreased gradually since 1995. Implementation of mitigation measures are offset by increase in housing systems (animal welfare) and increase of animal numbers in some categories.

The National Framework Code of Good Agricultural Practice (FC GAP) for Ammonia was issued in 2003. Many federal states followed with implementation supported by financial incentives for the use of mitigation techniques. Further dissemination of the FC GAP took place through leaflets, flyers and online. The effect of the implementation of FC GAP on emissions abatement is not definitive, due to a number of different influencing factors (increase in housing systems, change in animal numbers).

b. Netherlands – Klaas W. Van der Hoek, National Institute for Public Health and the Environment

There is no standalone ammonia code in the Netherlands; legislation on ammonia and animal manure are closely interrelated. There are established interactive models for ammonia abatement (with regard to greenhouse gases) at farm level. A series of laws from 1984 – 1987 limited the expansion of existing farms, mandated the covering of manure storage outside buildings and limited ammonia emissions from animal housing systems. Some measures were not enforceable due to issues with checking operations. Progress in animal housing includes the calculated emission factors replaced by measured values over the period 1987 – 2000, and the Green Label awards from 1990-2000 for new animal housing systems indicative of more than 50 % emissions reduction which has boosted research and implementation in this area. Regarding manure storage, natural crust option is disallowed because it does not achieve the requirement for 80 % emissions reduction. Regarding the spreading of manure, since 1995 there has been no broadcast surface spreading of slurry.

It is noted that not all measures are suitable for inclusion in environmental permits for individual farmers. Examples here include duration of grazing period, and some low emission application techniques on clay and peaty soils. It is important to maintain a system of checks for operational control of measures. Examples here are reduction efficiency of air scrubbers and manure application techniques (as installed air scrubbers were not always

used in practice i.e. installed but not used as intended). There must also be assessment of implementation of low emission techniques on the national and local scale. One solution is to pose additional questions on the agricultural census regarding housing systems and manure application techniques.

c. Denmark – Nicholas J. Hutchings, Department for Agroecology, Aarhus University

A number of action plans related to ammonia have been implemented from 1985 onwards. Historically, general regulation of farming included obligatory N-quotas, manure plans and limits on stock density. However regulation is now moving towards a goal-oriented approach, whereby farmers can choose measures to achieve goals, and goals vary geographically. Ammonia emissions have decreased steadily since 1990. Useful information for farmers may include an explanation of the underlying theory, effectiveness range, constraints on use, elements in economic assessment, side-effects (animal welfare, co-benefits), practical advice, monitoring and documentation and pointers on where to find more information.

Due to the prescriptive regulated approach undertaken in Denmark, the Framework Code has not been of particular relevance. However, from the Danish experience it is clear that guidance is relevant when it can save farmers money, and when farmers are free to choose how to achieve regulated environmental goals. Guidance is of increasing relevance and importance going forward.

6. Parallel working groups for smaller discussion

a. Working Group 1: Technical discussions on national framework codes; sharing good practices

It was generally agreed that the framework code (FC) is positive and encouraging. There was concern that the FC would be used to establish future mandatory requirements in EU legislation. It was made clear that this is not the intention of the FC and a clear introductory sentence is present in the FC to this effect.

It was noted that the measures listed are not applicable across all regions, and for this reason translation into national codes is required. The current document names some proprietary products. As a consequence of this discussion, it is agreed that these will be removed and replaced with more generic wording. Additional wording will mention safety in relation to the use of acids to reduce of ammonia emission from manure spreading.

In relation to emerging technologies, it was agreed that new technology should be mentioned, especially to encourage innovation, while being clear for each method about the current status of its development. The process for inclusion of emerging technologies will be through blog/website initially, then agreed for inclusion at formal TFRN, WGSR and EB meetings. It was agreed that the UNECE Ammonia Guidance Document should also be updated regularly, every 4 to 5 years.

There was a discussion on the opportunity for a website showing relevant information on product manufacturers (machinery, pesticides, fertilizer) and the advantage of supporting a network of early adopters.

b. Working Group 2: Experiences in rolling out and disseminating codes of good practice; relating national ammonia codes to other national codes of good practice

The two existing national codes discussed (Croatia and Flanders) are integrated codes, involving soil, water and air; so co-benefits are covered. A lot of regulation is incorporated in the existing codes.

