

# India fuels the issue of resource security as the Chinese restrict rare earths and tungsten exports

*India discovers the strategic price of an inadequate critical materials supply – a lesson for the US*

✘ The development of countries like China, Brazil, India, Turkey, Mexico, or Indonesia has generated a shift in the global economic map thanks to the rise of so called “South-South” cooperation. The formation of the BRICS (Brazil, Russia, India, China and South Africa) is perhaps the most startling example of this phenomenon. Of course, Europe and the United States remain pillars of global technology, trade and finance but they face much greater competition, especially when it comes to resources, than was the case in the 1950’s or 60s. In fact, over the past two decades the rise of the BRICS and similar powers has substantially and permanently changed the map of the supply and demand for raw materials. China, in particular, accounted for over 50% of the increase in global consumption of industrial metals between 2002 and 2005.

Beyond this overall increase in demand, changes in technology have given cause for rare earths (essential for the advancement of many ‘green’ technologies) to be especially vulnerable to geopolitical whims and strategies. Tantalum is widely used in the electronics industry. Such minerals, given their uneven geographical distribution, difficulty of extraction and processing or the concentration of their production chain, represent a challenge for rising and existing economic powers alike. This has fueled the issue of resource security: the growing demand for unprocessed metals and the consequent difficulties in access to raw materials

will generate an ever more complex international struggle over the exploration, extraction, processing of raw materials.

Millions of jobs depend on access to raw materials and there has been an increase in demand for minerals and metals, accompanied by significant difficulties in the supply of certain raw materials, such as price volatility and market distortions – i.e. China's rare earth export restrictions. Countries and companies have invested billions in research to promote technological innovation in the value chain of raw materials through a wide range of initiatives such as new concepts and technologies for exploration efficient in terms of costs and identifying alternatives for critical raw materials even as research will help to improve processing and waste management technology to make mining and recovering critical materials more socially and environmentally acceptable. However, in the face of growing demand, supply is becoming problematic due to the concentration of supply in very few countries: China, Russia, the Democratic Republic of Congo and Brazil; add to this the low 'substitutability' and rudimentary recycling technology and it is not hard to see why the European Commission in 2010 identified 14 raw materials as having strategic importance. **They are antimony, beryllium, cobalt, fluorspar, gallium, germanium, graphite, indium, magnesium, niobium, platinum group metals, rare earths, tantalum and tungsten – in short known as 'moly' products.** Such is the context in which China has decided to continue applying export duties on several such materials including rare earths and tungsten, even though it had been expected to lift them on January 1 of this year to comply with the World Trade Organization (WTO) ruling deeming that export controls on such critical materials (including REE's, molybdenum and tungsten) were illegal. China has until 1 May 2015 to comply and its decision to uphold them is borne out of geo-strategic concerns.

On December 31, it was reported that China would restrict rare

earth and tungsten supplies to India, presumably to contrast the rise of India's military industrial complex. Indeed, molybdenum products are essential in the manufacturing of stealth radar evading technology, in targeting mechanisms and temperature resistant magnets and materials used in jet engines and aerofoil components in manned aircraft and increasingly in unmanned drone aircraft, which are playing an ever more important role in special operations. Missiles use samarium-cobalt (Sm-Co) magnets as do the ion plasma propulsion engines of future spacecraft. Neodymium-iron-boron magnets are able to withstand extremely high temperatures and are used in special munitions. Cerium and other REE are used to produce phosphors in lighting, radars and night vision equipment; even the 'humble' smart-phone can become an invaluable piece of defense equipment, facilitating communication. While not a rare metal in the chemical sense, rhenium is a highly temperature resistant element that is needed to produce the Joint Strike Fighter (JSF) aircraft to be supplied to the US and many of its NATO partners.

