



Environmental Investment Center

Russian Perspectives on Climate Change in the Lead up to a Post-Kyoto Agreement

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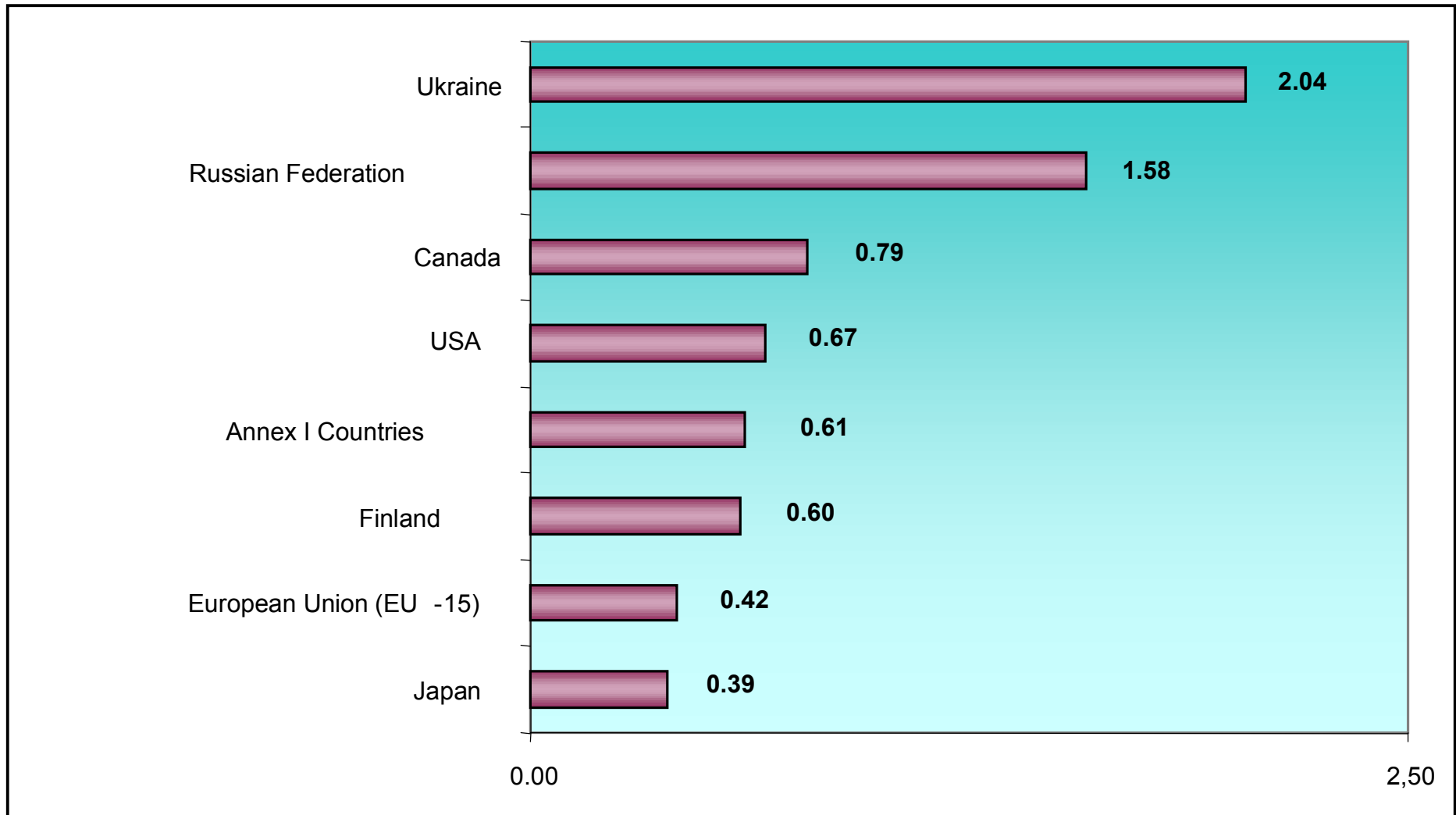


Russia's GHG emissions

- Russia today lags far behind the EU and even the US in the implementation of the Kyoto Protocol. No policy and measures, no JI projects, just formal compliance with reporting and registry requirements.
- One of the reasons why is that Russia will surely not exceed its GHG emission limit ("Assigned Amount") established under Annex B of the Kyoto Protocol. With about 2,200 MtCO₂e of emissions per year Russia will end up with only **11,000 MtCO₂e** of cumulative emissions for the Kyoto period 2008-2012 or even less, while its quota is **16,617 MtCO₂e**. Thus, Russia will automatically fulfill its obligations, resulting in an emission surplus of at least **5,600 MtCO₂e**.
- However, GHG emissions per 1 dollar of PPP GDP in Russia are **2.6 times higher** than the mean value of Annex I countries. In a carbon-constrained world, this may lead to economic losses for Russia which needs to meet strong market requirements and standards in terms of carbon intensity and GHG emissions management.
- This problem can be resolved through the modernization of the Russian economy and by way of attracting further investments. This may be achieved, *inter alia*, within the framework of the Kyoto Protocol, through Emission Trading under Article 17 and Joint Implementation under Article 6 of the Kyoto Protocol.



