

# CASPIAN OIL & GAS: NEW PERSPECTIVES BEYOND PROJECTS AND PIPELINES

CHRISTOF VAN AGT

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Caspian Oil & Gas: New perspectives beyond projects and pipelines

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**COVER PHOTO**

Divankhana pavilion of the Shirvanshahs' Palace in Baku Azerbaijan

# **CASPIAN OIL & GAS: NEW PERSPECTIVES BEYOND PROJECTS AND PIPELINES**

CHRISTOF VAN AGT

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# EXECUTIVE SUMMARY

## INTRODUCTION

**Achievements<sup>1</sup>:** With the decision to export Caspian gas to the EU via the Trans-Anatolian and Trans-Adriatic Pipelines, the era of investment in strategic oil and gas infrastructure, launched in the nineties, is drawing to a close. Caspian oil exports are flowing to world markets and natural gas resources are coming on-stream, forging new trade links and fulfilling producer and consumer diversity goals. Only Trans-Caspian ambitions for oil and gas remain constrained, due to competing interests in the region, despite ambitious EU mediation efforts and corporate interest in enlarging markets. Caspian resources will be further unlocked by the recent final investment decision on the second development phase of the giant Shah Deniz gas field off the shore of Azerbaijan and the first oil production that finally surfaced from the giant offshore Kashagan field of Kazakhstan this year. Caspian crude, gas and products flow predominantly to Russian and Turkish market outlets. Oil and gas flows to adjacent markets and ports in Central, South-eastern and North-western Europe will expand over time as regional export capacity in the Southern Corridor reaches critical mass widening access to resources as well as transport and trade opportunities<sup>2</sup>. Global markets will draw on Caspian resources in response to market signals and have moved beyond strategic considerations alone. Chinese demand will weigh more heavily on coal and minerals in Mongolia, as well as on the gas resources of Turkmenistan and of the Eastern Caspian, where it became a partner in the Kashagan project. India, in turn, has gained minority shares in the Azeri-Chirag-Gunesli offshore project and the Baku-Tbilisi-Ceyhan pipeline, exporting oil through the Southern Caucasus to the Turkish port of Ceyhan on the Eastern Mediterranean. Meanwhile, Afghanistan seeks to reintegrate with the wider region, while Kyrgyzstan and Tajikistan aim to harness their hydro-electricity potential. These developments, along with growing gas exports from Turkmenistan to China and through Afghanistan to Pakistan and India, are creating more diversity in energy exports, which will not only strengthen energy security but also contribute to stability and cooperation in the wider region. These are significant changes from the situation in 1990, when Caspian oil and gas could only reach markets through Former Soviet

1 These findings draw on the elements for discussion at the roundtable on 'Caspian Oil & Gas: Past Practices and Future Prospects', Huys Clingendael, 2nd of July 2012.

2 See also Annex, Figure 1: Overview of key Southern Corridor gas pipeline capacity and Map 1: Overview of key Southern Corridor gas pipeline routes.

Union networks and trade practices. On the other hand, the gridlock in the Southern Caspian region, in which relations with Iran and legacies of conflicts and disputes figure prominently, remain a sobering constant.

**The evolving market context:** New conventional and unconventional resources of oil and gas are making their way into the global markets. This, together with more competitive terms of trade facilitated by hubs, is exerting pressure on European gas prices and oil indexation. Business models and policy will have to find new energy market security optimums and respond with greater flexibility to broader trade opportunities that displaced coal, new finds and excess renewable supplies leave in the wake of breakthroughs. This could in turn mean that implementation of the Third Legislative Energy Package will shift into high gear, perhaps even leading to the realisation of the EU's internal energy market by 2014 as mandated. Under these new realities, the EU's climate policies and Emission Trading System appears off target and price signals are not coming through. Meanwhile, internal market developments in Russia, plus a slight crack in Gazprom's gas export monopoly which is allowing a broader range of LNG exports to Asian markets, indicate that market trends are converging towards a more competitive environment in practice despite an enduring impasse in the EU-Russia energy dialogue. Market and regulatory developments in Ukraine might further reduce the need for major investment in infrastructure to accommodate long-distance dedicated flows. In European hubs and newly emerging energy ports, from the Baltic and Black Seas to the Eastern Mediterranean, this will shift the trade focus from transportation to more diverse marketing opportunities and enable Caspian resources to reach markets more sustainably and competitively.

