KEY TRENDS, THREATS AND RISKS OF THE POLITICAL, ECONOMIC, SOCIAL AND SECURITY DEVELOPMENT IN THE WORLD IN 2020-2025 HORIZON

Milos BALABAN
balaban@fsv.cuni.cz

Available at http://www.population-protection.eu/attachments/027_vol2n1_balaban_eng.pdf.

Abstract

In the next 10-15 years, the global development will be determined by several key factors: environmental degradation, competition for energy resources, rise of the new powers – the non-Western actors of global politics, economy and security, a new configuration of global governance in which the European Union will strive to assume a more prominent place, a number of new threats such as proliferation of weapons of mass destruction and of new weapon technologies, and, last but not least, global economic instability resulting from recurrent economic crises of the existing global economic model. Environmental degradation, linked with the phenomenon of global warming, will generate serious security threats, e.g. the growing deficit of drinking water in some regions that will affect hundreds of millions of people. The competition for energy resources, especially of oil and gas, will grow fiercer and determine the policies of the principal global security actors. In this context, the fact that a considerable proportion of the world’s energy resources are located in politically unstable, insecure regions is and will remain a serious risk factor. Global politics will be more influenced by the emerging powers, both - global (China) and regional (India, Brazil) ones, this fact will bring a challenge e.g. for new political strategy of the European Union. The global role of the EU may also be undermined by the negative demographic trend: population aging and decline in Europe.

Keywords
Environment, resources, energy security, global and regional powers, global governance, demography, new threats.

Environmental degradation, competition for energy resources, rise of new powers - "non-Western actors" of global politics, economy and security, a new configuration of global governance, in which the European Union will strive to assume a more prominent place and many new threats resulting from economic disruption, energy, cyber and bio-security are likely the key determinant of future development in the next 10 to 15 years. In many ways, we can talk about the "risk" future, which even the Czech Republic will be faced with. "Understanding" of the future is important for the Czech political
and security elite, facing a crucial challenge: to develop a new security strategy for the CR in the near term, which would correspond to current and prospective trends in security policy, as reflected inter alia in key policy documents and forecasts of the European Union and NATO.

In the next fifteen years, on a global scale, the effects of environmental degradation will increasingly appear. The global warming will be the main phenomenon. The report of the Intergovernmental Panel on Climate Change – IPCC\(^1\), published in Paris in early February 2007 shows, in this context, that significantly higher concentration of greenhouse gasses (carbon dioxide CO\(_2\), methane CH\(_4\) and nitrous oxide N\(_2\)O) since 1750 result from the human activity\(^2\). The world is according to the Report on the way to a warmer climate and extreme temperature fluctuations. During the first quarter of the 21st century the temperature increase globally within the span of 0.4 and 1.1 degrees of Celsius, which will not be disastrous at that time, but we will be on the way\(^3\) already. Many regions in Asia and Africa will suffer with drought because of global warming, which causes hundreds of millions of people find themselves without access to safe drinking water and relevant livelihood, because there will not be a sufficient amount of cultivable land. Europe will not be dramatic in extent directly affected by environmental degradation, but global warming may cause a serious temperature fluctuations in the European territory. Extreme heat and drought on the one hand and extreme cold weather on the other hand may cause more frequent devastating floods, affect agricultural production and can induce heavy burden to provide electricity or stability of energy infrastructure, respectively. These items represent the major security threat, especially in the context of future, because of large EU dependence on energy supplies from outside, often very unstable territories. Another great thread to Europe may stem from armed conflicts and clashes in regions of Africa and Asia, caused by droughts and the lack of necessary food and material resources. First, this may induce a wave of migration from the affected areas to Europe.

