



**ФГБНУ «Институт агроинженерных и экологических  
проблем сельскохозяйственного производства»**  
Institute for Engineering and Environmental Problems in Agricultural  
Production

# **Reduction of ammonia emissions in Eastern Europe, the Caucasus and Central Asia**

Natalia Kozlova,  
co-chair EPN-EECCA

WGSR-55, Geneva, June 2017, Agriculture and Air Pollution



# **Expert Panel on Nitrogen in the Countries of Eastern Europe, the Caucasus and Central Asia (EPN-EECCA) within TFRN**

## **ESTABLISHMENT OF EPN-EECCA**

**at the 7th meeting of the TFRN (Saint Petersburg, 28 February-2 March, 2012) with the aim of promoting cooperation among countries of EECCA and across the UNECE region.**

## **THE PURPOSE OF EPN-EECCA:**

- To increase awareness and knowledge on reactive nitrogen emissions;**
- To explore options for integrated nitrogen management to abate these emissions;**

## **OUTCOMES:**

- Participation of EECCA countries experts in TFRN activity,**
- Translations of TFRN documents into Russian :**
- Joint projects**

**Web-site: <http://www.spb.sznii.ru>**

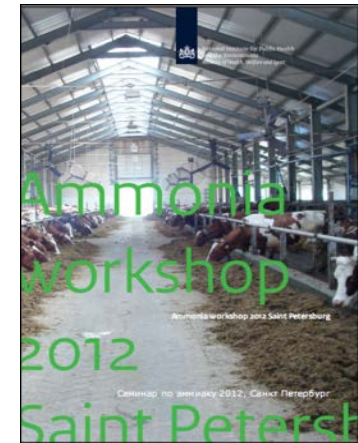


# Expert Panel on Nitrogen in the Countries of Eastern Europe, the Caucasus and Central Asia (EPN-EECCA) within TFRN

Dissemination of  
“Options for Ammonia Mitigation Guidance from the UNECE Task Force on Reactive Nitrogen” –  
“Сокращение выбросов аммиака: меры и действия” (hard copy of Guidance document in Russian)

Proceedings of the workshop “Abating Ammonia Emissions in the UNECE and EECCA Region in the Context of the Nitrogen Cycle” in cooperation with RIVM, the Netherlands. 2014 (in Russian and English)

English-Russian version of the Glossary of terms on livestock and manure management, Ramiran