**Impacts of price on capacity:** When hub prices start to converge and come to reflect regional market realities more strongly than they do remote long-term upstream investment requirements, this could have consequences for the long-term security of supply and for the business models that underpin investment decisions taken today. Downward pressure on prices may lock in volumes of Caspian and other gas constrained by remote pipelines, in favour of less expensive sources coming available in areas relatively more accessible for seaborne LNG transport. Regional price differentials have sharpened, adding to the risk of price volatility. As commercial actors seek to arbitrate these price differences, new long-haul pipelines may become less attractive. Companies operating in the Caspian will need to consider many new elements in their decisions on where to invest and how to organise export flows over the next thirty years. On the other hand, EU gas demand may well recover on the back of more abundant and competitively priced supplies.

This would enable the EU to capitalise more straightforwardly on the role gas can play in the low-carbon economy, ultimately attracting more supplies from the Caspian and other distant sources throughout this period. Oil price linkage will loosen its grip on gas markets, and energy export and investment revenues are expected to decrease, limiting economic growth in producer countries<sup>3</sup>. Together with WTO entry, this should stimulate the economic diversification and modernisation of Caspian resource economies. Efforts to align energy sector regulation and market integration could reclaim the lead from grand infrastructure designs. Government support for project-specific efforts to circumvent transit risks stemming from asymmetric regulatory approaches is in fact a symptom of the policy gridlock between the open and vertically-integrated market structures of consumer and producer countries. The change in market variables appears overwhelming for both state-owned and private sector investors, affecting energy security, competitiveness and budgets of both consumer and producer countries. A more robust and cohesive Caspian policy framework, one shared by wider Caspian stakeholders and which moves beyond individual NOC-IOC transactions and infrastructure investments, is needed to maintain socio-economic growth and stability in the region.

**The geopolitical context:** Recent events have sharpened our collective awareness of the complexity of competing objectives. The ‘Arab Spring’ has increased uncertainty across North Africa and the Middle East, where many key oil and gas producers are redefining their governance. Global tensions with Iran and a runaway conflict in Syria expose how universal values and norms, although shared multilaterally, can be defeated on the back of multipolar power projections. The rapid emergence of a more densely integrated world market has created uncertainty about resource availability and market access, giving way to unpredictable tensions. The confidence-inspiring momentum surrounding governance frameworks has dissipated, and well-established institutions are slow to adjust to new realities. The absence of collective cohesion aggravates regional disparities. New sources of oil and gas, from the Eastern Mediterranean to Sub Saharan- and East Africa as well as North- and Latin America, create both new opportunities for development and potential for confrontation. Producer-state governments will have less leverage

<sup>3</sup> In this new energy environment, economic growth in Russia may slow down by 1 percentage point year on year, according to Russian assessments: ERI RAS-ACRF (2012) *Global and Russian Energy Outlook up to 2040*. On the other hand, WTO membership should stimulate more diverse economic growth by some percentage points over the medium term in Russia. See also Lamy (2013) *WTO Accession Puts Russia in a Better Position to Address its Domestic Challenges*, January. The same applies to Azerbaijan, Kazakhstan and Turkmenistan in the Caspian region, whose economies are dependent on resource income and that are equally likely to see government energy sector income decrease due to production delays and downward price pressures. This trend could therefore stimulate economic diversification and modernisation, including but not limited to closer EU association and WTO membership.

when consumer markets and energy mixes become more diverse and energy markets are more abundantly supplied. As the high price cycle and tightly supplied energy market transforms into a more abundant and diversely supplied environment, owing to technological advances, unconventional oil and gas production and the competitive economics of new conventional finds, the strategic significance of Caspian energy resources is being eroded.