The REE industry has become extremely lopsided in China's favor and many countries, India increasingly so, need to invest more in securing dependable supplies of critical metals. India, for the time being, lacks the technological capability or the right rare earth ores to avoid reliance on raw material imports; just as the US and Japan were caught off guard in 2010, when China restricted exports of critical minerals, India too has been drawn to the need to develop buffer reserves. India has been especially keen to develop its aerospace technology sector – as has China in recent years – but it lacks the materials to develop the advanced alloys needed to make aerospace frames and engines alike. It is not enough that titanium, tungsten and chromium (among others) are hard to find in India (essential to produce high-stress components from special bearings to turbine and compressor blades), modern aerospace technology is experimenting with materials able to withstand extreme temperatures and stress

such as ceramic composites and borides and zirconium for the leading edges of wings.

Rare earths today represent what titanium and tungsten were in the 1930's and 40's and it is essential that reliable supplies of these essential materials be available. One of the most important development initiatives launched by Indian Prime Minister Narendra Modi is known as "Make in India". A shortage of critical materials for the defense and high technology sectors will severely limit the impact of the campaign according to Avinash Chander, Scientific Adviser to the Defense Minister and Director-General of the Defense Research and Development Organization. India has sought Japanese help in improving extraction and processing. India does have some rare earth production capability; it is minimal when compared to China, but the partially State owned 'Indian Rare Earths Ltd' sells some ore material such as monazite and a few value added products for magnets. Japan has already made investments in India. A subsidiary of Toyota Tsusho called Toyotsu Rare Earths India Pvt. Ltd. is based in Vishakapatnam, in the state of Andhra Pradesh, and is involved in the production of some rare earth elements. The company operates a base in which it is produced monazite sand, rare earth element, and is responsible for the preparation of rare earths such as neodymium, lanthanum and cerium; receives the supply of monazite sand from Indian Rare Earths Ltd (IRE), which falls within the jurisdiction of the Department of Atomic Energy.

Recently, IRE has requested authorization to extract rare earths from the sand along a coastal stretch of approximately 2500 hectares in Brahmagiri (Puri district). Japan is said to have contributed at least a half billion dollars for the development of alternative sources of rare earths in India, which wants to attract Japanese investment.

Both India and Japan understand that the rare earth industry offers trade, strategic and diplomatic advantages. At the same time, ensure regular supply of rare earths will be a process

that will take a long time. If you invest today in various projects, then it may take about five years to double or triple production. Over the years, many countries in the world had stopped investing in the extraction of rare earths because, from a financial standpoint, it was more feasible to import from China. However, this had led China to develop a monopoly in this area. For countries like India there is much to learn from the experience of the rare earths. It is important to understand that with regard to critical materials and essential minerals, planning is vital. India has learned the hard way that dependence on other countries – especially other competing economic and military powers such as China – should be minimal with respect to strategic materials required in the energy, aerospace, nuclear power and in defense sectors. In addition, there is a constant need to monitor trends in progress in areas such as semiconductors, silicon technology, production of microcircuits, thin films, nanotechnology, and so on. The presence or absence of strategic materials are two factors that have an impact in the short and long term on the economy of the country, as well as on military preparedness. The United States may be caught equally unprepared in this matter and India's lessons apply to it as well.

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## **Potash is the new safe haven sector to hedge against market volatility**

☒ Panic descended on the markets last week. The selloff on Wall Street and other major exchanges was not especially dramatic, but it was sustained as investors reacted – with

just a little panic – to signs of a global economic slowdown, possible policy changes at the Fed (i.e. higher interest rates) and a high US Dollar. The lower growth expectations and lackluster US employment statistics suggest that the Fed will not be especially eager to raise interest rates just yet. Nevertheless, the markets will be marked by more turbulence this fall and mining companies and commodity prices will be among those most subjected to its whims. While investors will be struggling to predict and make sense of the markets, there are opportunities in precious metals, which have fallen to yearly lows; uranium had also started to attract some interest in August. Then, there are fertilizers, agricultural sector stocks and potash in particular. These are looking rather good – especially in the mid and long terms.

There is the sensation that fertilizer – potash, phosphate, nitrogen – stocks are ‘overweight’ and that there is a potash glut. Grain prices have dropped, suggesting that investors will react in a bearish manner, as if guided by ‘Pavlovian’ conditioning. Nevertheless, fertilizer prices, and potash ones in particular, should hold, since consumption is high and the industry has had plenty of time to absorb and expect the lower grain prices – a trend that may last into the next year.

