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Overview of current EU-Russia trade and investment relations

By Karel De Gucht

Will Russia finally join the World Trade Organisation (WTO) by the end of 2011 ? It would be a bold person who could answer this question with any certainty. Russia has been negotiating its accession to the WTO for nearly 18 years, longer than any other country, and remains the biggest and most important economy still outside the organisation. Predictions of Russia's imminent accession have been made in almost every year of the last decade, only for new complications and delays to occur.

But right now, I believe Russia really is closer to WTO accession than ever. The last quarter of 2010 saw the final conclusion of bilateral negotiations with the US and EU and we are approaching the end of the technical work on the revision of the Accession Working Party Report, which has been necessary to reflect changes in Russia's trade regime following the formation of the Customs Union with Kazakhstan and Belarus. There are of course a number of hurdles still to overcome. We need to find a solution for Russia's recently proposed investment scheme in the car sector, which is incompatible with WTO rules; we need more reassurances and action to be taken by Russia in the field of Sanitary and Phytosanitary (SPS) measures; and the differences between Russia and Georgia, a WTO member, will need to be resolved sufficiently to allow Georgia to support Russia's accession.

But all the above can be overcome, with political will and effort on all sides. And this would open the possibility of Russia's accession by the end of the year.

WTO accession is the primary and most immediate focus of the EU's trade and investment strategy towards Russia. One of the significant features of the current bilateral relationship is the instability and lack of transparency in the constantly changing legal and administrative framework within which trade and investment takes place. Russia is not only negotiating its WTO membership but the current Partnership and Cooperation Agreement (PCA) is also being revised and the negotiations on the New Agreement which will replace it still have quite some way to go. At the same time, at a regional level, Russia, Kazakhstan and Belarus have chosen closer economic integration in the form of a Customs Union and are developing more ambitious plans for a Single Economic Space. WTO accession would take our trade relationship a major step forward by bringing Russia into the same rules-based global trading system that underpins the EU's trade regime.

Even after the economic and financial crisis, Russia remains the EU's third largest trading partner (after the USA and China) and the EU is still Russia's largest trading partner and the foremost investor in Russia. So Russia and the EU are already strategic economic partners. But in today's rapidly changing global economic environment, both parties can benefit a great deal from deepening economic integration further. The EU's longer term strategic objectives are therefore to encourage the overall economic development of Russia in a direction which would open it up to the global economy and to the EU, and to seek eventual closer economic integration on the basis of a mutually agreed set of rules, thereby uncapping the trade potential, enhancing mutual benefits and preventing Russia from being inward-looking and protectionist.

The first step would be accession to the WTO. It is important to recall the benefits for both sides. The introduction of WTO disciplines in the Russian legislative system would help to make Russia's economy more transparent and predictable, improve the business environment for all economic operators and open up Russia's economy to global competition. It would also create a stronger incentive for foreign companies to boost their investments in the Russian economy, which is essential for Russia to realise its ambition to move from a resource-based to more diversified economy, built on a thoroughly modernised industrial base. Binding multilateral rules would also constrain the capacity of powerful domestic lobbies to seek and obtain protection through ad hoc tariff and non-tariff measures, which may reflect personal or

sectoral interests rather than Russia's wider economic goals of modernisation and diversification.

For the EU, WTO accession would lay the cornerstone for a massive step forward in our relationship. It would bring immediate benefits in terms of lower import duties as Russia has committed to removing on accession the "anti-crisis" duties that it introduced in 2008-2009. And further import and export tariff liberalisation would follow after accession in accordance with the schedules that Russia has agreed to. For Finland, this notably includes a reduction in the levels of export duties for various types of wood that are important for the Finnish economy.

Russia would also be obliged to harmonise its regulations and practices with WTO rules across the board, including in such areas as technical and sanitary-veterinary standards, customs procedures, non-tariff measures (e.g., licenses, permits) and other. This will significantly facilitate our agricultural and industrial exports provided that Russia will honour its WTO commitments.

For the first time Russia would be brought into the global trading system under the same rules and conditions as most of its trading partners. In this respect, the value of having Russia subject to the WTO dispute settlement mechanism should not be underestimated.

Of course, WTO accession will not solve all the trade irritants that exist between the EU and Russia. Some of them go beyond the remit of the WTO. The imbalance in our trade flows (to simplify, exports of energy and raw materials from Russia versus imports of manufactured goods to Russia) will persist, and the day-to-day problems that EU companies face in doing businesses in Russia will require more fundamental reform of the business environment. In the medium to longer term we need more extensive bilateral economic integration between the EU and Russia in order to tackle these issues.

This is one of the reasons why the EU established the Partnership for Modernisation with Russia in 2010. The aim is to support reform and enhance bilateral trade and investment possibilities, focussing on key sectors for innovation and growth, through dialogue at different levels and practical co-operation projects. Many EU Member States have established their own Partnerships for Modernisation with Russia in the same spirit.

So Russia's WTO accession should only be a first step in the development of our bilateral trade relationship. Building on this, and on the achievements of the Partnership for Modernisation, the second step should be a New Agreement which contains substantial trade and investment provisions that go beyond WTO rules. Our current negotiations are based on the understanding that Russia will be a WTO member by the time the New Agreement is signed and from the EU side, we want the Agreement to be as ambitious as it can, bearing in mind it will be a non-preferential agreement.

In the longer term we need to go further still. A Free Trade Area (FTA) agreement between Russia and the EU was already foreseen even in the current PCA, and it is still in the EU's economic interests to aim for such a preferential agreement in the future. The creation of the Russia-Kazakhstan-Belarus Customs Union makes the prospects for a bilateral FTA with Russia more difficult, but not impossible. In recent weeks Russia has revived talk of an EU-Russia FTA, and we shall be discussing details in the months to come.

But we should not get too far ahead of ourselves. Russia has shown that it is capable of springing surprises and our immediate task is to focus on WTO accession, and then the New Agreement. One step at a time...

Karel De Gucht

Trade Commissioner

European Commission

Challenges and solutions to the regional security

By Artis Pabriks

The Baltic Sea region is not only one of the most prosperous regions in the world, but it is also one of the most secure regions with relatively low possibility of military conflict or tension. However, it does not mean that Baltic Sea region in general and the Baltic countries in particular do not face security challenges affecting the Baltic security in the long run.

I define security as freedom from risk, danger or fear. It is a guarantee of confidence and ability to act autonomously, without external constraints. Security also means the absence of threat of war or conflict. Bearing this in mind, we have to remember that there is no absolute security, just like there is also no excessive security.

What are the major challenges to the regional security? In my opinion, security challenges can be divided in the same way as the Baltic Sea regional security guarantees in the late nineties, namely, the soft and hard security challenges.

Among the soft security challenges I would like to distinguish three main issues.

The first challenge is the climate change and environmental issues which, in case of hypothetical crisis, will equally affect all countries around the Baltic Sea. The latest developments in Fukushima nuclear plant, as well as the rising sea level and coastal erosion are just a few warning examples adding to the feeling of fear and increasing the danger caused by human error.

Energy security is another soft security challenge. The lack of diversified energy supply sources along with the lack of energy interconnection network with the "mainland EU" is an increasing challenge, first of all, to the three Baltic States and their prospects of successful economic and social development.

The third soft security challenge is the lack of connecting transport network which still, twenty years after re-gaining the independence of the three Baltic States, hinders the Baltic region to become an integral part of the Central Europe and Scandinavia. The lack of the transport network causes the region to stay in the EU periphery and prevents from turning the Baltic geographic disadvantage into a communicative advantage.

Among the hard, but, probably, less likely security challenges for the region, one should mention the possibility of political instability in the EU Eastern partnership countries or countries to the East and East South from the Baltic-Nordic region.

The region is characterized by the lack of, or very short, history of liberal democratic tradition, relative poverty, inequality of distribution of wealth and increasing military potential.

The recent developments of the "Arab Spring" make us speculate how stable the regimes in the CIS territory really are. What can be expected in the event of political or economic collapse of one or another country in the region? How will the growing military might of the countries impact the balance of power internally and internationally? What about the increasing threat of terrorism in the region? What are our possibilities to counter migrant or refugee spillover to the EU countries?

I want to briefly reflect on some of the developments in the region. First, a number of current initiatives taken by the Russian President Medvedev towards modernization of his country have been welcomed by the Baltic countries and the West in general. Being the neighbours, the Baltic States are particularly interested to see Russia developing according to the classical lines of democracy. The Baltic States should welcome it if after the 2012 Presidential elections the liberal democratic reforms would gain their momentum. At the same time, one would have to admit that the task is not easy to be accomplished in Russia, since several attempts of democratization have already failed. It is yet to see if Russian leadership and elite will have enough courage to continue the difficult way of reforms instead of maintaining the status quo and yielding to the temptation of the growing income from the oil and gas exports.

As regards Belarus, our goal should be to have Belarus as an independent state orientated towards the European values. Unfortunately, after the last election EU demonstrated relative lack of understanding in the regional affairs and went the easiest way which had already failed once a few years ago. In the long term, it will work against EU's own interests resulting in a decreased influence of the EU over the processes in Belarus and its increased orientation away from the EU.

What is the role and perspective of the Baltic-Nordic region taking into account the global and regional challenges? Traditionally, as rather small countries, Baltic and Nordic states have been looking for their security and prosperity via deeper regional cooperation and global engagement. Nordic cooperation, as well as institutional cooperation among the Baltic countries, is of a unique character, setting an example to other regions. However, I believe the cooperation on its own has its limitations. By using the existing mechanisms of Nordic, Baltic, or Nordic-Baltic cooperation, the region is unable to fully counter future challenges of either – soft or hard – nature. Also, to ensure the capability of global economic competitiveness or flexibility requires something more than the existing framework. Attraction of the regional investments, role in the global security architecture or the future defence capability development can be hindered without enhanced regional cooperation. Therefore, there is a need for a critical review of existing cooperation mechanisms and courageous vision on the future of the region. There is a need to change the philosophy of cooperation to philosophy of regional integration of Nordic and Baltic countries. The possible benefits of this plan of the decade are multifaceted and can guarantee sustainable development of the whole region as an integral part of strong NATO and EU.

Being aware of all possible limitations for instant implementation of the idea, I think we have to have a broader vision of the current global processes. We will put at risk our future welfare and ability to compete on the international scale if we ignore the growing changes in the other parts of the world. For example, due to the global economic and financial crisis, Latvia dramatically cut its defence budget and underwent defence reforms. Similarly, most European countries and even USA are currently facing reductions of defense spending. Unfortunately, it happens at the time when other regions are doubling or even tripling their defence spending. Similar challenges are to be expected in demography, economic competitiveness and many other areas.

I am convinced that regional integration is the only feasible solution for areas like defence sector where many so-called "pooling and sharing" opportunities exist, and sooner or later the same will have to be applied to other sectors as they will face the same challenges of the outside world. I do not think that the solutions are very complicated. But they do require the political will of the Baltic and Nordic politicians to look beyond the old nation-state paradigm and promote ways of closer and more inter-dependant cooperation among the countries contributing to an eventually integrated, and thus, more secure and successful region.

Artis Pabriks

Dr., Minister of Defence

Latvia

Completing the Circle – Russia and the European Union Strategy for the Baltic Sea Region

By Dirk Ahner

“Close cooperation between the EU and Russia is also necessary in order to tackle jointly many of the regional challenges.”

This sentence, in the Commission Communication concerning the European Union Strategy for the Baltic Sea Region (Communication from the Commission to the European Parliament, the Council, the European Economic And Social Committee and the Committee of the Regions, COM(2009) 248 final of 10.6.2009), both noted a fact and identified a challenge for the nascent strategy. While the eight Member States of the European Union that have coastlines on the Baltic Sea make the region a high priority for the Union, it is clearly not, and should not be seen as an ‘EU Lake’. On the contrary, Russia – an eighth of the population of the region and responsible for about a quarter of the intra-regional trade – is an indispensable partner for a successful strategy.

Why, then, was Russia not included in the planning and preparation of the Strategy from the start?

To answer this question, we have to remember the 2006-2008 situation in Europe. ‘Normal Relations’ had been resumed in the region only 15 years before and two enlargements had transformed the Baltic Sea from a region of peripheral interest (only two Member States with coastlines, each also looking to the North Sea and Atlantic) to a prime concern. Since the most dramatic difference from the earlier period was the influence of the European Union, with policies and funds covering many areas of activity but especially environment, transport, infrastructure and economic development it was natural for the region to discover its new identity. Meanwhile EU- Russian relations were dominated by other issues on other fronts and efforts to develop cross-border partnerships were hindered by administrative incompatibilities.

Nonetheless, Russia, like Norway and Belarus, presented a ‘non-Paper’ on the strategy during the consultation and preparation phase. This offered a cautious welcome to the Strategy, “based on the assumption that it [would] be an internal document” and highlighted the multilateral approaches such as the Northern Dimension and the Council of Baltic Sea States. The non-Paper concluded by confirming Russia’s readiness “to exchange views on specific aspects of such cooperation be the EU interested to do so while elaborating the Strategy”.

Fast forward to 2009. The Strategy was adopted by the Commission and endorsed by the European Parliament and Council. The political success was considerably greater than had been foreseen and implementation on the ground was gradually beginning. It was time to take stock of the position of Russia and find ways in which Russian and EU interests in a healthy and developing Baltic Sea Region could be harmonised.

As anticipated in the Strategy and in the Russian non-Paper, contacts started in the multi-national arenas. Thanks to good cooperation from the External Relations service of the Commission (now the European External Action Service) and support from the Member States concerned, the EUSBSR became a regular item on the agenda of the Northern Dimension. At the same time, the Helsinki Commission (HELCOM), in which Russia has from the start been an active member, was recognised as a leading partner in environmental concerns – most of the proposed environmental actions and

projects of the EUSBSR link directly to the Baltic Sea Action Plan prepared by HELCOM and adopted by its members. However, while these bodies provided a sound basis for agreement on principles and identification of common interests they were less well adapted for development of concrete projects.

The Commission therefore made contact directly with the Russian authorities through the Ministry of Foreign Affairs in Moscow. This led to a meeting between members of the EUSBSR team and the Ministries of Foreign Affairs and Regional Development in February 2010. Lists of possible projects and areas of cooperation followed from each side and the next stage is a working meeting in Moscow at which Commission officials from different departments will be able to discuss specific projects with their opposite numbers in Russian Ministries.

Meanwhile, other stakeholders started to use their own contacts across the borders of the EU to launch practical examples of cooperation in the context of the strategy. The most advanced example is the use of the long-standing association between St Petersburg and Turku, and also between St Petersburg and Hamburg, to create a ‘Round Table’ for cooperation on specific projects of interest to those cities and their regions. This exercise, in which the Commission has also participated, may be the most successful approach to launching effective cooperation, at least in the short term. However, even here there is the challenge of converting fine words into practical actions.

Stepping back to view the range of initiatives designed to improve practical cooperation with Russia, we could conclude as follows:

- While a successful ‘European Union Strategy for the Baltic Sea Region’ could be – was – created without active participation by Russia the overall impact will be much greater if we can work as partners to address the challenges and exploit the opportunities the Strategy opens up.
- This partnership must fully recognise the rights and responsibilities of each partner, and in particular must not appear to be a back door attempt to force Russia into an EU mould.
- We can, and should, use every possibility to optimise communication and increase the range of initiatives on which cooperation will bring tangible benefits to the region. The Strategy offers an incentive and a context in which more effective cooperation can take place.

Dirk Ahner

Director-General,

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European Commission



Cooperation in change in the Baltic Sea Region

By Björn Grönholm

Development and Cooperation in the Baltic Sea Region

In order to understand the development of the Baltic Sea Region we have to study the history. Beside the main development trend it is important to be aware of the changing patterns within this main trend, as development within all countries and sub-regions diverse.

The Baltic Sea Region has a long tradition of cooperation. Cooperation has, however, not been self-evident. Cooperation within respective country, region and city has taken different turns in time, so also in recent times.

The needs for cooperation and development have varied a lot. During the last twenty years the development of the Baltic Sea Region can be characterized as a success story. No other region in Europe has faced and carried out such a strong development during such a short period of time. This success has several reasons. These reasons can be found in the tradition to cooperate and the need to develop and build a common and stable future. Furthermore the existence of broad numbers of organisations, networks and institutions within the region is another reason for the successful development in the region.

While evaluating the last twenty years of development in the Baltic Sea Region one question arise; Can we assume that the situation somehow was more "easy" in the 1990 concerning the needs, interest and goals for development, compared to the situation in 2011? It is tempting to answer yes to the question, but this is not necessary the case. The circumstances are different so a comparison is difficult as both time periods are combined with different uncertainties and challenges.

Cooperation in the Baltic Sea Region

The regained independence in the Baltic States lead to a fast increase in cooperation on different levels of the society, both within the countries as well as between countries. Globalisation and existing new technologies also influence and change individual behaviour. This does, in turn, change the forms and reasons for cooperation.

After two decades of cooperation, the Baltic Sea Region is now in a new phase of development. Almost all countries around the Baltic Sea are EU members and the cooperation is also much more institutionalized than before. The basis for this new phase is the EU strategy for the Baltic Sea Region. The intention with this strategy is to further develop the Baltic Sea Region and improve the competitiveness of this European macro-region as well as the whole Europe.

The forms of cooperation and interaction in the Baltic Sea Region have changed remarkably since beginning of 1990s. Three main differences can be observed. First, cooperation has changed from bilateral cooperation into network cooperation. This is perhaps most clear when focusing on city cooperation. Another change concerns the types of cooperation. The cooperation has moved from a ceremonial cooperation to a more concrete, sector based and in particularly need based cooperation. A third change can be seen in the actors that are involved in this cooperation: A change from only political and administrative leadership involved with national and particularly international colleagues and stakeholders to

involvement of all levels and sectors in public administrations. Cooperation is in other words much more diversified today. The table below illustrates the levels and types of cooperation that can be found in the Baltic Sea Region.

<u>Governance mode</u>		
	<u>Within nation-states</u>	<u>Beyond nation-states</u>
Governmental	National governance (governmental actors only). SWEDISH ENVIRONMENTAL PROTECTION AGENCY	Intergovernmental cooperation, intergovernmental governance, international regimes/conventions, International governance, European governance (intergovernmental, supranational). EU, HELCOM, CBSS
Hybrid	Transformation of traditional forms of national governance. New forms of participation and access of non-governmental actors. Public-private partnerships. AGENDA 21	Transformation of traditional forms of international governance. Emerging new forms of governance. New forms of participation and access of non-governmental and transnational actors. Global public policy networks. BALTIC 21, HELCOM,
Nongovernmental	Influence of national nongovernmental organizations on national, regional and local governments (lobbying)	Influence of international nongovernmental organizations on international and intergovernmental institutions (lobbying) BSSSC, UBC,

Figure: Governmental, Hybrid and Non-governmental Governance; A Typology (Source: Joas, Kern and Sandberg, AMBIO Vol. 36, No. 2-3. April 2007)

Case UBC – 20 Years Experience of City Networking

Union of the Baltic Cities was founded in 1991 by 32 cities is a city network that has been involved in the development and integration of the Baltic Sea Region. The UBC consist today of altogether 106 member cities from all cities around the Baltic Sea.

The establishment of UBC was a result of the need to support policies and practices in cities in the Baltic countries and Poland after the cold war. A wise decision was to involve all countries in the network and activity from the beginning. This has lead to a good basis for a functional macro regional network. After twenty years of

cooperation we can see this development as a success story.

The activities within the UBC has developed from initial training projects to a broad scale of activities including top level conferences, benchmarking activities, investment projects and an increasing participation in EU policy development. Some issues of specific value can be mentioned. First, the cooperation has built up a productive partnership with Russian cities. Secondly the cooperation has initiated several new joint initiatives and has promoted regional sustainability and competitiveness. One example is the *Common Understanding of Sustainable Ports and Cities* - a policy statement that opened the way for more joint efforts between ports and cities in the Baltic Sea Region.

Results of UBC cooperation can be seen in economic investments, diffusion of best practices and good governance patterns, increased awareness of different regions as well as cultural and administrative differences.

Changing Circumstances

Changing circumstances change the need and forms of cooperation. Challenges like climate change, energy efficiency and the EU 2020 targets, global competition and economic trends are broad and complex. These challenges will also form the scope for involvement and arenas for deciding and solving challenges. These challenges put

pressure on finding solutions with a broad political commitment and acceptance and will in most cases also demand multilevel governance approach.

With this in mind, there is a need for all actors to be alert and follow the development, a need to adjust to changes and actual needs. This is a tough task for all organisations and in particularly the public authorities in the Baltic Sea Region. In a region with relatively small societies transnational cooperation is a natural way to work and use resources efficiently. Important is to have clear goals for decision-making. Decisions in "hard times" can be more innovative due to the demand and pressure to find new solutions!

Björn Grönholm

Head of Secretariat

*Union of the Baltic Cities –
Commission on
Environment*



About the underlying documents that have shaped Estonia's policy of internal security

By Marko Pomerants

Protecting survival and development is the key objective of every independent state. The achievement of this objective requires strategic underlying documents, which are among other things based on the history of the state, its relations with neighbours and the developments in the world. This article provides an overview of Estonia's path in its search for strategies in shaping its defence and internal security policies.

15 years ago, the Republic of Estonia saw the birth of its first strategic security policy document – on 7 May 1996 the *Riigikogu* approved the Main Guidelines of Estonia's Defence Policy¹. At that time, the main objectives of Estonia's defence policy and national defence included the prevention of aggression against the Estonian state and thus the document did not address internal security in great detail.

On 6 March 2001, the *Riigikogu* approved the National Security Concept of the Republic of Estonia², which for the first time formulated Estonia's broader national interests and security policy objectives:

- The preservation of Estonia's independence and territorial integrity;
- The protection of the survival and continued development of the Estonian state as a democratic state;
- The promotion of the welfare of people and the preservation of the Estonian nation, language, culture and the Estonian identity through times by developing international cooperation in the increasingly globalised world.

Above all, that document was focussed on joining the NATO and the European Union, but it also addressed the strengthening of internal security, which included a physical and a social component. Subsection 3.4 of the said document described in greater detail the tasks of law enforcement authorities in ensuring physical security. The social component placed an emphasis on the coordinated activities of individual institutions in order to ensure material welfare and social justice for the public.

On 16 June 2004, the *Riigikogu* adopted the National Security Concept of the Republic of Estonia (2004)³. Raul Mälik, the then Undersecretary of the Ministry of Foreign Affairs, described the reasons for the renewal of the security policy as follows: "In the three years since the adoption of the previous document, there have been various developments in the security policy situation both in Estonia and the entire world. 11 September 2001, military operations in Afghanistan and Iraq, problems in the development of NATO and the European Union and many other circumstances force us to take a serious approach to

ensuring Estonia's security."⁴ The 2004 document uses the term "internal security policy", which encompasses the tasks of the internal security structures of the country and the overall organisation of the system and includes participation in international activities to ensure security. Compared to earlier documents, more emphasis is placed on ensuring compliance with the security and safety requirements of Estonian ports, ships, airport and aircraft as well as on the IT security area.

On 12 May 2010, the *Riigikogu* approved the National Security Concept of Estonia⁵, which focuses more than ever before on security policy and the functions vital to society. The concept covers the area of internal security, which is directly related to ensuring national security: protecting constitutional order, responding to emergency situations and mitigating the consequences thereof, guarding the external border, combating terrorism, international organised crime and corruption. Estonia's inclusion in the Schengen judicial area has given us greater responsibility in guarding the external border of the European Union.

In addition, the national security concept also focuses on ensuring the primary functions for the state and the public in every situation and on strengthening the cohesion of the society. This entails the continued functioning of critical services, electronic communication, cyber and energy security, transport infrastructure, the financial system and environmental safety, uniform regional development, integration, psychological defence and the protection of public health.

Compared to the earlier concepts, the currently valid document includes new topics, like energy security and the possibility of introducing nuclear energy as a means to improve security of supply. The use of nuclear energy is currently a highly debated topic in connection with the Fukushima nuclear power plant accident caused by the earthquake in Japan. Cyber security has in the concept been addressed both from the aspects of continued functioning and prevention of crime. Emphasis is also placed on the development of psychological defence mechanisms.

The internal security policy is also directed by the Main Guidelines of Estonia's Security Policy until 2015⁶, approved by the *Riigikogu* in 2008. These guidelines address the activities necessary for improving the safety of the living environment and increasing the sense of security of every person on a wider basis. The document includes an internal security policy vision, according to which Estonia will in 2015 be a secure society, manifested by a safer living environment and increased personal sense of security as well as a decrease in the number of fatalities and casualties. The security policy development directions

¹ Approval of the Main Guidelines of Estonia's Defence Policy. 16.05.1996. – RT I 1996, 33, 684.

² Approval of the National Security Concept of the Republic of Estonia. 12.03.2001. – RT I 2001, 24, 134.

³ The National Security Concept of the Republic of Estonia (2004). 21.06.2004. – RT I 2004, 49, 344.

⁴ Mälik, R. A New Phase in Estonia's Security Policy. – Diplomaatia, 2004, 9.

⁵ The National Security Concept of Estonia. 25.05.2010. – RT I 2010, 22, 110.

⁶ Security Policy 2010. Report on the implementation of the "Main Guidelines of Estonia's Security Policy until 2015". – Ministry of the Interior, 2010.

include: increased sense of security, increased fire safety in the living environment, increased protection of property, smaller number of accidents, improved security of the state, increased speed of emergency assistance and more efficient security policy. The implementation of the uniform principles and the achievement of the objectives determined in the Main Guidelines of the Security Policy are supervised by the Ministry of the Interior, but in order to implement the objectives the ministries engage local governments, companies/private entities, social and other organisations and volunteers from the public to the maximum extent possible.

The Government of the Republic in the person of the Minister of the Interior presents a report on the maintenance of law and order on the bases of the implementation of the main guidelines of Estonia's security policy to the *Riigikogu* by 1 March every year. In addition to the report, the Ministry of the Interior has in the last two years also presented an annual compilation to the *Riigikogu*. In addition to the summary of the implementation of the main guidelines in the past year, the compilation also provides an overview of the main projects, events and future objectives in the area of internal security. The compilations⁷⁸, are available on the website of the Ministry of the Interior both in English and in Russian. Both the report and the articles illustrate the reporting year and should be of interest to people working in the internal security area as well as to students and ordinary interested citizens.

The development of Estonia, including the development of the internal security area, has been constant and provided an increased sense of security for our people, even despite the recent crisis years. According to surveys, the Estonian public has confidence in rescuers, the police and the border guards. We will always have the traditional tasks like rescuing human lives in traffic, but there will also doubtlessly be new challenges arising from the constantly changing security environment.

Marko Pomerants

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⁷ Security Policy 2010. Report on the implementation of the "Main Guidelines of Estonia's Security Policy until 2015". – Ministry of the Interior, 2010.

⁸ Security Policy 2011. Report on the implementation of the "Main Guidelines of Estonia's Security Policy until 2015". – Ministry of the Interior, 2011.

Pori–Riga – cooperation in the future

By Aino-Maija Luukkonen

“A twinning is the meeting between two municipalities to act together within a European perspective, confronting problems and developing increasingly closer and friendlier ties between one another”. In these words, Jean Bareth, one of the founding fathers of the CEMR, defined twinning after the Second World War in 1951.

Bareth's words fit the cooperation of Pori and Riga perfectly, even if according to the European framework of twinning, co-operation did not start until the 2000s due to historical and political reasons. The cooperation between Pori and Riga is an excellent example of a good relationship that has lasted through the revolutions of time, history and politics.