Negative influence of the climate change, in a global scale, comes significantly to the fore, in particular, provision of sufficient amount of water as a strategic raw material, respectively water resources, which is essential to sustain life on earth. Although 71% of the planet is covered by water, only 3% of water is drinkable, but the majority of this 3% is in the form of snow and ice. Less than 1% of the water, i.e. 0.03% of the world's water supply is available to people. The problem of availability and distribution of water, respectively water resources, will be one of the most important issues of the next two decades and the whole 21st century\(^4\). Yet it has strongly intertwined economic, social and security dimensions. It illustrates among others, that, 1.1 billion people lack currently the access to the safe drinking water and it is expected that this figure will rise to 3 billion in 2025. 2.6 billion earthmen (millions of them in urban slums), do not have any sanitary systems, and therefore they do not live in adequate sanitary conditions\(^5\). Now, 80% of all diseases in developing countries are linked to water scarcity. Access to water already is, and will increasingly be the source of bilateral
or regional conflicts, which follows from the fact that 40% of population live within 260 river-basins shared by two or more states. Conflicts can arise from efforts to gain a larger share of water resources, one country at the expense of another one, for securing the supplies for population and operation of industrial and agricultural production or due to pollution of water resources - precisely because of this production. NATO study „Future Security Environment” indicates in this context the 20 highest risk areas, where such conflicts may happen.

Major system shift in approach to the environment is still postponed. It would probably require an extensive revision of access to political, economic and social development in the world. But there are taken only minimal measures such as reduction of greenhouse gas emissions by 5.3% under the Kyoto Protocol. However, they can not fundamentally reverse the negative trends outlined above. The Kyoto Protocol, under which emissions of carbon dioxide into the atmosphere should be reduced of 5-7% until 2010 in comparison to levels in 1990, is valid only until December 2012. However, even this objective, which is a totally minimal (according to environmental experts, would break of the negative trends in global warming require a limitation of carbon dioxide emissions of tens of percent) has not been fulfilled for several reasons. The United States as the world largest polluter together with the other major polluters China and India have not joined the protocol so far. That is why the protocol covers only a quarter of global emissions.

The United States will remain in the perspective of 20 years, the world's biggest polluter of the environment. Americans who contribute 5% to the world's population, weigh the atmosphere heavily by 25% of greenhouse gas emissions globally in 2006. By 2030, there is expected only a relatively minor change: it will be about 3% less, i.e. 22%. For a complete picture of the role of the three largest polluters, it may be noted, that each American loads the atmosphere by about twenty tons of carbon dioxide per year, each European by nine and Chinese by five tons per year. Therefore, the role of these three actors in achieving and subsequent implementation of substantive agreement on reducing greenhouse gas emissions is absolutely crucial. The climate summit in Copenhagen in December 2009 failed to reach such an agreement, inter alia, because the summit were not only the disputes over the extent of climate commitments, but of a clash of global political and economical forces in the forming multi-polar world, where on one side became rich "North" (U.S., EU) and the other increasingly affluent "East" (China) together with a less developed "South", defending his right to industrial development.

Significant limitation of the positive changes in the environment will be the fact, that it is expected to increase the consumption of energy resources (oil, gas) by 50% till 2020. The rapidly emerging economic giants - China (anticipated increase in consumption of 150%) and India will be very much involved in. Oil and gas prices in world markets will grow, because of this fact.

In the forefront with strong security overtone will increasingly be a question of the availability of non-renewable energy sources and of the total investment in the energy sphere. One of the prerequisites that energy sources are able to meet global needs in 2020, is to triple its investment in maintenance and development.
Crucial position for ensuring the supply of major energy resources will continue to have the Middle East and Gulf region, where there are deployed the largest oil reserves in the world (Saudi Arabia, Iran, Iraq, United Arab Emirates)\textsuperscript{10}. Furthermore, it is Russia\textsuperscript{11}, Caspian region, Nigeria, Venezuela, Angola and Algeria (with large gas reserves).

Most countries, which possess reserves of energy raw materials, will be located in unstable regions, or they will be faced with a difficult political, economical and security situation, respectively. This concerns primarily the Middle East region and the Persian Gulf states (Saudi Arabia, Iraq, Iran). In order to ensure smooth delivery of oil and gas for the United States and especially for Europe, much attention will be paid to their production and transport from regions outside the Middle East. If Europe is to be noted, according to studies by the European Commission, Europe's dependence on energy supplies from non-European territories will increase to a level about 75% in 2020. This concerns mainly the supply of gas, because 51% of gas is imported from the territories outside the EU (Norway, Algeria, Russia). Russia's share in the gas supply to the EU reached 31\%\textsuperscript{12} in 2010. One of Europe's priorities is to reduce energetic dependence on Russia. The key role in this regard will play the Caspian region, respectively Trans-Caucasus and Central Asia in perspective. The oil pipeline Baku - Tbilisi - Ceyhan (BTC) operates already and there are plans for constructing Nabucco gas pipeline. However, there are many factors that can endanger the mentioned European project.