# Future Actions

**Involvement of new members to EPN-EECCA by disseminating information about the TFRN activities**

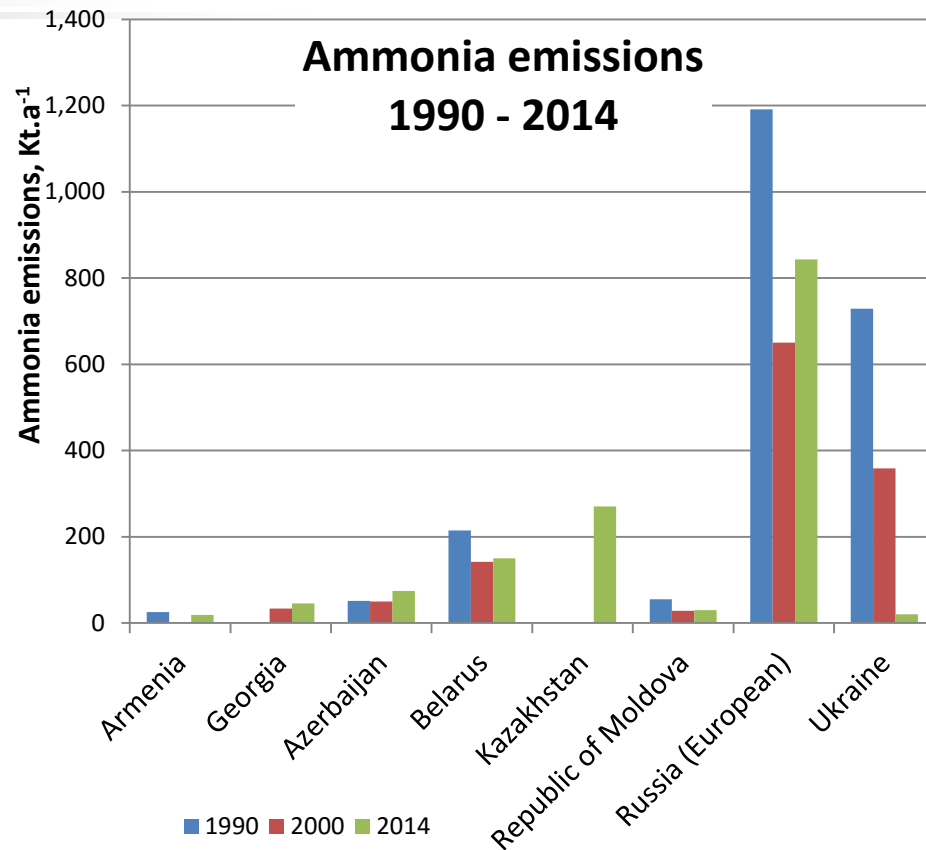
## **Related difficulties:**

- **So far agriculture has not been perceived by public and policymakers as a major source of pollution;**
- **Funding**



# Ammonia emissions in Countries of Eastern Europe, the Caucasus and Central Asia

Eastern Europe, Caucasus and Central Asia (EECCA)	Ratified CLRTAP	Participation in TFRN, EPN-EECCA events	National advisory code of good practice to control ammonia emissions
Armenia	yes	-	-
Azerbaijan	yes	+	-
Belarus	yes	+	-
Georgia	yes	-	-
Kazakhstan	yes	+	-
Kyrgyzstan	yes	-	-
Republic of Moldova	yes	+	-
Russian Federation	yes	+	-
Tajikistan	no	+	-
Turkmenistan	no	-	-
Ukraine	yes	+	+
Uzbekistan	no	-	-



In the countries with the growing agricultural production the key method of environment pollution abatement is to apply low-emission practices into intensive livestock rearing in compliance with Annex 9 to the Gothenburg Protocol



# Project :“Best available techniques (BAT) for intensive rearing of pig, poultry and cattle in EECCA countries – support of the implementation of the Gothenburg Protocol of the UNECE-CLRTAP and the environmentally sound techniques according to the EU Industrial Emission Directive (IED)”

## Implementing organizations:

- DöhlerAgrar, Germany
- German Environment Agency (UBA),
- “Institute for Engineering and Environmental Problems in Agricultural Production” IEEP, the Russian Federation

*This project (no. 43086) was financed by the German Federal Environment Ministry’s Advisory Assistance Programme (AAP) for environmental protection in the countries of Central and Eastern Europe, the Caucasus and Central Asia and other countries neighbouring the European Union. It was supervised by the German Environment Agency (UBA).*

**Umwelt  
Bundesamt**

On behalf of:



Federal Ministry  
for the Environment, Nature Conservation,  
Building and Nuclear Safety

of the Federal Republic of Germany



**The overall objective** of this project is to develop an information exchange on the integrated methodology for the classification of livestock housing systems, and of storage, treatment and spreading of manure produced, in terms of “Best Available Techniques (BAT)”

**The specific objective** of the project is to draft proposals on introduction of BATs for intensive livestock farming in the Russian Federation based on the relevant European experience.

**Project started in 2014**

The work was done for the conditions of the North-West of Russia.



## Fragment of the list of recommended BAT

<b>Techniques for reducing emissions from the storage of solid manure</b>	Store dried solid manure in a barn
	Store solid manure on solid impermeable floor equipped with a drainage system and a collection tank for the run-off
	Select a storage facility with a sufficient capacity to hold the manure during periods in which the application to land is not possible
	Store solid manure in field heaps placed away from surface and/or underground watercourses which liquid run-off might enter
	Reduce the ratio between the emitting surface area and volume of the manure heap
	Cover solid manure heaps
<b>Techniques for reducing NH<sub>3</sub> emissions from slurry store</b>	Reduce the ratio between the emitting surface area and the volume of the slurry tank
	Reduce wind velocity and air exchange on the slurry surface by operating at a lower level of fill
	Minimise stirring of slurry
	Natural crust
	Use stores that are able to withstand mechanical, chemical and thermal influences



# <http://ndt.sznii.ru/>

Главная | Управляйте своими | Google Переводчик | Home | ndtsznii.ru/images/bi | GISMETEORU

znii.ru/en/

Словари | Узнать погоду | Sergey A — «Танде...» | 2013 Edition of the ... | Переводчик Google | Визуальные заклад... | TFRN activit

Контакты: (812) 466-57-16 | Email: nli@sznii.ru | ИАЭП

**НДТ** В ЖИВОТНОВОДСТВЕ

BAT PROJECT | BAT DOCUMENTATION | NEWS | CONTACTS | LINKS

BAT EU | BAT RU

Home

## Best available techniques (BAT) for intensive livestock farming.

The Federal Law of the Russian Federation № 219-FZ "Concerning the Introduction of Amendments to the Federal Law "On Environmental Protection" and Certain Legislative Acts of the Russian Federation".