Indeed, the sustained low crop prices may be close to reaching the bottom and any increase will meet a corresponding increase in fertilizer prices. The price of corn is especially low (USD\$ 3.50 a bushel – it has been as high as USD\$ 8 according to RBC). Any lower and it will cost more to produce than to sell. The ‘natural’ forces of supply and demand will unleash their magic and restore a modicum of balance, pushing crop prices higher. There is also the issue of global fertilizer demand continuing to increase. For the past decade the big drivers of potash prices have been China and India. The annual contract negotiations between the potash majors through CANPOTEX and the Russian giant Uralkali over the price for a ton of potash (now at about USD\$ 310/ton) set the tone for the rest of the year.

This year, the crops were said to be abundant but low quality, which may determine higher demand for potash, which helps to improve soil and crop quality. PotashCorp advised that it predicts record high potash shipments and suggests this trend will continue into 2015. PotashCorp said that China continue to be a strong buyer as its farmers have set new consumption records, encouraged by the lower prices, setting the best market conditions in a decade. Farmers in North America are no different; they too appreciate a bargain and the lower prices have made potash more popular. The switch to 'volume' sales model adopted by Uralkali may have some sense now. The lower prices have made it easier for potash to be used by a far wider number of farmers, many of whom, will have become convinced of its necessity in the future, boosting demand. The fact that agricultural scientists have observed "an increasing nutrient deficiency and declining soil test levels in North America" can only be good news for potash miners.

Predictions of a sustained volume based potash market were strengthened by the fact that Uralkali no interest in restoring the price-cartel. Demand has simply defied and exceeded expectations. In 2013, Uralkali's decision to break the Belarusian Potash Co sales organization (BPC), de facto ended an informal, global price fixing cartel through which it and CANPOTEX, in North America, controlled two-thirds of the world's potash market. At the time of the BPC collapse, there were dire predictions about the potash market, yet potash prices have not dropped nearly as dramatically, as some analysts had predicted at the time (InvestorIntel was far more optimistic). The analysts failed to predict improved demand from Brazil and China as expected. They also failed to consider the global hunger for higher crop yields, which has kept the potash price above USD\$ 300 per ton. In fact, Brazil, which requires potash for its sugar cane fields agreed recently to a price of USD\$ 380/ton with Uralkali. Uralkali has also gained market share in the BRICS (Brazil, Russia, India, China and South Africa) thanks to their response

against sanctions adopted by the NATO bloc against Russia in the wake of the crisis in Ukraine.

Demographic development in the long term speaks for the potash sector. Demographic development (according to United Nations estimates, the world's population will grow from 7 billion to almost 10 billion in 2050) coupled with efforts to operate more and more successful land management, mean that the long-term prospects for potash remains excellent.

The African continent presents tremendous market potential for mineral fertilizers and potash in particular. Africa is surely one the most important markets for mineral fertilizers, having the potential to increase the value of its annual agricultural output of \$ 280 billion in 2010 to \$ 500 billion by 2020 according to the African Development Bank (ADB). Moreover, Africa has the potential to attract 880 billion dollars of investment in agriculture by 2030, which will drive demand for products such as fertilizers, seeds, pesticides and machinery as Africa develops its own production of biofuel, grain refinement and food. Africa still has considerable untapped value in its agricultural industry and it needs regulatory improvements to facilitate more investment, encouraging market-oriented rural employment, technology transfers (of which potash use is a part) and provide the sound basis for sustainability and long-term transformation. The prospects for agricultural growth in Africa are excellent, especially if small farmers are helped to specialize and add value.

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**Sanctions against Russia**

# ignore the real politik of the markets

✘ The crisis in Ukraine, which started around last November, has intensified and exacerbated tensions between Russia and NATO to a degree unknown since the pre-Gorbachev Soviet Union. On September 30, The European Union decided to renew and add new sanctions against Russia, claiming that the peace plan in Ukraine has not yet been respected. Brussels had hinted that it would consider revoking the sanctions had there been progress by September 30 toward a ceasefire. The EU will continue to “closely monitor developments on the ground,” but failed to issue another deadline. Should the EU consider the ‘situation on the ground’ to have stabilized, it will consider amending or revoking the sanctions, in whole or in part. The EU, in effect, is looking for any possible excuse to scrap the sanctions as even the most critical EU member states were reluctant to enforce sanctions while others continue to demand a softer approach toward Moscow.