The EU today has a chance to engage with Caspian governments and society more comprehensively and visibly than in the past, in more areas than only energy and security agendas. The Arab Spring exposes again that universal values are not shared uniformly in the same order among partner countries. Different priorities compete in Syria and the wider region in a deadly stand-off that signals a retreat into bipolar 'comfort zones' reminiscent of the Cold War and the conflict in Former Yugoslavia after the fall of the Berlin Wall. Major shifts, including but not limited to ISAF troop withdrawal from Afghanistan, affect the wider region in its entirety and require enduring and sufficiently broad engagement with Caspian society and state structures, well beyond energy projects and pipelines alone.

Caspian states will need to accommodate rising social and economic requirements as the commodity price boom of the past decade levels off under the pressures of a more competitive energy market environment. Governments will need to shift gears from entrenchment in their newly acquired state sovereignty toward opening up to stronger regional cooperation. They will need to turn from nation building to governing society through well-functioning institutions, rule of law and anchor socio-economic growth and stability in modern education systems for new generations. Resource dependent economies of the Caspian may well have more limited negotiating power and government leverage as the region integrates into a world in which socio-economic and market dynamics prevail over energy and security concerns alone. Yet this integration should also stimulate the economic diversification and modernisation of Caspian society. While the Southern Caucasus may tend towards Euro-Atlantic governance styles and Central Asia toward Asian ones, the Caspian can take the best of both worlds and become a self-defined region, depending on the ability of the littoral states to cooperate and inspire constructive international engagement.

## KEY FINDINGS

- **Multiple systems for sea-borne oil exports alter flows and raise security of supply and environmental concerns; stronger international cooperation is required:** Major oil pipelines serving diverse market outlets, both new and existing, were successfully put in place in the nineties. Though these already integrate markets and instil commercial discipline, they require expansion to accommodate rising Caspian net oil export potential. If Caspian states are to make true on IEA forecasts of 4 mb/d by 2020<sup>4</sup>, they need to move forward with new major oil export systems, including Trans-Caspian shipments and pipeline exports to China, as well as optimising pipeline access and transport practices. Investment in mid-stream re-export capacities in the Black Sea region, aimed at alleviating environmental and security risks in the Bosphorus and Dardanelles and reaching downstream markets, has stalled due to suboptimal competition between stakeholders. This investment has been further impacted by the economic crisis and by new Russian market outlets on the Baltic and Pacific. The absence of a shared vision means that if a re-reversal of flows through the Odessa-Brodi pipeline does not occur, Turkey would seem best positioned to move forward with the construction of the Samsun-Ceyhan Pipeline. New export capacity via Russian ports on the Baltic Sea and increased exports to China may further alleviate or displace mid-stream risk but would lower the quality of Caspian crude and could raise EU concerns regarding security of supply. After the Fukushima Daiichi nuclear power plant and Macondo oil well crises, there is a clear desire to limit risk also in the Caspian. As production levels rise and society becomes more engaged, risk control will require stronger government cooperation.
- **The fragile gas pipeline network is still no match for the vast production potential of the Caspian:** Gas reserves were considered all but stranded in the nineties when demand in the Commonwealth of Independent States (CIS) fell and development was driven by the desire to unlock vast Caspian oil reserves for world markets. Interest in Caspian gas resources revived in light of a combination of more multipolar dynamics in relations with Russia, growing gas demand in power generation, and expectations of tight supply in both the Asian Pacific and Euro-Atlantic regions. New Caspian gas discoveries have helped to diversify dependencies and shift trade relations. Increased investor appetite for the gas reserves of Azerbaijan and improved data transparency have resulted in a considerable volume of gas being quantified in Turkmenistan as well, which, after Russia, Iran, Qatar and Saudi Arabia, now holds the world's fifth largest