Russia's GHG emissions per PPP GDP (kg/USD)



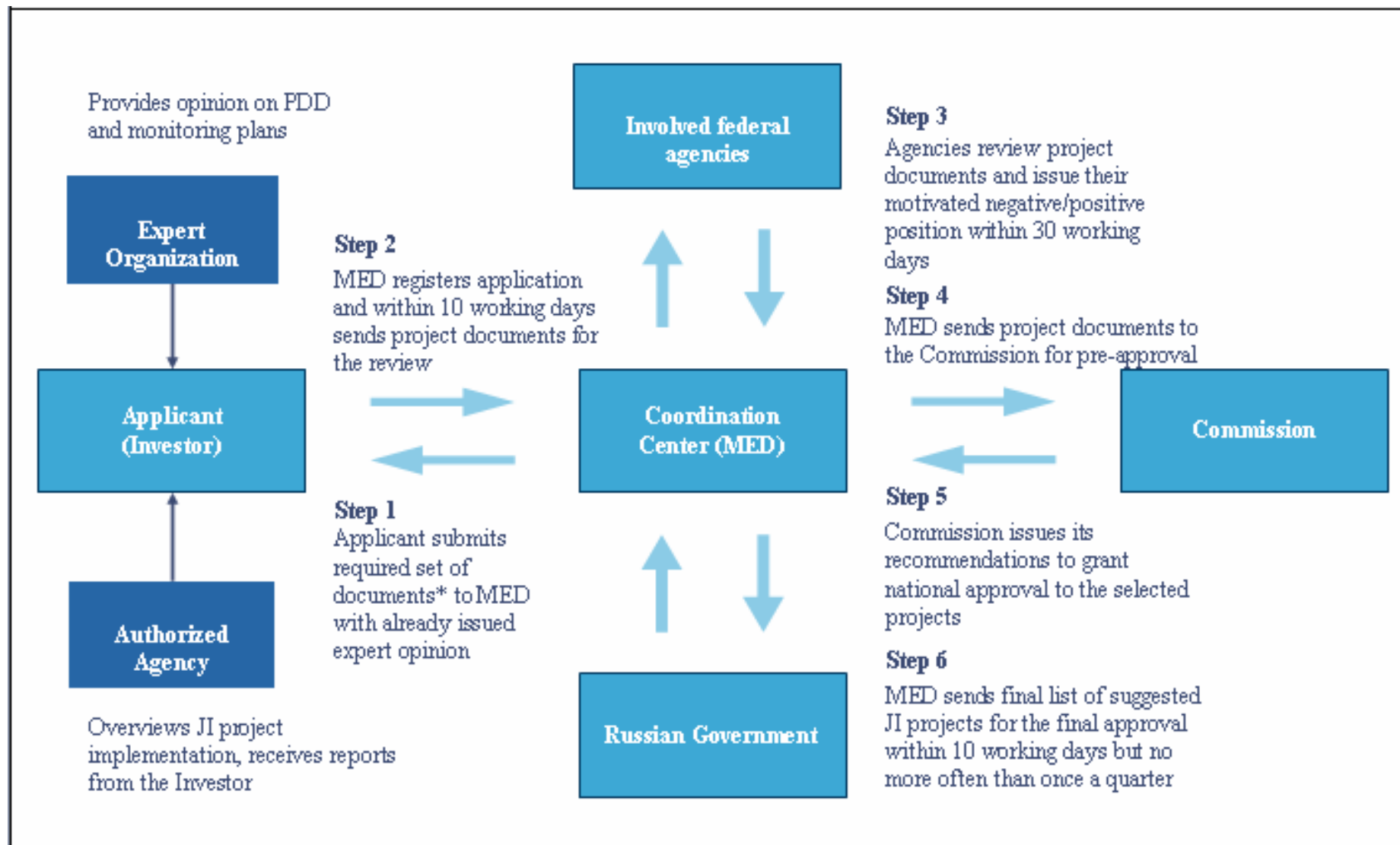


Russian JI regulation and procedures

- Russian JI regulation was adopted by the Russian Government (GoR) on 28 May 2007 and became operational in February 2008.
- Collection of applications for JI projects approval started on 10 March 2008.
- Russian JI legislation has not been completed yet but so far it allows to develop projects and submit them for the Host Party approval.
- According to the established procedure, applications for JI projects approval shall be submitted to the Ministry of Economic Development (MED) who register them and send to the relevant ministries for “no objections”.
- The final decision is made by a special commission set by MED with the representatives of other interested ministries included.
- Approvals should be issued by GoR on a quarterly basis.
- ERUs are supposed to be issued in the Russian Carbon Registry annually on the basis of the monitoring reports that have to be prepared and submitted by applicants to the relevant ministries not later than 15 February.
- Both Russian and foreign investors can apply for JI projects approval.