Above all, it's very intense Russian efforts to diversify their gas transportation routes to Europe through the Nord Stream pipeline (from Russia over the bottom of the Baltic Sea to Germany), which construction will begin in 2010, and South Stream (from Russia over the bottom of the Black Sea into Bulgaria), which construction has been planned. The big German and French energetic companies are involved in building the Nord Stream pipeline. The question mark is whether, for example, for the planned Nabucco pipeline, it is possible to get enough gas capacity especially from Azerbaijan and in future from Central Asia. In this case, it is necessary to take into account that Azerbaijan has the option to diversify its cooperation in the supply of raw materials (not just with Europe, but traditionally with Russia and potentially with Iran and China). In the case of Central Asia, it is already clear, that in addition to Russia, China became a key player, which, inter alia, directly financially contributed to the construction of a gas pipeline from Turkmenistan to China put into service in 2010. Role of the major "energetic" arbiter in the region will undoubtedly play a new regional power Turkey, which cooperates not only with the European Union (its the willingness even in energetic safety securing questions will undoubtedly depend on the approaching possibility of Turkey to the EU), but also more and more with Russia. Even the military-political factors should be taken into account. The Russian-Georgian war in August 2008 resulted the de facto in the partition of Georgia and its military-strategic weakening, which obviously has reduced the level of security of the Baku – Tbilisi – Ceyhan oil pipeline.
Moreover, Russia is strengthening its position of an important supplier of energy resources in Asia. This is illustrated by the construction and operation of the oil pipeline Vostochnaja Sibir - Tichyi Okean (VSTO), lined from the Siberian Taishetu to Kozmino terminal on the Pacific coast, allowing to increase Russian oil exports to Asian markets from the current 6% of total Russian production to 25-30% in the next twenty years perspective, which has reduced a strong dependence of Russian oil exports to Europe (currently more than 90% of Russian production). China is also connected to the pipeline VSTO (up to the city Dacin). Russia also remains a major supplier of oil to India (now it covers 73% of its consumption). In 2009 there was also launched the first Russian plant for production of liquefied natural gas at Sakhalin, with annual capacity of 9.6 million tons of gas, which will provide five percent of world supply of this energy source. The main customers, for next 20 to 25 years, are companies from Japan (60% of supply), South Korea and the United States.

Also nuclear energy will not give up its position in the global energetic. The strong dynamics of development evident in the sixties and eighties of the 20th century, however, slowed sharply in the last decade and it is currently the slowest growing source of energy (behind oil and coal). Further decrease in production of nuclear energy is expected in the next three decades. This results from the International Atomic Energy Agency estimates, according to which the share of nuclear energy in the global energy production has decreased to 4.7% (versus 6.4% in 2003). Due to the shortage of energy resources, however, this trend may change. The most ambitious program of nuclear energy development has now got China, which plans, this way, to eliminate the possible consequences of the mentioned energy deficit.

In the next 15 years, efforts to reconstruct the existing traditional energy architecture based on the consumption of fossil fuels - oil, gas and coal through the development of new technologies, which should increase global energy security will still continue. It is, however, in any case a long and technically very complex task. It may be mentioned, that the study of the National Intelligence Council of the United States of America „Global Trends 2025: A Transformed World" published in November 2008 says, that the development of new technologies takes 25 years before they can be used in wider scale.

Among the main players in world development, the United States strive to keep the position of the most influential political, economic and military actor. However, the political and economic power of China rises significantly above. China's rise is in parallel, as evidenced by the number of prospective studies and economic forecasts for the next 20-25 years, part of the rise of new global and regional players outside the transatlantic area, that dominated world history, politics and economy in the past 500 years. This concerns mainly the countries of South and East Asia - the most fundamental changes are taking place right in this region. Japan is no longer the only Asian country of "economic miracle". India, Vietnam, Singapore, South Korea and Indonesia follows it step by step. Also the positions of countries with significant natural, economic and human resources, such as South Africa, Brazil and Turkey grow stronger and these countries will
become regional powers. Europe will continue to play an important role in the world, mainly due to the large internal market and political infrastructure represented by the European Union. Russia retains its influence in international affairs on the basis of their material resources and because of its important security role in the Eurasian space.