The code in Croatia is quite basic, a starting point to help farmers and there is the possibility to get support from the Government for farmers who want to adopt better measures. The Flanders code is strongly linked to the obligations in legislation. It was felt that not all measures are (economically) feasible for the farmers. The measures were perceived as being quite expensive, especially for countries with a lot of small farms and only a few big ones. Both countries report that it was difficult to bring the different obligations under different sets of legislation together.

It was recognized that there was a wide range of experience between countries. While some countries have been active in reducing emissions, for new accession states to the EU, or for new parties to the Gothenburg Protocol, there may be a steeper learning curve.

Key drivers include the Natura2000 legislation, with a clear requirement to protect European natural habitats. The group felt that for countries with a big area falling under the Natura2000 legislation and for countries with a lot of small farms, it was challenging to implement measures across the whole sector. Another important driver could be the linking with European Structural and Investment funds and the Rural Development program. Subsidies for a sort of environmental services (protection) could be helpful.

A question was whether the market could change the situation by focussing on good practices and somehow reward farms that work in the most environmental friendly way. Participants however didn't feel it should be completely left to the market. Farmers are constrained by the need to get a satisfactory return for their products.

More focus on cost aspects could be useful - both on a national scale as a farm scale. It might be useful to use the framework code to link to existing 'reference farms' who can use innovative technologies (subsidised by government) to spread new technologies.

In the follow-up plenary discussion it was again stressed that the framework code is not directly addressed to farmers, but that nevertheless communication (at national level) to a wider audience, including consumers, is important. It was suggested that financial support and incentives for abatement techniques should be publicized through a website.

c. Working Group 3: Experiences in measures to reduce ammonia emissions; how do countries relate to the UNECE guidance document on options for ammonia mitigation and other international references

The establishment, publication and dissemination of 'advisory' national codes are mandatory. The Framework Code is a tool to help countries to develop their national codes. The Gothenburg protocol itself makes no reference to the Framework Code (only a reference to the national codes). National codes are not generally published in all countries. Countries with strong regulations on emission reduction measures do not have national codes (NL, DK). Some others cover the aspects in different national codes for individual fields of production or cover more than NH₃ as parameters (e.g. PL). For national documents, regulations need to be synchronized and integrated approaches are necessary. However, many countries do not yet have National Ammonia Codes of Good Agricultural Practice.

Incentives have proven to be successful in Switzerland, where no regulations apply for manure application. The local authority provides financial incentives for using low emission spreading techniques. This has resulted in a 30% decrease in emissions from spreading.

Regarding interactions with CAP, funding under the second pillar is not possible if the measure is mandatory; some measures could be integrated into pillar one. It was proposed that a choice of three out of ten measures (for reduced emissions) could be eligible for direct payment from pillar 1 (like greening measures).

IED / BREF – the second draft of the revised BREF on pigs and poultry is almost finalized and its conclusions about to be negotiated. Proposed emission ranges are broadened. The aim is to have a similar structure as the UNECE Ammonia Guidance Document (GD). The group recommended that GD Category 1 methods should be considered as BAT, and to introduce BREF-Information to the Guidance Document in a next updating round. It should be noted that Category 1 measures represented BAT from a technical perspective while explicitly specifying associated costs.

Market developments (e.g. the abolishment of the milk quota) will have a strong effect on dairy cattle numbers in some countries (projected increase of 50 % in Ireland). The question arose of how countries could respond to market developments that risk offsetting measures on emissions reduction.

Data availability could be supplemented through using statistical data with additional data sources. For implementation of technologies often additional data sources, like technological agencies or data from authorities issuing permits need to be integrated. Accounting for emission reduction measures in the inventories is only possible with detailed calculations or inventories. Especially (but not only) in eastern European countries data availability is often poor and resources are missing to improve the availability of data needed. Emissions estimates at a regional / national scale are mainly models that do not necessarily reflect exact reality and can leave too much room for maneuver. Therefore there is a need for supporting monitoring of atmospheric ammonia concentrations to ensure that expected trends are verified in reality

It is noted that ammonia links to other aspects and changing contexts, for example changing milk quotas. The wider political landscape of ammonia and interactions must be considered.

d. Working Group 4: Addressing the barriers to ammonia mitigation: can the efficiency dialogue help?