Russian JI regulation and procedures





Russian JI regulation and procedures

- The total amount of ERUs that can be issued and transferred to the investors under JI during the Kyoto period (2008-2012) is gaped by **300 Mt CO₂e**.
- This total limit is split among different sectors and categories of sources as follows:
 - energy sector – 205 Mt CO₂,
 - industrial processes – 25 Mt CO₂,
 - use of solvents and other products – 5 Mt CO₂,
 - agriculture – 30 Mt CO₂,
 - waste management – 15 Mt CO₂,
 - land use and forestry – 20 Mt CO₂.
- This may put certain constraints on JI projects in Russia though the procedure allows revising of the established limits and there redistributing among the sectors from time to time.



Questioning Russian JI procedure

- This distribution does not match with emission reductions under Russian JI projects already submitted for determination and published on the UNFCCC website. The amount of expected GHG emissions reduction under *Industrial processes* category is much higher even now. On the other hand, no JI projects have been proposed yet in *LULUCF*, nor in *Agriculture*.
- The provisions allow the redistribution of limits between the categories in case that “no applications from a particular sector have been submitted”. Here, out of curiosity, come several “what ifs”:
 - What if applications have in fact been submitted, but they are few and cumulative reductions are still under the limit?
 - What if the overall limit is exceeded?



Questioning Russian JI procedure

- What if the amount of emissions reduced due to the JI project is higher than the amount of emissions indicated in the PDD? Will additional ERUs be issued above the amount of AAUs reserved for the project?
- What if, on the contrary, the actual amount of emissions reductions are much less than projected? Will this lead to cancellation/withdrawal of JI project approval?
- Will there be accounts opened for JI project applicants or investors in the Russian carbon registry?
- What documents will be required by MED in order to take a decision on transfers of ERUs to the investor's/purchaser's account outside Russia?
- Which taxes are applicable to the proceeds received for emission reductions or for ERUs transferred (sold) in the market?



Russian JI projects

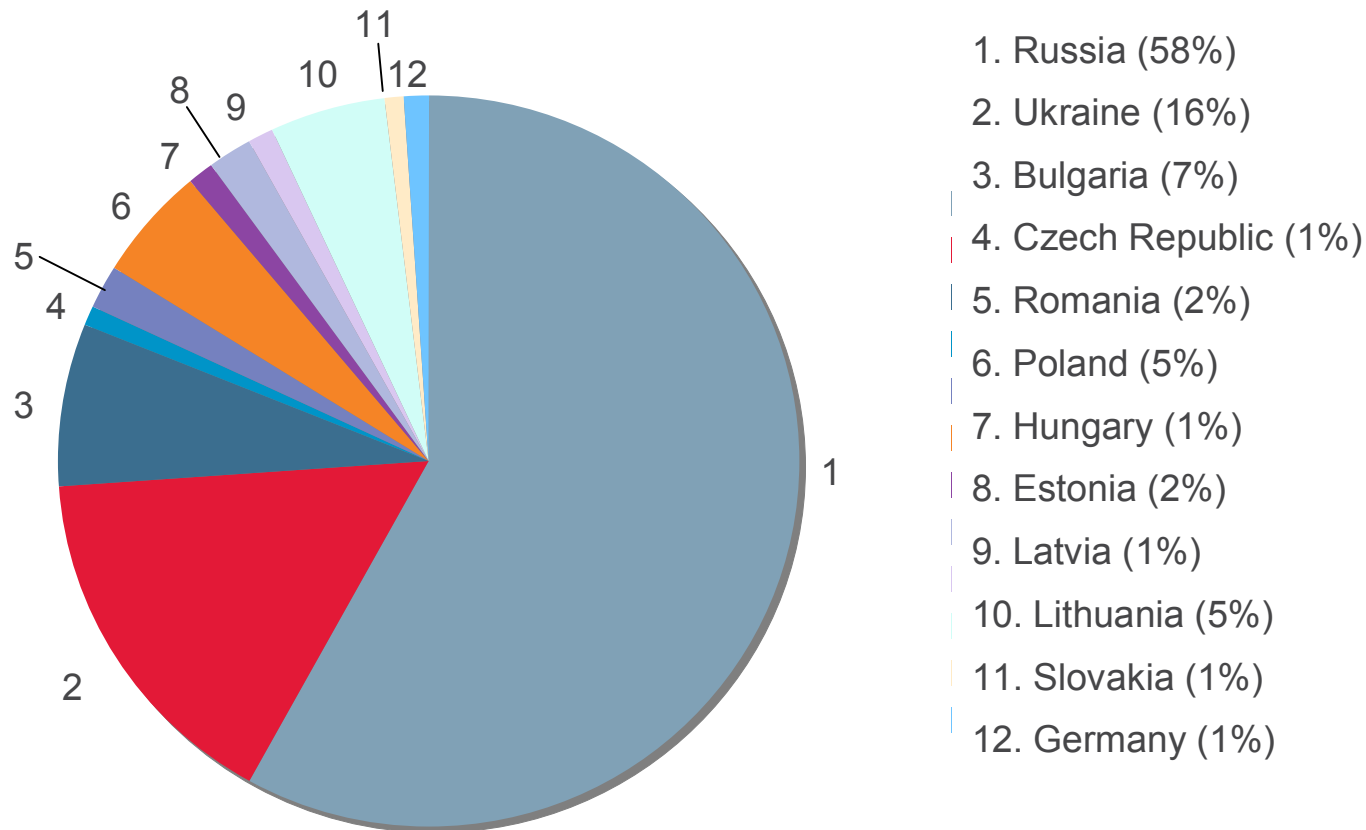
- As of 8 May 2009, **38 JI projects** with over **100 MtCO₂e** of emission reductions have been submitted for approval to MED
- **NONE of them has been approved yet!**