"Small Pori" and "Great Riga" have been carrying out both official and unofficial cooperation with each other for about half a century. Cooperation and friendly relations come in so many different forms that there are great difficulties finding things that have remained outside the cooperation. The word "cooperation" is not enough to describe the depth, versatility and relevance of the alliance between these cities. There is a genuine link with real bottom-up interaction, personal relations, friendship and deep partnership in this alliance. Pori and Riga have more things to unite them than to divide them: the sea, sand dunes, parks, hockey, music, culture and history to mention but a few.

Membership of the European Union has further deepened the close relationship. Pori had the honor for several years to share its experience, knowledge and expertise in EU affairs when Latvia became a member of the EU in early 2004. EU membership will open up new and promising windows of opportunity in the future too. The international and open global world will increasingly emphasize the local strengths and characteristics of both cities: their strong cultural and historical identity, survival in the face of structural changes, location near the sea and their desire to grow. The creative link between local and

global generates huge potential for the development and growth of both Pori and Riga, if and when the cities are able to take advantage of these opportunities offered by the borderless world in which we live.

The key factors for future cooperation are the deepening of good personal connections on all levels, the ability to use networks of both cities and continuous, open and future-oriented interaction.

The significance and importance of large cities will continue to grow in the near future. The cities of Riga and Pori are an unusual couple in terms of size, but therein lie also untapped opportunities. In the future the most successful cities will be those that are able to benefit from each other's expertise, creativity and networks, in their own development. Riga is one of the largest metropolitan areas in Northern Europe. It is literally an exemplary source of inspiration for Pori as well as for any city, a real City of Inspiration. Pori, on the other hand, is one of the oldest and biggest cities in Finland and its significance for example in the development of events, experiences and new forms of energy, will belie its size.

In Europe today there are about 17 000 twinning relationships. The relationship between Pori and Riga is just one among thousands, but the depth, diversity, richness and quality of this cooperation serves as an example to any area, in the Baltic Sea Region and beyond.

Visu labu Pori! Kaikkea hyvää Riga!

Aino-Maija Luukkonen

Mayor

City of Pori

Finland



Finland in need of a strategy for promoting language skills

By Fred Karlsson, Henrik Lax and Henrik Meinander

In Finland a polarized black and white public debate on maintaining or abolishing the compulsory tuition of Swedish at secondary school level has distorted our perspective on language policy and fundamental national interests. In the first place the focus should be on how we desire to define our identity and position in a rapidly changing world. Which should the geographical orientations of our nation be, and how should they be put into practice?

Becoming a member state of the EU has a wide impact on how we perceive ourselves. Also Russia and Estonia have turned much closer and important to Finland. An additional relevant aspect is that Finnish business is integrating into the Swedish and other Scandinavian economies. The policies on language tuition constitute the core of a small nation's identity and cultural choices. The priorities reflecting our cultural and economic affiliation materialize into a concrete shape through the choices of languages we make and the legislation we pass on the use of them. These are cornerstones with bearing for many decades to come.

The linguistic landscape of Finland has changed a lot after the turn of the century having consequences for the use and development of all of our languages, Finnish included. In a changing environment new skills of behaviour are required. Several trends are involved in this changing picture.

English is getting a more dominant position as a mean of communication in international trade, arts and sciences, culture and other relations. Many big enterprises have already adopted English as their working language. At the same time the skills in the students' use of their mother tongue have deteriorated at the primary and secondary educational levels. The variety of languages spoken by immigrants rooted as new citizens in our country is growing. The debate on the position of the Swedish language as the second official domestic language is therefore bound to be a hot topic for decades to come.

The scope of the choices of languages by the students have turned more narrow, and the levels of their communication skills have declined.

The more animated and hot the debate turns, the more people tend to forget one thing, and this they do irrespective of their affiliation with the Finnish or the Swedish speaking population of the country. It is indeed the Finnish speaking majority and its political representatives who decide on which languages shall be subject to compulsory tuition in our schools. The decision, however, is in the first place not about the rights of the Swedish speaking Finns to use their language in dealing with the public authorities, which one could believe when following the debate. The decision is rather about preserving the dynamism of a well-performing integrated Finnish society as a whole.

Our present law on the use of the Finnish and Swedish languages does not address all the necessary requirements. The law is not as such an endorsement of the use of Swedish - in fact not of Finnish either - as a working language of the public administration, if the districts of the governmental authorities and the municipal structures are redrawn or revised without creating compensating organizational structures to support the use of the language. Lately the Swedish language has been the victim of several such reforms of the public administration eroding the use of the language.

These reforms have created difficulties for the Swedish-speaking population to use its language in delicate circumstances, e.g. when dealing with the police, judiciary or public health services. Consequently people are concerned and feel insecure.

In fact Finland is lacking a consistent national language policy, and this is causing confusion and embarrassment, and also divides the decision makers within both language groups. Wavering and inconsistent decision making on mergers of bilingual municipalities and the creating of new districts for cooperation in the social and health care sector bear evidence of the lack of a common vision.

In 2009 the Research Institute for the Languages of Finland presented an extensive analysis on the challenges of the Finnish language and launched a program for promoting the use and overall development of it. We very much regret that the political decision makers so far have not paid any attention to this report and initiative. We note with interest that upon a presentation of similar arguments in Sweden, a bill was passed with the explicit aim to care for high standards and the comprehensive use of Swedish - the main and dominant language of the country!

A good command of our native languages is the prerequisite for successful learning and command of other languages. We believe it is urgent to define a common vision on how the use and quality of our national languages shall be preserved in the future. This is a must if we want to provide sustainable conditions for the Finnish people to be successful in extending their language learning.

It is of equal importance to address the requirements posed by the constitutional federative provisions governing the relations between the Åland Islands (a Swedish speaking self-governing territory) and Mainland Finland.

Considering the contradictory trends depicted above, it is urgent to bring the present disorder to an end. The government of Finland to be formed upon the parliamentary elections on April 17th, 2011, should take a firm stand on this issue and appoint a broad political committee duly assisted by experts to define the foundations of a sustainable language policy and action plan for the country.

Much analysis and preparatory work has been carried out already. In March a working group headed by the former President of Finland, Mr. Martti Ahtisaari, and made up by members from most factions of the parliament, presented a report and a program for the preservation and promotion of the official national languages. The report published in 2009 by the Research Institute for the Languages of Finland, as well as a recent report on the national languages by the Finnish Board of National Education, provide relevant substance and guidelines for a proactive and progressive national language policy.

Visions, solidarity and farsighted statesmanship as well as a constructive public debate are now required to pave the way for an improvement of the national language assets. By the time of the publication of this article, the program of the new government of Finland is likely to have been approved. We believe it will address this challenge of improving the linguistic skills of our people.

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Big business in the BRICs

By Andrea Goldstein

Gaining greater knowledge of the characteristics of large firms that dominate the global economy is inherently an important endeavour. As the late Alfred Chandler, for four decades the influential professor of business history at Harvard Business School, made it clear, we still live in a world of large firms. From Google, Microsoft and Apple to Wal-Mart and Ikea, from Boeing and Airbus to the majors that dominate the global oil industries, and almost any manufacturing or service sector, large corporations make a myriad of business, economic, social and political decisions that influence the world we live in.

Unfortunately, modern economics does not treat these powerful firms as concrete actors: they are abstracted into general economic models or absorbed as single anonymous data-points into large statistical samples. Understanding the strategy, structure, ownership and performance of large business amounts to an ambitious programme of research. Analyzing responses to global change, particularly economic integration and the recent financial and economic crisis, requires identifying large firms clearly, so that both their aggregate and their individual behaviours can be easily traced. This kind of 'phenomenon-based' research, addressing significant empirical developments for the sake of their real-world importance, not just their disciplinary interest, can establish both general trends and individual anomalies. The promise of such research is more informed policy-making at government level and more accountability at the top of these large firms themselves.

At any latitude, this is a very ambitious project in the face of uneven access to data and information. When it comes to the analysis of large emerging economies, and the BRICs in particular, limitations are even greater. The starting point is that to the growing importance of Brazil, Russia, India and China in the global economy is reflected in the increasing weight of their companies in *Fortune Global 500* rankings. The overall trend was clear even before the crisis and by 2010 China alone had more entries than any other country except the United States and Japan. As far as headquarters are concerned, only Tokyo and Paris hosted more *Global 500* companies than Beijing.

The BRIC economies, however, are different from each other and this is also true when examining the heights of their respective business worlds. In Russia in 2007 (the last year for which data covering all Russian companies, regardless of ownership, is available) there were six oil companies (including state-owned Gazprom, Rosneft and Surgutneftegaz) and an equivalent number of mining and minerals ones born from the ashes of Soviet *kombinat* (controlled by famous oligarchs such as Mikhail Prokhorov, Alexei Mordachov and Roman Abramovitch) among the top 19 companies by turnover, together with seven services companies. It is only in the 20th position that one could find a manufacturing firm, TAIF, and in 32nd for a foreign-owned entity, Ford.

India is *prima facie* similar – among the top 10 for 2009 there were nine state-owned enterprises (seven in petroleum, one in electricity and a *trading company* for minerals) and, ranked 2nd, the Reliance energy and petrochemical private group. The largest manufacturing company was Tata Motors (15th) and the largest ICT giants

were TCS (18th) and Wipro (19th). Maruti Suzuki was the largest foreign-owned company and ranked 20th only. Nonetheless, it would be imprecise to consider many Indian firms as standing-alone corporate entities. In most cases, they belong to diversified family-controlled business groups and operate according to a different logic than traditional Western companies. The most famous case is Tata, which groups dozens of firms in almost every sector, each of them applying a series of group-wide principles established in more than a century of existence. Managers often rotates across different firms and other functions are performed centrally.

Brazil is yet another reality, more diversified. In 2009 the two largest firms were in the petroleum industry, Petrobras and BR Distribuidora, both controlled by the state albeit listed on the stock exchange and with sizeable stakes in the hands of private investors. Volkswagen in the 3rd place was the largest multinational and six more, all European (Ambev, Fiat, Carrefour, Shell, Telesp and Vivo), were in the top 10, together with a private, Brazilian mining giant, Vale. These seven multinationals, plus the four next largest (General Motors, Walmart, Arcelor Mittal and Ford), make more than 9% of their global sales in Brazil. There are four other local corporation ranked between 11th and 20th. While business groups exist, they are far less important and widespread than in India.

For China, unfortunately, there is no single ranking that includes both domestic companies and subsidiaries of foreign multinationals. In *Fortune 500*, at any rate, all Chinese entries correspond to state-owned enterprises. Petrochina and China Mobile alone have recorded aggregate 2009 profits that were higher than for the 500 largest private companies in China! In fact not a surprising result when considering that China Mobile and two other state-owned companies, China Unicom and China Telecom, carve out the huge and very lucrative telecom market (in India, which is comparable in size, there are more than a dozen national operators), or that Petrochina pays land €20 cents per square meter, almost a joking figure compared to the market value.

An earlier generation of researchers studied strategy and structure in Japan and produced a rich body of literature that has influenced thinking and practice in the West. Today it is time to extend the research into emerging economies, to go beyond the clichés and devise appropriate policies to compete in international markets and avoid the protectionism and even xenophobia that are often stirred by ignorance about the outer world.

Andrea Goldstein

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Russia's WTO accession might be a game-changer

By Kai Mykkänen

Back on track

Russia has been in WTO negotiations for 18 years now. The process was close to completion in 2006, when Russia suddenly lost interest as oil prices soared. Chastened by the 2008-2009 economic crisis and refocused by President Dmitry Medvedev's commitment to modernization and a policy reset with the US, the WTO process quickly returned, however, to the top of Russia's agenda. By 2010, pursuit of WTO membership had regained steam with the signing of major bilateral agreements about the accession with the US and the EU. At the moment, the WTO multilateral working group is finalizing its work. From the technical and substantive perspectives, at least, Russia might be officially ready to join the Club by the end of this year.

Risks: US-Russia relations and Georgian stubbornness

During the recent crisis, Prime Minister Vladimir Putin showed his fondness for domestically popular protectionist gimmicks. At the time, he was quite explicit about his reluctance to surrender his powers to impose unilateral ad hoc adjustments to rules of trade. Nevertheless, it would appear that Putin has now decided that, on balance, WTO membership is worth supporting. He campaigned in favour of it in Germany last November and confirmed his personal commitment in Brussels recently. Evidence of this political about-face could be seen last December when Russia agreed with the EU on large reductions on export duties for round wood. Just four years earlier, imposition of wood duties were seen as so strategically necessary to Russia's economic destiny that it was ready to break its 2004 deal with the EU on WTO membership.

There is clearly momentum in Russia for WTO accession these days, but that could change in the coming months. An unexpected event similar to the Russo-Georgian war in 2008 could easily change the attitudes of both Russians and the West, halting the process for years.

Indeed, WTO-member Georgia is at present the single biggest hurdle to the accession – even in the absence of resumed hostilities. Since the flaring of the South Ossetia conflict in 2008, Georgia has blocked all formal multilateral processes in Russia's WTO negotiations. In principle, it is possible to accept a new member with a qualified majority of the general meeting of ministers. However, the proposal for the general meeting has to be made by a working group which can only have a quorum with all member states in attendance. Thus, as long as Georgia boycotts working group meetings, it can effectively prevent a vote on Russia's WTO entrance. After two years of refusing all proposals to even meet Russians to discuss this topic, Georgia announced in March that it was finally ready to start direct negotiations on Russian accession. One can hope that it indicates Tbilisi's readiness to agree with Russia on realistic terms, but we are by no means there yet.

Direct effects: Nothing revolutionary

Despite the challenges, the current sentiment is that Russia will manage to join WTO in the near future. Hence, the real question Western industrialists should be asking is "What will change?"

Far from an end to all problems, we should expect a bumpy ride – at least in the short run. After all, the WTO is not per se about elimination of customs tariffs or free trade. Russia's WTO commitment would only be to cut import tariffs by about a third in average. Implementation of reforms against trade-related red tape would take many years to phase in. India, for example, was a founding member in 1947 of GATT, the precursor to the WTO, and yet today is still one of the most protectionist trade partners anywhere. Russia is unlikely to be much less capricious. On the contrary, the traditional WTO sanctions for members that violate WTO rules would be hard to use on Russia. Do we really expect, for example, that Europe would petition the WTO for permission to impose import tariffs against Russian oil and gas, effectively punishing consumers in Germany, Poland and other countries dependent on Russian hydrocarbons?

In general, the main problems of doing business in Russia are not issues directly targeted by WTO rules, but rather more mundane issues such as corruption, bureaucracy, outdated technical standards, fraud and theft. Moreover, WTO rules say nothing about non-discriminatory red tape, which will likely remain a serious challenge for Russian and foreign players alike.

Indirect effects: Optimists see emergence of economic renaissance

Expect a boom in foreign investment to Russia following WTO accession. This boom, driven by investor exuberance, will be made possible by diminished risk premia given by financial institutions for Russia that both lower financing costs and cut the rate-of-return demands on capital investment in Russia. Several large European industrialists have already said that they are merely waiting for membership to green-light big projects.

While foreign investors are doubtless engines for change in Russia in the long run, we might also want to consider how WTO membership could be a game-changer for Russian economic policy. Joining the Club would be an achievement for the liberal faction of the ruling elite, strengthening their position in setting priorities for domestic economic policy. Russia could use increased exposure to competition with imports and foreign investors to boost efficiency and the overall competitiveness of its economy (Russian labour productivity is currently only about half the eurozone average). Ultimately, we could see the establishment of a virtuous circle that leads to decreasing inflation through competition; a ceiling on real appreciation of the ruble; cheaper financing costs for domestic investors; a larger share economic activity generated by SMEs and companies in non-oil sectors; creation of a larger, more independent middle class; and stronger demands by Russians for democracy and the rule of law.

One way to facilitate further reforms could be forming a free-trade area with the EU. The stalled WTO process has largely kept this discussion on ice for the past five years.

In any case, the direct effects of WTO membership will remain limited if Russia is unable to implement tough reforms on itself (e.g. technical standards, privatization, competition policy and its public procurement processes). It is up to Russians in the end.

What happens if WTO talks collapse?

The less-discussed possibility of failure of the WTO process is worth noting as it, too, could serve as a political game-changer – just not in a good way. Failure of the accession process at this late stage would surely be interpreted by Russians as a sign of hostile Western policies to isolate Russia. Russian leadership would likely be absolved of responsibility for the failure, but would devastatingly undercut the position of the liberal camp, which has used the WTO argument extensively to push through reforms during the 2000s. Failure would strengthen the hand of the nationalist-conservative faction, who could point to failure as proof that Russia needs to stop taking orders from the West and imitating Western ways. Worst of all, the failure could occur just ahead of the parliamentary and presidential elections next December and March and stoke nativist sentiments. While a less likely scenario, it appears that failure of the WTO accession process in the coming months could change Russia more than the accession itself.

Kai Mykkänen

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What is bringing the United States, Europe and Russia together

By Vladimir Baranovsky

Joint efforts of the United States, Europe, and Russia are a key element in protecting the Euro-Atlantic space from destabilizing threats. Furthermore, the impact of this endeavor, if it turns out successful, will most probably be significant well beyond the Euro-Atlantic borders. The idea of cooperative interaction on security issues could become the most important organizing principle of the modern international system.

Are the USA, Europe and Russia in a position to operate together? When considering this triangular configuration, it seems obvious that all its components have other priorities, and when there is a conflict with Euro-Atlantic values, it is far from always resolved in favor of the latter. Furthermore, there is a traditional dichotomy between two approaches to security issues. One treats them as a *common problem* affecting the basic interests of all, and, hence, requiring joint action. The other seeks to achieve a *balance of interests*, assuming the need for compromises, diplomatic "exchanges", quid pro quo, etc. By and large, the Euro-Atlantic security cannot be built without compromises between parties, but it cannot be built *solely* on compromises in the absence of a sense of common challenges, common threats, and common problems.

What are these system-building parameters of the Euro-Atlantic area? All three parts of it feel the effects of the new global context. Its impact on their approach to security is rather contradictory and often leads in different directions. It is important that this new context does generate incentives encouraging the United States, Europe, and Russia towards cooperative interaction. Allowing for differences in interpretation, specific trends in global international political development carry significant security implications for all the three main actors.

Imbalances in the system of international relations resulting from the end of bipolarity have increased uncertainty on the world stage, concerns because of possible local and regional turmoil, unclear medium- and long term development prospects. ***The U.S., Europe, and Russia have an objective interest in stabilizing the international political system.*** Its increasing entropy creates for them more dangerous threats than attractive opportunities. Minimizing possible destabilizing consequences of international political development is essential for strengthening Euro-Atlantic security. This is the broadest framework for joint action by the United States, Europe, and Russia (for instance, in the area of conflict management and peace building).

The recent economic crisis introduced interesting new parameters into the question of Euro-Atlantic security. Its magnitude was recognized as comparable with the largest economic upheaval of the last century, which affected all the major countries of the world – the 1929-1933 crisis and Great Depression. That crisis shifted the trend of international political development towards a new world war. By contrast, the impact of the current crisis on world politics has had a stabilizing effect. ***In the conditions of the global crisis, the U.S., Europe, and Russia have proclaimed their interest in working together to overcome it, as well as in building a more sustainable and equitable global economic system.*** This approach not only meshes naturally with the logic of a "Euro-Atlantic

project," but also objectively brings its members closer together.

Arms control has been one of the victims of the chaotic and contradictory processes that have occurred since the Cold War ended. Over the last decade efforts in this sphere have come to a virtual standstill in the Euro-Atlantic region. ***The United States, Europe, and Russia have an objective interest in overcoming degradation in the field of arms control and giving negotiated agreements a renewed impetus.*** The reasons are partly intrinsic, that is, to rationalize defense efforts in terms of cost-effectiveness and other parameters, while ensuring a stabilizing effect for both the participants and the broader international political system. Partly they are increasingly extrinsic, that is, to serve as a tool to influence the surrounding world by producing a demonstration effect, establishing standards and regulations, legitimizing sanctions in response to their non-observance, and so on.

In some specific areas of arms control, contemporary international political developments objectively stimulate the formation of a unified Euro-Atlantic approach, as in the case of nuclear non-proliferation. It should be noted, however, that in the field of arms control there is also a possibility of quite significant deviations from the logic of Euro-Atlantic cooperation in the direction of purely/predominantly national security interests and concerns.

The international arena witnesses a redistribution of relative weight characterizing various existing and emerging centers of influence. In the global balance of economic and political forces the strengthening positions of China and India are increasingly becoming an important factor, a trend likely to continue into the future. A number of other countries in Asia and Latin America are also developing intensively. The presence of the Islamic world is ever more visible on the international stage (albeit not as some integral whole, "pole" or "power center"). ***The U.S., Europe, and Russia have an objective interest in ensuring that the rise of new centers does not marginalize them, "old" actors, but occurs with their guidance.*** An important aspect of Euro-Atlantic security is minimizing the challenges from competing centers through cooperative interaction with them. The higher the level of consolidation of the "old" centers in such interaction, the less likely will be a prospect of confronting them against each other and playing on the contradictions between them.

There is a gradual shift in the center of gravity of the international system from Europe towards Asia. The main problematic themes of international political development are occurring in a broad band stretching from the wider Middle East and Caucasus through Central and South Asia and to the extended Far East. ***The United States, Europe, and Russia have an objective interest in the southern vicinities of Asia not becoming a zone of permanent armed violence and lawlessness, a source of chaos and terrorism, or an area for hegemonic pretensions and rampant geopolitical rivalry.*** As far as possible they should act as external stabilizers in this region. Without vigorous efforts to foster larger Asia's political stability, Euro-Atlantic security itself will remain precarious and fragile.

In the long term, the main intrigue within the emerging international political system will be managing the relationship between the developed and developing world. ***The U.S., Europe, and Russia have an objective interest in minimizing the explosive potential generated by the North-South dichotomy.*** Here precisely is where the main external threat to Euro-Atlantic security resides in the form of growing protest potential in that part of the global society that regards itself as not only disadvantaged but largely without future prospects.

The Euro-Atlantic region countries will be the main targets of dysfunctional behavior springing from this soil (violence, terrorism, uncontrolled migration, etc.). They will have to constantly look for opportunities to minimize the devastating pressures – by engaging in direct counter-action against them, seeking to cut off their sources, and attempting to influence the power elites of the countries where they originate. It is unlikely that a global “social contract” can be reached or a comprehensive set of formal rules created in this area, but concrete agreements on various issues of concern may be quite viable and useful. Essential would be to form a sense of community and responsibility in the face of this global challenge, which must be implanted in the public consciousness and on the political agendas of countries in the Euro-Atlantic space.

The modern international political landscape is further complicated by internal conflicts arising out of ethnic and religious differences, inter-clan fighting, separatist aspirations, the ineptitude of state entities and their collapse, and the emergence of new states when complicated by a tortured process of self-identification. ***The U.S., Europe, and Russia have an objective interest in domestic conflicts not becoming a source of international political complications.*** Their concerted or joint approaches to such situations, allowing them to minimize the possibility of rivalry and confrontation in this area and at the same time helping to resolve conflicts, could become an important part of maintaining Euro-Atlantic security.

Although the “Westphalian” tradition focuses on the absolute, or at least the most restrictive interpretation of the grounds for and the scale of external interference in the internal affairs of states, modern international trends conflict with this logic. ***The U.S., Europe, and Russia have an objective interest in the possibility of exerting external influence on those domestic political situations that could have a destabilizing effect internationally.*** It is in their interest to reach agreement regarding the terms of such an influence, its objectives, tools to be used, and limitations on their use.

This is also important because we deal here with an extremely sensitive topic that affects national sovereignty

and needs to be approached with caution. Otherwise it will gravely threaten the existing world order by moving away from the rule of law and towards the unrestricted law of force. The challenge, the answer to which is vital in terms of Euro-Atlantic security, is to develop suitable methods and procedures governing external intervention, including the possible use of force, not through the arbitrary rejection of international law, but through its consolidation and development.

Bringing to a common denominator the imperatives of internal development and those of international behavior, insofar as they confront each other, represents one of the most difficult challenges. ***The United States, Europe, and Russia have an objective interest in developing collaborative approaches to the conflict-prone themes of existential character, both actual and potential—that is, where the sources of tension are less situational and more caused by problems of principle.*** They include, for instance, (i) the mutual responsibility of states in the use and transborder transfer of natural resources; (ii) efforts to ensure their own security and how other states perceive such efforts; (iii) the conflict between the right of peoples to self-determination, and the territorial integrity of states; and so on. At this stage, in most cases it makes no sense to talk about formal agreements, but simply keeping these subjects on the agenda can be an important element of Euro-Atlantic identity.

By and large, the United States, Europe, and Russia all have their own policy with regard to the outside world and security problems. However, common concerns, challenges, and opportunities seem becoming a new qualitative element of their interaction – which may bring about the most significant changes in international developments.

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China is ruling rare earth elements and oxide production

By Mikko Ruohonen and Lea Ahoniemi

1. The role of energy investments in China

One of the economic facts in global settings has been that Chinese economy is still growing 8-10% per year in the future despite the economic crisis of the world (BOFIT 2010). Now China's GDP has passed Japan and moved to be 2nd biggest economy after USA in the world. One of the key growth elements has been investments, China has invested over 40% of GDP for 6-7 years since 2004 (BOFIT 2010). This has happened especially in infrastructure field such as energy production, housing and road building sector. Energy consumption grows rapidly in China, therefore industries and Chinese megacities need more energy capacity. Lately hydro, wind, solar and other green energy solutions have been favoured in China due to growing environmental problems. State-owned companies are key players which coordinate energy business investments. That creates a major competitive arena for energy business in China. However, it also affects raw materials production and management.

In this article we examine the role of rare earth metals production in the energy business environment, especially in wind energy sector, which is a rapidly growing area in China. First we describe rare earth elements and their markets, then examine the role of China in protecting and restricting rare earth metals production and finally discuss the forthcoming situation in the world. We end with alternatives on possible solutions for future operations in securing rare earth metals availability in a global setting.

2. Rare earth elements and their oxides; background

The rare earth elements are a group of 17 elements with rare qualities and which can be processed into rare earth oxides (REOs) used in the manufacture of a variety of commercial products. These include e.g. mobile phones, GPS devices, missile systems, water treatment equipment, fibre optics, laser technology, batteries for hybrid cars, high power magnets, wind turbines and fluid catalytic crackers (FCC).

In many cases, these alloys are essential for the product to function and cannot be replaced with other materials. It is estimated that they constitute a market of around USD 1–5 billion depending on the market conditions and average prices. According to a rough estimate, in 2008 the average REO price (Baotou Steel) was around USD 60 per kilogram (USD 28/lb), up from the 2001–2007 level of USD 22/kilogram (USD 10.25/lb).

Table 1. Rare Earth Elements (REE)

Symbol	Name	Applications
Ce	cerium	NiMH batteries for hybrid and electric cars, water treatment
Dy	dysprosium	High power NdFeB magnets for hybrid cars
Er	erbium	Laser and fibre optics
Eu	europium	Compact fluorescent lamps
Gd	gadolinium	Contrast agents used in MRI
Ho	holmium	Laser and fibre optics, magnets
La	lanthanum	Fluid catalytic crackers (FCC), NiMH batteries
Lu	lutetium	Immersion lithography systems (circuit packaging)
Nd	neodymium	High power magnets for wind turbines and hybrid cars
Pr	praseodymium	High power magnets for hybrid cars

Pm	promethium	Nuclear batteries (e.g. space industry, science stations)
Sm	samarium	High power NdFeB magnets for hybrid cars
Sc	scandium	Aluminium-scandium alloys for space industry components
Tb	terbium	Compact fluorescent lamps
Tm	thulium	Laser technology for surgical procedures, portable X-ray equipment
Yb	ytterbium	Laser technology for the materials industry
Y	yttrium	Compact fluorescent lamps

3. Production and markets

Despite rare earth elements are found all over the world, oxide production has been concentrated in China. Export tariffs and other restrictive measures instigated by China have shaken the market. As a result, e.g. Japan has made an official complaint to China about the tariffs. According to Jefferies (2010) the largest producers include Baotou Steel (50,000 tonnes/year), Baotou Huamei, Jiangxi Copper (20,000 tonnes/year) and Sinosteel. China's share of global rare earth elements is only around 36%, estimated to run out in around 300 years at the current rate of production (120,000 tonnes/year).