Russia, meanwhile, has taken the first steps to comply with the EU demands, agreeing to a ceasefire with Ukraine, even as it has enforced its own, ongoing, retaliatory embargo against a number of European agriculture-food sector products. The ceasefire is holding tenuously but there is great uncertainty and fear because Ukraine aspires to join NATO and the European Union within the next six years. There is very little chance Russia would allow this to happen without its own retaliation, especially about the issue of NATO membership. The Russian Foreign Ministry has been controversially referring to Ukraine’s ‘restive east’ as Novorossiia, the territory that once consisted of what in today’s terms would be Odessa, Mykolaiv, Kirovograd, Dnepropetrovsk, Kherson, Zaporizhyya, Donetsk, and Luhansk.

The EU’s sanctions Russia concern companies operating in the

energy, finance and defense sectors, including the oil giant Rosneft and the weapons manufacturer Kalashnikov. The EU has also imposed assets freeze and a ban on granting visas to travel to a number of officials and business personalities considered to have close ties to President Vladimir Putin and pro-Russian rebels in eastern Ukraine and in Crimea, annexed to Russia. NATO military command said that while the first phase of the ceasefire saw a significant withdrawal of Russian forces in Ukraine, there are still hundreds of troops, including special forces, in Ukraine. The conflict between pro-Russia rebels and Kiev's own troops has now claimed more than 3,000 lives.

The crisis worsened last July 18, when (still unconfirmed) pro-Russia rebels accidentally shot down a Malaysian Airlines Boeing 777 airliner, (Flight MH-17) sparking a slew of allegations against Russia and its reckless arming of the rebels. Evidence suggesting that the rebels had Russian 'Buk' surface to air missiles, which were deployed against Ukrainian fighter jets and helicopters, amounted to a "massive escalation" of the crisis said Jonathan Eyal, director of the UK's Royal United Services Institute. It should be noted that while Flight MH-17 served as the premise to bolster Western resolve against Putin, the Ukrainian government holds the actual technical fault because it failed to shut down its airspace at a time of aerial warfare. In fact, the families of that flight's German victims plan to sue the government of Ukraine, rather than Russia's, in accordance with that failure.

The international response was to boost sanctions against Russia that had been rather tepid until that point. However, the US State Department, and the neo-conservatives that still have influence there, primarily one Ms. Victoria Nuland, the US Assistant Secretary of State in charge of Europe and Eurasian Affairs, played a rather important role in fomenting the crisis. Nuland was secretly filmed as she addressed

Ukrainian business and political leaders at a Washington meeting that the United States had spent “USD\$ 5 billion to develop Ukrainian Democratic Institutions”. Nuland was evidently rather involved, then also in the successful coup (and it was a coup, regardless of one’s feelings about the previous Ukrainian leadership) against the democratically elected, but pro-Russian President Viktor Yanukovich. Indeed, the situation in Ukraine is not at all as clear as the Western media and diplomacy hawks have presented it; that is, one where Russia is bullying a ‘democratic’ neighbor, trying to improve its fortune by looking toward alliances with the ‘West’ rather than staying ‘East’. Many commentators have ignored the huge role played by the United States and its allies in prompting the Ukrainian crisis in the first place, ignoring, in the process, the very real risk of it escalating into a more wide reaching war.

