

# Coherent Nordic Action for the Arctic Climate

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## Targeting Agricultural Open Burning in Eastern Europe

The seminar was jointly arranged by the Nordic Environment Finance Corporation and the International Cryosphere Climate Initiative in Stockholm on August 14, 2015.

### Participating organisations:

- Nordic Environment Finance Corporation (Henrik G. Forsström, Henrik Toremark, Anja Nysten, Johan Willert)
- International Cryosphere Climate Initiative (Gail Stevenson, Svante Bodin, Alexei Gittelson)
- Swedish Government Offices – Ministry of Environment and Energy (Caroline Dickson)
- Swedish Environmental Protection Agency (Åke Mikaelsson, Ann-Sofi Israelson)
- Swedish International Development Agency (Magdalena Svensson)
- JTI Swedish Institute of Agricultural and Environmental Engineering (associated with the Swedish University of Agricultural Sciences) (Per-Anders Algerbo, Ola Palm)
- Business Sweden – the Swedish Trade and Investment Council Russia (Andreas Giallourakis)
- IVL Swedish Environmental Research Institute (associated with the Nordic Council of Ministers and the Danish Ministry of Environment and Food) (Katarina Yaramenka)
- Luleå Technical University (Nils Skoglund)
- Gårdstånga Nygård farm (Gustaf Ramel)
- Swedish Meteorological and Hydrological Institute (Erik Engström)
- Carbon Limits (Stephanie Saunier)

### Summary of discussion

ICCI's presentation on Open Burning in Russia and NEFCO's future strategy suggestion for Open Burning reduction in Eastern Europe was followed by a discussion jointly moderated by NEFCO and ICCI. The presentations are attached. Here is a summary of the discussion:

Generally, the audience were satisfied with the well-defined, narrow scope of the agricultural Open Burning issue in Russia and Ukraine. Stephanie (Carbon Limits) pointed out the project has multiple similarities with the Carbon Limits' Black Carbon Gas Flaring project.

Ann-Sofi (The Swedish Environment Protection Agency) emphasised the need to initiate co-operation between the Open Burning project stakeholders and other international organisations working with Black Carbon. The most immediate opportunity is to present the conclusions of the project at the Arctic Council AMAP and ACAP Working Group Meetings

in Tromsø in mid-September. Ann-Sofi pointed out that agricultural burning is not yet one of the focus areas of the Working Groups. The project should also be presented to the Senior Arctic Officials (SAO) meeting to be held in October. The SAO could make a recommendation to their national-level ministers, respectively, to highlight agricultural burning as a priority issue to the climate work. Caroline (Swedish Ministry of Environment and Energy) recommended an extended co-operation with Nordic organisations (in particular the Nordic Council of Ministers) and the Climate and Clean Air Coalition, and it was suggested that Sweden may push further for this. She also raised the idea of introducing Open Burning and the project at a side event at the COP-21 in Paris in early December this year.

Åke (the Swedish Environment Protection Agency) expressed his interest in the institutional connection of the project, namely how it worked with government stakeholders in Russia and which reforms the project was supported. Alex, Gail and Svante (ICCI) explained that the project invited governmental organisations and politicians to participate in the project activities. The no-burn legislation is Federal but needs to be complemented in many cases by specific regulations relevant to each target region, representatives on the regional level were targeted. In particular, the co-operation with the Krasnodarskiy Krai regional government was successful, giving rise to stricter no-burn legislation, as well as a 21% reduction in burning since the project's inception. Moreover, the project cooperated closely with the quasi-governmental Association of Russian Farmers (ACCOR), which is consulted by the authorities concerning new legislation and support schemes to the agricultural sector. Finally, the Federal Ministry of Natural Resources and Environment has been informed about the project during a conference in St. Petersburg (The St. Petersburg Initiative) and expressed interest in a more detailed briefing. Magdalena (the Swedish International Development Agency) expressed that the possibility to obtain support for the project increases if it is somehow connected to Ukraine's recently signed Free Trade Agreement with the European Union, which enters into force in 2016. As far as agricultural products are concerned, this is likely to happen, provided that Ukrainian farmers comply with the European Union standards and certification will be sold at a significantly reduced customs duty. Many of the participants contributed to the discussion on the current absence of a global, or even an Arctic context, coupled to an accurate standard to estimate Black Carbon emissions from field and forest fires. Svante (ICCI) suggested that the goal should be to elaborate a harmonised way of globally dealing with Black Carbon emissions, rather than a standard model for estimating emissions from agricultural Open Burning. He also referred to the guidelines for reporting BC emissions to the Convention on Long-range Transboundary Air Pollution (CLRTAP) that already exists but the accuracy in emission inventories depend by and large on the validity of the emission factors used to relate observed burning to real emissions of BC. Svante will address the issue with experts working on Open Burning and monitoring of burning in South Asia including the leading expert of using satellite data to estimate emissions of Black Carbon (Michigan Tech. Institute) during next week.. He emphasised that a factor providing significant uncertainty to the estimation of agricultural Black Carbon emissions is that it stems from an area, rather than a point source. Stephanie (Carbon Limits) added that the amount and

type of emissions depend on how and what is burnt and under which circumstances. Her experience is that gas flaring can give rise to very different levels and types of Black Carbon emissions. According to Anja (NEFCO), NEFCO does today lack a Unit Abatement Cost for Black Carbon. Anja would prefer if any standard methodology to estimate Black Carbon emissions, that might be a result of the future project, is kept as simple as possible. Alex (ICCI) told the audience more about how the Ukrainian Agrosoyuz is intending to set up co-operation on emissions certificates trading with the Gold Standard Foundation. The certificates are initially valid for CO<sub>2</sub> emissions. The Gold Standard Foundation has elaborated a methodology to estimate Black Carbon emissions that would be worth studying, and will be approached for a discussion on possible co-operation.

Nils (Luleå Technical University, LTU) is researching how agricultural residuals can be burnt together with sludge in controlled combustion chambers in order to achieve a higher-temperature burning process and thus a significantly higher efficiency (compared to burning 100% residuals). The ashes from the burning process can be distributed as fertilizers and has excellent preferences to hold nitrogen on the field. LTU has also conducted its own research on how emissions are distributed using simple and cheap equipment placed in small measuring stations. The methods could be used to significantly improve the accuracy of using satellite temperature data only. Stephanie (Carbon Limits) also discussed the possibility of using airplanes or other technology to measure emissions in research projects.

Gail (ICCI) reminded the audience of the successful agricultural reform that ended agricultural Open Burning in Poland and the Baltic States during the early 21<sup>st</sup> century. She emphasised the need of scaling up the project by gathering academia, the public, authorities, farmer associations, and financial institutions in order to succeed with the project. At the end of the day, the general issue of possible up-scaling is crucial for achieving a real global impact on SLCP. Ola (JTI), who participated in one of the agricultural projects in the Baltics some ten years ago, emphasised the need of demonstrating turn-key solutions, including the technical, educational and financial components, in the local context to provide the farmer with the overview. The overall concept attracted necessary support from the authorities that were participating actively in the project. At the time, there was a participation of local commercial banks in these initiatives in Poland and the Baltic countries, and obviously NEFCO could play a similar role (alone or in parallel with interested commercial financial institutions). JTI would be interested to participate in similar projects in the future. Gustaf (Gårdstånga Nygård) marketed direct-seeding no-till agricultural methods as one way of dealing with the straw by leaving it on the field and avoid the fires.