Table 2. Global demand in 2008 by market and volume.

Catalysts	20%
Glass	10%
Polishing	12%
Metal alloys	18%
Magnets	21%
Phosphors	7%
Ceramics	6%
Other	6%

Demand is expected to increase by around 10+ per cent per year. The report predicts annual demand running at 124,000 tonnes, of which the Chinese market will account for 60%. Demand is expected to grow at an annual rate of 12%, which will slow due to high prices. It is anticipated that the following sectors will boost demand:

– **Wind turbines:** Wind turbines may require up to 220–450 kilograms (500–1,000 lbs) of rare earth oxides, mostly neodymium. The demand for rare earth oxides will increase once the wind power industry switches from electromagnetic induction to Direct Drive Permanent Magnet Generator (PMG) turbines; it is anticipated that the wind power industry will account for 5,000–10,000 tonnes of the annual demand for rare earth oxides by the middle of the decade. (Jefferies 2010)

– **Hybrid cars:** The batteries and technology used in a hybrid car contain around 12–24 kilograms of rare earth elements, mostly lanthanum, and around 1.5 kilograms of neodymium for magnets. The manufacture of one million hybrid cars requires 12,000–20,000 tonnes of rare earth elements, representing around 10–15% of demand. Some industry researchers have estimated that the demand for rare earth oxides used in magnets may rise to 40,000 tonnes a year by 2014. This figure does not include the wind power industry. (Jefferies 2010)

– **Manufacture of compact fluorescent lamps (CFLs):** The phosphors used in CFLs require yttrium, europium and terbium. The market is expected to grow by an average of 10–15% per year as various countries amend their legislation on track for greater energy efficiency. (Jefferies 2010)

Global production of rare earth oxides increased, roughly speaking, by an average of 6.9% per year from 1965–2000, decreased by 4% per year from 2000–2010, and production is

currently down by approximately 9% from its peak (137,000 tonnes/year in 2006). In 2009, production was estimated at 124,000 tonnes, of which **China accounted for 97%**. The report predicted a production volume of 125,000 tonnes for 2010. For many years, the demand for rare earth elements has been restricted by production volume controls and export measures. China has decreased export quotas by 35 percent for the first half of 2011 which might mean that the export restrictions may force foreign business operations on rare earth elements to move to China. Other alternatives include India, which produces only 2,700 tonnes per year, and increasing production there would not exhaust reserves (3 Mtn) for centuries. Other reserves exist in e.g. the former Soviet republics in Eastern Europe (19 Mtn), the USA (13 Mtn) and Australia (5.4 Mtn). New rare earth element developments are being planned e.g. in Australia, and California, USA. **Changes in market prices** have been drastic, especially in 2009. The prices of samarium, cerium and lanthanum oxides in particular have soared. The table below shows some examples taken from the original report.

Table 3. Spot prices for selected rare earth oxides up to August 2010 (USD/KG) (Jefferies 2010)

Rare earth oxide	2007	2008	2009	Q1/2010	Q2/2010	August 2010
Lanthanum O	3.4	8.7	4.9	6.1	7.5	35.0
Cerium O	3.0	4.6	3.9	4.5	6.4	35.0
Neodymium O	30.2	31.9	19.1	27.6	33.2	63.0
Samarium O	3.6	5.2	3.4	3.4	3.4	30.4

Since summer 2010, the spot price of some oxides has increased by far more than 100 per cent, in some cases even eight-fold (see samarium oxide).

3. Prospects for increasing production and other means

Building a supply chain for rare earth elements will take years. After the initial investments, the various phases of acquiring processing expertise will take a long time. Environmental aspects need to be considered as well. Even the implementation of a pilot project may take 2–5 years, provided that rare earth oxides are obtained securely from elsewhere than China. Some industry experts have estimated that e.g. building a US supply chain would take until 2020–2025 to complete.

It is estimated that Australian production will commence during the third quarter of 2011. According to an estimate by Lynas Corporation Ltd, the company in question (Mt Weld) is capable of producing 10,500 tonnes per year as of the first year. The report states that the company can provide around 17% of global supply, and furthermore that, in particular, the demand for metal alloys and magnets will multiply in the years ahead. China is expected to increase its production by 5–10% per year, which would indicate a share of 80% of global production by 2017.

Production in the USA is expected to commence in 2012, courtesy of Molycorp Minerals LLC which owns, in California, the world's largest rare earth element deposit outside China. The company managed to raise investment capital of USD 394 million on the US stock markets this summer. Molycorp's mine had to be closed in 2002 due to Chinese competition.

One opportunity is recycling and more effective use of resources. For example, in European Union a strategy discussion has started on recycling and use of resources. Protecting supplies of scarce raw materials would a temporary solution to the problem. Therefore, recycling and increasing resource efficiency is needed. Also collaboration with China is regarded. (European Parliament 2011)

The latest crisis in Japan might accelerate the focus of energy production from nuclear power to green energy in which China has major plans for the future. For example, they are targeting 10 times more wind energy capacity up to 150 GW in 2020 (Exolus 2011). Rare earth metals are most important in wind turbines.

Finland's mining industry has also a role in rare earth metals. The potential to find new high-tech metal deposits in Finland is high, especially for platinum group metals, lithium, rare earth elements, titanium and cobalt. New mining operations related to high-tech metals are planned for lithium in the Kokkola region, and for phosphate, rare earth elements, niobium and tantalum in Savukoski (Tuusjärvi et al. 2010). Last year published Finnish mineral strategy (2010) describes a scenario where a new kind of globalisation will arise in the world, with the developing countries, led by China, taking control. Free trade will continue, but ownership of large mining companies and the technology industry operating in the field will gradually shift to the developing countries. Mining operations will be enhanced, but the environmental aspect will not gain public support and standards will not be set for it, especially in the developing countries. The experts who participated in drawing up the Finnish mineral strategy estimate that this is the most likely scenario for the next few decades. The same mineral strategy considers the rare earth element discoveries made in Finland promising. Then again, their processing requires funding and, above all, expertise.

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The Europe Foundation focuses its future action on the Baltic Sea Region – Baltic Sea strategy and protection is a priority area in Europe

By Anders Blom and Ossi Tuusvuori

Since the adoption of the Baltic Sea Strategy of the European Union in 2010 there has been an effort to get a more focused approach in implementing the ambitious goals of the strategy: clean and healthy Baltic Sea and strong and successful Baltic Sea region. The implementation of the Action Plan with its 15 priority areas and the important work done by several regional, national, local and private actors in all the Baltic Sea region states also means that there is a complex network of actors with many interests – hopefully aiming at the common goal benefiting the Baltic Sea and the people living in the region.

The EU Baltic Sea Strategy is a step into the direction of making Baltic Sea as a political region with its own identity, governance and institutions, agenda and common representation of the interests, as Esko Antola has described the challenges of the development of the Baltic Sea region cooperation in his report to the Konrad Adenauer Stiftung in 2009

(http://www.centrumbalticum.org/files/255/Baltic_Sea_Strategy_web_version.pdf). Antola has been the Director of the Centrum Balticum (<http://www.centrumbalticum.org/>) in Turku since its establishment 2006 as an independent think-tank on the Baltic Sea matters.

With an increasing level of financing and political attention to the Baltic Sea protection “issue” it is evident that there will be also an increasing number of actors involved. Transparency and coordinated action between various programs and actors at all levels is vital in order to ensure efficient use of resources and using best practices.

The Europe Foundation was created in 2000 on the basis of the Trust Fund of the former Institute of European Studies in Turku (1989 – 1998) was merged with the 60th anniversary donor fund of the editor-in-chief of the leading regional newspaper Turun Sanomat, professor Jarmo Virmavirta. The Institute and its Director, Dr. Esko Antola were pioneers in the Finnish European integration policy research and discussion, and Turun Sanomat offered an excellent forum for the debate and for presenting the results of the research.

The institute was established by private citizens and organizations where Turku JCC (Junior Chamber of Commerce) was the key mediator between different parties in Turku and initiation of major activities in the process 1988 - 89. The JCC European Academy education project 1989 – 90 gathered over 300 business leaders and resulted the major funding for the Institute. Since 1998 the activities of the institute were transferred under a new Pan-European Institute at the Turku School of Economics.

Respecting the long traditions of the research on European and Baltic Sea issues in Turku and enhancing its role in the challenging process of the protection of the Baltic Sea, the Supervising Board of the Europe Foundation agreed in May 2010 on the guidelines of its new Baltic Sea program for the years 2011 - 2017. The focus of the Foundation's activity will be in supporting various projects and actions related to the research of the Baltic Sea region and the protection of the Baltic Sea, particularly those in the South-Western part of Finland and Turku.

Since mid-1990s the Foundation has annually granted the Europe Award to a person who has been actively involved in the Europe research. The award is traditionally presented in

the margins of the Europe Day celebrations organized by the Regional Council of Southwest Finland. The award was granted for the first time as a Baltic Sea Award in 2010, when Director Ilppo Vuorinen of the Turku University Archipelago Research Institute (<http://www.seili.utu.fi/en/>) received the award. Archipelago Research Institute, which is located in the island of Seili, was established in 1964 as an all-year field research station for the University of Turku. Since then, the research station is focused the multidisciplinary environmental research of the Archipelago Sea, and the Baltic, as well. The main task of the research station is on the long term monitoring of the sea environment.

In May 2011 the award was granted to Project Manager Pekka Paasio of the Forum Marinum Museum Centre (www.forum-marinum.fi) in Turku for the work done by Paasio over years in saving and developing the maritime culture and promoting the inter-linkages of the Baltic Sea region. The Baltic Sea Award is a concrete way to support local actors and projects in their work relating to the Baltic Sea and the unique archipelago sea region of South-Western part of Finland.

The Foundation also has agreed to issue annual index reports on the status of the protection of the Baltic Sea in the South-Western part of Finland. The first index report will be issued in 2011 in collaboration with the Baltic Sea Action Group (www.bsag.fi). This report will describe the main actions taken for the protection of the Baltic Sea in the S-W part of Finland and will follow their development by using the criteria set by the environment authorities (e.g. on water quality, drainage, fish stock, public funding for the protection measures, general conditions for action).

In addition to these two regular annual activities the Europe Foundation will establish partnerships with local actors like the Regional Council of Southwest Finland (<http://www.varsinais-suomi.fi/>) and the local universities and high schools. The Foundation also endeavours to build up a co-operation network with business world and thus enhance social responsibility for the protection of the Baltic Sea.

With these measures the Europe Foundation hopes to be able to improve and develop collaboration and coordinated action of all various actors involved in the protection of the Baltic Sea, especially in the South-Western part of Finland.

For more information on Europe Foundation see www.eurooppasaatio.fi

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Forum for social dialogue in the Baltic Sea Region – a model for Europe

By Silke Lorenz and Katariina Röbbelen-Voigt

“Social partners are the foremost experts on issues concerning the labour market and working conditions; therefore, social dialogue plays a key role in achieving decent and productive working conditions.” (BSLN Steering Committee Statement November 2010)

The Baltic Sea Region is economically seen as an important region in the EU with high mobility of labour. The EU BSR States generate about 29 % of the EU GDP and in 2009 approximately 68 million people were employed there. The Baltic Sea Labour Network (BSLN) was introduced in the latter part of 2008 as a partially EU-financed project in order to tackle labour market policy issues. Mainly because of its tripartite structures, the network has had a successful launch. Trade unions and employer organisations as well as the Baltic Sea Parliamentary Conference (BSPC) and the Council of the Baltic Sea States (CBSS) have worked together through labour market issues and have formulated tripartite statements. The importance of this kind cooperation within the region has indeed become apparent during these last two and a half years.

During the project lifetime some main steps have been taken in regards to institutionalising social dialogue in the BSR. In order to strengthen the role of the social partners, a Forum for Social Dialogue in the Baltic Sea Region will be established in conjunction with the BSLN final conference in November 2011.

The labour markets and challenges in the BSR

Working together through labour market issues is extremely important since this dynamic region could be developed into one of the most competitive regions in Europe. The long-term existing trade relations have been considerably reinforced over the last few years which is also underlined by the increasing demand for skilled labour. At the same time the Baltic Sea States are facing some major challenges such as the current demographic development which is affecting the decrease in labour force. These changes also affect companies' working conditions and training concepts since the changing employee age structure requires new approaches. Besides this, the increasing labour mobility - especially commuters in the border regions - calls for new strategies and even more importantly, for detailed information about the respective labour and vocational training markets. Currently a cross border labour and vocational training market monitor is being tested in the German – Polish border region Mecklenburg Western Pomerania and the West Pomeranian Voivodeship. This monitor, which is a part of the German – Polish BSLN pilot project, will help to establish transparency and clarity of labour market development and will identify the labour force demands as well as short-time qualification needs within the companies.

Structure of social dialogue in the BSR

The social partners play a decisive role in developing new concepts around these issues since they are the experts in labour market policy. For this reason social dialogue is an integral part of the European social model as it is based on values such as responsibility, solidarity and participation.

The models of social dialogue at a national level differ within the Baltic Sea States and are therefore not directly

transferable from one country to another. The implementation of social dialogue at national levels is differing throughout the BSR, especially in the new member states which have a low trade union and employer organisation density and thus is followed by low representation of interest. However, working together on jointly identified problems and common challenges is not dependent upon the different models. Although, the diversity can be a challenge, working together is also supportive to the different States and new strategies can be more easily developed.

Forum for Social Dialogue in the Baltic Sea Region

If the BSR is expected to be competitive, the general culture of social dialogue needs to be strengthened in all member countries. The social partners should have the means to influence social policy on a European level as well as national one and this is why the tripartite forum of social dialogue is so necessary.

The forum aims to influence policy- and decision making in labour market relations, e.g. by issuing joint opinions and recommendations; in promoting transnational social dialogue based on the social partner's responsibility for the development of labour market policies in the BSR; and at networking and exchanging experiences amongst the social partners and political institutions within the BSR.

Its agenda will concentrate on proposal development in order to create sustainable labour markets, growth, competitiveness, high employment rates, and in addressing the labour mobility and service challenges in the BSR. The annual round table discussions will offer the opportunity to exchange views on different issues and to formulate common statements.

Even though Russian institutions were not part of the EU-financed network, their partnership in the tripartite forum is extremely important as we see the forum as a central institution tackling labour market challenges within the entire region and because Russia is an important advocate in the Baltic Sea region. Consequently BSLN is already augmenting a cooperative network with Russian institutions and learning how Russian authorities, employers and trade unions evaluate the labour market situation and social dialogue in North-West Russia and where their interests for future transnational cooperation in the Baltic Sea region on these issues will be.

The forum will be a platform for social dialogue, a knowledge pool for labour market policy issues in the region and a facilitating body for further activities needed within these areas.

Deepening and strengthening of social dialogue at national level

During BSLN's lifetime, the partners have already carried out studies and pilot projects which have been concerned with, for example, the challenges related to labour mobility and with the deepening of and training in social dialogue.

In Lithuania there is neither sufficient nor efficient training nor promotion of social dialogue. The labour market is characterised not only by a high unemployment rate but also by insufficient involvement amongst the social partners. Young people enter the labour markets without any prior knowledge of labour relations or social dialogue.

Since the situation is undesirable for both employers and employees, the Lithuanian Confederation of Industrialists together with three trade union confederations, have established a Social Dialogue Center to provide special educational seminars for young people. Seminars topics include: labour relations and social dialogue, job interviews, taxation, and negotiating between employer and employee. The seminars are for the practical preparation of future employees in order to integrate them into the active labour market as smoothly as possible. The participation rate has been high and the positive feedback proves the importance of the Centre.

Important changes in the Latvian labour markets and its current economic situation have influenced their labour relations; the percentage of grey economy and unemployment has risen and caused polarisation of their society. Distrust in the State and in State institutions has caused its civil society to become weak and passive. A Latvian pilot project, launched by the Free Trade Union Confederation of Latvia, aims to develop and strengthen their social dialogue by organising social dialogue forums in different regions where regional municipality, employers' organisations, trade unions and social and economic experts can all take part. This way both employers and employees are educated in employment rights and in labour and social protection. Collaboration among social partners in the region is stimulated, thus strengthening its civil society and creating more activity that in turn formulates and improves the frame for social and economic development in the regions.

The Estonian Trade Union Confederation is focussing on future leaders and aiming to include the new generation of trade unionists in its promotion of social partnership at workplace, sectoral and national levels. Objectives are to introduce the principles and functions of social partnership and the role of social dialogue in solving employment related and social problems. Knowledge and practical skills such as civil society knowledge, the role of social partners in the modern economy and social dialogue at a European level is provided as preparation for a new generation of social dialogue leaders and promoters. Negotiating skills and experience are the necessary preconditions for successfully managing bi- and tripartite negotiations and for resolving even the most complex issues related to work, the employment market, social security and the working environment within the Estonian society.

Conclusion

The Forum for Social Dialogue's recommendations aim to help solve labour market challenges in the BSR. The basis for the labour market strategy recommendations is the competence pool gathered during the BSLN lifetime, including all practical work and best practise examples carried out during the three year project. Only by working together can labour markets benefit all social partners. The Forum for Social Dialogue in the Baltic Sea Region combines national and transnational levels and brings relevant participants together to work at sustaining labour markets. It is a development forum for decision and policy makers to combine knowledge and ideas in order to create strategies, policies and practical solutions.

Therefore the slogan is:

Working together for sustainable labour markets

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Shale gas can shake up the European gas market

By Marko Lönqvist

Russian daily *Kommersant* wrote in last November that Italian gas company Edison SpA has summonsed a lawsuit against Russian Gazprom's subsidiary Promgas at the Stockholm Court of arbitration. Edison's aim is to reduce the price that company is currently paying for Russian gas distributed to Italian company based on long term agreements with Gazprom.

Edison argues that the current gas price it is paying to Gazprom, is significantly higher than the gas price on European spot market and therefore the company is suffering losses. According *Kommersant*, the dispute between Italian and Russian companies is approximately about 1 – 1,5 milliard USD.

This is the first case in EU of a lawsuit being summonsed against Russian gas monopoly over pricing issue. But there is a strong possibility that this not the last case. The crux of the matter is the rapidly changing market environment. Gazprom's gas business is based on long term agreements where the price level is agreed to a certain period – often for many years – beforehand. The gas flows from Russia to Europe on pipelines and this has guaranteed certain stability for European customers.

During the last few years the situation has changed rapidly. For European customer the Russian gas is not necessarily the most competitive alternative any more. There are nowadays lots of possibilities to buy gas on so called spot market where the price level is defined on daily basis. And the price level has been reducing a lot because the gas volumes on spot market have been rising. One of the most important reasons is the development on gas industry in USA. In USA several gas companies developed few years ago a new technology, which allows to produce gas from the shale. Since then the shale gas has become an increasingly important source of natural gas in United States; today Shale gas production makes up 20 percent of total U.S. Natural gas production. Globally this development had led to situation when U.S. is not anymore importing so much liquefied natural gas (LNG) from abroad. Naturally this gas not demanded any more in USA, has flown to European market and roiled the price level here.

Other significant factor is the fact that there are lots of shale deposits around Baltic Sea, especially in Poland and there are currently several dozens of foreign and Polish companies test drilling these unconventional deposits. Results seem to be promising and many experts estimate that soon there will be Polish shale gas on European market. Analysts estimate that this is the reason why the

long term gas price is probably staying on quite low level in Europe – despite the Libyan crisis.

For Russia, as the world's largest holder of natural gas, the impending lower gas prices and availability of alternatives for Russian produced – an so far more expensive – pipeline gas at European Market, provides many challenges. Especially now that the Nord Stream pipeline from Russia to Germany is to be built up along the Baltic Sea. The longest sub-sea pipeline in the world is also a huge investment for the international investors, but now the changing market environment may cause some doubts on yield expectation. For customers i.e. European countries, situation is improving because there will be more variety. The consumers will be better off.

In this market situation there is a possibility of a conflict. As former U.S. Undersecretary of Energy John Deutch writes in Foreign Affairs: As unconventional gas becomes more available in Europe, consuming countries will insist on an open market with competition from diverse suppliers to meet demand.

How Gazprom will answer to the challenge of cheaper gas is so far unclear. But the elements of conflict are there. Clear evidence is the dispute between Italian Edison and Gazprom described at the beginning of this article. On January Lithuania launched a formal complaint to European Commission accusing Gazprom of abusing its dominant position as the country's main gas supplier. Lithuania complains that it has to pay higher gas prices than neighboring countries.

Probably there will be Polish or European shale gas on market in future, but the changes will not occur rapidly, because of huge investments required. But situation on gas market in Europe is changing little by little and both the suppliers and consuming nations will have to adapt themselves in new market environment.

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Russian gas price reform and its impact on exports to Europe

By Lars Petter Lunden

Domestic gas price reform has been considered necessary to secure Russian gas volumes to Europe. Currently, domestic gas prices in Russia are regulated at artificially low levels, causing over-consumption and underinvestment in new production capacity. The argument has been that increased domestic prices would curb demand through fuel switching, energy efficiency measures and decreased consumption due to lower real incomes. Moreover, increased prices would incentivize field developments thus compensating production decline or even increase production. Given that the reform succeeds accomplishing these goals the benefits for Russia should be obvious; increased export revenue *and* more efficient gas consumption. Moreover, European countries' fears of Russian exports falling short of European demand as Russia's core West-Siberian production assets decline could be allayed.

To achieve more efficient consumption and production development, Russian authorities in 2006 engineered a scheme to let domestic prices for industry consumers reach netback parity by 2011⁹. However, since 2006 the development path of the price reform has repeatedly been revised and it is currently not clear when the gas price is supposed to reach netback parity. Moreover, low European prices have narrowed the gap with Russian prices and seem to have taken some of the steam out of the reform progress.

However, even if the gas price reform will be implemented successfully, the ability of increased domestic prices to increase Russian exports remains far from proven. Russian gas export dynamics are complex; they are influenced by supply and demand in foreign markets, conditions in the regulated domestic market and the interconnection between foreign and domestic markets. Moreover, price reform may be accompanied by an unexpected side effect in terms of reduced cost of using gas exports as a tool in foreign policy.

Four questions need to be addressed in order to analyze the effects of Russian gas price reform on European exports. Will demand be reduced as prices rise? Can domestic price hikes accelerate the pace and number of new field developments? If the answer to one or both of the first questions is yes, will Gazprom choose to allocate the available volumes to increased exports? And finally, will the changed domestic cash flows influence on export allocations?

The prospects of freeing up volumes for exports through domestic demand reduction seem limited. Evidence on gas price elasticity, i.e. to what degree gas consumption will respond to price changes, is scarce in Russia. In fact, gas consumption, fuelled by GDP growth, has actually increased along with gas prices. Nevertheless, according to the World Bank, energy efficiency measures represent a savings potential equal to 45 percent of total primary energy consumption. However, currently many investments that are expected to generate attractive returns are not made. Moreover, the slow and erratic pace of the gas price reform (real prices have not increased substantially) does not incentivize energy efficiency investments since it creates severe timing issues for the industries contemplating efficiency investments. Fuel switching could reduce demand for Russian gas. However, switching to alternative fuels is not necessarily a viable option. Investments in coal are relatively capital intensive and the deposits often located far from demand

centers. Moreover, coal creates local pollution through both lower air quality and ash disposal. Nuclear and hydropower are both alternatives, but long lead times, expensive developments and uncertain reform progress limit the impact of gas price reform on investment decisions. Finally, there is the inability of consumers to curb their own consumption. Currently most Russians pay a utility fee that is independent of the volume of gas consumed. In fact, in many households there is no possibility to adjust heating and thereby gas consumption. Supply is determined either for the building or even at village level and the only way to regulate indoor temperature is often to open the window.

Second, several factors influence the decisions on whether to develop new fields. For producers other than Gazprom the issue of pipeline access dwarfs most other concerns. If access to the pipelines is not granted, production from, and developments of, fields owned by both independent gas companies and oil companies producing associated gas will be limited. In fact, Gazprom's *de facto* pipeline monopoly is probably an important reason for the gas price reform to target a netback price rather than liberating the domestic market as this would inevitably give Gazprom true monopoly power. Moreover, the erratic fiscal framework, ambiguous history of foreign investments and cost inflation all dampen investments in the gas sector.

Third, Russian exports' most influential variable is foreign prices. The global gas glut is not expected to recede in the near future which implies a relatively low gas price. Gazprom has an impact on the prices it receives in the EU since it currently functions as a swing producer. Increased supply would most likely be directed to the spot market thus putting further pressure on the gas price. Lower spot prices would put increased strain on the already weakening link between oil and gas prices that Gazprom is interested in maintaining to avoid pressure on their oil indexed contracts. Furthermore, if the gas price reform would be implemented in its current form, lower European prices would inevitably transform into lower domestic prices too, thus creating a double revenue dip.

Lastly, Russian gas price increases could even curb exports. As domestic markets become equally profitable to foreign markets Gazprom's domestic profits would increase. This implies that Gazprom, and Russia, is less dependent on the foreign markets to generate needed revenue. There have already been accusations of Russia using its dominant position as a gas supplier to impose a political cost on its exports. For example, Russia has allegedly penalized disobedient countries with higher gas prices in times of turbulent bipartisan political relations. However, thus far this effect has been limited since most of Gazprom's profits have been generated abroad. As the share of profits generated in foreign markets diminishes, Russia would have an improved bargaining position vis-à-vis its foreign customers. Thus, domestic gas price increases may come with an unexpected, and with foreign eyes unwanted, side effect since the cost to Russia of using gas as a political weapon could decrease.

Lars Peter Lunden

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⁹ In this article, netback price implies export prices less transport costs, taxes and import duties. Other authors sometimes define netback prices more narrowly, i.e., price less transportation costs.

Energy superpower of business as usual?

By Markku Kivinen

Is Russia an energy superpower? In terms of fossil fuels Russia is one of the great players. It has the largest reserves of natural gas in the world, the second largest coal reserves, eight largest oil reserves. Russia is the largest exporter of natural gas in the world and many studies deal with the security issues linked with pipelines and energy infrastructure. Nowadays Russia is the second largest oil exporter, as well as one of the main nuclear powers and the world largest energy exporter.

There is no established paradigm in assessing Russian energy policy. In the Energy project of the Aleksanteri institute we have made an effort to establish one. So far most of the research in the field tends to be descriptive. One approach focuses on energy diplomacy explaining it on the basis of negotiations and conflict resolution. In theoretical terms this kind of approach can be called agent-centric. On the other extreme geopolitical explanations put energy issues in the context of permanently given national interests and conflicts. And finally energy economics deals mainly with economic mechanisms mediating supply and demand but without any systematic theory of political aspects of the development. We have developed a new, more comprehensive and conceptually more ambitious approach. Our starting point has been in Anthony Giddens' structuration theory which Alexander Wendt has developed further in conceptualising international relations. We have also brought in William Sewell's idea that individual events may play a crucial role in structuration process.

Following Anthony Giddens' structuration theory our argument is that we should combine structure and agency in explaining energy policy. By the concept of structuration, Giddens refers to how people-actors are enabled and constrained by the structural positions they occupy at a given time. Structure is conceptualized as *rules* and *resources*. We have conceptualized those policy environments in terms of four structural dimensions through which actors will have to manoeuvre – resource economic, financial, institutional and ecological. We argue that so far we seem to lack knowledge of how actors operate through the whole structural constellation. Structures signify the patterning of the conduct of actors, and processes that have preceded it. This makes it imperative to attend both to recognized and unacknowledged dimensions within which action takes place. Consequently action can have both intended and unintended consequences. The energy policy actors do not act in a vacuum nor are their interest given by mere geographical position.