4 IEA/OECD (2012) World Energy Outlook

proven gas reserves<sup>5</sup>. Though major pipeline agreements to feed growing Euro-Atlantic and Asian Pacific import dependencies are in the implementation stage, the challenge to match geological reserves with future energy demand in the two regions remains huge. In order to enable Caspian gas resources to help meet global demand and deliver on time, all existing regional pipelines are needed and new ones must be built. Already in existence are the Trans-Central Asia pipeline to China and the Central Asia Centre system to Russia, which need to be modernised. A Coastal Caspian pipeline could perhaps augment the Central Centre system to Russia. New pipeline capacity soon to come online through the South Caucasus to Turkey, connecting with the EU market through a Trans-Anatolian (TANAP) and Trans-Adriatic pipeline (TAP) will ultimately land in Italy. Another pipeline is the a Trans-Afghan pipeline to India and Pakistan (TAPI) for which agreements are in place. Broadening access to upstream onshore resources for international investors, moving forward with new forms of cooperation between IOCs and NOCs and joint development schemes are needed to ensure that deeper and more difficult to develop layers can be accessed in order to produce the required volumes. After 2020 the new unconventional and conventional gas resources coming available in the Eastern Mediterranean and Black Sea regions, Myanmar, East Africa and on the Russian Pacific and Arctic coasts may begin to compete. To not miss out on opportunities, the Caspian will need to enable further investment to be better positioned by that time.

- **New emerging oil and gas provinces with good market access and investment conditions are eroding IOC appetites for Caspian risk:** Upstream oil and gas contracts concluded in the nineties reflected that host governments whose capital and technology were severely constrained lacked a track record on the treatment of large-scale foreign investments and were newcomers to the dealings of the international oil and gas scene. PSAs aligned the interest of key foreign investors in obtaining access to resources and host government needs. Through their development, PSAs created revenue by ring-fencing then untested sovereign governments and regulatory risks. Over time investment conditions have sharpened, considerably limiting the scope for PSA agreements. The growing capacity and confidence of Caspian host governments has culminated in the establishment of mandatory shareholdings by NOCs and in stronger, more self-confident institutional frameworks that assertively impose new rules and regulations on oil and gas sector operations, sometimes even with retroactive effect. Against the backdrop of significant new offshore and onshore

5 EIA (2012) Excluding the United States reserve base which comes in as a new fifth place as a consequence of unconventional production from shale.

acreage that has come available elsewhere, Caspian ‘resources nationalism’ will perhaps temper the oil and gas sector’s current means of development, namely best available industry technology and IOC practices, in favour of larger NOC involvement, both foreign and national. On the other hand, it could lead to a more measured development of the oil and gas sector, affecting resource-enabled economic growth forecasts. The latter may well provide the window of opportunity the Caspian needs to diversify and broaden socio-economic growth by harnessing the economic potential of other sectors. Alternatively, it may stimulate and entrench rent-seeking behaviour and resource curse phenomena.

# **GLOSSARY AND LIST OF ABBREVIATIONS USED IN TEXT AND ANNEXES**

<b>ACG</b>	Azeri Chirag Gunesli oil fields
<b>ACRF</b>	Analytical Center of the Government of the Russian Federation
<b>AFG</b>	Afghanistan
<b>AIOC</b>	Azerbaijan International Operating Company
<b>ALB</b>	Albania
<b>ANCA</b>	Armenian National Committee of America
<b>AZ</b>	Azerbaijan
<b>BEL</b>	Belarus
<b>BLSEA</b>	Black Sea
<b>BPS</b>	Baltic Pipeline System 1 & 2
<b>BTC</b>	Baku-Tbilisi-Ceyhan oil pipeline
<b>CASP</b>	Caspian Sea
<b>CCP</b>	Caspian Coastal Pipeline
<b>CDC</b>	Caspian Development Corporation
<b>CEU</b>	Council of the European Union
<b>CHN</b>	China
<b>CIS</b>	Commonwealth of Independent States
<b>CNOOC</b>	Chinese National Offshore Oil Corporation (Chinese NOC)
<b>CNPC</b>	Chinese National Petroleum Company (Chinese NOC)
<b>CPC</b>	Caspian Pipeline Consortium
<b>CRO</b>	Croatia
<b>CSTO</b>	Collective Security Treaty Organization
<b>East Med</b>	Eastern Mediterranean
<b>EC</b>	European Commission
<b>ECS</b>	Energy Charter Secretariat
<b>ECO</b>	Economic Cooperation Organization
<b>ECT</b>	Energy Charter Treaty
<b>ECU</b>	Eurasian Customs Union
<b>EIA</b>	US Energy Information Administration
<b>EITI</b>	Extractive Industries Transparency Initiative
<b>EP</b>	European Parliament
<b>ERI RAS</b>	Energy Research Institute of the Russian Academy of Sciences
<b>ESPO</b>	Eastern Siberia-Pacific Ocean oil pipeline
<b>EU</b>	European Union