Russian JI projects

215 JI projects (183 - Track 2, and 32 - Track 1) are prepared worldwide with the total GHG emission reduction over **300 Mt CO₂e**. Russia potentially holds up to **60%** of the JI market.

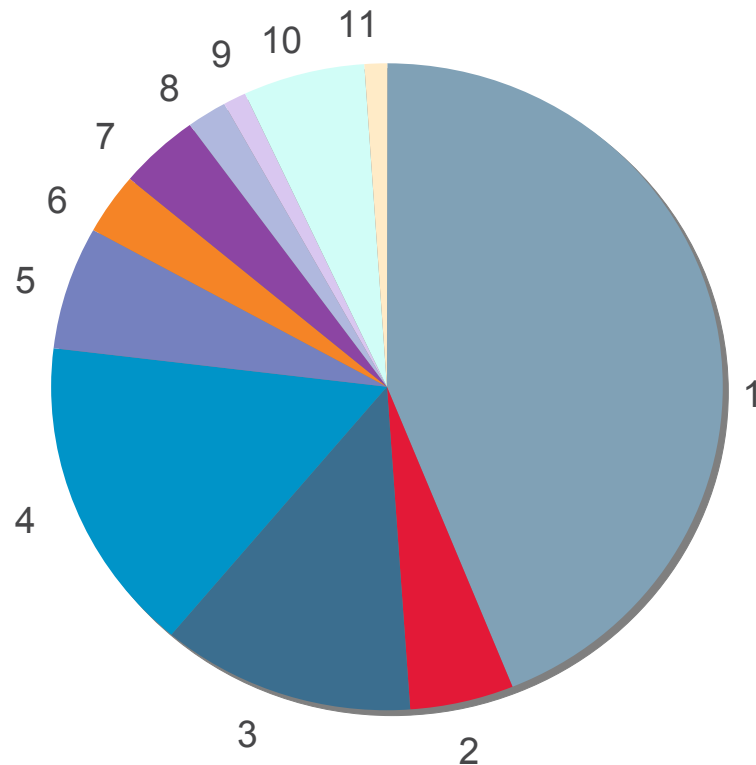
(Source: UNFCCC website, 2008).





Russian JI projects

Russian JI projects deal with various categories and sources of GHG emissions.



1. Methane leakages at NG distribution (44%)
2. Methane emissions from landfills (5%)
3. Coal mine methane (12%)
4. N2O, HFCs, PFCs and FS6 (16%)
5. Fuel switch (6%)
6. Biofuel and renewables (3%)
7. Energy efficiency (4%)
8. Energy saving (2%)
9. Recovery of CO2 (1%)
10. APG utilization (6%)
11. Other (1%)



Russian JI projects

JSC Ural Steel



- Reconstruction of electric arc furnaces and installation of new continuous casting machine with the enhanced productivity
- Expected GHG emission reductions over 2008-2012 – 3.2 Mt CO₂e

LLC Enisey



- Utilization of low pressure associated petroleum gas at an oil field in Komi Republic for production of dry gas and condensate
- Expected GHG emission reductions over 2008-2012 – 281.2 thou. t CO₂e



Russian JI projects

JSC Archangelsk PPM



- Implementation of fluidized bed technology for energy generation from bark and wood waste and waste water sludge
- Expected GHG emission reductions over 2008-2012 – 1,02 Mt CO₂e
- Realised pre-Kyoto emission reductions (VERs) – 807.6 thou. tonnes CO₂e

JSC Sawmill 25



- Construction of a new bark and wood waste fired boiler house and CHP plant to produce energy for the mill's own needs
- Expected GHG emission reductions over 2008-2012 – 215.4 thou. t CO₂e
- Realised pre-Kyoto emission reductions (VERs) – 33.5 thou. tonnes CO₂e



Provisions for JI in Russia post 2012

- Russia should take advantage of its leading position in the world JI market to further promote JI mechanism during negotiations on the international climate change treaty post 2012.
- Harmonization of crediting under JI and CDM to a uniform 10 year crediting period;
- Improvement of effectiveness and efficiency by promoting transparency and securing due process for project participants, converting the JISC into a permanent body and creating appeal and review process of JISC decisions;
- Shifting focus on additionality from a financial perspective to an environmental one;
- Supporting the expansion of sectoral, programmatic and domestic JI.