The general logic of Russian framework can be seen as comprising three different schemata: Soviet time interdependency based no planned economy, business logic and energy superpower aspirations. The frames are not completely mutually exclusive. Rather the transition can be characterised in this respect as a gradual replacement of planned economy interdependency in non-market form by mere business logic. The idea of an energy superpower comes up with the rise of oil price.

Following Russian media and political discussion there is no doubt that the discourse on energy superpower is plainly present in Russian political discussion. One has

good reasons to suggest, however, that it is first of all an instrument for domestic political scene. It has a certain appeal to politicians who are hankering for the lost empire. From the business point of view the situation is far less clear. Would it not seem natural to expect that businessmen in energy sector are most of all interested in making profits for the company. And this pure business logic may be even jeopardised by frames which come from the political sphere. This would seem to raise the question to what extent energy superpower 'cultural schemata' is a real action frame. It might very well be a mere rhetorical horizon collecting diversifying actors in a same discourse without having a direction to clear interest articulation and real political coherence.

There is no doubt about a growing control of state in hydrocarbon production sector. But what does this really mean? What is the state control all about? What kinds of organisation or institutional agencies are Russian state owned firms, such as Gazprom or Rosneft or Transneft? Are they still predators as many Western observers are apt to argue or have they been tamed during the Putin era? I do not have an intention to give a final answer to these questions but based on our studies so far, I would provoke further studies to start with following six hypotheses:

Hypothesis 1: Gazprom is not a coherent unity. Rather it is a conglomerate of interests.

Hypothesis 2: Major state owned firms are lobbying within the state apparatus to define the rules of the game according to their own interests.

Hypothesis 3: Domestic pricing causes a major conflict of interests between the energy companies and the state.

Hypothesis 4: More effective private and foreign companies are trying to find some kind of equilibrium between high profits and high uncertainty concerning the political risk.

Hypothesis 5: Strategic frames of action are defined by a complex combination of formal and informal rules of the game.

Hypothesis 6: Foreign policy discourses are neither identical nor simply dominating the business interests.

My understanding is that based on our empirical data the business frame is going to be dominating Russian energy policy. There are no inevitable tendencies which would make highly political scenarios to realise. Technological constraints and business interests create also a window of opportunity for successful political choices.

Markku Kivinen

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I am a happy man

By Pentti-Oskari Kangas

I am bold enough to dare to say in public that I am happy. I am happy because I get to work as a servant. If you want to spread the word that I am happy, I will also be happy about that. I know that it will make people envious. The world is strange, in that there is no success without jealousy. I don't mind people being envious of me.

I am also a selfish person. I enjoy selfishness. You can tell that to people too. I am a selfish person in that I immensely enjoy the appreciation is addressed to me. As a servant, the greatest goal of a day's work is to receive thanks from my clients. When I succeed in this, I return home from work feeling almost guilty of how happy I am. What? Coming home from work in a good mood?

I am an entrepreneur in tourism and therefore a servant. When I teach classes for students about the joys of the service profession, the first thing I always ask is for those who think they are selfish to raise their hands. Usually, one or two hands will go up with hesitation. It is easy to shock listeners by stating that those who did not raise their hands should change professions. You cannot serve people if you don't enjoy appreciation. The service profession is that kind of profession.

Actually, I have not yet been able to think of a profession that is not a service. For a long time I believed that our President is not in a service profession, until I realized that she is a servant to the people.

Positive nature has not always been one of the fundamental characteristics of us Finns, living on the outskirts of the Baltic Sea; we do not smile and we are not friendly. Fortunately, times are changing. Our tourism business serves its customers in the pearl of the Baltic Sea, Finland's archipelago: crossings on the steamship s/s Ukkopekka and conference and recreation services at Herrankukkaro on the island of Rymättylä in Naantali.

Our business operations are mainly seasonal in nature. Most of our employees are students from universities and other schools. We train our employees ourselves. We just recently had a staff training session. We sat on the pier of the old fisherman's estate and I told stories about the archipelago and about our business. I shared a secret with the new young recruits: in the job interview, we only looked at their qualifications and recommendations as a mere formality. They had nothing to do with our choice. The only criterion for our choice was the kind of picture the applicant presented of him or herself. Smile, positive nature and attitude. That's all. Last season we made a summary of our customer feedback. On a scale of 0–5, we asked about the service attitude of our staff. We got 4.8. I would have been disappointed if it had been 5, because then there would have been nothing to strive for. The knowledge that there is room for improvement keeps a servant on his/her toes.

When I began as a private entrepreneur 50 years ago, a common denominator was and still is authenticity, old-fashioned quality, peace, originality, nature and nostalgia, and to top everything off, a friendship and partnership with our own Baltic Sea. Herrankukkaro is a conference and recreation center for companies in Naantali built around an old, former fisherman's estate. Our clients can bathe in five

different saunas. The largest sauna is a genuine in-ground smoke sauna for 120 people. We have an outdoor spa in the midst of nature, which situated near the old traditional saunas. We take the water for the spas from the Baltic Sea, filter it through sand and purify it. So, we are purifying the Baltic Sea. Even though they are only drops, it still has significance. If we each purify our own drops, we will save the Baltic Sea.

Our objective is to leave the customer feeling good and positive – whether it be by stories, food, traditional saunas, trips on the steamship, music or natural environment. Twenty-five years ago, we switched over almost entirely to renewable energy. We take all possible measures to avoid using plastics. Our food is local and our outdoor activities are harmonious with nature. We had never consciously considered sustainable development, environmental responsibility or carbon footprints in our business operations. We just did it that way, because it felt natural to us. Everything happened as if by accident. Then the fundamental values by which we had been operating for all of these decades suddenly became a trend. We were awarded as, Finland's best tourism business of 2010. We were ahead of our times – without even knowing it.

One economy guru recently wrote about corporate responsibility in a startling way: "The companies that figure out in 2015 that they have to become environmentally responsible will be hopelessly left behind, because by then it will not be a competitive edge." Well said.

You can also tell people that we are proud of our success. And we won't hide our secrets to success, since they are so unfathomably simple – within everyone's capability.

Here they are: Smile in positive service, and hold nature in high esteem.

Attitude matters. Always.

Pentti-Oskari Kangas

Steamship Captain

s/s Ukkopekka

*Old Master of the
archipelago estate
Herrankukkaro*

*Extra hand and part-time
pensioner (only 12
hours/day of work)*

THE HAPPY MAN

Finland



Can the Baltic Sea recover from eutrophication?

By Seppo Knuuttila

The Baltic Sea is the only inland sea wholly in Europe and is one of the largest brackish-water basins in the world. The combination of a large catchment area with associated human activities and a small body of water with limited exchange with the Skagerrak and the North Sea makes the Baltic Sea very sensitive to nutrient enrichment and eutrophication. The catchment area of the Baltic Sea is more than 1,700,000 km², with a population of approximately 85 million inhabitants.

In Europe, nearly all regional seas have faced increased loads and nutrient enrichment in the past decades and have witnessed the undesirable effects of eutrophication. A physical feature which markedly increases the vulnerability of the Baltic Sea is the vertical stratification of the water masses. The most important effect of stratification in terms of eutrophication is that it hinders or prevents ventilation and oxygenation of the bottom waters and sediments by vertical mixing of water, a situation that often leads to oxygen depletion.

In 2007 adopted HELCOM Baltic Sea Action Plan (BSAP) contains measures that are estimated to be sufficient to reduce eutrophication to a target level that would correspond to good ecological and environmental status of the Baltic Sea by the year 2021. Required reductions of annual loads addressed to the whole Baltic were estimated as 15,250 tons (42%) of phosphorus and 135,000 tons (18%) of nitrogen from average annual nutrient loads. Similarly, quantitative reduction requirements were addressed to each HELCOM country. In addition to the BSAP, European directives such as the Marine Strategy Framework Directive (MSFD) and the Water Framework Directive (WFD) require the Baltic coastal countries that are EU Member States to reduce eutrophication to an acceptable level corresponding to good ecological/environmental status, thus giving further impetus to the implementation of the BSAP.

The requirements of the EU Urban Waste Water Treatment Directive (UWWTD) aim at protecting the environment from the adverse effects of discharges of wastewater. The degree of treatment of discharges is based on an assessment of the sensitivity of the receiving waters. Member States shall identify areas that are 'sensitive' in terms of eutrophication. Those coastal states of the Baltic Sea which joined the EU in 2004 negotiated transition periods for the implementation of this directive which extend to 2015.

However, from the point of view of the alarming status of the Baltic Sea the requirements of the UWWTD are not stringent enough. If it can be shown that nitrogen and phosphorus is reduced with 75 % in a sensitive area as a whole, requirements for individual plants need not apply. In order to sufficiently prevent phosphorus discharges into the Baltic Sea implementation of more effective measures to improve the treatment of wastewater, including increasing phosphorus removal from 80% to 90%, are definitely needed in all coastal countries. It is estimated that implementing of measures to improve the treatment of wastewater according to the HELCOM recommendations will reduce phosphorus inputs into the Baltic by more than 7,000 tons, almost half of the total required reduction. Enhancing wastewater treatment to include chemical removal of phosphorus has been estimated as one of the most cost-efficient measures.

Excellent positive example of improvement in wastewater treatment sector is large project being carried out in the City of St. Petersburg in Russia since the year 2005. Within the Gulf of Finland and the entire Baltic Sea, St. Petersburg has been clearly the largest individual point-load source of phosphorus and nitrogen. Before the year 1978 the treatment status of wastewaters from the City was almost zero and practically all wastewaters were discharged directly to the Gulf of Finland or into the River Neva without treatment. Once the on-going projects will be completed in 2015, the total phosphorus load from the City into the Gulf of Finland will reduce ca. 75% within a decade.

But not even the full implementation of the above mentioned measures and HELCOM recommendations on waste water

treatment will be enough to meet the reduction targets on total loads in order to reach the good ecological status of the Baltic Sea. Increased economic development, and thereby also increased pressures from human activity in the Baltic Sea region, will possibly contribute to an increase in eutrophication. Supplementary measures may be required to mitigate these negative environmental effects. Especially important are the developments taking place in the agricultural sector.

During the last century, agricultural practices have changed dramatically. New technologies, crops, animal breeding and, particularly, the introduction of chemical fertilizers, have increased productivity enormously. At the same time, consumer preferences have changed dramatically towards a large proportion of meat in human consumption. These changes have been most pronounced in the western countries but similar changes are now occurring in the new EU member states, as well as in Russia and Belarus. Higher living standards and EU agricultural subsidies are driving this development.

The reduction of nutrients from agriculture can be achieved through a combination of different measures that have to be applied according to the specific characteristics of the region. The scenarios show a substantial reduction in nitrogen and phosphorus if balanced strategies optimising nutrient use and minimising nutrient fluxes from agricultural systems, such as animal feeding, handling of manure and crop cultivation are applied. The scenarios also show that if agricultural production is intensified throughout the Baltic Sea region – especially in the eastern part of the region owing to increased fertilizer use and increased livestock production – without application of strict measures the inputs will increase substantially. Therefore all countries need to implement measures to drastically reduce agricultural inputs, including changes in manure handling and fertilization.

The agreed, currently implemented measures to combat eutrophication should also be evaluated in the light of the projected environmental changes for the Baltic Sea region to be expected as a result of global climate change. An increase of the mean annual temperature by 3°C to 5°C has been projected for the Baltic Sea basin during this century. It is likely that the changing climate would also entail a general increase in annual precipitation, in particular, during the wintertime. Increased runoff, resulting from the increase in precipitation, would probably lead to increased nutrient loads from the drainage area to the Baltic Sea.

Further development and strengthening of nutrient management strategies by the countries in the Baltic Sea catchment will be a result of multiple drivers, inspired by the BSAP, and often also national legislative plans implementing European directives and other national action. Which one is the most prominent or wide ranging is not an issue - the key is that loads are progressively reduced. It should be clear that the eutrophication status will only improve if loads of both nitrogen and phosphorus are significantly further reduced. The most important factor for reaching good ecological/environmental status with regard to eutrophication is political will, and cost-effective solutions must be available in order to motivate such political determination.

Seppo Knuuttila

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Eating bread to clean up the Archipelago Sea

By Juha Salonen

Salonen Bakery is a Finnish family company that dates back more than a hundred years. Our company has strong local roots in the city of Turku, in the heart of Southwest Finland. The maritime aspect of Turku holds major significance for the vitality of our area and the sea also forms an integral part of our daily living environment.

In October of 2009, Salonen Bakery launched a year-long campaign during which time we donated ten cents on every purchase of our 'Saaristolaisnappi' bread packs for the protection of the Archipelago Sea. The collection of funds was carried out in collaboration with the Centrum Balticum Foundation's Protection Fund for the Archipelago Sea, which works to stop the eutrophication of the sea. The operations of the Foundation are primarily funded by companies, various organisations and private individuals for whom the Archipelago Sea is important.

In one year, we accrued EUR 20,000 through our bread campaign, which is the biggest single corporate donation made since the fund's inception. Although it may not sound like a huge sum on its own, the donation will enable the funding of projects amounting to approximately EUR 150,000. These projects will strive to improve the situation in the Archipelago Sea. Most of the donated amount will be used for the KIRSTU project, which aims to renew the wastewater systems of 100 households in the communities surrounding the Archipelago Sea, thereby reducing the load on the sea. The funds will also be used in a project aimed at determining how waterworks that are to be discontinued can be turned into facilities that can filter nutrients from water, thereby reducing the phosphorus load on our water systems. The most important single target is the Halinen waterworks on the Aura River – the river that runs through our beautiful city.

The significance of corporate responsibility will continue to be highlighted. Caring for the environment is everyone's concern. Responsibility issues are also taking a firmer foothold in consumer decision-making – something we noticed during our campaign. Following the launch of the campaign, sales of Saaristolaisnappi bread doubled, and the growth in sales continued all year. The product had already been in the market, but the opportunity to do something good and have an influence through a purchasing choice appears to have drawn consumers to our product. We also received a lot of media attention and our product was featured in a number of different forums. The campaign was a success not only in terms of sales, but also for our corporate image.

A crucial part of our campaign was also the text on the package, encouraging consumers to send us tips or their thoughts on how to improve the state of our waters. We were surprised by the amount of feedback we received: people from across Finland responded, even from areas far away from the sea. People were clearly interested in and affected by the topic, and Finns expressed their readiness to chip in, both through their words and their actions. The suggestions were very concrete and illustrated that people are really thinking about their actions and the consequences of their behaviour. We compiled the ideas that we received nationwide in a small brochure, and we distributed it, for example, at fairs.

Companies can no longer turn a blind eye to how strongly environment-friendly values are guiding consumer decision-making. This is clearly visible in the food industry: when consumers become enlightened, companies must follow suit. Salonen Bakery's core knowledge lies in breadmaking, and we

strive to take changing consumer trends into consideration in our product development. In addition to caring for the environment, consumers nowadays are increasingly demanding products that are purer and manufactured more in line with traditional methods. A case in point is our additive-free bread products, sales of which increased by more than a third last year. Consumers want pure, natural bread that also keeps well. Bread that keeps well does not have to be thrown out and create a load on the environment. Responsibility has reached all aspects of life – for many it has become a way of life.

Salonen Bakery is a strongly local company that employs fewer than a hundred people. Our Saaristolaisnappi bread campaign is proof that even smaller companies can take action and participate in protecting the environment and, through their donation, put in motion a number of measures that can have a major impact. Just as important as funding concrete projects is grabbing the public's and the media's attention and inspiring them to write about these projects that bring nature protection work within everyone's reach. Our campaign additionally had a clear effect on the demand for and sales of our product – aspects that are vital for any company. It created a positive cycle that benefits all parties.

Salonen Bakery will continue to seek good causes and co-operation partners to work with. We have tightly incorporated responsibility into our business strategy: we have switched from oil to LPG as our main form of energy, made machine investments and, among other things, upgraded our refrigeration machines to make them more environmentally sound. The work is only just beginning, and it will become a firm part of our operations in the coming years, both in terms of our operating methods and our product development.

The Archipelago Sea and the maritime spirit are also important to me personally and close to my heart. My family and I are avid boaters and, like approximately half a million other Finns, we have a summer cottage. Our cottage is situated in the outer archipelago, where the waters are still relatively clear. But out on the boat we can clearly see how the sea is changing.

Heading towards the shore, the sea is much cloudier than it was, for example, ten years ago, and abundant blue-green algae growth can be seen in many areas. I really hope that in future my children, and later on their children, will be able to run from the steaming sauna directly to the shore and jump into algae-free sea water. And that from our boat we can admire a sea that is clearer than it is today.

Juha Salonen

Managing Director

*Salonen Bakery (Leipomo
Salonen Oy)*

Finland



Sustainable development of Saint Petersburg – goals, problems, strategies

By Irina A. Shmeleva

St Petersburg is the second largest Russian city and the fourth largest city in Europe after Moscow, Paris and London. It is one of the few European cities, the whole central part of which is designated as the UNESCO World Heritage. It has a very high cultural and geopolitical importance in the context of wider Europe.

The development goals for St. Petersburg for the period of 2005–2025 were defined in the General Plan adopted in 2005 as follows: the stable improvement of the quality of life of all population groups of St Petersburg with the orientation on the securing the European standards of living; development of St Petersburg as a multifunctional city, integrated in the Russian and world economy; providing a high-quality business environment; strengthening St Petersburg as the main Russian contact centre of the Baltic Sea region and the North-West of Russia.

The goals for territorial planning in St Petersburg are: securing Sustainable Development of St Petersburg; improvement of the quality of the urban environment, preservation and regeneration of the historical and cultural heritage; development of engineering, transport and social infrastructure; securing taking into account the interests of the Russian Federation, the interests of the citizens of St Petersburg and their groups, the interests of the intra-city municipal units in St Petersburg. The Plan implies the design of the whole range of local St Petersburg laws, aimed at regulating the main fields of the city's development: a) On the cultural heritage sites (historical and cultural monuments) in SPb, including documents, regulating the preservation of the centre of St Petersburg as UNESCO World Heritage Site; b) On the natural healing resources, medical-recreational sites and resorts; c) On the specially protected natural territories; d) On the Earth's Interior; e) On Soils; f) On Waste Management; g) On Forests; h) On Fauna; i) On nature management and environmental protection; j) On the Preservation of the Air Quality; k) On the Protection from the Noise; l) On Radiological Safety; m) On Electromagnetic Safety and so on.

Despite the fact that Sustainable Development is proclaimed a priority goal it should be mentioned that in the list of the 'priorities of socio-economic development' listed under the heading 'The Goals of Territorial Planning' there are no environmental goals, the majority of the listed priorities relate to the development of the certain sectors of the industry, trade, science and commercial sector.

The General Development Plan of SPb was a cause of big debates and much resentment according to the press, and it is clear that the main dimensions of sustainable development are not linked in it; the key concepts on which the development of St Petersburg is based, according to the City Administration Board are stability, balance, reconstruction and organic growth. Whereas non-financial components of the quality of life, democratic governance in decision making, as well as reduction of the environmental impacts are not listed as key priorities. Given the current priorities one can expect further increase in the pressure on the environment from industry and transport. The speed, coordination and the degree of the planned innovation in the area of public transport and organization of ergonomic, safe and human-friendly living space seem to be insufficient.

At the same time, the monitoring of the quality of the environment is constantly carried out by the Nature Use, Environmental Protection and Ecological Safety Committee of the Administration of St Petersburg. The annual report on the quality of the Environment in St Petersburg is published regularly every two years. Several years ago an international project on the 'Information and Communication Technologies to Strengthen the Sustainable City Management' was started, which was focused on the creation of the interactive information system that could help decision makers to receive information on the concentrations of the pollutants, emissions, the quality of the green areas, generation of waste and other spatially distributed data. The Ecological Portal was launched on February 2010 (<http://www.infoeco.ru/>) where actual information on Environmental Policy of St. Petersburg, Environmental Control, Ecological safety and Ecological Culture could be found. The project enables the creation of a service directed for the citizens of St Petersburg for the increase of environmental awareness. The project partners are city of Turku, city of Kotka, Ecofellows Ltd, VALONIA, UBC Environment and Sustainable Development Secretariat <http://www.ubc-environment.net/index.php/main:awarenessstpetersburg>. Unfortunately indicators for Sustainable Development are not presented on the Ecological Portal of St. Petersburg.

As a positive trend it should be mentioned that St. Petersburg has a unique environmental management system, supplied by geo information system related to the structure of monitoring stations, covering a multitude of environments (geological, hydrological, atmosphere) that describes the status of the environment in terms of some 100 different pollutants. Control system allows to calculate the concentration of pollutants using dispersion models.

The Environmental Policy Statement for Saint Petersburg for the period of 2008-2012 was adopted. Sustainable Development as a goal is also mentioned in this document, indicating that economic, environmental and social goals of development are considered to play the equal role. But the indicators for SD are not even mentioned in the policy document. The present situation in St. Petersburg from the citizen's point of view could be characterized as follows: transport system cannot keep up with the development of the city, traffic jams became the inherent part of the urban life, construction of much needed new underground lines goes very slowly and is delayed for several decades, tramway routes are being demolished throughout the city to give priorities to private transport, public transport is not seen as a priority, there is no system for regulating parking on all major city streets, there are no cycling paths inside the modern districts. There are also lots of problems in waste management strategies. Satisfaction of the immediate economic interests of the developers companies and City administration leads to the destruction of green areas - parks, trees in the streets, the green spaces. There is a permanent conflict between the City Administration and Environmental NGOs and representatives of Civil Society on the problem of preservation of the Green Spaces in the city and also on the problem of the Historical Center of City preservation which is not considered by City Government and

developers as a factors that deteriorate the quality of life of the citizens, pose a threat to their health, destroy their self and place identity and deepen the psychological stress and discomfort. It is obvious that the solution to these problems requires their consideration of environment management also as the public goods management problem and the Sustainable Development as a strategy of interaction of the human being and the environment.

The comparative analysis for SD indicators of cities in Baltic region, Europe or other regions would be interesting to see the difference in economic and administrative instruments of environmental policy or difference in public transport strategies, recycling strategies or quality of life index. The comparison of some indicator for St. Petersburg and cities of Finland are presented in the UBC site <http://www.ubc-environment.net/index.php/main:awarenessstpetersburg>

St. Petersburg has a powerful potential for Sustainable Development but for its realization several conditions need to be fulfilled. We see them as:

- Democratic elections of City Governor (Mayor) for a fixed term with his(her) personal responsibility for the quality of environment and quality of life;
- New City administrative management structure for Sustainable Development that could link poorly connected Committees with it's goals, tasks and responsibilities;
- Systemic strategies for Sustainable Development for the city as a whole, city centre, its different districts, newly constructed districts; reconstructed brown field sited; municipalities and houses, industrial areas, including transport infrastructure, green spaces, green architecture, public spaces and so on;

- Creation of Legislative acts for Sustainable Development strategies and indicators;
- Instruments of Democratic governance and Civic participation in decision making and control over SD strategies;
- Intensification of the Education for Sustainable Development, especially at the University level and Excellence level for business leaders and government officials;
- PR of Sustainable Development Strategies, including discussions in Media and Green Social Advertising;
- Efforts for paradigm shift in ecological consciousness for environmental values to be priority contrary to power values and momentary economic gains.

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Climate change in the Baltic Sea marine environment

By Ilppo Vuorinen

Several environmental changes are expected to intertwine in the Baltic Sea area into local and regional consequences of the Global change, these, in turn, are expected to cause extensive changes in fauna and flora of the Baltic Sea. The most socially relevant of foreseeable changes evidently are a decrease in marine fish stocks, and an increase of "green tides" i.e. extensive algal blooms affecting tourism and local recreation.

Global climatic models by the International Panel of Climate Change, and their regional extensions (Arctic Climate Impact Assessment, European Freshwater Dimension, and Baltic Assessment of Climate Change) produce generally similar predictions about expectable changes in key climate factors. The expectations include: increasing rainfall, and temperature, these changes will take place especially in winter, and in the northern areas. If we are to foresee changes at the ecosystems level, e.g. in the Baltic Sea marine ecosystem, it is necessary to take into account also local and regional environmental factors, which may, or may not, corroborate the general trends set by changing climate. There are a number of regional and local features because of which the Baltic Sea has often been presented as a relatively sensitive and vulnerable ecosystem, with possibly low resilience capacity.

Vulnerability and sensitivity, basic characteristics of the Baltic Sea

There is a relatively large human impact on the Baltic Sea, which is due to the population of 85 mi people in the watershed area of 2,13 mi km², these are some 17 % of the population of the European Union, and almost 20 % of the area of European Continent, respectively. The water volume, however, is relatively small, since the sea itself is very shallow (average depth of only 56 m, while average depth of the oceans globally is 4000 m, and that of another European inland Sea, the Mediterranean is 1500 m). The renovation and exchange of water are slow compared to other coastal areas. The retention time (the average time a water molecule is spending in the Baltic Sea) of water is up to 20 years, it is slowed down by trenches in the Danish Sounds (average depth there is only about 20m). There is no tide, which would enhance the water exchange.

Low salinity, biodiversity and resilience are one aspect of the vulnerability

Generally the biodiversity, species richness of fauna and flora, of the Baltic Sea is very low. This is mainly due to young age of the basin. Many species, otherwise able to live there, have not had enough time to colonize the area. Specifically to a brackish water area, the low salinity poses a further stress for both marine and freshwater species of plants and animals. Thus most of the marine species in the Baltic Sea are there found next to a lethally low salinity. Low salinity is another cause for low biodiversity, the number of marine species is much lower in the Baltic than in the neighboring sea areas in the North Sea. Low biodiversity is expected to increase the risk of low resilience capacity. This is hypothesized because the species pool available for building up a new ecosystem after a catastrophe is poor compared to other marine areas.

Expectations of changes in salinity and temperature due to climate change

Changes in the Baltic Sea salinity, (and the biodiversity) are intertwined with other environmental changes due to the last glaciation. The Baltic Sea ecosystem has been during the last

ten thousand years, and still is, subject to change. Factors responsible for changes in biota are, besides salinity, temperature (and changes in ice cover), land uplifting, and sea level changes. These changing large scale factors are directly related to changes in present day environmental factors, which can be seen in current environmental monitoring time series.

The salinity of the Baltic Sea is controlled by a balance of freshwater runoff from the watershed area, and inflows of saline North Sea water, that prior to 1980's were almost a yearly and seasonal phenomenon. In the observational time series started in late 1800, their greatest frequency is in January, and during the observational period of 125 years there is a record of about 110 major pulses (war years not included in the monitoring).

Due to expected increase in the rainfall, and subsequent runoff, the salinity of the Baltic Sea is expected to decrease which would mean a respective change in the distribution areas of many Baltic Sea marine species of plants and animals. Thus in the case of a 50 % decrease of salinity (the extreme result from some of the models), the Finnish coastal area extending furthest south to the Baltic Sea would have same kind of biodiversity of marine species and animals that is currently found at the level of Northern Bothnian Sea, and Southern Baltic coastal areas would experience the disappearance of the shore crab (*Carcinus moenas*) and sea star (*Asterias rubens*). For several marine fish species that are target of commercial fishing, such as cod, herring and plaice the decrease in salinity will cause a decline of stocks. On the other hand, fresh water fish species will replace them into some extent.

Increasing rainfall will also cause increased leaching of nutrients from the watershed area. That is expected to increase the eutrophication of coastal areas. Visible result of eutrophication will be an increase in algal blooms, both in cyanobacteria that are mostly found in the open sea, and also concerning green algae and affecting the recreation areas of the Baltic Sea coastline.