The crisis has actually been rather less about Russian aggression in Ukraine than a Western attempt to lure Ukraine into NATO and the European Union, while weakening the political future of Russia’s President Putin. Victoria Nuland’s previously mentioned meeting proves that Washington invested many US tax payers’ dollars to finance Kiev’s Maidan public protests and the coup against President Yanukovich, who had been democratically elected. Russia sees NATO’s creeping into Eastern Europe as a challenge to Russia, which had been assured of its continued influence – free of NATO troops – in a formal agreement signed by Presidents Mikhail Gorbachev and the George H. Bush at the time of German reunification in 1990. NATO, meanwhile, has announced it will build five new bases in Eastern Europe last August. This cannot but deepen tensions between the Kremlin and the West. Meanwhile, Ukraine has gained nothing since its new ‘democracy’ started. Kiev needed, says the IMF, some USD\$ 35 billion in aid last May; the IMF has revised that amount to USD\$ 55 billion, while economist Desmond Lachman says it now needs “closer to USD\$ 100 billion”. Moscow has not done so, but it could shut off

supplies of its gas to Ukraine as winter approaches. The fact is that the most democratic solution would be to allow a referendum in the pro-Russian Ukrainian provinces to vote whether to stay in Ukraine or join Russia.

Many of the opinions heard so far, enforced by sanctions and materialized through the deceptive use of campaigns costing billions of dollars, have come from people living far beyond the borders of Russia or Ukraine. Meanwhile the sanctions continue; are they effective? The last package of sanctions Treasury USA and the EU takes aim at Russian banks, the energy industry and the military. Sberbank, the largest bank in Russia, will not have to Western long-term capital (that is any loan lasting over 30 days). The USA and the EU want to cease the development of exploration projects in Siberia and the Russian Arctic, preventing the West's oil majors from selling equipment and technology for deepwater shale gas projects. Exxon and Shell, therefore, can no longer do business – building pipelines for instance – with such energy sector giants as Gazprom, Gazprom Neft, Lukoil, Rosneft and Surgutneftegaz.

The United States Secretary of the Treasury, David Cohen, has insisted that the sanctions package “isolate” Russia further from the global financial system. Interestingly, nationalist Russian shareholders have seen to it that the shares of the companies on the list of sanctions go up rather than down while the shares of the oil majors in the United States have gone down! Oh, and because Russia has been isolated from Western capital, Russia will simply not be importing goods and services both from the USA and the EU – finding alternatives through its BRICS (Brazil Russia, India, China, South Africa) partners and beyond. Moscow is simply dealing in local currencies with its other business partners and this could hurt the West and its currencies in the long term, because other developing countries might start to do the same.

Russia may sell its energy resource in any currency except USD and EUR while importing clothes, technology, hi-tech electronics, computers, agricultural goods and raw materials it needs from Asia and South America. There are serious doubts, moreover, as to how long the EU member states, in absence of a shared energy policy, will last without Russian gas even if they manage to secure alternative supplies from other countries (Azerbaijan, Qatar, Libya?). The West is still banned by another set of, rather counterproductive, sanctions against Iran, which means that it cannot import oil or gas from there to meet the Russian shortfall. The markets are less 'irrational' than they are motivated by profit and profit is based in reality. The current intentional politics practiced by the West against Russia express very little 'reality' and much ideology. Russia has a huge surplus of foreign capital – and can protect itself from the economic storm. The EU is still in austerity mode and failing to recover; even Germany, the Union's strongest economy, is hurting with recent growth rates noted at -0.2%. Markets respond to realpolitik and the economic wars launched by Washington and Brussels against Moscow will hurt the markets of the former rather than the latter.

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## **Ukraine crisis pushing Russia to form rare earths alliance with China**

✘ In 1986, Deng Xiaoping, launched the “863 program”, aimed to gain control of the rare earths market in the sector saying: “The Arab countries have oil, China has rare earths.” The 15 “rare elements” along with yttrium, scandium ('15+2'),

have the characteristic of retaining a strong magnetic property, resistant even at high temperatures. They are essential for the production of hard drives, satellites, lasers, digital cameras, wind turbines, fluorescent lights, electric motors, hybrid, mobile phones, guided projectiles, new generation radar and many other items that are of special military interest. In truth, these elements are not as "rare" as the name would suggest, but, their extraction and treatment requires expensive technology, because these elements are not found in nature in its pure state and they must be refined. Their abundance betrays the fact that most are found in deposits at low concentration, making it economically unwise to extract. China is the country with the largest reserves of rare metals (between 35 and 45%) and, since 1986, has made the greatest effort to support technological research in the field. Taking advantage of the significant economies of scale, low labor costs and minimal regulatory impediments, it has been able to optimize the supply chain in order to offer prices that have eliminated all competitors. Russia has the largest reserves after China – about 20% of the world's known reserves – but recently there have been new discoveries in the region of Murmansk and the Kola Peninsula. In addition, while the known North American, South African, Australians, Indian and Brazilian rare earth deposits do not ensure a supply of the full range of "15 + 2", it is virtually certain that the Russian deposits would be able to provide the entire series.