Provisions for JI in Russia post 2012

- Russia should undertake to improve its domestic JI legislation in terms of JI projects approval, issuance of ERUs, and taxation.
- A more precise list of eligibility criteria should be set forth.
- No more caps on GHG emission reductions generated and transferred under JI. Only emissions should be capped, not emission reductions.
- No more “efficiency criteria” except for those to prevent the use of old-fashioned technologies and equipment.
- Allow issuance of ERUs into project owners’ accounts with the registry.
- May be specific taxation for different types of projects? Like in China?



Capping Russia's GHG emissions post 2012

- The biggest and the most important issue, of course, is Russia's commitment to GHG emissions limitation and reduction after 2012. If no commitments taken, Russia will lose most of its advantages and opportunities.
- At COP 14 in Poznan (December 2008), Russian delegation expressed that Russia would take quantitative commitments to limit or reduce its GHG emissions limitation after 2012. However, **no commitments have been declared ever since**.
- Let's calculate Russian GHG emissions towards 2020 basing on assumptions drawn from what GoR has already declared as its strategy for the future. In the outcome for 2020, GoR has declared the following
 - Energy intensity of GDP should be reduced by 40% below 2007 level;
 - Renewables shall increase up to 4.5% of electricity produced;
 - APG flaring should be reduced to only 5% by 2012 (*hardly doable, in my view. But by 2020 a least a part of this will be completed*).
- Let's also assume that Russian GDP will double between 2012 and 2020.
- Under the above assumptions Russia's GHG emissions will most probably increase by 2020 **up to 80%** of their historic 1990 level against 65% they stay now.



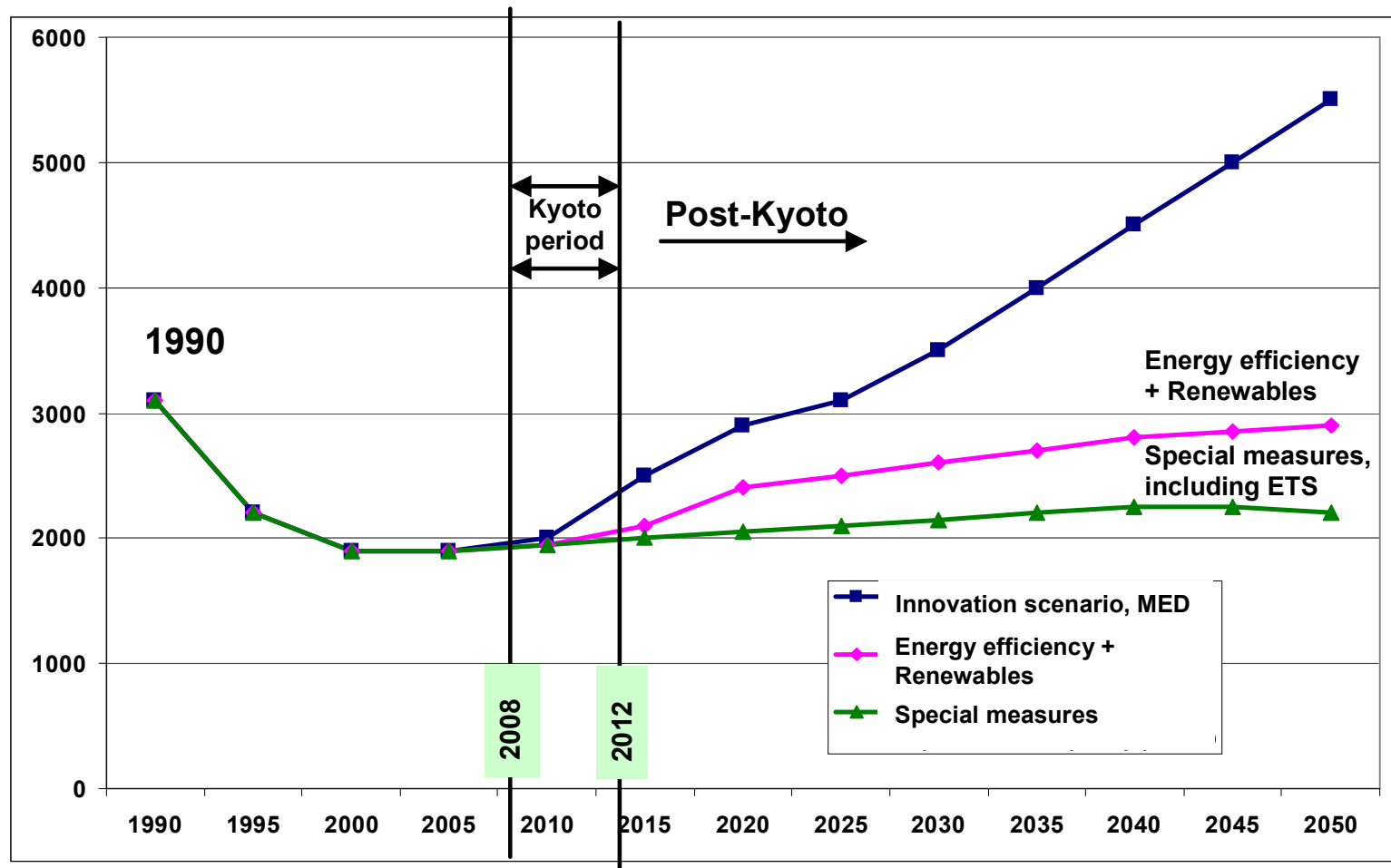
Capping Russia's GHG emissions post 2012