National states will in 2020 still hold a dominant position in the world order. We can assume, that their governments will find themselves in a strong confrontation with the pressure of economic globalization and the influence of new technologies expanding, especially informational, on political and social processes. In this regard an important role will also play non-state actors, whose influence will strongly increase. These include such multinational economic corporations, whose economic strength is often greater than the power of national states (Microsoft, Exxon Mobil). It’s obvious that also some other players have a great influence in the contemporary world. These are some global non-governmental organizations (Greenpeace, Transparency International), media and internet portals forming political attitudes of tens and hundreds of millions of people (television channels CNN, BBC, Al Jazeera, an Internet portal You Tube) and last but not least, the armed movements with a greater or minor degree of hierarchy, centralization and coordination, that can negatively affect the security and economic situation in the regional and global scale (Al Qaeda, the Taliban, mafia groups, drug cartels, groups of sea pirates). Power and influence is and will be generally more diffused in the highly globalized world.

In the coming ten to fifteen years at the global level will increasingly show asymmetry between global realities and the existing mechanisms of global governance. It is expected that this is reflected in the activities of the United Nations, which, as it originated after World War II with its principles, will be probably not fully operational. Increasingly important role may also play "informal" global governance platforms, to which now belongs primarily G816 and G2017. The importance of G20 will probably increase in particular with respect to its role in setting the strategy process to eliminate the impact of global economic and financial crisis in 2008-2010. Important role in international politics and economy will also play a strong cluster of "non-Western actors", such as a grouping of the BRIC (Brazil, Russia, India, China). According to the International Monetary Fund in 2007 represented the economic potential of these four countries 12% of world GDP (8% in 2000), respecting the estimation, that in a period of years 2040-2050 will be higher than the GDP of countries comprising the G7 grouping of 1997 (U.S., Canada, Great Britain, France, Germany, Italy, Japan)18.

At the end of the second decade of the 21st century it is expected to enhance the performance of the global economy - its size will be about 80% more than in 2000 and average income per capita will increase by about 50%19. A systemic change of development will mainly contribute. This represents the transformation from model of industrial society to a science model20, whereas the impact of new major players in the global economy - China and India will extend (Table 1).
Table I
World GDP rates (in % by using PPP)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>21.7</td>
<td>19.4</td>
<td>18.3</td>
<td>16.6</td>
</tr>
<tr>
<td>China</td>
<td>5.5</td>
<td>10.1</td>
<td>17.7</td>
<td>22.7</td>
</tr>
<tr>
<td>Japan</td>
<td>8.3</td>
<td>6.0</td>
<td>4.6</td>
<td>3.6</td>
</tr>
<tr>
<td>India</td>
<td>3.1</td>
<td>4.3</td>
<td>6.9</td>
<td>8.7</td>
</tr>
<tr>
<td>Russia</td>
<td>2.8</td>
<td>2.9</td>
<td>3.1</td>
<td>2.7</td>
</tr>
<tr>
<td>EU-27</td>
<td>24.5</td>
<td>20.8</td>
<td>18.6</td>
<td>15.6</td>
</tr>
<tr>
<td>France</td>
<td>3.6</td>
<td>3.0</td>
<td>2.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Germany</td>
<td>5.3</td>
<td>3.9</td>
<td>3.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Great Britain</td>
<td>3.4</td>
<td>3.1</td>
<td>2.9</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: The Economics Inteligence Unit – taken from Charles Grant publication „Can Europe and China shape a new world order“, London, Centre for European Reform, 2008.

Improving the performance of the global economy will in overall have a highly uneven character. It will further deepen the economic and social differences between the three types of countries: countries whose economy is based on agriculture, countries with economies built on using of cheap labor and low-tech product manufacturing, and eventually countries with economies and social systems based on knowledge (the knowledge economy). It can not be excluded that the growth of poverty and underdevelopment especially in regions with no prospect of major economic and social progress, which includes mainly sub-Saharan Africa, may lead to an escalation of political, social, humanitarian and security problems. Ability to find solutions to face this potential thread is increasingly becoming part of the efforts to ensure global security.