Discussing salinity changes that long does not imply that temperature changes were of no importance. A development towards milder winters will cause substantial changes in distribution of species that are directly related to the extent of wintertime ice formation. The distribution limits set by temperature concern e.g. seal species breeding on the ice (harbor seal, *Phoca hispida*), porpoise population (*Phocoena phocoena*) which is confined to open water, and several species of migrating birds, that are using the Baltic as wintering area, actually a larger number of birds is found in the Baltic Sea during winter than during the breeding season.

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Dynamic sustainability assessment – the case of Russia in the period of transition (1985-2007)

By Stanislav E. Shmelev

The assessment of progress towards sustainable development in Russia is a subject of extreme importance especially in the situation of economic crisis and increased attention to such issues as global environmental issues. There is still a gap in understanding of the ways to comprehensively assess the sustainability at the macro scale, interpretation of the links among the different social, economic and environmental processes and effects as well as strategic forward looking analysis from the point of view of multiple criteria. A single priority of facilitating economic growth by doubling GDP alone is definitely limiting the sustainability potential of the Russian economy.

Sustainable development is essentially a multidimensional problem, it involves simultaneous analysis of environmental, economic, social and institutional aspects of development of a state, a city or a region. The new tools based on the application of multicriteria methods are needed for the assessment of sustainability over time to understand if the country is evolving in a sustainable manner and what could be done to improve the situation.

Since the end of the 1980s Russia has undergone dramatic structural economic, social and institutional changes. These changes included freeing of prices, reviving the entrepreneurship tradition, seizure of the previously substantial state support for science, attraction of foreign direct investment, development of the resource extraction based economy, relaxing terms and condition for international trade, first – dramatic deterioration and then a slow recovery in the level of consumption and quality of life, an introduction of a flat tax rate in 1997, which accelerated the growing differentiation between the rich and the poor. A relative neglect of environmental and social aspects of the development of Russia has and continues to have long term sustainability consequences. Spatial aspect of the development of Russia presents another challenge, which hasn't been addressed adequately in the past.

Existing sustainability measures that have been available for Russia: Human Development Index (HDI) and Adjusted Net Savings (ANS) assume that component indicators are perfect substitutes and large progress in one of them can compensate negative tendencies in many others. Such a peculiarity is masking the existing multidimensional nature of the development process. For example, in HDI the full compensability between the GDP, life expectancy and education determined the change in the trend when the growing GDP and education outweighed declining life expectancy. The complexity of the development pattern in HDI, therefore, was hidden in the linear aggregation procedure. The estimation of the relevant components in ANS meets a series of methodological problems, including estimation of future prices, quantities of resource extraction as well as interest rates.

The most difficult task emerging when we are faced with multiple indicators of performance is "sense making", in other words, how to make sense of the complex pattern of indicators and steer the right course.

Taking the UN Sustainable Development Indicator Framework as a starting point, we applied a multicriteria assessment method to analyze the sustainability of the

multidimensional development path of the Russian economy.

The method was applied to two sets of 3 and 10 sustainability criteria over the same time period (1995-2006). The total list of criteria considered, based on the Indicators of Sustainable Development (UN, 2007) comprised *GDP per capita, annual energy consumption per capita, share of renewable in the energy mix, expenditure on R&D as a share of GDP, unemployment, life expectancy at birth, Gini index of income inequality, number of crimes, emissions of CO2 and water pollution*.

The recent trend in GDP growth has been seen by most observers as a positive tendency, although the fact that this growth was mostly oil and gas led has been the cause of concern for many observers. Spatially, the development of the Russian economy is characterized by extreme unevenness, if the regional distribution of GDP is considered. The most prosperous regions are Moscow city, Moscow region, the oil and gas producing regions in the Urals and Siberia, and St Petersburg. The difference between the gross regional product in the most prosperous Moscow city and less developed parts of Russia exceeds 100 times.

Atmospheric CO2 emissions in Russia started to shrink from 1990-1991 CO2, which was caused by the decline in the production levels and the structural change in the economy. As a whole, the existing tendency could be characterised a positive one, however having declared the goals to double Russia's GDP without the proactive modernisation, wide introduction of energy efficiency measures, and a gradual transition to the renewable energy sources, Russia could face strategic difficulties in meeting its post-Kyoto commitments.

Social issues are characterised by the fall in life expectancy from 1991 to 2003. A positive tendency for life expectancy to increase from 64.85 years in 2003 to 68.7 in 2009 could be seen as an early sign of a wider change in the direction of development.

Gini Index of income inequality (measured for earnings) in Russia increased from 0.26 in 1991 (the level of present day Austria, Luxembourg and Finland) to 0.409 in 1994 (the level of Moldova and Ukraine, approaching the level of China, Turkey and USA). After a brief decline to 0.375 in 1996 Gini Index went up to 0.4 in 2003, reaching the value of 0.406 in 2004 and 0.423 in 2008.

Unemployment rate in Russia climbed up from 5.2% in 1992 to 13.3% in 1998 and then went down again to 7.8 in 2004 and 6.3 in 2008. The financial crisis brought this figure up to 8.4. Inflation according to official data was always lower than that in Poland and approximately the same as in Ukraine.

The method was applied for two cases: that of *three* basic sustainability criteria and a detailed set of *ten* criteria. The case of three comprised: GDP per capita, CO2 emissions and life expectancy, representing economic, environmental and social dimensions respectively (1995-2006). In our model, the priorities, reflecting the current policy trend, were set: priority of GDP over CO2 emissions and life expectancy. In this case an overall positive tendency is observed. If, however, the different, more

humanistic set of policy priorities is chosen as opposed to the more technocratic, i.e. life expectancy is considered to be more important than GDP, and reduction in CO2 emissions is seen as more important than GDP, then the trend is changing, and the most sustainable year in this setting was 2006, followed by 1996 and 1995, then 2005, then 1997, then 2004, then 1998 and so on. The least sustainable years in this setting being 2001, 2000, 2002, 2003 and 1999.

In the more detailed analysis taking into account all *ten* criteria given the assumptions of the technocratic policy priorities, the “sustainability trend” appears to be positive up until 2006 (with minor exceptions), with more recent years dominating the previous years. If, however, a different pro-environmental and more humanistic set of policy priorities is assumed – an increase in life expectancy and reduction in CO2 emissions to combat climate change are more important than GDP growth, etc. the picture becomes quite different. In this setting the years 1997 and 1998 dominate the other years and since 1998 a decline in sustainable well-being is observed. The years 2005, 2006 and 1995 appear to be the least sustainable in this setting.

Treatment of many conflicting priorities simultaneously is a challenge that many national governments and international organisations are facing today.

Specific policy priorities can determine the result of the evaluation of “progress”, the interpretation of which rests heavily in social consensus and shared values. We have seen that placing more emphasis on social aspects of development, such as longer and healthier life and reduction of income inequalities, as well as the environmental aspects, such as cleaner air, climate change mitigation, increased deployment of renewable energy technologies, and contribution towards the global sustainability as opposed to the increase in the GDP, changes the interpretation of the progress that the society experienced in a particular time frame. Therefore, the hierarchy of policy priorities that are supported by the given society or international community can stimulate a pattern of more or less sustainable development.

The solution of the current critical situation in Russia seems to be the following – the growth in education expenditure, increase in the governmental and stimulation of the private investment in the national economy; the use of cleaner technologies (minimization of CO2 emissions), a transition to more extensive use of renewable energy (minimisation of natural capital depletion in the long run), as well as more efficient use of energy in different sectors, development of sustainable waste management systems, capable of returning valuable resources in the economic circulation and reducing thereby environmental impacts. Additional measures to reduce the gap between the rich

and the poor should be undertaken, for example with the help of progressive taxation system; active government investments in the science areas should support and develop the research potential, additional investment should be directed towards the development of the health care system, the development of the environmental management systems, including the preservation of forests, as well as creation of the environment, capable of securing the increase in life expectancy.

Thus, the proposed approach offers a comprehensive framework for the assessment of sustainability at the macro level and could provide necessary support for policy makers in establishing priorities for development as well as evaluation of progress in a multi-dimensional setting. In the context of the evolving economy of Russia, it seems that more emphasis is needed on the elicitation of social preferences and democratic articulation of different interests within a society, so that social and environmental issues would become equally as important as the speed of economic development and the true sustainability of development could be secured.

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More details on this study could be found in:

Shmelev S. E. (2010) Dynamic Sustainability Assessment: The Case of Russia in the Period of Transition (1985-2007), Queen Elizabeth House Working Paper, http://www.qeh.ox.ac.uk/dissemination/wpDetail?jor_id=340

Шмелев С.Э. (2009) Многомерный анализ макроустойчивости развития России/ ПОЛИТЭКС / Политическая экспертиза 2009, №4, сс. 115-132

Baltic Sea needs public involvement

By Martti Komulainen and Katariina Kiviluoto

The alarming state of the Baltic Sea requires actions at all levels, from individuals to NGOs, industries and countries. The discussion on the state of the Baltic Sea is institutionalized, and the voice of the wide public has been so far suppressed under summits and declarations presented at high levels. In order to amplify the process to heal the sea, also public involvement is needed. Modern communication methods such as social media, open new perspectives for public involvement.

A sailing boat ploughing through a sea looking like green porridge. Slimy fishing nets. Fishes with accumulated toxins. The Baltic Sea suffers from an overdose of nutrients, which in turn leads to massive algal blooms. The other side of the coin reveals world's second largest basin of brackish water, and economically and culturally invaluable area with a nature consisting of a unique mixture of marine and freshwater species.

The Baltic Sea has been claimed to be the most polluted sea in the world. True or not, the state of the sea is alarming, has been so for decades already. Eutrophication (increase in plant production caused by excessive availability of nutrients, mainly phosphorus and nitrogen) is the most prominent problem. But oil and chemical freighting as well as introduction of alien species present serious threats, too. Not to mention the climate change, which makes the puzzle even more complex to resolve.

There seems to be a general concern on the state of the Baltic Sea. The health status of the sea has been a continuous theme in the mass media. Moreover, several seminars, initiatives, programmes, conventions and action plans have been produced, and many development projects have been carried out. In February 2010, the state of the sea was raised to the highest political arena when Baltic Sea action summit (BSAS) was held in Helsinki. The Baltic Sea countries were represented at the highest level and numerous NGOs and business actors made commitments, either new or updated, to save the Baltic Sea. Whether or not, these lead to some concrete measures and new openings remains to be seen. Expectations are exceptionally high.

The results in saving the Baltic Sea are moderate, though there are many positive signals and much work has been done. More power and political will is needed to change the course towards a healthier sea. We desperately need a legally binding agreement for the protection of the Baltic Sea, involving all countries in the Baltic Sea catchment area.

What can and should be done to change the course? To put it simple: decrease nutrient load from all sources and minimize chemical and oil risks. Determined actions at all steps are of utmost importance. Also research on the most cost-efficient means and targeting actions with the largest impact, is required. Guidance, norm guiding and political actions are needed, too. Some political steps have been taken, of which the HELCOM Baltic Sea action plan is the most important.

Towards Baltic Sea citizenship

According to the recent BalticSurvey also a significant part of the people are worried about the Baltic Sea environment. The sea has an important role in the leisure time of the people living around the Baltic Sea. Surprisingly, majority of the people in most countries tended to disagree that they personally can affect the state of the sea, but instead viewed that efforts should be focused on waste waters, industry and farming.

But the people have an important role in the protection of the Baltic Sea. They can make a difference by choosing wisely

in their everyday lives as consumers, and by putting pressure towards decision makers to take concrete steps to protect the sea. Individuals can for example donate for the Baltic Sea, in order to finance protection investments. And they can also join WWF's voluntary oil troops, which are desperately needed should an oil accident occur. Moreover, people can generate fresh views and ideas to protect the Baltic Sea. There really are a myriad of ways people can participate!

In the light of the findings of the BalticSurvey, it seems that more work in the field of environmental awareness and public involvement is needed. This has been acknowledged in several policy programmes. On HELCOM Baltic Sea Action Plan adopted in 2007, the need for public engagement and stakeholder involvement is raised. The plan recommends that countries, regional and local government and organizations engage the public and stakeholders in activities promoting a healthy Baltic Sea and actively promote public participation in decision making.

On EU's Marine Strategy Framework Directive covering also the Baltic Sea, member states are also guided to have communication measures and measures raising the public awareness.

We believe that active civic society is a prerequisite for sustainable development. Also choices made at an individual level, and especially the entity of individual choices, make a difference. Furthermore, the public, by interacting with researchers and policy makers, can contribute developing fresh ideas to protect the sea, in the spirit of "think tanks". This parallels to open-source development met in IT-world.

In order to achieve active public participation, Baltic Sea awareness has to be raised. Many conceptual models in environmental education share similar steps of having environmental sensitization, awareness raising and empowerment (the feeling of the capacity to make changes to reach a certain outcome). In brief: an individual acts for a certain goal, if the individual finds the issue important, has "got tuned" into it, and has a feeling that he/she can make a difference.

At the moment, however, there aren't enough channels for the voice of the public and civic initiatives. The ongoing BalticSeaNow.info project, funded through Central Baltic Interreg IVA 2007-2013 Programme, tackles this problem by developing tools for public communication, discussion and participation. The project consists of a web portal (www.balticseanow.info) and events organized in partner countries. The goal is to promote public involvement and to strengthen a common "Baltic Sea identity".

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Nuclear problems of the North-West of Russia (from Fukushima perspective)

By Aleksandr Nikitin

In the year of the Chernobyl's 25th anniversary Fukushima gave us new lessons, and once again reminded of the need to revise security standards of reactors working today for various purposes. It has also pushed us to concentrate attention on condition of the numerous onshore and offshore storages for spent nuclear fuel and radioactive waste.

There are seven old nuclear reactors operating on the Kola and Leningrad nuclear power plants in the North-West of Russia, which do not meet current safety requirements, because they were designed and built at the time with other requirements. Besides that there are 13 transport reactors built in the 70-80s, which operate on the nuclear ice-breakers based in Murmansk. Russian Northern Navy owns about 30 nuclear submarines and surface ships, with about 50 reactors in total.

Each nuclear power plant has its storage facility for spent fuel and radioactive waste. In total, there are about 6,000 tons of spent nuclear fuel in the storages in the North-West Russia. The largest repository of spent nuclear fuel is located at the Leningrad nuclear power plant, and the most hazardous and problematic repository is located in Andreeva Bay in Murmansk Region.

All storage facilities for radioactive waste on the North-West of Russia are currently packed to their capacity, so Rosatom started to build new regional repository for radioactive waste in Sosnovy Bor, near the Leningrad nuclear power plant.

Nuclear crisis we are observing now in Japan makes the whole international community to look differently at the nuclear energy development strategy in the world, as well as at some safety questions of reactors and repositories of nuclear and radioactive waste. First of all, it must be a political decision to close the oldest reactors, which do not meet safety requirements, because "cosmetic" modernization is not able to bring these reactors in compliance with current requirements. It is also necessary to reject the delusion that the situation in Japan may not occur in areas which are not earthquake-prone. Of course, external influences on the Fukushima reactors were results of the earthquake and tsunami, but the main cause of the nuclear catastrophe was the fact that nuclear power stations and their infrastructure did not sustain long-term power cuts from external sources. Such situation may emerge not only after earthquakes, but also after hurricanes and heavy snowfalls. Russian nuclear power plants in the North-West region are able to "survive" complete blackout for no more than 6 hours, then processes similar to those on Fukushima will begin.

Chernobyl and Fukushima teach that experiments on nuclear reactors lead to sad consequences. Today the Kola nuclear power plant is preparing to conduct an experiment to increase power capacity of nuclear reactors in order to produce additional electricity. This is pure unreasonable gamble that must be stopped. Fukushima showed a low readiness of the staff for accidents at nuclear power plants.

On the 29th of April, opening a joint meeting of parliamentarians of the Russian Federation and the Nordic countries on nuclear energy development, Murmansk Governor Dmitry Dmitrienko said that the emergency response system, which was created in the Murmansk region, is recognized as the best in Russia. It is an easy and unjustified political statement. Emergency response system and staff trainings were checked only after such accidents as Chernobyl or Fukushima. Staff trainings and the quality of the emergency response system in nuclear industry should always be approached critically, guided by the rule - it is better to underestimate own capabilities than to overestimate them.

Fukushima showed that a bottle neck of the nuclear power plant is reactor's pools/repositories for spent fuel. The accident showed that the spent fuel storage facilities are even more dangerous than the reactors themselves, because they are poorly protected and cannot stand against external influence. Repositories contain far more radioactivity than the reactors.

And the last thing that appeared after Fukushima is a very weak supervision and safety system monitoring by regulatory authorities. In the Fukushima situation the IAEA failed to accomplish its task to monitor the safety of nuclear power plants operating in the earthquake-prone areas. The IAEA did not provide much support to Japanese specialists during the accident. The IAEA was fascinated by nuclear energy propaganda and spreading out nuclear energy to different countries, even those which are not yet prepared to apply such complex technologies as nuclear power. The IAEA did not manage to disseminate authoritative, timely and reliable information about the accident in Fukushima. Now the IAEA is not an international nuclear safety watchdog, they became an inert bureaucratic structure, which must be radically re-organized. Same features can be also seen in the Russian regulatory organization - the Federal Service for Ecological, Technological and Nuclear Supervision (atomnadzor).

Today, we can conclude that the North-West of Russia is a nuclear- and radiation-saturated area. Problems and defects which we saw at Chernobyl and Fukushima accidents exist on the nuclear facilities in the North-West of Russia. We must draw conclusions from these disasters, and finally learn the lessons of Chernobyl and Fukushima.

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Russia

Renewable future in the Russian Barents Region

By Anne Gry Rønningen and Ksenia Vakhrusheva

Today the Murmansk region in Northwest Russia is highly dependent on nuclear power to cover its energy consumption. Around 50 % of the energy production in the region comes from the Kola Nuclear Power Plant (KNPP). Together with energy produced by large-scale hydro and thermal power stations, the region is currently experiencing an energy surplus. This will radically change, however, when the KNPP reactors are decommissioned. Three of the four reactors which are operating at the power station today, have already passed their designated life span. The Russian authorities, however, keep postponing the shutdown of the reactors. This poses an environmental risk for Northwest Russia, as well as its Nordic neighbors and is one of the many concerns of The Bellona Foundation regarding environmental safety in the Barents region.

First of all, the concern regards the lack of modern security standards at KNPP, such as the security capsule covering the reactors. Due to the age and technology of the power plant, it will never be possible to upgrade the security level at the KNPP to satisfactory standards. If an accident should occur, the environmental and human consequences would be disastrous. Secondly, the nuclear waste produced by the power station continues to be a matter of great concern. No permanent safe storage solution exists for this highly dangerous radioactive waste which will continue to pose a major health threat for thousands of years. In addition to potential environmental and human costs, nuclear energy also represents a major economic cost. The newly published report "The Economics of the Russian Nuclear Industry" by Bellona, shows that contrary to claims that nuclear energy is an economically competitive energy source, nuclear energy is actually one of the most expensive sources of power. High subsidies from the state bring the prices down to an artificially low level. Bellona's report shows, however, that without these subsidies nuclear energy would never be able to compete on the regular energy market.

Based on these factors, Bellona has worked for more than two decades to convince Russian authorities that the KNPP needs to be shut down. Likewise Bellona has worked to promote the development of alternative clean sources of energy in the region. The Kola Peninsula possesses an enormous potential for development of renewable energy. To map this untapped potential, Bellona took the initiative to write the report "Prospect for Development of Non-conventional and Renewable Sources of Energy on the Kola Peninsula". The report was launched in 2007 and showed that the region in particular possesses one of the greatest wind energy resources in Europe, estimated at 360 billion kWh annually. In addition, the region possesses tidal, wave, small hydro, biomass, and solar resources. Using only a small percentage of all the renewable energy resources available in the region is more than sufficient to meet the current electrical power demands of the region, or match the power capabilities of the most outdated nuclear reactors, thus permitting their retirement.

However, both in Russia generally, and in the Murmansk region specifically there is a strong reluctance to make use of renewable energy. Unambitious renewable energy targets at the federal level (4.5% from renewable energy sources by 2020) is testimony to this, as is the absence of a specific renewable energy program at the regional level in Murmansk. Lack of political will and no economic subsidies nor other support mechanisms for investments in renewable energy, is placing Russia on the bottom of the charts concerning investments in clean energy. The aversion to such investments becomes evident through statements frequently heard from Russia's Prime Minister, Vladimir Putin. Last September, for instance, he said during the VII annual Valdai Discussion Club that nuclear energy was the only viable alternative to fossil fuels available today, while other alternatives were for now nothing but trifling business.

There are, however, some signs that Russia too is making steps towards more environmental friendly energy solutions. Throughout last year President Dmitry Medvedev repeatedly stressed the importance of developing alternative energy sources,

followed up by some juridical amendments. In October last year, the Russian government issued a directive stipulating a list of criteria for claiming federal compensation of costs for sites generating energy from renewable sources, provided their output capacity does not exceed 25 megawatts. This should help encourage construction of small power plants producing energy from renewable sources. Another step forward was a law, signed into force by President Medvedev last December, allowing companies to enter into long-term sale-and-purchase agreements to buy or sell power produced at renewable energy sites at special, wholesale-market, prices. In addition to the federal laws, all Russian regions were last year instructed to develop their own regional programs on energy saving and energy efficiency, including renewable energy, with an earmarked budget. Besides some additional funding from the federal budget, the financing of such energy saving initiatives have, however, to be covered from regional, municipal and private sources.

This means that even though such documents would help create some of the infrastructure needed to foster renewable energy prospects in Russia, there is still a long way to go, especially when it comes to support mechanisms and investment incentives. The Russian parliament, the State Duma, is yet to give its attention to a draft law on state support mechanisms for renewable energy sources in the Russian Federation – a bill prepared jointly by the Russian hydropower giant RusHydro and a number of experts in the field.

Another difficult challenge facing the development of renewable energy in Russia – besides the lack of an advantageous regulatory framework or any tangible support from government authorities – is the indifference on the part of most of Russia's energy consumers. Living in a country that has enormous reserves of fossil fuels at its disposal, the Russian population has grown accustomed to enjoying a steady and seemingly limitless supply of relatively cheap energy. Alternative energy, by contrast, is based on an entirely different approach altogether – one that puts the virtue of saving energy before producing it, with the emphasis on producing it in a sustainable manner that does not deplete nature's resources. Before Russia is even ready to make the leap to a greener energy economy, the very concept of energy efficiency has to take root in Russian minds – and workable energy saving solutions must be created in their homes.

That is why The Bellona Foundation considers information dissemination and capacity building, both within the government and civil society, as one of its most important tasks. Only by increasing awareness about locally available renewable energy alternatives among the inhabitants of the Kola Peninsula, can we create the foundation for making cleaner and safer energy decisions for the future.

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Russia

Security challenges in the Baltic Sea region – a Swedish perspective

By Ingmar Oldberg

Since the Warsaw Pact and the Soviet Union fell apart, the Baltic Sea region has moved from being divided and a front in the Cold War to being safely embedded in NATO and the European Union, while Russia has remained outside. The three Baltic states and to some extent Poland still fear their Russian neighbour, who remains militarily superior to all of them, and they are especially anxious about the cohesion of NATO and the transatlantic link between Europe and North America. They therefore worry that NATO and US military engagements in Afghanistan, Iraq and nowadays in Libya, will absorb too many resources and distract attention from the region and weaken NATO's solidarity clause. In order to win solidarity in case of threats against themselves the Baltic states and Poland have played active roles in these wars despite limited resources. Also non-allied Sweden and Finland, which benefited from NATO enlargement in the Baltic Sea region, support NATO operations in Afghanistan and Libya at the same time as they engage in EU military cooperation. Reunited Germany backed NATO in Afghanistan but not the wars in Iraq and Libya. Wars outside Europe thus also tend to split NATO, including the Baltic Sea states.

In order to reinforce their security the Baltic states and Poland have called for as much NATO and US presence in the region as possible. After joining NATO the Baltic states only got a NATO patrol of four aircraft based in Lithuania, and Tallinn became host to NATO's Cyber Defense Center, but no troops and installations, since Russia could see as a threat. However, after Russia's war in Georgia in 2008, NATO at least started to make contingency plans for the defence of the region. Concerning Poland, the United States in 2008 decided to deploy a missile base there against long-distance attacks from Iran in the future, but partly because Russia saw this as directed against itself, the plan was scrapped and a small base with Patriot air defence missiles was built instead.

Further, the melting of the ice in the Arctic Ocean and the rising demand for energy in the world has evoked a growing interest in West in access to the rich resources in the Arctic parts of Russia. Observers in the Baltic states therefore worry that this might lead to a reallocation of resources particularly in the Nordic states to the Far North and create a security vacuum in the Baltic Sea region, thus giving Russia more leeway politically and militarily. Western states could be tempted to make security concessions to Russia in the Baltic Sea in exchange for access to or deliveries of Russian energy from the Arctic. Furthermore, since most export of Russian oil and gas production in the Arctic region, notably the Yamal peninsula, goes through pipelines to the Baltic Sea and then by tankers or pipelines across the Sea to the West, this also increases Russia's wish to control the Baltic Sea. However, one can object that growing Russian engagement in the Arctic also could lessen its interest in the stable Baltic Sea region. Russia furthermore needs Western technology in exploiting its Arctic resources and modernizing the country, which may make it more cooperative in general. Russia also needs good relations with NATO and the EU.

The above words show that Russia, the biggest country in the region with great power ambitions, still poses several security challenges to its neighbours in the region, especially the small Baltic states. As the Russian economy recovered in the 2000s as a result of profitable energy exports, the military assignments have grown manifold. An ambitious naval construction programme has been announced, and several large-scale exercises been held in the region, mainly in the Kaliningrad district, often with offensive elements like amphibious landings. Violations of the Baltic airspace happen frequently, and Russian intelligence activities are intensive. The Baltic fears heightened when Russia in August 2008

invaded parts of Georgia and recognized the separatist regions of Abkhazia and South Ossetia as independent states. If Russia would deploy one of the huge Mistral assault ships, which it is buying from France, this would greatly increase the threat to the Baltic countries. On the other hand, the Russian naval forces in the Baltic Sea were much reduced in the 1990s. True, the number of ships is higher than in the other states but it is stable and the average age is over 20 years. Only one tactical submarine is operative. Further, the navy has no priority in the military system, and Russia has more serious security concerns and ambitions in the Black Sea region than in the quiet Baltic Sea.

More serious is the problem of the Russian minorities in Estonia and Latvia, which Russia has constantly used as a means of political pressure on the respective governments. Russia claims that they are discriminated against since they are not granted automatic citizenship, and its consulates distributes Russian passports to those who want them, which tends to undermine their loyalty to the resident countries. The defence of Russian citizens and compatriots abroad is inscribed in Russian official doctrines. In 2008 this pretext was used as a motive for the military intervention in Georgia. In 2007 Russia supported local Russian protests in Tallinn against moving a war monument through economic sanctions, and Estonian authorities were subjected to massive cyber attacks. However, this Russian policy induces the Baltic states to rely even more on NATO and the EU, and it undermines the positions of the Baltic Russians who do not want to move to Russia. Thus with time, Russia seems to have become more cautious in supporting the Baltic Russians and more prone to accept the governments. In 2007 it signed a border agreement with Latvia, which has the highest share of Russians, and in 2010 a Latvian president was for the first time officially invited to Moscow.