"... Best Available Technique is a complex of production processes, equipment, engineering methods, techniques, procedures and tools, which are based on the latest achievements of science and technology, which have the best combination of indicators that environmental and economic efficiency objectives have been achieved, which feature technical applicability in production on the facilities that have an adverse impact on the environment..."

**Scheduled plan of transition to BAT.**

- 2017 – development of Russian BAT reference book for intensive rearing of pigs
- 2017 – development of Russian BAT reference book for intensive rearing of poultry

By 1 January 2025, legal entities and individual entrepreneurs, who are engaged in economic and (or) other activity on the objects (facilities) scope of BATs application, are required to obtain an integrated environmental permit.

- It allows to avoid the access of nutrients to the water bodies
- Biogas installations allow to process manure and manure-bearing wastewater into organic fertilizers and to produce a head-carrying agent
- Subsoil application of organic fertilizers reduces atmospheric emission and eliminates the wash-off of organic fertilizers open water bodies

Taskbar icons: File Explorer, Calculator, Word, PowerPoint, Skype, PDF Reader, Chrome, Photoshop



Implementing organisations

ny/bat-project/implementing-organisations.html

кодящие - natli | Интерпретацию из IE | Hosting PeterHost.Ru

Контакты: (812) 466-57-16 | Email: nli@sznii.ru | ИАЭП

**НДТ** В ЖИВОТНОВОДСТВЕ

BAT PROJECT | BAT DOCUMENTATION | NEWS | CONTACTS | LINKS

Implementing organisations

Home / BAT project / Implementing organisations

DoehlerAgar,  
German Environment Agency (UBA),  
Federal State Budget Scientific Institution "Institute for Engineering and Environmental Problems in Agricultural Production – IEEP"

On behalf of:

Federal Ministry  
for the Environment, Nature Conservation,  
Building and Nuclear Safety

of the Federal Republic of Germany

This project is financed by the German Federal Environment Ministry's Advisory Assistance Programme (AAP) for environmental protection in the countries of Central and Eastern Europe, the Caucasus and Central Asia and other countries neighbouring the European Union. It is supervised by the German Environment Agency (UBA).

« Prev | Next »

Taskbar icons: Total Commander 6.S..., Implementing organ..., Nitrogen Workshop O..., TFRN11 projekt.pptz..., Final report 43006 11...



# A workshop on BAT in intensive livestock farming was held on 16 February 2016, on the premises of IEEP

The main purpose of the workshop was dissemination of information obtained in the course of project work and discussion of elaborated Recommendations.

The workshop was attended by 54 specialists – scientists from relevant research institutes, lecturers from higher educational establishments, representatives of industry and administration, including 4 representatives of EECCA countries (Belarus, Kazakhstan, Republic of Moldova and Tajikistan).

The English-Russian and Russian-English simultaneous translation was provided.





# Animal and poultry manure utilization systems (phase 2 of the project)





# Conclusions

1. EECCA countries differ with regard to addressing the problems of reducing emissions from agriculture, ammonia emissions in particular.
2. In a number of EECCA countries, agriculture is not considered a top priority sector in terms of lowering the environmental impact, ammonia emissions included.

For these countries, it is sometimes more important (urgent) to disseminate information and to raise awareness on mitigation measures at all levels.

3. In the countries with the growing agricultural production the key method of environment pollution abatement is to apply low-emission practices into intensive livestock rearing and to improve the farm-level management.

Development of the National Advisory Code of Good Agricultural Practice to control ammonia emissions and its dissemination among the private farmers and large-scale agricultural producers is also an urgent issue.

4. Development of the guidelines for farmers on integrated environmental measures may be the subject of further work. A relevant international project for EECCA countries would be beneficiary.



**Thank you!**