Potential conflicts of a social nature, however, loom even within developed countries. Aggressive entry of China, India, and together with them the other rapidly growing states in the increasingly integrated world economy, among other things, will bring about a further input of hundreds of millions of people (including the highly skilled), to the global labor market. This significantly increases the pressure on labor markets of developed countries, which will be increasingly confronted with the movements of the production capacity (and high-tech) in the “new territories”. It is conceivable that this can cause wider manifestations of discontent in developed countries, that may affect their political, social and security stability (especially in situations, where the hegemony of discontent will be middle class, whose interests will be affected to the greatest extent).

As for demographic trends, in 2020 the earth's population reaches 8 billion (6.5 billion in 2009), while 61% of the world's population will live in Asia. Population aging will be the main demographic problem in developed countries but
also in China, which significantly affects the economic and social policy (the need of wider and more affordable social services, health care, etc.). The EU will be confronted with a significant decline in population in the next 15 years (in 2025 will contribute to the world's population, only by 6.5%)\(^2\). The United Nations study on demographic changes in Europe notes in this context, that if the current development trends do not change, the European Union will need to maintain sufficient dynamics of economic and social levels by 2025 around 150 million immigrants (i.e. more than 7 million annually). Security risks associated with high levels of migration are thus more than reasonably expected.

By 2020 and with a high degree of probability even furthermore security problems will occupy one of the leading world political agenda. The main security threats are, according the classification of the European Security Strategy of 2003, terrorism, WMD proliferation, regional conflicts, the existence of failed states and organized crime. The listing of these threats in perspective 10 to 15 years will extend the range by other threats: may impair the economic, energy, cyber and bio security. In addition to failed states also the existence of "failed" big cities\(^2\) will pose a security threat. Security threats are also so called strategic shocks, including, for example, "mega" earthquakes, volcanic eruptions changing climate of the planet, thus something that is not possible to completely predict or control. The negative effect of these "strategic shocks" can cumulate, if they happen in unstable regions, respectively in failed states or cities.

Geographically, there will come a series of security threats, including Islamist terrorism, generated in so-called arc of instability: Sub-Saharan Africa - North Africa and East Africa - Middle East - Balkans - Caucasus - Central Asia - South-East Asia. Activities and objectives of Islamist terrorism are a global security threat multiplied by the fact, that they are (by the words of French philosopher Jacques Derrida), "beyond the political and state structures and moves outside the codified law." It’s goals are also in a visible political dimension, which is establishing itself as one of the decisive global political forces influencing international development.

Conflict potential of "arc of instability" will also amplify other potential security instability outbreaks, located either in its framework (strained Israeli-Palestinian relations, India-Pakistan dispute over Kashmir), or in regions that are in its relative vicinity. This concerns in particular Taiwan (strained relations with China, which consideres it as an integral part) and the Korean Peninsula (the existence of nuclear capabilities and threat of its possible use of the DPRK and the possible consequences of the collapse of the totalitarian regime in this country).

A serious security thread in the highly interconnected global economy is an economic and financial instability, which was proved by impacts of global economic and financial crisis that was triggered by the collapse of the banking sector in the United States in 2008. In regard to the relatively large non-transparency of the global banking sector and global capital transactions it is not possible to exclude recurrence of similar crises with devastating effect on the political, social and economic stability in the global and national scale in perspective of 10 -15 years.
Another risk factor is the proliferation of weapons of mass destruction (WMD), including nuclear. At the beginning of the 21st century it turned out, that the modified contract system of nuclear weapons non-proliferation functional since seventies of the 20th Century does not correspond to development of new technologies and to the globalization process\textsuperscript{25}. Illegal trade with nuclear materials and know-how for the production of nuclear weapons actually got out of effective control, which made nuclear weapons or technology to produce them available to a growing number of states, even in high-risk regions (the Middle East, East Asia).