A still more serious security problem in the region is Russia's economic influence, especially in the energy sector. The Baltic states are totally dependent on Russian gas, and so are the other littoral states to varying extents. Russia has repeatedly stopped deliveries of oil and gas as a means to take over Baltic companies and/or exercise political pressure. The state-controlled Gazprom and other big Russian firms have also established themselves in certain fields. Russia has at the same time reduced its dependence on transit through the Baltic states, which was an important source of income, by building oil and cargo terminals in the Gulf of Finland. Concerning Lithuania, however, Russia remains dependent on it for land transports to the Kaliningrad exclave. The construction of a gas pipeline through the Baltic Sea directly to Germany, which has been used as a motive for more naval presence, has evoked protests from the Baltic states and Poland. However, the gravest security threat in the region is the growing number of oil tankers crossing the Baltic Sea, where one accident might have disastrous environmental effects.

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Northern Sea Route enters international shipping business

By Mikhail Belkin

The sailing distance from Murmansk to Shanghai when using NSR is approximately 6600 nautical miles while through the Suez Canal it will be 12000 miles. Less time and fuel spent for a voyage is not the only benefit of the "Europe-Asia sea highway". Such threats of traditional routes as piracy, political instability of neighboring regions and overloaded canals are totally avoided in the North. However the problem is that till 2010 the information of the Northern Sea Route potential was scarce and ship owners had more questions than answers. The NSR commercial navigation started to develop since 1920 but for decades the route was used for internal purposes of Soviet Union and then Russian Federation. Though officially the NSR was opened for foreign vessels in 1991, absence of definite shipping data and accident statistics hampered the efforts to evaluate the economical effect of transit voyages through the High North.

Atomic icebreakers operated by Rosatomflot provide safe navigation in the Arctic all year round, but the best time for commercial transit shipping through the NSR is from the end of June till the middle of October. This is a so-called "season window" when vessels with ice class of 1A or higher (1B is possible if ice conditions are mild) can navigate the NSR assisted by the powerful atomic icebreakers. The "season window" of 2010 set several milestones in the history of international shipping.

117 000 tons deadweight tanker SCF-Baltica left the port of Murmansk eastbound with the cargo of gas condensate for China. She was piloted by atomic icebreakers "Rossiya" and "Taimyr" while sailing along the NSR for less than 10 days. The voyage to China took the tanker 23 days against 42-44 days when sailing south. At the very same the two Russian hydrographic vessels were measuring depth above the North Siberian Islands to find the draught limitations. They have officially proved that the NSR can be used by the vessels with the draught up to 18 metres which means 150 000 tons deadweight vessels can navigate these waters safely. The High North areas are extremely rich in natural resources and their transportation to the world's major raw resources consumers like China can be done faster and easier through NSR eastbound. The companies that load oil tankers at the ports of Murmansk and Vitino (White Sea) already plan their future shipments to China via the NSR.

Bulker "Nordic Barents" with 41 000 tons of iron concentrate from Sydvaranger, Norway passed from Kirkenes to China via NSR in September. This was a truly international voyage for the Chinese-owned vessel operated by a Danish company was carrying Norwegian cargo bought by a Switzerland broker. The safety of the voyage was provided by the Russian atomic icebreaking fleet. The latter was doubted by the insurance company that, as was said before, had no definite statistics for the Arctic shipping. The desolate northern areas posed significant risk if the vessel had been damaged on the NSR. To remove this risk and bring the insurance premium to an acceptable level Rosatomflot introduced specific terms into the contract that guaranteed towage of a broken

vessel to the nearest port. This helped to resolve the matter.

The voyage of Tor Viking II was done in December 2010 - a month after the official completion of summer-to-autumn navigation on the NSR confirming that it is possible to increase the period of Arctic navigation in winter months if the piloted vessel is fit for it. Though at some point Tor Viking had to be towed by atomic icebreaker Rossiya because ice conditions at the time proved to be really hard. Tor Viking had to get from Alaska to the Baltic Sea as quickly as possible and the Arctic passage was the best choice.

While 2010 was a milestone in the history of international shipping, 2011 is to set a start for a full-scale Arctic transit navigation. Several ship and cargo owners have confirmed interest in the NSR transportation. Their plans are not limited by the existing fleet only which cannot satisfy completely the growing demand for ice-class vessels. New 1A vessels are being built and even more are planned to be ordered. In 2010 one 100 000 tons tanker and one 41 000 tons bulker made the pioneer voyages; today we talk about several panamax (75 000) and suezmax (150 000) type vessels. The transit bulk and liquid cargo traffic is going to increase correspondingly to 800 000 tons in 2011 and more than two million in 2012 and this is only eastbound cargo. The Asian market demands raw resources and container cargoes are dispatched to Europe. Should a return cargo line be established those numbers will rise by at least 50%. Today the Northern Sea Route is a safe and predictable alternative to the Suez Canal where the cost of passage is easily calculated due to recent revision of icebreaking support rates. Now a ship owner enjoys a considerable discount if a certain amount of transported cargo per year is reached or the same vessel sails in load via the NSR and returns in ballast.

As the NSR transit project develops and more parties are getting involved in it, the final integration of the Suez Canal #2 into the international shipping logistic scheme is a matter of few years. Atomic icebreaking fleet operated by Rosatomflot has accumulated immense experience of Arctic navigation which makes it the real shipping safety guarantor on the Northern Sea Route.

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The North-East Passage is already a fact

By Yrjö Myllylä

The increasing interest of the great powers in the northern areas shows that the North is moving from the periphery to focal point. U.S.A., Russia, Canada, and Norway have updated their strategies in the Arctic region since 2008. Finland's strategy for the Arctic was ready in the summer of 2010, and the preparation of EU's strategy for Arctic is a topical issue. The increased importance of the North has wide ranging impacts. There is a need to understand the real factors affecting the development, and pay attention to what we can control.

The great powers updating their strategies, climate change is only one reason for the increasing interest in the Arctic Region and the North-East Passage, other factors are more important. First of all, the collapse of the Soviet Union can be mentioned, which has moved the interest of Russia being the world's by surface largest state and by far the largest arctic state more and more north as the southern oil-producing countries became independent. Russia needs the North and the North-East Passage.

Secondly, the growth of the global economic should be mentioned and its impact on the prices on the limited raw materials, such as oil and other mineral. The third important factor is technology, especially transportation technology development - the new cost-saving transport system and other solutions create key conditions for exploitation of Arctic's natural resources – items that we are able to control. With these changes for example Murmansk, being North-West Russia's only ocean port and central nodal point of the North-East Passage is becoming increasingly important in the long term as a centre of the energy industry and logistics, with a radiation also to Finland.

The price of crude oil cleaned from cyclic variations has risen since the 1950s in today's money terms. In addition to the increase of raw material, price innovations of transport technology are needed to mobilize oil and other natural resources. The Finnish planning companies, such as Aker Arctic, a subsidiary of STX Finland, have been in a key position:

For example, the world's first oil transportation system operating in icy waters was introduced in the summer of 2008 in Varandei, situated in Pechora Sea in the north-eastern part of Europe. Without the assistance of ice-breakers, vessels transport oil along the North-East Passage to the mouth of the Murmansk fjord being ice-free all year round, where oil further is reloaded into ocean going vessels. The oil is transported to China along traditional trade routes. In the vicinity of Varandei an oil rig will also be completed in the Prirazlomnoye oil field in the summer of 2011, when oil drilling the Arctic Ocean begins. The oil of the field will be transported from Murmansk along the North-East Passage using Finnish-designed and already manufactured vessels.

The regular use of North-East Passage without the assistance of an ice-breaker was a fact already in 2006, when the Helsinki shipyard completed the first ore carrier ship designed by Aker Arctic and which was able to traffic the North-East Passage independently.

The vessel-Norilsk Nickel-named after the purchasing company, was an innovation.

It passes through the ice in North-East Passage without any assistance of ice-breakers in regular traffic from Dudinka situated at Yenisey River arm in Siberia to Murmansk. The main ice obstacles are passed by going astern, where for example the Azipod® drive system innovated by ABB and Wärtsilä will provide essential help. Another innovation is also ore and container transportation on the same vessel. Capital goods and consumer goods are then transported as return cargo. Four sister ships were constructed in shipyards in Germany as Finnish Shipyards at that time were giving priority to the production of cruising ships. In the summer of 2010 eight cargo ships came through the North-East Passage from one end to the other. By the end of January 2011, orders had been placed for the summer for more than 20 vessels for oil, gas and steel cargo.

The Finns can be considered are the world's most Arctic people. According to some sources, approximately 60% of the world's population living north of Helsinki are Finns. Our nation is enriched by northern technological know-how of ice-breakers as well as trains, tram ways and other means of transportation operating in snowy and cold conditions. This fact was also realised by the Russians, when founding the new Arctech Helsinki Shipyard together with the Russian United Ship-building Corporation and STX Finland in December 2010. However, arctic technological demand is not only confined to Russia. China is also interested in the northern natural resources. Technology applied to cold weather is needed over the whole Northern Europe and even in South Africa. At the moment, a research vessel for Antarctic representing a new generation and ordered by the South African environmental administration is under construction.

North-East Passage is not expected to melt. For example, according to the latest satellite data from 2011 the maximum extent of the ice in the Arctic Ocean has been more or less in line with the long-term average. We need to develop the technological know-how for inclement weather conditions, and keep the advanced position of the Baltic Sea countries as a co-operation between the countries also in the future. The Baltic Sea region is a key energy transport corridor. The Baltic Sea freezes in winter, at least partially. It provides a development platform for the products needed also for the upper Arctic Ocean region. The Baltic Sea Region can be used as a product development platform for example for ice-breaking and oil protecting vessels as well as for other transport, energy and environmental technology products operating in ice. There will be a growing market for these products in, for example the Arctic Ocean, where the oil transport is increasing. The coastal countries around the Baltic Sea could place innovative orders as South Africa did and order oil protecting equipment in the name of environmental protection. These products have a growing market in for example in the Arctic Ocean, with its increasing oil transports. The Baltic Sea countries should be active trying also to incorporate the themes of arctic transport, energy and environmental technology in the EU's research Framework Programmes. For example the so called Aurora Borealis-research vessel project for the arctic region planned with the aid of EU and Russia and Framework Programme should be continued.

Finland could also in the future play an important role in the development of the arctic transport, energy and environmental technology. In Finland, the Parliamentary Committee for the Future has produced during the year 2010 a report entitled "Russia 2030 based on Contracts" (editors Osmo Kuusi & Hanna Smith & Paula Tiisonen). In the context the Committee for the future has formed a statement: "Finland must draft a Research and Development Programme for the Development in Finland of Arctic Transport, Energy and Environmental Technology."

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Evolution of geopolitical factors, determining innovative directions of the Arctic regions sustainable development

By Valery Mitko

Geopolitical factors evolution means their consideration not in a statics, but in dynamics, allowing to predict variants that is the scientific substantiation of accepted decisions making an essence of the innovative approach. The major geopolitical factors, their evolution request the innovative approach in all spheres of ability to live and, first of all in safety of society as the sustainable development can happen only in the conditions of safety.

Geopolitics studies processes and principles the states, regions and the world as a whole development with the account of system influence of geographical, political, social, ecological, economic, military and other factors.

The **geographical factor** is defined by spatial position and natural resources. It is basic for Russia and its evolution only for the last century had an essential change of Russia and new approaches of defining of external borders of continental shelf in Arctic regions instead of sectoral to the following from the Convention on the International marine law accepted not by all subarctic states. It defines innovativeness of the approach not only to formal delimitation, but also to a scientific substantiation of their change. Talking about claims of subarctic and other states to various possible activity in Arctic regions it is necessary to consider as correct and **innovative direction** an advancing of declared duties of region development in comparison with the shown rights in maintenance and a region sustainable development.

Political factor consists in type of statehood, organizational structure of management, division of authorities, social structure of a society, presence of a civil society, freedom of the Mass Media. The Arctic Public Academy of Sciences created on the basis of Geo-policy and safety section of the Russian Academy of Natural Sciences shows credo – assistance of harmonisation "Science-power-business" relations on the Civil society formation basis.

Economic factor is defined by people standard of living, capacities, agrarian capacities, a transport communication infrastructure, mobilization capacities. This factor is the major, defining the maintenance and forms the inter-regional and intraregional interaction. The comment can be only one as there are interesting slogans of type «Fights for Arctic regions» which are however not unreasonable, but evolution of this factor allows to assert that the one who will provide higher quality of life in region will win fight. Here one more important thesis is pertinent: if quality of life grows in region more slowly than manufacture growth there will be colonial character of interactions.

Military factor basically for Arctic regions can consider in its connection with global and regional safety. Evolution of the military factor is very considerable and it is possible to make comments on creation of ice airdromes in Arctic regions in the thirties, a concentration in Arctic regions sea strategic nuclear forces of Russia and other states, escalating the military presence in this region recently.

Ecological factor is defined by demographic pressure upon the limited resources of territory, an exhaustion of resources, life-support system of the person, vegetation and fauna poisoning and destruction. The ecological factor as well as its evolution, for Arctic regions as a whole and for region, in particular, are specific for the reasons of anthropogenous factors on environment increasing pressure. It is necessary to notice that in the foreseeable future in region placing few floating atomic electric power station are planned. It also will influence on the radiation safety organization in region besides the general for Arctic regions problems – its contamination for many years and without **innovative workings out** clearing of the Arctic territories is simply impracticable.

Demographic factor is defined by density and population structure, rates of development. Features of this factor evolution are defined by a general world tendency. The tendency of sharp steady growth of the population in southern regions and slow – in northern. It inevitably leads to change of structure of the population in northern regions. The declared idea of "tolerance" if has not completely failed, at least appeared rather insolvent in Germany, France. Though the North, owing to a special environment always reckoned this point of view socially tolerant, it is possible to assume presence of problems already in the near future. The principle not tolerances, but harmonization of the indigenous and alien population on the basis of steady traditions acceptance in region should be an **innovative direction** here.

Cultural-religious factor is defined by confessional, national, cultural, labour traditions. Here it is necessary to consider, both traditions of indigenous population, and appeared in foreseeable historical term from other regions. The culture should shine road to economy, otherwise last wanders in darkness. This factor defines integrity of the Russian state as only creativity is penetrated by search of meaning of the life, and the person, aloof from culture, actually becomes the criminal.

Ethnic factor is defined by interests of indigenous nationalities in other states, level and a condition of their participation in social processes. Previous and specified factor there were a subject of active discussion on nowadays.

Intellectual factor is defined by development of a science, formation. This factor becomes the major in XX1 a century when science and education becomes a strategic resource of the state as a whole and region, in particular. In revival of geopolitical value of Russia exists, obviously, and objective requirement - without its stabilizing role boundless open spaces of the post-Soviet territory in long-term prospect are doomed to disorder interstate relations. The sustainable development concept is preferable already because it leads to change of competitive type of behaviour on conciliatory.

Russia has made enormous efforts in North development. Unique manufactures in the north, unique Northern sea route are created. Now all leading countries show heightened interest to Arctic regions as to a source of safe development in the XXI century. Actual are questions: What is mission of Russia in Arctic? Have Russia abilities to discharge such mission? Do other states agree and approve the Russian mission in Arctic?

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Russia's human capital and the task of modernisation

By Julian Cooper

In assessing Russia's prospects for modernisation, an important issue is the state of the country's research potential and the implications of unfavourable demographic trends. It is often argued that one of the advantages of Russia when compared to other emerging economies, or 'growth markets' as they are now termed by Jim O'Neill, the originator of the BRIC acronym, is that it possesses strong human capital in terms of educational standards. This is usually seen as a favourable legacy from Soviet times. However, paradoxically, it could now be argued that human capital has become almost an Achilles heel of present-day Russia, threatening to become yet another obstacle to modernisation, rather than a central component of the solution.

There are several dimensions to this issue. Firstly, there is no question that Russia possesses considerable scientific talent. However, the average age of scientists has been rising steadily and the number of young people wishing to take up a career in research has been relatively modest. All too often, the most talented younger scientists prefer to work abroad. Pay is not usually the main issue. More important is a widespread and justified perception that the research culture in Russia is not conducive to productive research or rapid career advancement of the talented. For scientists in 'exile' it is rather galling to see Russian government measures designed to attract top foreign scientists to work in the country, notably in the Skolkovo enclave. It can only be hoped that the experience of foreign scientists spending time in Russia may help to promote much needed reforms making the lives of indigenous researchers more congenial.

There is another, related, problem. A legacy of the Soviet past is that in Russia much of the nation's high technology industry is found within the defence industry. As Medvedev and Putin now appear to recognise, economic modernisation must also include an upgrading of the capability of the defence sector, not only to permit the development of more advanced armaments, but also to boost civilian high technology. But here there are some difficult personnel issues. With a few exceptions, mainly enterprises successful in exporting their arms, pay levels are still relatively low compared with those of other sectors such as financial services, energy or metals. In addition, the very strict regime of secrecy, a legacy of Soviet times, is not attractive to young people used to the new freedoms of post-communist Russia. In addition, they find that research institutes and design organisations are staffed predominantly by much older personnel, many beyond retirement age.

The situation in the electronics industry is illustrative. According to the then head of the department of the radio-electronics industry of the Ministry of Industry and Trade, V Minaev, speaking in late 2009, the average age of all personnel in the industry was almost 47.5 years, with 16 per cent under 30, but 27 percent over retirement age. (According to another dependable source, in the late 1980s the average age was in the early about 33). Of scientists, only 18 per cent of candidates of science were under 50 and a mere 4 per cent of doctors of science, but 58 per cent of the former and an astonishing 83 per cent of the latter were working pensioners. And this is in an industry experiencing extremely rapid technological change.

To make matters worse, the labour force is steadily contracting. In the Russian radio-electronics complex, which also includes the communications equipment industry, the number of R&D personnel has fallen from 140,000 in 1997, to 110,000 in 2000 and is now some 80,000. It is perhaps not surprising that since 2004 the volume of output of some important electronic components, in particular integrated circuits, has been declining quite rapidly. The state of the electronics industry is giving rise to mounting concern as the production of military and space equipment is becoming increasingly dependent on imported components, notwithstanding a strong official commitment to self-reliance. The available data indicates a similar situation of ageing

R&D personnel, with very modest new recruitment, in other branches of the defence industry.

At a government level there is also a growing realisation that the quality of higher education at many universities and colleges is not of an adequate level. That this may be a more general issue is shown by Russia's relatively poor showing in the OECD's PISA surveys comparing levels of educational achievement at the school level. Even in maths and science, the relative standing now is not impressive. Furthermore, when efforts are made to secure training in new skills appropriate to the modernisation agenda, the results are not always satisfactory. Recent reports have indicated that some universities have quickly introduced new academic programmes in nanotechnology, but the first graduates are finding it difficult to find jobs, partly because their skills are being found not appropriate to the requirements of the business sector and because the quality of training is not of an adequate level.

Since 1991 the prestige and popularity of science and engineering as disciplines to be studied at universities have fallen sharply, many students preferring economics, business studies or law. The shortage of highly trained engineers is a matter of concern at the government level and the problems of engineering education formed the topic of the March 2011 meeting of Medvedev's Commission for the Modernisation and Technological Development of the Economy.

A major problem in improving the quality of higher education is the relatively weak development of scientific research within the university system. Only fifteen percent of higher educational establishments are engaged in R&D and the majority of lecturers are not personally involved in research activity. Overall, the share of Russian total R&D by spending undertaken in the higher educational sector is less than ten percent, in striking contrast to most OECD countries. Efforts are now underway to boost the R&D contribution of the university system, but this will inevitably be a gradual process. The experience of many developed countries is that interest in research is developed first at the undergraduate level, but in Russia the dominant perception appears to be that it is something that can be left to the stage of postgraduate training.

The skill problem is not only a matter of high level aptitude for research. In high technology sectors, not the least the defence industry, there is an increasingly acute problem of a shortage of highly skilled manual workers. Inadequate skills, coupled with aged production equipment, may explain at least in part an embarrassing series of failures in the military-space sector, e.g. the 'Bulava' submarine-launched strategic missile and the failure to launch satellites required by the GLONASS navigation system.

The problems Russia is now experiencing with human capital suggest that its development has to become a higher priority in developing policy for modernisation. The salience of this issue will mount as negative demographic trends make themselves felt, above all the fall in the cohort of young people which will be a feature of the coming decade.

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Estonian-Finnish cooperation in the fields of innovation, and R&D as a start-up company

By Valdar Liive

Estonia and Finland are neighbours with impeccable political and economic relations. More than 4000 companies with Finnish holdings have been registered in Estonia, Finland is the largest trading partner of Estonia, and more than 6 million trips take place between Tallinn and Helsinki annually.

Do the relations of these two countries have room for development, and do we need to work for it or will it happen by itself? Is there something Finland and Estonia could do together? It all depends on how you look at it. Helsinki was established to compete with Tallinn, but when looked at from a bit further away there is nothing more than a wide river separating Estonia from Finland.

I believe that we have preconditions and opportunities for wider cooperation on the global markets. Going back in history, trade between Northern Estonia and Southern Finland, the "seprakauppa", has existed for more than 700 years. Fish from Finland and grain from Estonia, this is how cooperation and building of trust took place for hundreds of years.

We have the same understanding of quality. Honesty, individual contribution and cultural similarity – these are all important. Finnish people take longer time to plan their actions; Estonians may be a bit more flexible and experienced in working in constantly changing conditions.

We are different enough to interest each other, but also similar enough to make cooperation possible. Estonia has one of the best-developed e-solutions packages in the world¹⁰, Finland has priceless experience in developing industry and brands. Since the beginning of 2011 we have had the same currency, euro. We are both members of the EU and OECD, Estonia also belongs to NATO.

The Prime Ministers of Estonia and Finland have ordered two cooperation reports, by Jaak Jõeriüt and Esko Ollila in 2003 and Jaakko Blomberg and Gunnar Okk in 2008. In the latter report, opportunities for cooperation in the field of information and communications technology were emphasised.¹¹

The Euregio¹² network has been developed to promote co-operation and enhance regional integration between its members: Tallinn, Helsinki, Uusimaa and Harjuma.

In 2011, the European Capitals of Culture are Turku and Tallinn. Thanks to this project, numerous joint cultural events, tourism products and business solutions have been generated.

In 2010, the Estonian House (Eesti Maja – Viro-keskus) was opened in Helsinki, accommodating the Estonian Institute, the Tuglas Society, The Union of Finnish Estonian Society, Enterprise Estonia (tourism, export and foreign investments) and a representative office of the University of Tartu. This house was been established through citizen initiative, not by a decision of the governments. Cooperation between the cultural, business, tourism and citizen unions has become very fruitful. In addition, we have managed to significantly increase the visibility of Estonia in Finland. Finland is planning the concept of the House of Finland in the world. I believe we can help with our experience.

Here are some examples of the mutually interesting activities.

One good example is the Interreg project Smart Hotel, carried out through the cooperation of designers and industry, producing wonderful products in a short amount of time in intensive cooperation. It is hardly surprising that we chose the designers that participated in this project to furnish the Estonian House in Helsinki, and the Estonian Association of Designers as our cooperation partner. Cooperation is created between people, not organisations.

The Finnish publicly traded company Technopolis bought a majority share of the Ülemiste City technology park, located next to the Tallinn Airport in 2010 and named it Technopolis Ülemiste. The synergy forming as a result of this can already be seen, and hopefully the result will be even more impressive in the next couple of years. Today, Technopolis can offer office space and business services in Finland, St. Petersburg and Tallinn also to global enterprises. This is a tempting opportunity.

The Mobile Monday¹³ movement, established in Finland 10 years ago, is now globally active in more than a hundred locations. In September 2010, the jubilee of Mobile Monday was celebrated with a joint conference in Tallinn and Helsinki. More than 500 participants from 37 countries became acquainted with the best Estonian and Finnish skills, and their satisfaction was evident.

The Estonian start-up initiative Garage48¹⁴ - from idea to service within 48 hours - has also built a reputation outside Estonia. In January 2011, there was Garage 48 event in Helsinki at Aalto Venture Garage, bringing together young people from different countries and creating 16 new products in one weekend. However, cooperation and getting to know each other is even more important than the products. Currently, Garage 48 has projects in Africa with such cooperation partners as Google and Nokia.

The joint project of Outotec and Eesti Energia, Enefit¹⁵, is a specific industrial example that makes it possible to create modern technology for producing energy and oil from oil shale. It is most likely that Estonia has the best professional knowledge in the use of oil shale, and Outotec is a globally known engineering firm and manufacturer of mining technology. The first Enefit-280 plant will start production in Estonia in 2012, with the aim of being the best technology in the world.

In my opinion, the basis of innovation is formed by curiosity, limitations and environment. The cooperation opportunities between Estonia and Finland can be compared to a start-up business: there is not much money, but there are plenty of people with ideas and will-power. We have to prove that we can be better together than separately, and this cooperation could be extended to the whole Baltic Sea Region.

All we need to remember is that everything takes time: the first public cooperation project of the software developers that created Skype in 2003 took place in 1995, and Angry Birds was the 52nd game of Rovio.

My aim is to find the best characteristics of Estonian and Finnish enterprises and to encourage them to succeed on the global market together. Will you join this exciting journey?

Valdar Liive

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www.estonia.eu

¹⁰ www.e-estonia.com

¹¹ www.valitsus.ee/en/government-office/cooperation-between-estonia-and-finland

¹² www.euregio-heltal.org

¹³ www.mobilemonday.net

¹⁴ www.garage48.org

¹⁵ www.energia.ee/en/oil/international/enefitoutotec

Transferring innovation system knowledge to every-day best practices

By Jukka Viitanen and Martti Launonen

Governments all around the world are studying the new, emerging innovation activity trends and innovation creation mechanisms in search for up-to-date policy direction and tools to support their national economies. The focus is shifted from narrow science and technology (S&T) policy approach to building more comprehensive innovation policies, which can form a key policy framework and instruments for combining the academic research, technical R&D and market-driven solution provision.

Shift to innovation platforms

It has been widely recognized that the innovation ecosystems' national and regional development has been, so far, a relatively successful model for regional revitalization bringing together the key innovation actors to perform the relevant technology-driven development processes. The innovation ecosystems are organized primarily in various forms of regional clusters and combine public sector interests to private sector business-oriented actions. These activities have been located typically in modern science or a technology parks to create a physical, identifiable place for the shared actions, which in turn, can bring along additional branding and marketing benefits for the participants. However, all core organizations in every region are not uniformly successful, which leaves open a question: how to guide the under-performing regional systems closer to the global front-runner position? Why some score better than the others?

The global realities around the national and regional ecosystems are rapidly changing and so-called open value system development casts shadows to the present-day collaborative settings. The closed, local ecosystems lack the power and ability to attract key players, and are often doomed to remain "just that" - local. The global front-runners are moving towards an era of value network competition, where innovation and knowledge brokering take place in increasingly open, shared settings. The innovation activities become borderless, yet interconnected. It is argued, thus, that the future success of any and all innovation ecosystems is measured increasingly in innovation actors' abilities to connect and manage the talent, resources and partnerships - in combining the local knowledge base to the global innovation networks.

Best practices for share

Hubconcepts Inc. experts have been actively involved the last 15 years in developing practical tools and frameworks for innovation system management. They have visited in over 200 park sites, benchmarked dozens innovation and incubation centers, and conducted numerous studies all around the world. Now, the global best practice for managing the leading innovation ecosystems and hubs has been summarized in Hubconcepts™ book, which presents real-life case studies of seven (7) best practice sites from the USA, Europe and Asia. The book and in-depth analyses present a fully integrated framework and a systematic approach to developing the future innovation ecosystems and the related organizational processes, necessary to achieve the best possible innovation outcomes.

The authors see that it is of utmost relevance to realize that future innovation ecosystems will be embedded in a more globalized, interconnected and collaborative context, where information, resources, talent and solutions can flow freely and effectively between mutually complementing and/or competing locations. It is argued that these factors no longer endorse (strictly speaking) nation states, regions and/or organizations, but build instead on mutual trust and interest. Under these circumstances, the decision makers must prepare for continuous competition for the best factors and concentrate their efforts on building up attractive, functional and thoroughly interconnected platforms for effective knowledge and technology transfers, mutually beneficial innovation collaboration, and timely commercialization.