Barriers to ammonia mitigation included (perceived and real) threats to farm profitability (partly perceived, partly real); lack of knowledge on behalf of farmers and the general public, not in the least in recognizing ammonia emission as a problem; and many farmers not aware of the effectiveness of abatement options, and the potentially beneficial impacts on N balance, which can contribute to profitability for their farm. There is also currently a lack of easily measurable targets at the farm level.

Regarding the efficiency dialogue: increased N efficiency can give some reduction in ammonia emissions, and improve the fertilizer value of manures is improved, thus strengthening the incentive to conserve ammonia. Routines for simple cost-benefit calculations at farm level can be made. There was some discussion over the farm size threshold for targeting. It was noted that environmental permits often only apply to larger farms. However, much of the total ammonia emission is

associated with small and medium size farms. Therefore, thresholds might also be considered to distinguish between small versus medium and large farms.

Following issues were raised during the plenary discussion:

- Efficiency dialogue can help significantly, by highlighting the positive opportunities for farmers. However, more work is needed to refine the core messages for different audiences. The efficiency dialogue has proved particularly helpful with wider stakeholders like OECD in the context of Green Economy.
- On farm size, there are many issues to be considered in setting a pan-European threshold, recognizing regional differences and differences between livestock.
- A dedicated “ammonia label” for food products is unlikely to take off. However, it was agreed that there is a huge opportunities for including nitrogen options (including ammonia) into product stewardship and product labelling schemes. Research on food information for general public shows that message quickly becomes too complicated and that in general quality assurance schemes are shown to be more effective.

7. Closing of meeting

Although the original Framework code adopted in 2001, and GP ratified in 2005, currently still relatively few countries have established a clearly-named national ammonia code of good agricultural practice. Of 26 ratified signatories to the Gothenburg Protocol, the Strategies and Policies Questionnaire of the convention (2008, 2010) indicates that less than 10 signatories have so far met this requirement.

It is considered that the present revision of the Framework Code can provide a key opportunity for Parties to establish a national code if they have not already done so, or update their existing code where one is already in place.

It was noted that the phrasing of “Code” of good agricultural practice can be confusing for some countries, where the word “Code” would imply mandatory measures. It was made clear that while it is mandatory for signatories to establish, publish and disseminate their own National Ammonia Code, the contents of the national code is purely advisory in nature.

The workshop highlighted how the present revision of the Ammonia Framework Code draws directly on the recently revised UNECE “Ammonia Guidance Document” (ref number). As the contents are advisory in nature, the useful comments received have focused on fine tuning and making the Framework Code most useful for countries in establishing their own National Codes.

The discussion proved very useful in raising several other key issues related to ammonia. For example, there has been an ongoing dialogue between establishing the Ammonia Guidance Document, Ammonia Framework Code and revision of the EU BAT Reference Documentation (BREF) for the Pig and Poultry Sector.

There are also major changes ongoing on the European farm sector. Key issues include a sustained long term trend towards larger farm sizes, increasing larger point sources, as well as the opportunities for taking economically justified actions to reduce emissions. Similarly, it was raised that restructuring of EU Common Agricultural Policy (CAP) has ended the milk

quota system, with some countries planning to respond by increasing national cattle herd size and milk production. Discussions at the workshop highlighted the need to test such national plans in relation to the terms of the Habitats Directive, which might imply a requirement for compensatory action through the use of mitigation actions (especially when building new farm facilities) to ensure that overall ammonia emissions do not increase.

As a result of the very useful discussions received in advance of and at the workshop, additional amendments have been incorporated in to the draft revised Ammonia Framework Code, with a separate informal document (inf doc 3) provided to the Secretariat to support discussion at the Executive Body meeting.