Russia has every incentive to exploit these resources and the recent tensions with the West and NATO over Ukraine, have generated even more interest, given their demand in industrialized countries and their importance to military technology. And, in fact, the fall in the supply of China (which has been discussed extensively in InvestorIntel) has left Russia a serendipitous opportunity to enter the rare earths market. In late 2013, the IST group, founded by Aleksandr Nesis, has formed a joint venture with the state-owned company Rostekh, and a large investment fund in order to

invest at least a billion dollars, by 2018, to exploit of an area of about 250 square kilometers in the Yacuzia region in hopes of expectation of extracting 154 million tons of elements such as yttrium, niobium, scandium and terbium. The plant is expected to be finished by 2017, to enter into full swing only in the following year. ICT's plans have gained stronger momentum as a result of the tensions resulting from the political and military crisis in Ukraine. The United States has never quite warmed up to the EU's reliance on Russia for gas supplies (and for capital), always finding ways to disrupt the South Stream project – a pipeline bringing Russian to Europe via Bulgaria, avoiding Ukraine).

The IST rare earths supply from Russia would clearly tempt the EU in the same way that Russian gas has been doing with South Stream, promoting closer ties between many existing and potential NATO members and Russia – a perspective that most American foreign policy makers, especially on the neo-conservative side, regard with concern if not horror. If Russia cannot consider the EU as a reliable market because of geopolitics (European industrial powers needing rare earths will be hard pressed to promote sanctions against Russia), Moscow can still such outlets as Japan and the BRICS (Brazil, Russia, India, China, South Africa). Taking a page from the potash industry, where Russia had an alliance and pricing cartel mechanism with neighbor Belarus, Russian rare earth producers could establish a rare earths cartel of convenience with China. Last May, Russia and China (which are already linked by the “Shanghai Pact”) decided to increase their gas trade. A Sino-Russian rare earths cartel would be far more powerful than the gas one, being able to dictate world prices. Secondly, Russia could obtain the technology required to undertake a cost-effective exploitation of its resources. China, would gain deeper trade penetration toward Western Europe linking it to Germany more directly, potentially weakening the links with the United States. China and Russia would also have all the materials needed to expand their

military, thanks to the materials to advance new generation weapons from lasers to drones.

The Ukraine crisis – and China's rare earths industrial consolidation and reform – has given Russia an unprecedented incentive to develop a rare earths mining industry, which, in addition to its hydrocarbons, would give it further huge bargaining power on the world economy. It does not have the know-how, technology, refining plants yet but China can offer these. Rare earths are essential to the production of directed energy weapons: absolutely innovative systems that, instead of hitting a target with a bullet, invade it with electromagnetic radiation, plasma or high energy laser beams. They are weapons of power, precision and speed, offering much lower operating costs than conventional weapons. Now, the United States is at the forefront in the development of these systems, but for some years now, it has suffered projects delays, due to the difficulty of overcoming the supply problem. The US Department of Defense has launched some inquiries and legislative proposals to address the rare earths supply issue and the findings were discouraging.

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## **Western agricultural and potash sectors suffers more from anti-Russia sanctions than Russia itself**

✘ Russia has delivered a textbook response to the growing list of sanctions that the West and NATO countries have adopted, with more or less conviction, over its inevitable

interventions in the Ukrainian civil war. Russia has banned food imports from several Western countries including Italy, Germany and Canada. It has also banned Western investment projects in the Russian agro-food sector just as Russian food tastes and consumption habits have been expanding to include a wide variety of products. From the Western perspective that Russia should modernize politically, the sanctions will have adverse effects, delaying that very process of modernization, forcing a resumption of cultural and political insularity. Russia will put planned projects on hold or cancel them outright, hurting Western companies in the process.