In the Hubconcepts™ book, each case study outlines the current state of the key characteristics of a particular ecosystem setting. The stories present cross-sectorial relations, service structures and critical success factors in attracting, keeping and

developing the necessary resources, talent and capacities for continuous innovation creation. The results are analyzed for the ecosystem's capacity and readiness for meeting the globalization challenge, resulting in a distinct Ecosystem Profile for future reference. It is generally argued that, if and when done properly, these analyses can reveal a formula for replication and speed up the development of the next generation environments - not necessarily directly copying and transferring the results as is, but more like imitating the proven functional behavior for quality results.

The book gives the reader a chance to familiarize him/herself with related concepts for ecosystem development, particular characteristics of global best-practice case sites and, then, to reflect the presented notions to his/her own practices in relation to the specific development and management challenge at hand. Moreover, it is argued that the introduced concepts and findings can also be used as practical references for charting, evaluating and positioning regional innovation ecosystems on national and global levels.

Future in infrastructure – service combinations

The authors believe that the future success lies in more comprehensive regional planning, combination of parallel complementing management processes and real customer-driven benefit analysis in a core of park/center/environment planning. Moreover, they see necessary a shift towards regional master planning where real estate development projects are seen as a key part of the wider community development providing required infrastructure for future changing living/business/innovation environments.

The Hubconcepts™ framework, toolbox and management approach provide a foundation for planning and developing globally attractive innovation ecosystems. Decision makers can identify core issues fast and create practical vision for the regional development in truly global setting. This approach saves time in planning stages and keeps everyone focused on practical implementation challenge. The common terminology, best practice tool-set and readily available reference material of world's leading innovation environments improves dramatically the orchestrated development times and processes. Now, it's time to take the innovation system development challenge to the next level.

Jukka Viitanen

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Hubconcepts Inc.

Finland

Estonia – ever more firmly in the nation-liberal course?

By Henri Vogt

Estonia joined the club of Euro-countries in January 2011, almost 20 years after it had regained its independence in August 1991 and among the first of the former Eastern European communist countries. That this could happen also confirmed the remarkable recovery of the country's economy after the severe post-Lehman Brothers problems of 2008 and 2009. The economy is once again booming – the annual GDP growth rate may exceed the five per cent threshold this year – even though the level of unemployment has remained high, at well over ten per cent. Indeed the country is now the only one in the Euro-zone that fulfils all the criteria of the Stability and Growth Pact.

Given these developments, the first parliamentary elections of the Euro-era, held in March 2011, did not bring about any major surprises – apart, perhaps, from the turnout, which was reasonably high by the standards of the former communist countries of Eastern Europe, 63.5 per cent. The two biggest parties, the Reform Party and the Union of Pro Patria and Res Publica, together gained a healthy majority in the parliament and they now share the responsibility in Estonia's government; *Reformierakond* renewed its mandate in the Office of the Prime Minister. It is also noteworthy that the fragmentation of *Riigikogu* decreased significantly and, unlike in most previous elections, there were no significant new groupings that would have appealed to the voters with a populist, against-the-establishment message.

What these results seem to tell, above all, is that the political and economic course that Estonia has followed over the past two decades is now widely accepted by the citizenry. Many commentators call these policies 'neoliberal', but I would probably rather use the attribute 'national neoliberal' (or perhaps 'nation-liberal'), with a strong emphasis on 'national'. In other words, the Estonian political system, its polity, continuously obtains its basic energy from a strong sense of being a national *Gemeinschaft*, a community of ethnic Estonians. All acts societal thus include a national dimension; people's daily work efforts are not only meant to advance the wellbeing of the individual but also that of the entire nation – in spite of the individualistic tendencies that one can also easily observe in the country. In Scandinavia, by comparison, such mechanisms are much weaker. There are research results about this from the 1990s, but I cannot think of any issue that would indicate a significant change of this state of affairs.

This also means that a large part, or perhaps the majority, of the country's citizens have deemed the sacrifices of the past 20 years necessary and above all justified. Many ordinary Estonians, far more than was expected as the new era of independence dawned, have suffered severely during the post-Soviet transformation processes. The cleavages between winners and losers, between the successful and the unfortunate, have often been deep and clear-cut; in the beginning of the 2000s there was even a debate about the existence of 'Two Estonias'. Any visitor to the country can, of course, still easily get a sense of these deep dividing lines: one only has to look at the shining new towers in the centre of Tallinn, and compare them to the grey countryside villages.

The deepest cleavage of all is, of course, that between the Russian speaking population and the native Estonians. With the country's EU membership the situation of Russians has not improved, the political system hardly gives Russians a voice – and the relationship between Estonia and Russia has remained tense. The wide support of nation-liberalism thus also means that the often controversial and conflict-laden Estonian policies towards the Russian minority and Russia itself elicit very little criticism among the native population. In fact, we could also interpret the election results as a protest against the seemingly Russia-friendly policies and attitudes of the Centre Party, the biggest opposition party. There is currently no indication about this Baltic Tiger assuming more constructive policies towards Russia.

Estonia has thus remained a country of great contrasts but what is important is that this contrast-based societal constellation is now accepted and perhaps even affirmed by the majority of the population. Or perhaps we could even go so far as to argue that the existence of deep cleavages in society and the animosities towards Russia have constructed and reconstructed the Estonian nation in the sense we know it today. Within the national *Gemeinschaft* the fact that some people have had to suffer (more than might have been necessary) confirms the fact that the nation is something sufficiently valuable to suffer for; through this suffering the nation is knit together. In other words, instead of the universalising social-democracy that prevails in the Nordic countries and that acts as the foundation of their societies, Estonia's primary mentality is based on the particularism that materialises in terms of cleavages and contrasts both within society and towards its neighbours, combined with a strong sense of economic freedom. This may appear as a ruthless type of society, but it is certainly in many respects a dynamic and exciting one.

The late Ralf Dahrendorf, a world-famous sociologist and politician, claimed right after the events of 1989 that new political institutions can be put in place within six months after the change of the regime; in the case of the economy the change requires perhaps six years; but the social and cultural transformation would possibly last as long as 60 years. Estonia, in my view, shows that even socio-economic changes can happen relatively quickly, a new system has become thoroughly – to the extent it is possible in human societies – consolidated in just two decades. But this definitely does not mean that this new society would be without any deep cleavages and contradictions.

These cleavages and contradictions, however, can emerge or suddenly sharpen also in societies that have long enjoyed the benefits of a stable democracy. The current political situation in Finland is a testimony to this.

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Materials technologies transform Estonian economy

By Laura Kauhanen and Pekka Koponen

Estonia, as an emerging economy, has set an ambitious goal to raise the total R&D expenditure from current level of approximately 1.5% to 3% of GDP by 2014. The goals cannot be met only by means of money and thus the country has defined three strategic key technologies in supporting research, development and innovation. In order to reach the goals, Estonia is, among other instruments, launching national technology programmes to support key technology development. One of the priority areas are materials technologies and advanced materials, which have a key role in increasing the value of many industrial products.

Estonian materials science has been found high class in international comparisons but the public sector has lacked information for assessing the level of competitiveness of the materials technology related industries and the relevance of current research and development to the market needs. This has hindered the public sector from gaining a better understanding of the obstacles, challenges and opportunities that both public and private sector face.

Now for the first time, materials technology research, development and industry in Estonia has been mapped thoroughly. In addition to extensive interviews, the mapping was supported by the country being a leading e-state and hosting, for instance, publicly available database of all university research results published in Estonia. The comprehensive study provides an interesting case example for other emerging economies.

Materials technology is by nature an enabling and interdisciplinary field of technology. It provides significant added value on different fields of industry enabling renewal and increased productivity of existing industrial sectors as well as development of new business areas based on higher added value products and services. Materials technology is also strongly interlinked with the development of the other strategic key technologies, information and communications technology and biotechnology, named in the Estonian innovation strategy. The focus of traditional materials science has long been different structural materials. During the last few decades a vast number of new advanced materials and applications with extensively tailored material properties have gained ground. In the future, it will become possible to manufacture a wide variety of intelligent materials that can, for instance, react to changes in the environment, be responsive and communicative.

The analysis of Estonian Materials technology community shows that the country has a vibrant start-up community starting to commercialise the research results but the economic impact is still low. Technologies recognized under market maturation, market entry and prototype are the ones where rapid commercialization can be possible. From Estonian point of view, this includes technologies such as:

- Market maturation
 - Rare-earth metals, Oil shale technology, Laser technology, and Atomic Force Microscopy
- Market entry
 - Non-woven filter media, Fuel cells, High temperature power semiconductors, Supercapacitors, Thin film solar cells, Electroactive polymers, Electro-optical coatings, Industrial biotechnology, E-paper. Materials technology and Biotechnology.

Interesting developments further from markets include advanced coatings for metals industry, photovoltaics materials in general; carbon based nanomaterials and other nanomaterials as well as materials for sensors, atomic layer deposition and various new composites for metals industry use. These should be the main target for technology transfer activities.

In Estonia the economically important manufacturing industries including metals and machinery, forest, chemicals, plastics, textiles and construction materials are mostly working with very low added

value products and have currently very limited capability in applying research results in practice. To ensure high economic impact, a good balance needs to be found between investment and support for fundamental research and industrial production. Increasing collaboration in applied research between university research groups and industry will play a key role.

On international level, Estonian researchers in universities as well as many companies through their customers have good international connections. The largest area for development needs is in international technology transfer and scouting. There is also surprisingly little governmental cooperation in e.g. materials technology programmes between the Baltics and the Nordics despite the study showing focus on similar technology areas. Moreover, the proximity of Russia means a huge potential for technology and knowledge transfer both from and to Estonia with Estonians having a natural advantage compared to other countries by the good knowledge of Russian. Very many of the high technologies now in market phase have origin in Russia or Russian times. This opportunity will materialize only if the two parties overcome the political tensions and understand the mutual value added.

The following conclusions are made:

- As a small country, a strong focus of public funding is needed
- There is a good set of materials technologies in Estonia in all phases of the commercialization pipeline. The different phases face very different challenges and thus need very different support actions
 - Technologies in mature markets need more educated workforce in companies and more risk taking attitude in starting R&D projects and increasing the added value of products
 - Technologies close to market entry need public or private funding for establishing production as well as business knowledge to enter the global market
 - Technologies in R&D phase should be developed in collaboration with industrial players to guarantee practical relevance and future commercialization capabilities
- In most cases, there is a large gap between industry needs and university research and education

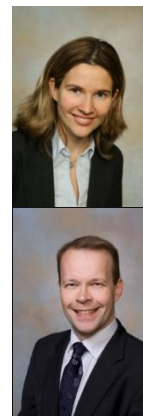
To sum-up, we believe Estonian materials technology plays an interesting role in the renewal of the already very traditional industry and there are some very interesting high-tech companies emerging. The study recommends a governmentally funded R&D Programme with strong support actions on facilitation of university and company cooperation to prepare for future funding "Materials R&D to business".

For full review of Estonian Materials Technology field see: Feasibility study for an Estonian materials Technology Programme made by Spinverse Oy and ordered by the Ministry of Economic Affairs and Communication.

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Modernization and innovative development in Russia – what lacks?

By Irina Busygina and Mikhail Filippov

Russia is a rich country which lags behind in technological innovations. It has significantly more researchers per thousand inhabitants than China, Brazil, or India, but it fell far behind China, Brazil and India in registered patents.

By the end of 2010 the evidence was abound that Russian businesses were reluctant to invest in new technologies. The natural resource extraction remains the most active area of investment. Most disturbingly, there is a clear tendency towards putting new investments not into buying new technologies but in repairing and maintenance of the old obsolete equipment. The equipment in use became so old that it was now necessary to divert much of available investments to just keep it running.

In June 2010 president Medvedev instructed the government to set up a “special investment fund” in which government funds will be complemented with private capital. No results of such a new investment strategy have been reported so far. There are a lot of evidences illustrating that state owned corporations created to promote innovation prefer to hold the money in bank deposits instead of investing them in risky high-tech products. Despite these facts, the chief Kremlin ideologist Surkov continued to argue that finding more money was the key to the problem of economic modernization: “methodologically, modernization is a simple thing – one needs money to introduce new technologies”.

Government-proclaimed desire to promote technological innovations and boost economic growth in Russia implies the need for the state to take an active role in economy and to provide the right stimuli and guarantees for investors. Since the Russian state under the current political regime lacks trust and credibility, and since the actions of the state to promote innovative economic development as well as its likelihood to succeed would depend on its type and characteristics, the economic agenda would demand its democratization. For entrepreneurs and investors, the Russian state in its current form is inefficient, ridden by corruption, lacks accountability and is unpredictable. Most importantly, it cannot credibly commit to respect property rights and sustain the rules. The democratic reform, in ideal, could modernize the Russian state and make it simultaneously strong, limited, accountable, conducive to good governance, and, thus, an effective agent of economic modernization.

Yet the same Russian leadership that sees and proclaims the vital importance of economic and technological innovations is reluctant to engage in political modernization, attempting instead to improve the existing model of governance by administrative methods. We explain such reluctance with the heightened political risks from the democratic reform for the stability of the current political regime. Thus, we are quite pessimistic about the

short and medium term perspectives of the economic innovations program in Russia. On one hand, the current political regime cannot provide “good governance” and credible commitment to form and sustain incentives for domestic and international businesses to invest into technological innovations in Russia. The existing political regime is more suitable for the status-quo economy based on natural monopolies exporting raw materials, metals and energy. On the other hand, anticipation of high costs and risks of political reforms make the choice to pursue them rather unlikely, and even less so during the forthcoming electoral cycle of 2011-12. In any case, political reforms would not have their desirable positive effect on the economy for a number of years.

In order to succeed in democratization, Russia needs time and investment of considerable economic and political resources to maintain trajectory until the benefits of reforms begin to emerge. Moreover, transformation process will cause serious political risks. Political reforms require patience – from the population as well as from the key political actors. And they require the initial consensus with regard to the long-term commitment to stay the course.

We could expect the period of instability and inefficiency caused by the initiation of reforms in Russia to be long and painful. The winning coalitions are likely to form half-way into a reform in favor of reversing the direction of institutional change. This suggests that several back-and-forth reversals might be realistically possible in future.

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Russia's modernization program as opportunity for Baltic Rim economic cooperation

By Päivi Karhunen and Riitta Kosonen

The national innovation system in Russia has been in major transformation since Vladimir Putin's first presidential term. The speed of introducing reforms in the field of research, education and innovation infrastructure has been particularly rapid during the past five years. The program for modernization of the Russian economy, launched by President Dmitry Medvedev in 2009, has brought along new initiatives in this field, and significant budgetary resources have been allocated to some of them.

The challenges of the Russian innovation system are numerous. The strategy draft Innovative Russia 2025, prepared by the Russian Ministry for Economic Development, makes an excellent overview of the state of the art. First, in the international innovation comparison Russia's performance is modest. The share of research and development (R&D) expenditure in the Russian gross domestic product (GDP) is slightly over 1 per cent, and the country's technology trade balance has turned negative in the 2000s. Furthermore, the financing of R & D is strongly dominated by the state, the share of which in 2009 was 66.5%. The efficiency of use of R&D funding calls for improvement as well. The three-fold increase in R&D expenditure since 1995 has resulted only in a 30% increase in the production of innovative products.

Moreover, the demand for innovations by Russian large companies is low, and skewed towards updating of manufacturing equipment instead of research and product development activities. This is one of the key reasons for the low degree of commercialization of innovations made in research institutes, which is traditional for the Russian science community. This problem was inherited from the Soviet economy, where R&D activities were performed at state research institutions with no linkage to the enterprises.

The interest of foreign companies to invest in R&D activities and technology-intensive production in Russia has been low. This is in part due to the challenging business environment in the country with excessive red tape and rampant corruption. Moreover, the cumbersome customs regulation and procedures have eroded the competitiveness of Russia as offshore production location of high-tech goods targeted to the world market.

What makes the modernization program different from previous initiatives for reforming the innovation system? One key issue is that for the first time, foreign actors are openly invited to participate in the process, and the need for imported knowledge and technologies has been recognized as central part of modernization. The introduction of modernization partnerships with foreign countries, including the European Union, provides a framework for such participation. Concrete initiatives introduced in the framework of the EU-Russia partnership for modernization include the proposed joint funding program by EBRD and Vneshekonombank, which would provide financing for investment projects implemented in Russia.

Furthermore, the recent reforms in the innovation system have included programs for bridging the gap between science and enterprises. One of the aims of the science sector reforms is to strengthen the research done in universities, and to strengthen their role as hotbeds for new innovative enterprises. The entrepreneurial university concept is a key component of the National Research University program, launched in 2009. It aims at creating preconditions and support structures for innovation and commercialization of research results into businesses at universities. An important step supporting this

aim was the law approved in 2009, which gives universities the opportunity to establish small innovative enterprises.

Moreover, the modernization initiatives have been linked to the broader context of improving the business environment and investment climate in Russia. The problem in previous attempts to improve the innovation infrastructure, such as the establishment of Special Economic Zones in 2005, has been that the legislation regulating them has not been in line with the broader legislative framework. This problem has been addressed in, for example, in the planning of the Skolkovo Innovation City, for which own legislation was adopted. This includes streamlining of visa and immigration procedures, and facilitating dealing with different authorities for Skolkovo residents. All these issues have caused major difficulties for foreign firms in Russia.

To sum up, the modernization program has in principle opened a new era in the history of Russian reforms, being based on the principles of open economy and international cooperation. This may open a window for the increasing integration of Russia to the Baltic Rim economic region. The principles of the modernization program may boost the role of St. Petersburg in the Russian economy, as being the Northern Capital of Russia. St. Petersburg hosts four National Research Universities, and modernization projects in the field of pharmacy and medical technologies, to mention a few initiatives. Overall, there are grounds to argue that the current modernization program in Russia is somewhat different from the previous national attempts in the innovation sector. Also, it is more sensitive to the national context and attempts to improve factors that have proven to be problems for innovation in Russia. What, however, remains unchanged from the previous efforts to modernize the Russian innovation system is the top-down approach, where the role of state is emphasized. Time will show how the new plans will be applied.

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The boom and crash of modernisation zeal in EU–Russia relations*

By Sinikukka Saari

The EU–Russia modernisation partnership – looking good!

President Medvedev's plans to boost innovation and modernise Russian economy have been received with a fair amount of enthusiasm in the west. Many in Europe hope that after years of persistent distrust and moping about, a new era of mutually beneficial, constructive cooperation in the primary field of economy and technology is finally kicking off.

In an attempt to seize the positive momentum and demonstrate goodwill towards the Russian leadership, the EU proposed a special 'modernisation partnership' that was agreed between the parties last year.

Although some have criticised that the partnership by claiming it is essentially just re-packaging of cooperation that is already taking place in the framework of four common spaces between EU and Russia, the agreement has nevertheless brought a positive spin on the relationship.

For once, the EU seemed to be responding quickly to developments in Russia and successfully advancing its political agenda by quickly adopting Medvedev's modernisation discourse

Or not.

Yet, I believe that the congratulatory enthusiasm for partnership for modernisation is unfounded. In fact, I would even argue that potentially the partnership for modernisation will even add to the problems of EU–Russia cooperation.

First of all, the EU reacted to mere change of political vocabulary – not to real political developments already taken place. At least for the time being, Medvedev's modernisation zeal is just rhetoric. Time will tell if it is going to develop beyond that.

The danger with this kind of 'ad hoc' cooperation projects is that the EU might embark on something that is not ever going to develop from words to deeds. If that happens, political agility becomes a burden rather than asset. The cooperation agenda gets buried with various projects of different size and shape which at some point sounded like good ideas but never took off the ground. The agenda is likely stay dysfunctional as taking topics off the agenda is even harder than getting them there.

Second, even in the case that Medvedev's modernisation plan is going to take off, problems might emerge. What the Russian political elite – or at least part of it – is proposing is a vertical, carefully managed elite-led modernisation. Innovation and competition are 'invited' from the top when and if considered necessary. It goes without saying that the elite do not believe political competition is needed – at least not before the next round of election (and then the next, and the next?).

Is this kind of vertical modernisation really what the EU should be supporting? After all, such a modernisation is not likely to be successful. In a globalised, interconnected world of today, this kind of restricted and managed modernisation is extremely difficult to pursue.

Even more importantly, supporting Russia's fuzzy modernisation programme is doubtful because that could mean indirectly legitimising the elite's plan to restrict political competition until undefined future. Although, in principle, there may be nothing wrong with gradual democratisation, the sincerity of Medvedev's plea for democracy can be justifiable questioned. For the time being at least, there is no indication that he is serious with it. On the contrary, every time his claimed beliefs have been tested, he has backed off.

It seems that the EU–Russia partnership for modernisation is based on wishful thinking rather than pragmatic, clear-headed analysis on what is going on in Russia. The typical juxtapositioning of idealists and pragmatists distorts the reality:

indeed, often the most 'pragmatic' policies are based on the biggest amount of idealism.

How to get it right?

If the partnership for modernisation is an undesirable way to engage with Russia, what then is the advisable one? How should the EU engage with Russia?

First, (as already mentioned) its policies should be based on long term-strategic thinking rather than ad hocism.

Second, the policy should be open, transparent and geared towards a greater amount of Russians than just the very select group of political elite. Although it may be a good idea to engage with people to some degree in all foreign relations, it is particularly important in the case of non-democratic states such as Russia. By engaging exclusively with the leaders (or appearing to engage only with the leaders) the EU is also indirectly legitimising the way the Russian authorities treat their citizens. The approach should be a more balanced one.

The EU policy with many neighbouring non-democratic states suffers from what in the academic literature has been called a 'joint stability trap'. This means that in EU is 'trapped' between its desire to promote democratic change and to preserve order and stability in its neighbourhood (see e.g. Bilgic 2010). In practical policies, maintenance of order and supporting the Russian government's policies have been given a clear preference.

In principle, the EU is acknowledging the importance of engaging with non-state actors in its neighbourhood. Unfortunately, the practice lags behind. Although the EU consults non-state actors before the human rights consultations with Russia, these consultations do not receive almost any media coverage. All that is visible to the public are closed doors of summits and human rights consultations.

The EU needs to communicate better and engage more actively with both Russian people and leadership alike. The EU should act publicly in an open and transparent manner. The EU–Russia human rights consultation should be developed into a more open, transparent and public dialogue.

Although currently Russia can be considered a 'stable authoritarian' state (Levitsky and Way 2010) a non-democratic state can hardly ever be considered stable in the long run. The strategy of backing authoritarian leaders in the name of stability will be decreasingly efficient in future.

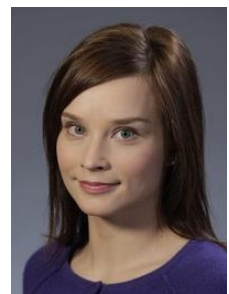
The European documents reflect the awareness that human rights and security are intertwined. Now it is time to update the practices to reflect this awareness – also in the case of Russia.

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* This article is based on my presentation in a seminar at the European Parliament organized by ALDE Group, 9 February 2010

Innovation strategies of emerging Russian multinational companies

By Sergey Filippov

Introduction

After the turbulent 1990s, following the break-up of the Soviet Union, Russia is rebuilding its economy. Its economic growth propelled by the rising natural-resource commodity prices has placed it in the category of emerging economies, together with China, India and Brazil. An important characteristic of the current stage of Russia's economic development is an increasing number of domestic companies venturing abroad. This internationalisation, once started in the neighbouring markets of former Soviet republics, proceeds to the advanced markets such as Western Europe and Northern America. The emerging Russian multinationals employ business models that enable them to leverage their country-specific advantages, such as access to natural resources. At the same time, emerging Russian multinationals start realising the value of innovation as a competitive advantage.

Background

Science and technology (S&T) sector was regarded as of strategic national importance in the Soviet Union, however it was organised according to a different logic than S&T sectors in many western countries. Its specific feature was its institutional fragmentation represented by branches of the national Academy of Sciences, ministerial research institutes, design bureaux, universities. The command economy tightly administered these linkages and the results of scientific research were 'imposed' on state-owned enterprises. After the collapse of the command economy, this inherent fragmentation manifested itself in its strong form. Many enterprises lost connections with their traditional S&T partners. In combination with national economic downturn, when many enterprises were occupied with short-term operational issues to sustain their existence, innovation receded to the background and became regarded as an unimportant element or luxury at best.

Many emerging Russian multinationals companies have successfully completed their initial reorganisation and began designing long-term strategic vision. In most cases, innovation is acknowledged as a critical element of these strategies. In terms of their innovation strategies, emerging Russian multinationals may benefit both from innovation capabilities at their home base in Russia and from access to strategic assets overseas.

Innovation Strategies in Russia

Three different approaches can be distinguished in terms of innovation strategies at home in Russia. Firstly, after the collapse of the command economy, large domestic companies started acquiring former state-owned research institutes. In many instances it implied recreation of lost linkages with the S&T sector. This approach dominates among (semi-)privatised former state-owned enterprises, particularly in oil and gas sector. Companies like Gazprom and Rosneft acquired former state-owned oil and gas research institutes and integrated them in their corporate structures.

Secondly, emerging Russian multinationals may form either joint ventures or strategic alliances with foreign (western) multinationals. This approach is in line with the idea of 'open innovation', whereby it is understood that modern organisations need to rely on each other's competences in order to boost their resource base. By forming partnerships with western companies, emerging Russian multinationals secure access to the latest technologies and know-how in new sectors, and, in turn, by partnering with Russian companies, western multinationals enter emerging Russian market. An oil joint venture between Russia's TNK and Britain's BP is a good example. Such partnerships increasingly manifest themselves in such high-tech sector as telecommunications, e.g. a five-year partnership deal between the mobile phone operator MTS and Nokia Siemens Networks.

Thirdly, some companies rely on their own, organic innovative development. They set up their internal R&D departments and employ talents to nurture innovation. An interesting case in point is start-up companies, specifically in IT sector. A well-known example is the computer security company Kaspersky Lab, originally established as a start-up, that has relied on the domestic expertise of Russian programmers. Currently, it is a global antivirus vendor operating in Europe, America and Asia.

It should be noted that this distinction is mostly analytical rather than a clear-cut separation. More so, for development of effective innovative capabilities, companies should combine these approaches in a synergetic manner. Success of modern companies in their innovation strategies depends on the ability to adapt technology and knowledge from various sources.

Strategies Abroad

Access to foreign technology and know-how by acquisition of foreign (technology-intensive) companies can be seen as one of the motives of Russian companies' internationalisation. The market motive can be considered as the prime driver; and technology and knowledge is regarded through the in-house competencies of the target asset. Through these acquisitions, Russian companies aim to foster their innovation and technology base and execute international expansion strategy. Several high-profile deals can be named. For instance, the Russian conglomerate Renova's acquisition of Swiss manufacturing companies Sulzer and Oerlikon; Evraz Group's acquisition of Oregon Steel Mills Inc. in the US. A crucial question here is whether emerging Russian multinationals possess sufficient absorptive capacities; this is an issue of effective integration, use and recombination of obtained knowledge and technology.

State policy

Russian government has recognised the acute need to modernise its national economy, overcome its chronic backwardness and diversify it away from excessive reliance on natural resources. The much publicised project 'Skolkovo', a Russian analogue of the Silicon Valley, serves as a showcase of these intentions. The Russian leadership has voiced its support to the international expansion of Russian companies and their access to foreign technology. Several state bodies are involved in formulation and execution of innovation governance, yet the innovation policy as a coherent and comprehensive policy is still lacking.