<b>EurasEC</b>	Common Eurasian Economic Community
<b>GE</b>	Georgia
<b>GEGF</b>	Gas Exporting Countries Forum
<b>GR</b>	Greece
<b>HREU</b>	High Representative of the EU on Foreign Affairs and Security Policy
<b>IAEA</b>	International Atomic Energy Agency
<b>ICSID</b>	International Centre for the Settlement of Investment Disputes
<b>ICG</b>	International Crisis Group
<b>IEA</b>	International Energy Agency
<b>IEF</b>	International Energy Forum
<b>IND</b>	India
<b>IOC</b>	International Oil & Gas Company
<b>IRENA</b>	International Renewable Energy Agency
<b>IRN</b>	Iran
<b>IRQ</b>	Iraq
<b>ISAF</b>	International Security Assistance Force of NATO
<b>IT</b>	Italy
<b>ITGI</b>	Italy-Greece Interconnector
<b>KAZ</b>	Kazakhstan
<b>KCTS</b>	Kazakhstan-Caspian Transport System
<b>KMG</b>	Kazmunaigaz, the national oil & gas company of Kazakhstan
<b>KPO</b>	Karachaganak Petroleum Operations, B.V.
<b>KYR</b>	Kyrgyzstan
<b>MAL</b>	Malaysia
<b>MOL</b>	Moldova
<b>NATO PfP</b>	North Atlantic Treaty Organization Partnership for Peace
<b>NCOC</b>	North Caspian Operating Company
<b>NCSPA</b>	North Caspian Sea Production Sharing Agreement
<b>NOC</b>	National Oil and Gas Company
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>OJ</b>	Official Journal of the European Union
<b>ONGC</b>	Oil and Natural Gas Corporation (Indian NOC)
<b>OPEC</b>	Organization of Petroleum Exporting Countries
<b>OSCE</b>	Organization for Security and Cooperation in Europe
<b>PAK</b>	Pakistan
<b>PSA</b>	Production Sharing Agreement
<b>RIAC</b>	Russian International Affairs Council
<b>RAS</b>	Russian Academy of Sciences
<b>RO</b>	Romania
<b>RU</b>	Russia

<b>SCO</b>	Shanghai Cooperation Organization
<b>SCP</b>	South Caucasus Pipeline
<b>SCPC</b>	South Caucasus Pipeline Company
<b>SEE</b>	South East European Pipeline
<b>SOCAR</b>	State Oil Company of Azerbaijan
<b>TAPI</b>	Trans-Afghan Pipeline
<b>TCP</b>	Trans-Caspian Pipeline
<b>TKM</b>	Turkmenistan
<b>TPAO</b>	Turkish Petroleum Company (Türkiye Petrolleri Anonim Ortaklığı)
<b>TPP</b>	Trans-Pacific Partnership Agreement
<b>TTIP</b>	Trans-Atlantic Trade and Investment Partnership
<b>TU</b>	Turkey
<b>UKR</b>	Ukraine
<b>UN RCCA</b>	United Nations Regional Center for Preventive Diplomacy for Central Asia
<b>UN SC</b>	United Nations Security Council
<b>USGS</b>	United States Geological Survey
<b>UZ</b>	Uzbekistan
<b>WTO</b>	World Trade Organization

#### **NUMERICAL VALUES**

<b>bcm</b>	Billion cubic meters
<b>gw</b>	Gigawatt
<b>kb/d</b>	Thousand barrels per day
<b>mb/d</b>	Million barrels per day