Apart from nuclear weapons it can be expected to increase the role of chemical and biological weapons, which will be available to obtain thanks to the development of their commercial production. The focus of terrorist groups are, also on this basis, the chemicals, that will be difficult to detect. Also biological weapons are a substantial threat at present and for future. Potential bioterrorism attack would have consequences, that would quickly spread into a global dimension\textsuperscript{26}. And there is another threat for the world - the abuse of nanotechnology. The use of so-called knowledge to enable mass destruction (KMD - Knowledge-Enabled Mass Destruction) is becoming a real possibility. Therefore it can only be a matter of time, before nanotechnology becomes of interest to terrorist organizations, when it is already part of the modern weapons development\textsuperscript{27}.

The study was created as part of the research project of Charles University and the Faculty of Arts "Development of Czech society in the European Union: challenges and risks ", subproject CESES "Vision and strategy of the development of Czech society in the EU ", MSM0021620841 and security research of the General Directorate of Fire and Rescue Services of the Czech Republic - Population Protection Institute "Prediction of future changes in the security environment and their impact on security policy."

Résumé

In the following 15 years we will see an increasing worldwide impact of environmental degradation. This process will have its social, economic and security repercussions: armed conflicts, increasing evidence of state collapse in some countries, rise of illegal migration from vulnerable regions. One big global strategic problem is the drinking water deficit. So far, however, discussions and negotiations at various international forums have not led to any definitive shift of the current trend: environmental degradation is growing worse, not least due to the differences in outlook between the developing and developed world, when it comes to need for sustained economic growth. The availability of non-renewable energy resources, with its strong implications for security, will also remain a key issue. The next 15 years will see continuing efforts to rebuild the existing energy architecture based on fossil fuel (oil, gas and coal) with the help of new technologies. This should enhance the global energy security. However, according to expert estimates, it will take 25 years to develop the new technologies and put them to broader practical use. The United States will remain one of the key actors of global development, but the political and economic leverage of China will increase substantially and the world will witness the rise of new actors: India,
Vietnam, Singapore, South Korea, Indonesia, South Africa, Brazil and Turkey, which will become the leading powers in their respective regions. Europe will continue to play a very important role worldwide, especially due to its large internal market and political infrastructure represented by the EU. Russia retains its influence on international affairs thanks to its natural resources and its important security role in the Eurasian area. As for demographic development, in 2020 the global population will reach 8 billion (in 2009 it was 6.5 billion), with 61% people living in Asia. In developed countries, especially the EU, but also China, the principal demographic problem will be population aging, a fact that will have crucial impact on economic and welfare policies. Till 2020 and very likely even beyond, security problems will remain at the forefront of the global political agenda. The main security threats will still be those identified in the 2003 European Security Strategy: terrorism, WMD proliferation, regional conflicts, failed states, and organized crime. However, within the next 10-15 years the number of threats will increase: economic, energy, cybernetic and biological security may come under attack and, apart from failed states, a new security threat will emerge in the form of “failed cities”.

NOTES:

1 IPCC was established in 1988 by the United Nations Environment Programme (UNEP) and World Meteorological Organization (WMO). Validity degree of this report is supported by the fact, that scientific progress in moderating the behavior of climate and analyzing the measured data providing scientists with a very high degree of certainty (90 percent) in understanding how human activity affects the warming world.

2 The CNA Corporation report "National Security and the Threat of Climate Change" (www.SecurityAndClimate.cna.org) indicates that the carbon dioxide level in atmosphere is higher than any time in the last 650 thousand years.

3 Breakpoint, when the irreversible chain sequence of global changes starts, is according IPCC 2 degrees Celsius.

4 Climatological Institute Hadley Centre for Climate Prediction and Research in the UK outlined in one of its expertise a very pessimistic vision of the future: According the study will by the end of the 21st century half of the planet ground suffer a disastrous drought and hundreds of millions of people find themselves in a serious threat. Side-effect of this drought will be starvation, mass migration of population, water shortages and the war for it.


6 These are the Tigris and Euphrates, Nile, La Plata, Rio Lempa, Orange, Incomati, Limpopo, Okavango, Zambezi, Cunene, Lake Chad, Senegal Basin, Jordan, Kura - Araksi,

7 But also the EU failed to comply with the Kyoto Protocol. In October 2006 the European Environment Agency released a report that the 15 "old" EU member states is likely to reduce emissions by only 0.6% in 2010, while in 2012 it should be 8 percent.

8 The ratio of world energy consumption is currently 40% oil, 26% coal and 24% gas. It is expected that gas will be in second place in 2010.