- The question however is – *Does Russia have **enough resources** to accomplish all it has declared in terms of energy efficiency, development of renewable energy and utilization of APG? What kind of additional resources will it need?*
- Possible solution is **carbon!** Russia can attract resources through emissions trading and carbon offsets within JI mechanism.
- When fixing Assigned Amount at 80% of historic 1990 emissions, Russia will only have 1,200 MtCO₂e free for trading during 2013-2020. This may not be enough.
- That means Russia's Assigned Amount should be bigger than just 80% of its historic 1990 emissions. Otherwise no opportunity remains for emissions trading and carbon offsets, and hence – no resources to provide for emissions reduction through energy efficiency, development of renewable energy and utilization of APG.
- Why not allow Russia take its remaining Kyoto limit which is at least 5,600 MtCO₂e into the new post-Kyoto commitment period? With this “safety cushion”, Russia can probably commit to reducing its emissions down to **70%** of its historic 1990 emissions. Under this scenario, 25% of transferred Kyoto limit will be used to cover the expected shortfall (1,400 MtCO₂e) while the rest 75%, which is at least 4,200 MtCO₂e, can be sold through either ET or JI and partly saved for the future.



How can Russia control GHG emissions?

- So far, GHG emissions are not regulated or controlled in Russia at all. This results in steady growth of GHG emissions under all development scenarios.





How can Russia control GHG emissions?

- For purposes of effective GHG emissions regulation, GHG emission sources should be divided into two groups:
 - *the first group* should include small and unorganized sources, such as transport, individual communal boilers etc. Emissions of this group should be regulated indirectly, through a system of technological performance standards applicable to individual technological units and pieces of equipment. These are considered to regulate fugitive emissions, fuel and energy consumption etc on the basis of best available technologies;

and

- *the second group* should consist of sources, which are controlled by companies and other enterprises. Aside from technical performance standards, emissions of this group should be directly capped (limited) under a kind of Russian emissions trading scheme ("RF ETS") similar to the EU ETS.



Creating RF ETS

- The RF ETS could be structured in such a manner that absolute emission caps (i.e., quotas or permits as they are called in the EU ETS) are determined for each company participant and that each emission permit is then linked to a certain amount of tradable carbon units (in case of EU ETS these are called allowances or EUAs), whereby each carbon unit is accorded 1 tCO₂e nominal value.
- Under such a regime, carbon units can be bought, sold and/or banked (i.e., saved for use in future periods).
- Emissions allowances should be balanced against actual GHG emissions and ought to be cancelled out every year, on the basis of GHG emissions report independently verified.
- Companies which submitted underestimated emission data should be fined. Such companies should cancel out additional permits, to balance their actual emissions against their emission allowances, and so comply with GHG regulation.



Creating RF ETS

- Aside from emissions permits, companies could obtain additional emissions rights by way of their acquired carbon units (AAUs, RMUs, ERUs and CERs) issued in other countries. When emissions balance is calculated, these units are converted into local RF emission allowances and, then, immediately cancelled out.
- If a company exceeds its permitted emissions (i.e., if actual emissions exceed the number of emission allowances held by a company in its account with the carbon registry), it should be penalized. The violating company should then be obliged to provide “double” compensation for this violation in the future commitment period, as follows: during the next commitment period, the number of emission permits issued in favour of the violating company will be automatically reduced by the exceeded emissions amount in the previous period, multiplied by two.
- The RF ETS should be open to foreign companies, as this would stimulate market demand and create tangible incentives for Russian emitters. Foreign companies should be allowed to trade, and legally purchased emission permits should be freely convertible into exported carbon units (i.e., AAU and RMUs).



Creating RF ETS

Setting the baseline:

- Baseline emissions are calculated as average GHG emissions during several years, instead of just relating to 1990 or any other year;
- The baseline level is further corrected taking into account expected growth of output of the enterprise;
- Emissions limits should be corrected in the context of sectoral “scale factor”. This factor would reflect the relative differences which exist among unit emissions reductions in each sector of the economy, arising from economies-of-scale and as a result of investments;
- If actual output is lower than was projected, then the permit for the next year should be corrected by way of subtracting the surplus which the enterprise acquired in the previous period by overestimating its economic growth.



Creating RF ETS

$$Q = \sum_{T_1}^{T_2} \frac{E_0}{V_0} \times V_t \times \alpha_t$$

Whereas:

Q – permit for the period,

E_0 – average annual GHG emissions during previous period,

V_0 – average annual production output during previous period,

V_t – projected/expected production output in year t ,

α_t – a sector specific decreasing factor in year t ,

T_1, T_2 – the first and the last years of budgeting period.