Western companies – especially German and Italian – have been providing the modern technologies and know-how to modernize the Russian agriculture and processing industry. Germany alone has invested over a billion Euros in Russian agribusiness, which have enabled Russia to vastly improve plant production, resuming its role as a primary exporter of wheat along with the USA, the EU and Argentina. The increase in the production of wheat and other crops has also allowed for improvements in poultry and pig production, which has raised demand for such minerals as potash and phosphate. Meanwhile, as late as 2013, several European small and medium enterprises in the agricultural sector had asked their EU representatives to significantly expand their corresponding commitments in Russia, facilitating ties further. The crisis and the Western (especially from the EU) promise to include Ukraine in NATO or even the EU have contributed greatly to the crisis. Not surprisingly, trade relations and problem-resolution mechanisms must be in place to build trust in trading partnerships and now both are in short supply. It will be difficult, but the EU must pursue a more diplomatic line with Russia in order to avoid completely cutting political level discussions and opportunities to continue working in favor of Russia's agricultural and food industry modernization, which benefit western companies directly.

The Russian government has chosen to ban imports of several food products from the EU and the USA not only as a means of political pressure, but also to highlight their positive impact on the development of Russian agriculture and food industry. It is therefore in the mutual interest of all powers concerned that the Ukraine conflict does not escalate further.

The effects of the embargo imposed by Russia have already been felt. Entire containers of EU food products have been blocked and sent 'back to sender', while Russian importers are advised have been terminated several contracts for the shipment of fruit and vegetables. The list of banned products covers the entire range of diets and tastes including beef, pork, chicken, fish, seafood, milk and dairy products, fruits and vegetables from the EU, USA, Norway, Australia and Canada, with the exception of alcohol and children's products. It is a sharp brake on the increasing demand for EU products on the dinner tables of all countries that made up the former Soviet empire that had begun to appreciate such gastronomic delights as Parmigiano Reggiano and prosciutto, not to mention all manner of oranges, grapes and legumes. In the first quarter of 2014, Russian imports of EU food products had actually risen in the first quarter of 2014. Countries such as Italy, which are relying on exports to lead the path out of the economic crisis, consider agriculture as a very important economic sector. It is estimated that Italy alone will lose over 200 million Euros in lost agri-business with Russia alone. Now we are facing a worrying escalation of the conflict with a trade war, which confirms the strategic importance of food especially during periods of economic recession. Russian leaders are master chess players and they have not chosen to target food imports casually; they are very aware that agriculture is a primary pillar of growth for the European Union at a time of economic stagnation. Indeed, worldwide agricultural exports from Italy alone grew by 5 percent in 2013, reaching a record high value of 34 billion Euros, even as other sectors suffered.

As for Canada, while Prime Minister Harper engages in smug tirades against Russia, the sanctions and growing trade 'Cold War' may have consequences for the potash sector. Russia is part of the block of BRICS (Brazil, Russia, India, China and South Africa) countries, all of which have high potash and phosphate demand driven by their respective agriculture and food sectors. As western borders close in response to decisions in Bruxelles, Ottawa or Washington doors open to Russia's East and South. In potash terms, the world's largest potash producer Uralkali expects to be able to implement price increases by as much as 10% in the 2015 supply contracts with China. Uralkali is considered the clock for the fertilizer industry, which also includes Canada's Potash Corp of course.

The People's Republic of China is the world's largest consumer of potash and now pays Uralkali USD\$ 305/ton. Technically, this should be good news for Potash Corp and its CANPOTEX partners (Mosaic, Agrium), but China may well decide to increase its share of supply from Russia in solidarity over Western sanctions. In turn, Russia will replace Western imports with meat and dairy products from Brazil, Argentina, Ecuador, Chile and Uruguay, which are more than willing to step up to the opportunity. China has also indicated that it can increase the supply of fruits and vegetables to Russia. Uralkali also has close ties to India and if it should see it advantageous, it could slash potash prices below contract rates, revamping the 'quantity' model by increasing production and undercutting CANPOTEX. Moreover, Russia may decide to trade in local currency when dealing with other BRICS members, further damaging the potash market.