Conclusions

The key question remains whether Russian multinationals will compete on the global stage on the basis of access to natural resources or utilising innovation as a competitive advantage, and whether they will be able to enhance their innovation and knowledge base at home and globally. As the value of innovation is increasingly recognised by other emerging multinationals, Russian companies are facing stronger competitive pressure and preparing for the strategic challenge and imperative of innovation.

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Law in the information society – a platform for cooperation in the Baltic Sea Region

By Katja Weckström

The rapidly developing contemporary information society offers unforeseen opportunities, but also challenges the legal system in unforeseen ways. While 'old' real world solutions can solve some legal problems that arise in the virtual context perfectly well, others are arguably ill-fitting for electronic communications and commerce. Weeding the fitting from the ill-fitting solutions is the challenge that all countries face. However, as with the internet freeing information, a key feature in legal development lies in the culture of sharing and active cooperation. Adopting a culture of sharing -- knowledge, education and best practices -- in the Baltic Sea Region may allow for keeping pace with technological development and resulting pressure on e.g. E-commerce law, Privacy law, Intellectual Property Law and Criminal law in addressing cyber-commerce, cyber-trespass, cybersquatting or cybercrime. More often than not these areas of law produce true conflicts, i.e. freedom of commerce and openness clashes with property, privacy or other fundamental interests.

Freedom and openness are virtues to cherish, but how should the law address security concerns, unwanted publicity and public release of personal data, defamation or inciting hatred in public chat rooms? Who is responsible for the dark side of information society; increasing distribution of material depicting child pornography, trade in counterfeit goods and increasing benefit of technological development in coordinating and maintaining organized crime; terrorism, drug and weapons smuggling and human trafficking? National authorities that used to have complete control within their sovereign territory and borders are increasingly dependent on private actors to act on their behalf. Are internet service providers the solution or the problem; is there a universal yardstick that tells us when an activity needs to be shut down; and do we shut down the activity, the infringer or the intermediary or do we cherish freedom and openness to the extent that we are willing to suffer the societal harm? 'Old' solutions placing duties to act on non-state agents upon receipt of court order transfer easily in theory, but how does the legal system deal with activity as rapid and fast-spreading as we witness on the virtual landscape today. The list of 'less serious', but equally fundamental virtual challenges is endless, as well as intriguing; what constitutes virtual property, who owns the content uploaded to Facebook or You Tube, can libraries make digital copies of books, can the FBI close down internet poker and, of course, can I get my favorite movie or a fake Rolex online.

All these challenges are addressable and we have the legal tools and knowledge for addressing them. The Faculty of Law at the University of Turku has offered a broad curriculum in English for the last 15 years, harboring a cluster of competence in intellectual property law, constitutionalism and fundamental rights law research. Since 2009 the Faculty has offered a Diploma in Innovation and Communications Law for students completing 44 ECTS of graduate level studies in the field. This Autumn the Faculty further strengthens its commitment to offering

high-level education in English by the launch of the 2-year Master's Program, Law in the Information Society (LIS). Both Programs have attracted international students as well as our own, which allows for truly international interaction. We rely on our own staff and courses offered by our partners in Turku, as well as our contacts abroad, who give visiting lectures or seminars on current topics. For more information on the Master's Program visit <http://www.law.utu.fi/en/studying/lis/>

The Faculty of Law is continuing to develop its network and partnerships and a culture of sharing knowledge, particularly in the field of information society law, but also in all other areas of law. We seek to encourage visits by both junior and senior academics and to better utilize the available co-operation and grant programs, such as e.g. ERASMUS and COIMBRA Group scholarship programs for young researchers from Eastern European Universities http://www.utu.fi/en/studying/cooperation/partners/scholars_hips_to_UTU.html or the Finnish-Russian Student Exchange Program (FIRST) <http://www.utu.fi/opiskelu/kv/partnerit/FIRST.html>. Visitors may take part in weekly Research Seminars as well as present their work for peer review. The Faculty also publishes a referee-journal, Nordic Journal of Commercial Law, which accepts papers on timely issues relating to international trade and legal developments affecting cross-border trade.

As with more traditional, 'real world' concerns, the countries in the Baltic Sea Region can face the legal challenges of the information society together. Sharing knowledge, education and best practices should be fairly easy, since established networks and exchange opportunities are ripe for utilization by up-coming legal professionals. The rapid development of technology, however, challenges nation-state marathoners with an English mile. Nations alone are less likely to succeed in this overwhelming task. However, together we can build on common knowledge and not only stay on-pace, but recalibrate the legal system to offer tailored solutions in response to real concerns in the virtual world. That after all, is the name of the game today!

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Innovation and knowledge development in the knowledge intensive business service sector (cross-country comparison – Hungary versus Slovakia)

By Csaba Makó, Péter Csizmadia, Miklós Illéssy, Ichiro Iwaskai, Miklós Szanyi and Péter Csizmadia

The current global financial and economic crisis put into the night light the patterns of economics modernization in the post-socialist countries in the Central and Eastern European (CEE) region. In addition, there is an under-researched historical shift in the economic structure in the developed economies, including the post-socialist economies in the CEE. Since the last decades of the XXth Century, we have witnessed the particular growth of the service sector at the expense of manufacturing. Some scholars qualify this challenge as a historical shift in the structure of economic activities, and others refer to it as a "service sector revolution". In a rather simplistic way, the wealth of nations can be attributed to agriculture two centuries ago, to manufacturing a century ago, and to the service sector now, producing 70 – 80 % of GDP in the developed countries. The share of service sector in the GDP in the CEE post-socialist countries ranges from 58.4 % to 62.9 %.

One of the most important impacts of this historical change on the global labour market is increased wage competition not only in the low-level blue-collar jobs in the manufacturing sector but also in the best- and worst-paid white collar jobs.

Governments in the emerging markets are designing new development (modernization) strategies – independently of the ideological color of the ruling government coalition – aimed at moving up on the Global Value Chain (GVC) and shifting from the "low-skill" to the "high-skill" equilibrium growth model in the CEE countries. In competing with the fast developing emerging economies of Asia, one of the key sources of the sustainable competitiveness is the developing innovative and learning firms, regions and economies. The knowledge intensive business service (KIBS) firms are playing key role in developing innovation and knowledge sources at the various level of national economies.

In this context, a cross – country company survey was initiated in 2008 and 2009 to compare the Hungarian and the Slovak KIBS sectors. Due to the crucial role of the firms' innovative capabilities and the related learning capacities the authors focused their interest on the diffusion of organizational innovations. In our view innovation is not regarded as exceptional and isolated event but as a result of individual and collective learning process embedded in the social – cultural relations of the firm. It is worth to call attention the importance of organisational innovations in the KIBS, since this forms of innovation have a continuous and open character and are attached to organisational changes and distributed across network of firms. Unfortunately our systematically collected information about this type of innovations is rather weak in comparison to our knowledge on innovation in the manufacturing sector.

In this paper, the international team of authors representing various disciplines in social science tries to map main features of organizational innovations relying on original company surveys data collected in Hungary and Slovakia in 2008 and 2009. Key lessons of the empirical inquiries are the following: integration in the global value chain (GVC) and company membership (networking) are the important drivers of the diffusion of radical (structural) organizational innovations. In this regard, Slovak knowledge intensive business service (KIBS) firms have better performance than the Hungarians. For example, such forms of structural (or radical) organizational innovation as project-based work, lean organization, and inter-professional working groups are more widely used in Slovak than Hungarian KIBS firms. In the case of the diffusion of procedural (or incremental) organizational innovation (e.g. team work, benchmarking, job rotation, collecting suggestion of employees, etc.) the contrast rather weak between the two countries surveyed.

After identifying various forms of organizational innovation, the firms' representatives were asked to assess the drivers (engines) of implementation of the new organizational concepts and practices. In both countries, the most important driver is the

improvement of the efficiency of daily operation. This factor is followed by the motives to renew the existing knowledge base, adapting to the environmental changes, strengthening cooperation within organization, improving quality etc. It is noteworthy that such drivers of organizational changes as renewal of product and services, the renewal of existing knowledge, the increasing size of the firms, and, especially the outsourcing of business functions play weaker role in Slovak company practices than in Hungarian ones.

In the literature dealing with technological and organizational changes, resistance of employees/managers and skill shortage are frequently cited as constraints of these changes. It is noteworthy that, in the present study, such factors were reported by a tiny minority of respondents and in conjunction with a lack of financial resources.

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Are there any landowners in Russia?

By Leena Lehtinen

The Finnish media was very much interested in Russian land law when the President of the Russian Federation Dmitry Medvedev signed the law on ownership of land in the border territories on January 9, 2011. This legal act restricts land ownership by foreigners in certain regions. Most of the municipalities located close to Finland are included in the boundary region where foreigners are not allowed to own land.

Two main questions presented in Finland were whether those restrictions contradict the principle of reciprocity, and to which extent this law affects the property rights of Finnish citizens and companies that have personal or business relations in Russia.

The law signed in January 2011 is actually nothing new in terms of Russian regulations associated with ownership of land by foreigners. The Russian Land Code, which was adopted in 2001, forbids foreign citizens and companies from owning land in boundary districts. The new legal act filled in a gap in the norms defining the territory in which any piece of land can be owned only by Russians.

The concrete list of municipalities where foreign owners of property are not allowed is a welcome clarification in the situation e.g. in the Republic of Karelia. Ten years ago it was not clear whether a foreigner could buy and obtain land. There was a risk that the parcel of land purchased or inherited by a citizen of a foreign country would be included in the restricted region. Because border territories were not defined in land legislation, it was unclear which real estate deals were illegal.

This clarification is the only positive thing about this act of the Russian President. Land ownership is a very uncertain matter, not only for foreign but also for Russian companies and citizens. Even though the creation of a market economy in Russia began more than twenty years ago, private ownership of land is still only possible in very rare situations. Real estate is coming into the hands of private persons very slowly.

The most common situation in privatization of land involves a case in which a house or other building located on a parcel of land owned by the state or municipality has been privatized, or if somebody plans to build a new house. There must be existing real estate or concrete plans for the building in order to get the land from public into private hands.

If the piece of land is not used for the purpose for which it was purchased within three years, the buyer may lose it. This is why it is not possible to buy land to keep in reserve for future use. This applies to both Russian and foreign investors.

Russian companies created by foreigners are entitled to buy land for industrial or housing construction even in those territories included on the President's list since 9 January 2011. This means that the presence of foreign landowners is not totally forbidden even in boundary districts, and is allowed in most parts of Russia.

It is hard to understand why the decision on restrictions was made at all and what the actual target of such restrictions is. For purposes of state defense, it is quite irrelevant whether the land in frontier districts is owned by a foreign person or Russian legal entity owned by foreigners, or by any private person.

Strengthening of private ownership is taking place not only in urban regions but also in rural territories. However, agricultural land cannot be owned by foreign persons and joint ventures with a majority of foreign shareholders.

Forests are still totally excluded from privatization. Land covered by forest cannot be owned by any private person. Russian companies and citizens may utilize the forest but not have it in their possession. Russian and foreign enterprises using state-owned forests have long-term tenancy.

Tenancy of forest was becoming a more interesting option for industrial investments after adoption of the new Forest Code in 2006. It allows mortgaging of the leasing contract and its use as a contribution to a company. Subleasing is also possible. The new forest legislation is more liberal and favors long-term investments;

however, the implementation has not encouraged foreign and Russian private investments.

The main problem here is the lack of private property rights! According to Russian law, forest is categorically state property and federally owned. Utilization of forest is organized by the regional administration according to strict rules set by federal bodies. Private enterprises and state bodies have concluded leasing agreements that are not clearly civil law contracts by nature. The private tenant is the weaker party, because the contract conditions may be unilaterally changed by the state in several situations.

Frequently changing norms concerning cutting, cultivation, taxation etc. lead to an unstable framework for contract relations. The legislation does not clearly define the responsibilities and rights between state bodies - federal and regional - or between public and private entities. The tenant is at risk of losing its land if the fulfillment of obligations is unreasonable and the contract is cancelled.

The main reason for this stable instability is the inability of Russian leaders to decide how to organize management in the forest sector. During the last twenty years the system has changed radically from a centralized into a decentralized system and vice versa. There has been permanent turbulence in the state administration. Private business has been given more space in the forest economy, but at the same time the economic responsibilities of private companies have been increased.

The crucial question is how to attract large investors to the forest economy. Long-term tenure is not a solution, because investors cannot be sure whether their contributions to the forest infrastructure will pay for themselves. Not even a 50-year leasing agreement is strong enough to guarantee the loans needed for infrastructure improvement necessary for organizing cuttings. According to Russian law, state property cannot be mortgaged, which means that private property rights in industrial forests are the only solution.

During the industrialization in the Russian Empire in the 18th and 19th centuries, land was privatized and the tsars gave forest to companies that used wood as a raw material. About 30% of the forests in the European part of Russia were private at the beginning of the 20th century. This path should also be followed today in order to protect forests against fires and illegal cuttings and from misuse of natural resources and national riches.

Speaking about reciprocity as it refers to the equal rights of Finns to own land in Russia compared to the property rights of Russians in Finland, it is worth taking into account the restrictions in ownership of real estate by non-residents in Ahvenanmaa, Finland.

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Is a new glasnost era beginning?

By Jukka Pietiläinen

If we trust Western media and media-freedom rating organisations, the Russian media are not free, not even partly free, but subordinated to an authoritarian regime. The reality is different. Although the mainstream media, television in particular, follow guidelines set by the authorities, there is much more plurality and freedom in less popular or less political media like local and small-scale newspapers, magazines or the internet.

One key word for Russian media freedom is glasnost, an ordinary Russian word meaning openness, which became the label for Gorbachev's policy of (initially limited) media freedom. Gorbachev's glasnost was a policy of the Soviet period. This year we celebrate the 25th anniversary of it. Glasnost was introduced in 1986 at the 27th party congress and included in the party programme. At first the policy was slow to take root, the Chernobyl disaster in April 1986 was clear failure for the new policy, but a more liberal information policy did evolve. Later, this increasingly free discussion in the media and society contributed to the collapse of the Soviet system.

Glasnost ended with the end of the Soviet Union. In a market economy and plural society there was no place for a government-based policy of openness. Freedom of speech took the place of glasnost in social discourse. Whereas the Yeltsin era was a period of uncontrolled freedom and chaos, with an economic collapse and a political power battle, the Putin era offered Russians a more stable era of economic growth, improved standards of living but also more control.

Putin has lead Russia to a more controlled, state-dominated media system. It is not correct to say that the Putin system means a return to the Soviet era. On the contrary, a large degree of media freedom has been preserved and developed. With the increase of independent media like local newspapers owned by journalists or the editor, magazines often owned by foreign media companies, and blogs, the Russians possess more opportunities to receive and to express views and news than ever before.

The other side of the coin is that critical information, which would be harmful to the state or the key power holders, is kept out of the mainstream media, especially the national television channels. A lot of criticism at the local level, like, for example, the Khimki forest story, can be found in the media anyhow.

According to the Integrum database, the number of times glasnost is mentioned in Russian press has remained at the same level over the last five years. In 2010 there were about 2,200 mentions of glasnost in central newspapers and 3,500 in regional newspapers, while in 2005 there were 2,000 mentions in central newspapers and 2,900 in regional ones. This slight increase continues to this day: during the first four months of 2011 glasnost was mentioned 800 times in central newspapers and 1,200 times in regional ones.

Many of these mentions of glasnost are in relation to Gorbachev's policy of glasnost or the Glasnost Defence Foundation, a civic organisation to monitor and defend the freedom of speech, or the lack of glasnost. We should keep in mind that in the Russian language glasnost simply means openness, and is not necessarily a reference to a state policy. Therefore glasnost may appear even without necessarily involving a reference to current political changes.

On the other hand, many of the papers which keep the word glasnost alive are, indeed, radical newspapers, often founded in the early 1990s under the slogan of media freedom. One of the examples is *Arsenevskie vesti*, published in Vladivostok, an independent newspaper "for the defence of the rights and liberties of the citizen" as its slogan on the first page announces.

When linked with the word 'new' the word glasnost has appeared in the Russian media only a few times during the last year or two, and the concept itself has not spread widely in the Russian media or Russian society. Some mentions may, however, be interesting weak signals to possible future developments.

The so-called new era of glasnost was linked with the new law on public access to information which came into force at the beginning of 2010. According to this law, local and regional authorities are obliged to publish information about the work of the local administration, for example, in relation to privatisation. Although the existence of a law does not necessarily mean that it has been implemented, one can find a wide range of information about local administrations on their websites. Part of this is certainly a PR-exercise on the part of the local leadership, but sometimes there is also useful information.

Moreover, in June 2010 a new era of glasnost was mentioned in a juridical forum in St. Petersburg, and Gorbachev expressed the need for it in an interview with Reuters. In the same month glasnost appeared in connection with the setting out of new guidelines by the Supreme Court of the Russian Federation on how to apply the media law. The guidelines (published in *Rossiiskaya gazeta* 18 June 2010) emphasised the importance of access of journalists to information and the role of the media in providing information to the citizen. The media, for example, have the right to publish information on the private life of citizens if it has social importance. Moreover, the Supreme Court stated that online media outlets can only be shut down for extremist comments left on their forums if they fail to comply with official requests to delete them. Earlier, the authorities had closed media for comments on their forums.

One of the most prominent references to so-called new glasnost was made by media analyst Alexei Pankin in *The Moscow Times* in English and in *Izvestiya* in Russian (both on 21 December 2010) in his regular column. As signs of a new glasnost era Pankin pointed out that president Medvedev has criticised his predecessor with a key word 'stagnation' and that a well-known television journalist Leonid Parfyonov levelled a harsh criticism at the state of Russian television. Parfyonov's speech was not shown on television, naturally, but it can be seen on the Internet.

The new glasnost is very often linked to the internet and its possibilities. While the traditional media are declining – only half of Russians was reading newspapers regularly in 2010 – internet and new media, like magazines, are increasing.

However, it is unlikely that there will be a glasnost policy which will activate people and cause the collapse of the political system, as was the case in the Soviet era. As Pankin pointed out, the public puts very little faith in the media, and therefore journalists can be allowed more freedom "without inflicting any harm whatsoever on society for the simple reason that nobody believes or trusts them anyway". But certainly, a more independent and critical media may increase the people's trust in the media and be useful for society as a whole.

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Benefits and challenges in developing regional integration (the case of the Customs Union of Russia, Belarus and Kazakhstan)

By Galina Shmarlouskaya

Regional integration is a development trend and the objective need of the countries facing challenges related to their incorporation into the world economy.

The Customs Union of Russia, Belarus and Kazakhstan was established on November 27, 2009 in connection with the need for modernization, export diversification of the national economies, joining efforts to overcome economic crisis implications. During its formation the Customs Union in the European Union was used as a model.

The goal pursued is to create a common customs territory with the intention of liberalizing goods and services movement for national and international companies that operate in the three countries, as well as eliminating customs barriers between the member states, and shifting state control functions of all types (except for border control) to the Customs Union's border.

The Customs Union **functioning principles**: elimination of customs duties in mutual trade in goods, avoidance of economic restrictions in mutual trade, application of single-tariff regulatory measures, common customs territory, uniform customs regulation, application of the Uniform Customs Tariff.

The system of customs legislation of the customs union includes: the Customs Code, international treaties signed by member states of the Customs Union, the decision of the Customs Union Commission. The Customs Code developed to meet the standards of the Kyoto Convention on harmonization and simplification of customs procedures was adopted on November 27, 2009.

Customs tariff and non-tariff regulation is based on a number of **documents**: Uniform customs tariff of the Customs Union, Common Commodity Nomenclature for foreign economic activities of the customs union (common HS Customs Union), a common list of goods subject to import or export bans or restrictions in the trade with third countries.

The **Customs Union Commission** fulfills the functions of: amending the customs duties rates applied by the member states, introducing the Customs Codes of the Customs Union, establishing customs benefits and quotas, defining the system of customs tariff preferences, introducing non-tariff regulation measures, special protective anti-dumping and countervailing investigations.

The basic principles of organization of customs administration in the Customs Union are: the absence of customs control and customs clearance at the internal borders of member states of the Customs Union; avoidance of customs clearance of goods released for free circulation and transferred within Belarus, Russia and Kazakhstan; a unified system of customs transit of goods through the customs territory of the Customs Union; creation of uniform conditions of transit.

Russian import duties (92%) were taken as a basis for uniform custom duties. 65% of tariffs were unified, 95% of all customs duties between Belarus and Russia were unified, 62% of all customs and duties between Russia and Kazakhstan were unified.

The benefits for all of the member states derive from an emerging common market with the capacity of 180 million people. The market enlargement for Russian manufacturers makes 15 per cent, for Kazakh companies – 10.5 times, for Belarusian ones – 17 times. The overall industrial capacity is 600 billion U.S. dollars, oil reserves - 90 billion barrels, agricultural production volume - 112 billion U.S. dollars. The GDP of the three countries totals 2 trillion U.S. dollars, the overall commodities turnover being equal to 900 billion U.S. dollars.

The establishment of the Customs Union can improve the allocation of revenues from import customs duties. Before the establishment of the Customs Union the total customs revenue of the three countries was divided in proportion: Kazakhstan - 3.1%, Belarus - 4.6%, Russia - 92.3%. Now: Kazakhstan - 7.33%, Belarus - 4.7%, Russia - 87.97%.

Other **benefits** are the following:

- equal rates to be charged on exporters for railroad, automobile, pipeline transportation of the exported goods;
- additional incentives for investors eager to arrange new production facilities and to move a part of their current facilities within the Customs Union (Russia will gain from transfer of production to Belarus and Kazakhstan);
- boosting export sales, as manufacturers are oriented to the needs of the common market, and all goods are recognized as domestic goods (e.g. Belarus is a large milk exporter on the European scale. It produces over 6 million tons of milk, about 4 of which may be exported. Kazakhstan has 16 million customers and almost no modern dairy farming. In Russia, the level of dairy self-sufficiency is 83%. Kazakhstan plans to increase delivery of heavy machinery to Russia and Belarus by 15 to 20%);
- facilitation of access to export-related infrastructure of the member states;
- financial markets integration and proportional increase of payments in national currencies for transactions within the Customs Union;
- creation of a unified customs transit system to accelerate the EU-Asia-Pacific cargo transit and an increase in income (in 2007 cargo transit amounted 700 billion U.S. dollars, revenues from services - \$ 50 billion); etc.

Integration **challenges** include

- differences in prices of energy commodities and import customs duties in automobile and aircraft industries;
- different export customs duties rates for raw materials, mineral fertilizers and nonferrous metals;
- extending the duration of customs control (in Russia in early 2009 zero duties on copper and potash fertilizers were introduced in order to support domestic producers in the height of crisis, in Belarus, the export duty on potash fertilizer is 16% and the country is not ready to reduce it);
- necessity of harmonizing technical regulation norms since technical barriers remain in the mutual trade (phytosanitary and veterinary control, lack of uniform technical regulations and standards, etc.);
- for Russia, the problems is that Russian importing firms engaged in customs clearance services may move to Kazakhstan where taxes are lower;
- increasing flow of Chinese products, especially light industrial products through the territory of Kazakhstan, etc.

Further work within the Customs Union is carried out in these directions: the application of customs duties, tariff preferences, indirect taxation, the procedure of moving goods across the customs border under the Customs Union, interaction of customs transit systems in the Customs Union of the Republic of Belarus, the Republic of Kazakhstan, Russian Federation and the European Union, etc.

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The EU and Belarus after the 2010 presidential election

By Matthew Frear

On 19 December 2010 Alexander Lukashenko was re-elected president for a fourth term in a highly flawed election. A harsh crackdown by the authorities in the aftermath of the poll saw hundreds arrested, dozens facing trial accused of inciting riots (including many of the alternative presidential candidates), and a concerted campaign launched against independent media and NGOs. Hopes in the West of a continuation of the limited political liberalisation which had been seen in Belarus before the vote were dashed and any signs of a thaw between Brussels and Minsk were reversed. Both sides have referred to a "time out" in their relations, however neither side is interested in completely shutting the door on potential future engagement and they will endeavour to return to the *status quo ante* in the medium-term.

For a decade EU policy focused on trying to isolate the Belarusian government due to the non-democratic nature of Lukashenko's regime. This included not ratifying a Partnership and Cooperation Agreement (PCA) and not inviting Belarus to participate fully in the European Neighbourhood Policy. Targeted sanctions, including an assets freeze and travel restrictions, were imposed on a number of top officials linked to the disappearance of opponents of the regime and also electoral fraud. Relations between the EU and Belarus began to improve marginally in 2008, as the Belarusian authorities released the last of their political prisoners and made some tentative, limited steps towards liberalisation. Although improvements in the conduct of the 2008 parliamentary elections were less far-reaching than many in the West had hoped, the EU temporarily lifted the travel ban for most of the officials it affected and in 2009 Belarus was invited to participate in the launch of the Eastern Partnership (EaP).

The EU's engagement with Belarus remained restricted. Within the EaP, Belarus was unable to participate in the bilateral track, due to the lack of a PCA, and was limited to multilateral regional cooperation. Belarusian opposition groups were invited to the EaP Civil Society Forum, however plans for a parliamentary assembly (EURONEST) faltered over disagreements regarding who should represent Belarus. During the presidential election campaign, the German and Polish Foreign Ministers visited Minsk with proposals for €3 billion in aid if elections were held under more free and fair conditions. However, in spite of nine alternative candidates being registered to run against Lukashenko and improved access to state media during the campaign, albeit from a very low base, the results on polling day itself and the violent clashes between riot police and protesters were to undo any progress made.

The EU was swift to condemn the actions of the authorities after the crackdown. Travel restrictions were re-introduced and extended to around 150 officials at the end of January, along with an asset freeze. An announcement was made at a donor conference in February on the quadrupling of EU aid for Belarusian civil society to €16 million. Several member states, e.g. Estonia, Latvia and Poland, eased visa restrictions for groups opposing the regime. Belarus was suspended from EURONEST, which was launched without Belarusian representation. Any renewed engagement by the EU is dependent on the release of all political prisoners. Nevertheless, the country

was not excluded from the EaP as a whole and the Belarusian Foreign Minister is not amongst those officials banned from visiting the EU. Economic sanctions have not been imposed against enterprises which bring in revenue for the regime, despite calls from some in the Belarusian opposition. While the EU has not ruled out the option of economic sanctions, it is unlikely to resort to actions which it perceives could harm the wider Belarusian society or push Belarus irreversibly into the arms of Russia.

The authorities in Minsk have criticised outside meddling in internal matters, often in highly undiplomatic language, and accused forces in both the West and Russia of fermenting dissent and even an attempted coup. Belarus announced in March that was imposing its own travel restrictions on journalists, activists and politicians from the EU, although a full list of who these are has not been released. The regime has been forced to rely more heavily on Russia for economic and political support as Belarus faced its own mounting fiscal crisis in April. However, Lukashenko has no desire to see Belarus become completely beholden to Moscow, as Russian demands for a greater role in the Belarusian economy threaten the president's hold on power. Relations between Minsk and Moscow remain strained after prolonged and public disagreements during 2010. While the trial and sentencing of opponents of the regime will continue, it is likely that those same political prisoners will eventually be released early to facilitate a normalisation of relations with the EU and counterbalance the influence of Russia.

The EU is also likely to want to try and build on the progress made in 2008-2010, once all political prisoners have been released. Poland's presidency of the EU Council in the second half of 2011 may see Belarus rise up the agenda, having been sidelined by recent events in North Africa. Brussels will want to avoid succumbing to Lukashenko's tried and tested tactics of making minimal concessions for maximum gain, seeking to play off the EU against Russia, and trying to trade geopolitical orientation for financial support. However, nor do they wish to see a neighbouring country fall into economic chaos and risk political instability in the region. Minsk will be facing tough choices in the coming two years in its relations with the EU, and Brussels will need to be smart in its response.

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