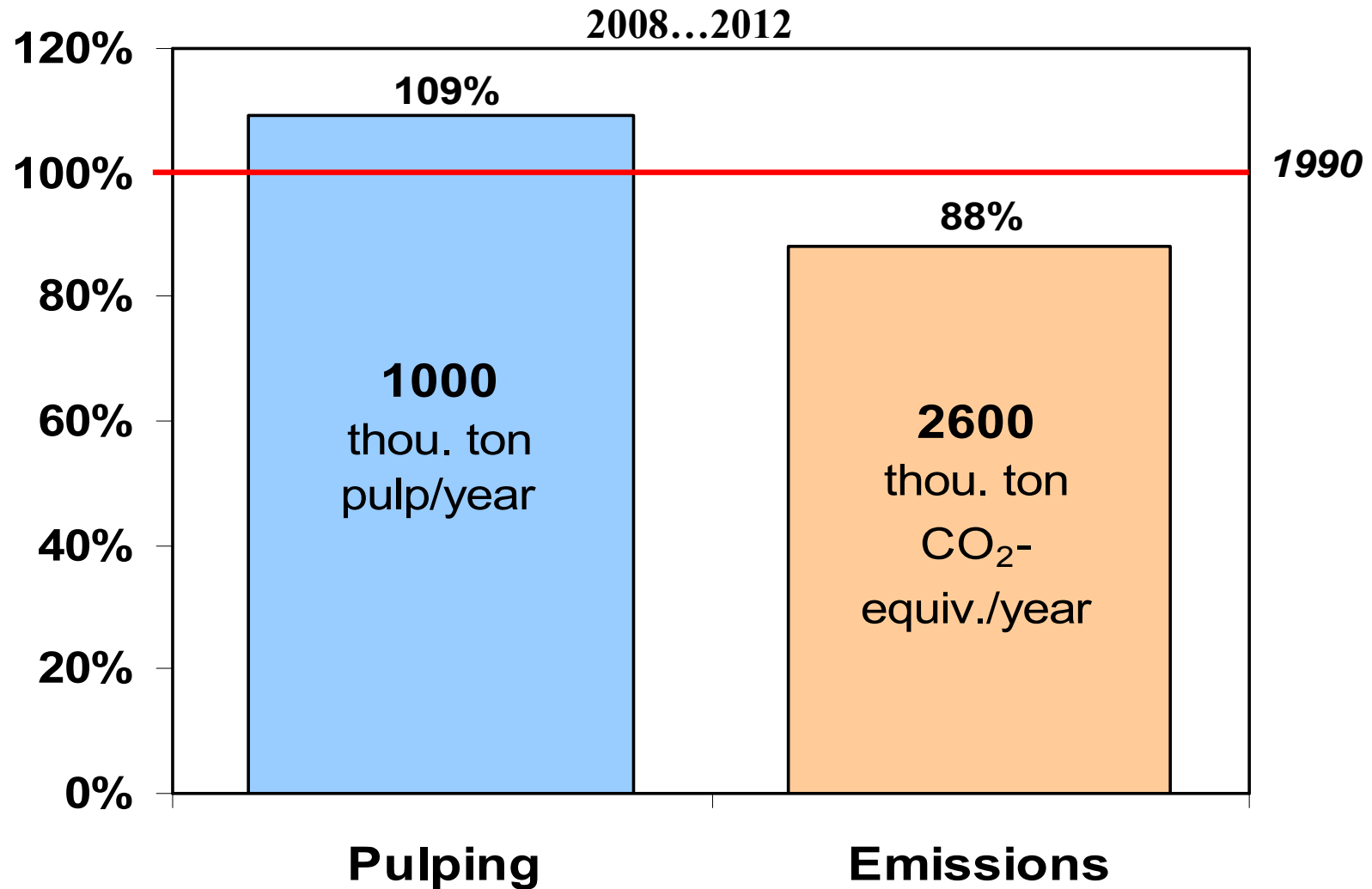


Good practices: Archangelsk Pulp and Paper Mill

- The most encouraging example in this regard is demonstrated by Archangelsk Pulp and Paper Mill ("APPM").
- APPM started controlling its GHG emissions in 2002 when it first ran comprehensive inventory of GHG emissions covering the period from 1990.
- In 2003, APPM became the first and, so far, the only Russian company which has committed to quantitative emission targets. The company pledged to keep its annual GHG emissions 12% lower in 1990 while at the same increasing its production by 8.5% against 1990. This decision was announced by General Director Mr. Vladimir Beloglazov at COP 9 in Milan (Italy) on 10th December 2003.
- To achieve this, APPM developed its climate strategy towards 2012, which includes energy efficiency measures at supply and demand sides and substantial increase of biofuels use.
- Due to this strategy, specific GHG emissions per ton of pulp have decreased by 45% against the 1994 year level; from almost 4.5 tCO₂e to 2.5 tCO₂e.
- Thus, production at APPM has grown almost twofold against 1994 level, while GHG emissions remain practically the same.