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# 30 million jobs in Europe depend on access to raw materials

✘ The European Union (EU) has published a document, the Raw Materials Initiative, outlining the importance of raw materials to its economy in view of rising concern over access to specific raw materials needed to match current and future technological development. The EU considers the availability and supply of raw materials to be an important risk to Europe's economy. About 30 million jobs in Europe depend on access to raw materials. The High Level Steering Group of the European Innovation Partnership (EIP) on raw materials has presented a strategic plan to ensure a stable supply of raw materials. The EIP aims to reduce dependence on imports of raw materials, improving the conditions of supply from within Europe itself and from countries beyond the Union. The EIP have considered both resource efficiency and access to reliable alternative sources, given the extent of the risk.

The development of countries like China, Brazil, India, Turkey, Mexico, or Indonesia has generated a shift in the global economic map thanks to the rise of so called "South-South" cooperation, highlighted by the need to extend the concept of the G8 to the G20 – that is to say between developing countries rather than simply between the rich North and the poorer South. The institutionalization of the BRICS (Brazil, Russia, India, China and South Africa) is perhaps the most startling example of this phenomenon. Of course, Europe and the United States remain pillars of global technology, trade and finance but they are no longer the sole or even main pillars as was the might have been the case in the 1950's or 60s. In the past two decades, in fact, the economic tides have substantially and permanently changed the international map of supply and demand for raw materials. Raw materials are

essential.

In Europe, the construction, chemical, automotive, aerospace, machinery and equipment sectors – all evidently reliant on raw materials produce in excess of 1.4 trillion in value and create employment for some 30 million people: access to raw material is critical on multiple levels. Emerging G-20 or BRICS or aspiring BRICS are also trying to secure access to more raw materials. The race, as stated by the EU Commission caused a “tripling of metal prices between 2002 and 2008”. China, in particular, accounted for over 50% of the increase in global consumption of industrial metals between 2002 and 2005.

Beyond this overall increase in demand, changes in technology have given some natural resources a new strategic importance. For example, rare earths are now essential to many “green” technologies. Tantalum is widely used in the electronics industry. Cobalt is used in lithium ion batteries as is graphite; germanium is found in fiber optics while indium is used in photovoltaic cells. Indium is also needed in the growing field of haptic technology – technology related to the ‘sense of touch’ and frequent in aerospace, displays, video games, controls and a growing list of applications. Such minerals, their rarity, their uneven geographical distribution or concentration of their production chain represent a challenge to the increasing importance for global economies. The emphasis on resource security, will force Europe to shift to the forefront in the fields of raw materials even while mitigating the negative impact on the environment and society. The growing demand for unprocessed metals and the consequent difficulties in access to raw materials are the foundation of the Strategic Implementation Plan (SIP – Strategic Implementation Plan). The challenge, should it succeed, will turn Europe into a world leader in the field of exploration, extraction, processing, recycling and substitution of raw materials by 2020.

How does the EU plan to achieve this? Research, development of new technologies , recovery and recycling of waste and identification of alternative materials , in line with the objectives of 'Horizon 2020', the EU's main instrument for funding research over the next seven years 2014-2020. Raw materials are the lifeblood sustaining the EU's industrial sector. At least 30 million jobs in Europe depend on access to raw materials and there has been an increase in demand for minerals and metals, accompanied by significant difficulties in the supply of certain raw materials, such as price volatility and market distortions – i.e. China's rare earth export restrictions. The EU has asked its companies, researchers and NGOs to promote technological innovation and non-technological innovation in the value chain of raw materials in Europe and beyond. The group of possible actions includes a wide range of initiatives such as new concepts and technologies for exploration efficient in terms of costs and identifying alternatives for critical raw materials.

The EU plans to launch up to ten specific pilot projects aimed at promoting the technologies for the production of primary and secondary raw materials as well as identifying alternatives for at least three applications of essential raw materials. In a separate aspect the SIP will also sponsor efforts to improve processing and waste management technology to make mining and recovering critical materials more socially and environmentally acceptable.

Image Source: <http://europa.eu>