10 According to OPEC sources, Saudi Arabia's reserves in 2003 were 262 billion barrels of oil, followed by Iran (133) Iraq (115) and United Arab Emirates (97).

11 Expert estimates says, that Russia has a usable volume of oil reserves of 10 – 20 billion tons (the current level of extraction would be ensured for next 22-45 years) and explored reserves of natural gas, 47 trillion cubic metres (extraction level can be ensured for 75 years). Total volumes of so-called projected oil and gas reserves in Russia are estimated to 44 billion tons of oil and 127 trillion cubic metres of natural gas. If these stocks would be confirmed by drilling, in the case of oil Russia would have enough supplies for 100 years and gas for 200 years.

12 The main consumers of Russian gas are the new EU member states (EU – 10), which cover their consumption of 73% from Russian deliveries. The major consumers of Russian gas from the 'old' member states are Germany (supplies cover 32% of consumption), Italy and France (25%).

13 China has provided loans to Russian companies Rosneft (15 billion U.S. dollars) and Transneft (10 billion U.S. dollars for building this pipeline branch. Russia will then deliver 15 million tons of oil annually to China in years 2011 – 2030. Rusko bude na základě této půjčky dodávat ročně Číňanům 15 milionů tun ropy v letech 2011 – 2030. Russia is currently a third major oil supplier to China after Angola and the Middle East region.


16 G8 members are United States, Canada, Great Britain, France, Germany, Italy, Japan and Russia

17 G20 members are Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Canada, Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom and the United States. The EU is also represented by the Presidency country of the EU and the European Central Bank.


20 Part of this change will also be an information technology expansion. E.g. in 2020, there should be available computers for only 100 U.S. dollars, which will be able to carry up to 500 billion operations per second.
21 Distinguished American economist, Director of Earth Institute at Columbia University in New York, Jeffrey Sachs indicates the three main determinants of keeping Africa in the trap of poverty and backwardness: inability to grow enough food (grain production of only 1118 kg per hectare), diseases expansion, which have a pandemic range (AIDS and malaria) and the economic isolation caused by very poor transport infrastructure.

22 "Financial" dimension of such solution indicates the UN Millennium Program: by 2010, Africa as the least developed continent needs direct assistance of 50 billion U.S. dollars annually.

23 One of the "population" scenario of the European Commission says, that if the EU does not begin to significantly promote the birth rate as part of an overall social policy, a sharp reduction of population begins from 2011 in Europe. This means, that until 2030 21 million people retires from work, which is 7% of the workforce. It could also have an impact for recruiting members of armed forces (e.g. Josef Šmondrk said in his article "Sources for security and defense of the Czech Republic" / Military panoramas No. 4 / 2004 /, that in 2025 will decrease the real recruitment potential by 30% due to population reduction and aging).

24 Number of people living in developing countries in cities will increase from the current 2.2 billion people to 3.9 billion in 2030. A total of 15 of the 22 "megacities" (cities with more than 10 million people) will be in developing countries. Extensive urbanization in developing countries is in the vast majority and not likely a controlled process, which is caused due to the lack of qualified management and administration. Then it is not possible to ensure adequate functioning of the economic, social and transport infrastructure, planning and development. Urban agglomerations are often established even in risky territories, which are exposed to natural disasters - earthquakes, floodings or tropical storms, which often require considerable casualties. Especially in the megacities is also a massive increase in so-called social vulnerability, which is associated with a high degree of social exclusion. Its primary indication is, that the vast majority of the population lives in slums. Megacities are also a source of great extent environmental pollution, and therefore a place for emergence and spread of dangerous diseases, that can turn into an epidemic and even pandemic with global reach. Risk is also in high rates of violent and economic crimes, that are often controlled by organized crime groups. Busy megacities without being properly controlled makes them a natural base for international organized crime groups and international terrorism.

25 In half of the first decade of the 21st century there are operating nuclear power plants or nuclear reactors in 43 countries and 100 countries have stocks of radioactive materials.

26 At an international conference organized by the International Criminal Police Organisation INTERPOL in 2005 at Lyon's the director Ron Noble stated, that there is no other way dangerous threat - however the world is not sufficiently prepared.


**Literature**