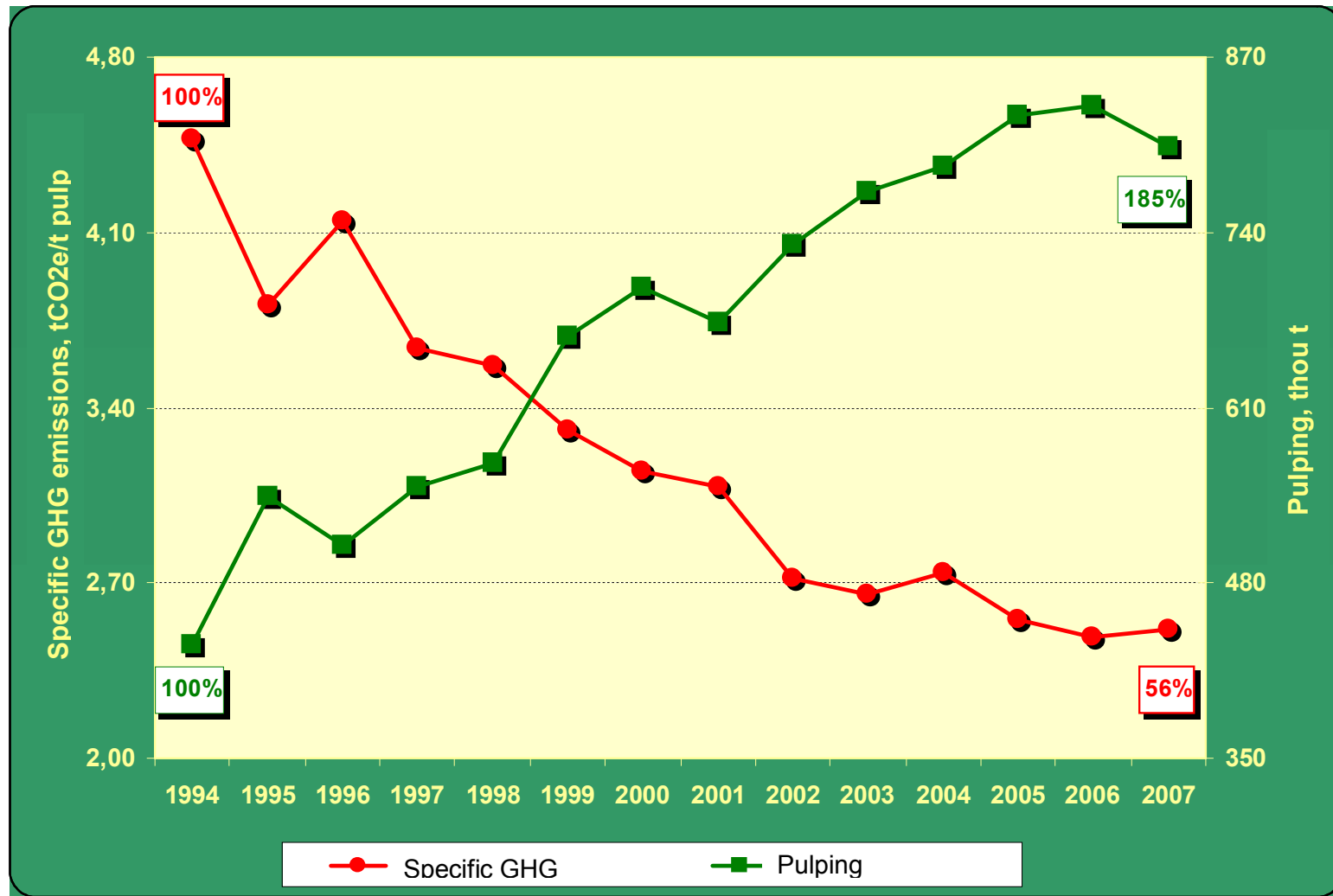


Good practices: Archangelsk Pulp and Paper Mill





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Good practices: Archangelsk Pulp and Paper Mill

- In 2007-2008, APPM received its first "carbon money", EUR 1.5 million, for early (pre-Kyoto) emission reductions under the waste biomass utilization project which has been implemented at the mill since 2000.
- From the moment the project was first put into operations in 2000 until 31 December 2007, it generated 807 thousand tCO₂e of GHG emission reductions, which were sold in the market under the Voluntary Carbon Standard.
- Now the mill is looking forward to receiving additional money for its GHG emission reductions under JI during the Kyoto period (2008-2012) while at the same time working on another potential JI project that could double its emission reductions and, thus, increase the mill's total benefits both in terms of energy savings and in terms of carbon credits to be further supplied to the market in return for cash.
- Examples of APPM and other Russian companies demonstrate that implementation of the GHG limitation measures does not prevent business development and production growth. On the contrary, they help improve operations, strengthen company's competitiveness and sustainability. They provide excellent opportunities for companies to earn money by selling carbon credits in the carbon market and to profit from additional economic benefits which are especially valuable in the crisis times we now live in.



Thank you for your attention!

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