# PART I ENERGY MARKET INTEGRATION: CENTRE STAGE IN SHIFTING MARKET TRENDS

## INTRODUCTION

In this report the Caspian includes the Southern Caucasus and Central Asia, while Russia and Iran make up the wider Caspian region together with other pivotal economic powers such as Turkey and China. The trans-continental region constitutes a vast, landlocked, resource-rich land bridge between the Euro Atlantic, Asia Pacific and the Middle East. While the Southern Caucasus and the Russian and Iranian Caspian coasts are densely populated, the Central Asian land mass is not. This leaves a fairly abrupt demographic gap on the Eastern Caspian shore, as the Central Asian population centres in the Southeast, of Uzbekistan and Kazakhstan. With 27 million inhabitants, Uzbekistan has by far the largest population in the region and harbours important ancient cities, making it the demographic centre of Central Asia (UN, 2011)<sup>6</sup>. The large and accessible hydrocarbon resources of Azerbaijan and Kazakhstan have however shaped most international engagement with the region.

Over the past two decades, tightly supplied energy markets and geopolitical concerns have pushed the resource-rich region quickly forward into a rapidly globalising world that has steadily become more interconnected. Today the Caspian supplies up to 3 mb/d of oil to world markets, along with some 60 bcm of natural gas. Major increases in oil exports have been stunted due to failing output in Azerbaijan and significant delays in project delivery in Kazakhstan. Yet these could pick up, together with gas exports, towards 2020 when new fields come on stream.

In the past, countries like India and Afghanistan have stood at the edges of the energy trade and investment patterns that have shaped the (re)integration of the region within the world economic system, but they are likely to become more engaged in future. Iran, however – a Caspian country by virtue of the fact that the lion's share of its population is situated in its North-western provinces – stands with its back turned to the rise of the region in the global energy market and world economic governance system. Iran's interests as a founding OPEC member and Islamic state differ from those pursued by the newly independent states in the Southern Caucasus and Central Asia and contrasts with the secular texture of other Caspian societies. These share a Soviet-era legacy in which stability is a core value and mistrust political activism, especially when inspired by religion.

6 See also Annex, Figure 2: Population density in the Caspian and Central Asia.

The first two decades of Caspian state building were a time in which the political elite subjected democratic development, and indeed individual rights and freedoms, to the security and stability requirements of the fledgling post-soviet state and newly established ruling elites. Today these serve the long-term interests of strategic foreign investors and their governments in accordance with how universal norms and values are upheld in the Caspian context. The IOC-NOC divide between Azerbaijan and Kazakhstan, on the one hand, which have successfully attracted major IOC investments, and Uzbekistan and Turkmenistan on the other, which have engaged mostly with Asian Pacific NOCs, is telling when compared to Asian Pacific and Euro-Atlantic governance perspectives<sup>7</sup>.

The United States, together with the United Kingdom and Turkey, has strongly contributed to the Caspian's re-emergence on the global scene. The European Union, too, has become more vocal about the region's significance especially since the supply cut of Ukraine in 2006, albeit mostly through its institutions rather than the economic diplomacy of EU member states. The Euro Atlantic remains the major beneficiary of Caspian trade and investment opportunities, while the EU and Turkey, together with Russia and China in the Asian Pacific, are the principle stakeholders in energy and security as the Caspian migrates into a new post-2014 energy and political landscape. The geopolitical perspectives of these wider Caspian players vary, however, as illustrated ever more starkly by the positions taken relative to the many protracted conflicts in the region and with respect to Syria and Iran. Cooperation on ISAF troop withdrawal from Afghanistan and gas infrastructure development towards Asian Pacific demand centres, however, are noteworthy exceptions.

The gradual inclusion of the Caspian in the international governance architecture is reflected in Caspian engagement in key international energy-, economic governance- and security frameworks<sup>8</sup>. While much has been achieved, effective multilateral cooperation in the Caspian remains weak. In the newly emerging energy environment, more should be done to promote investment and strengthen conditions that will allow for incremental energy sector investment in both existing and new fields. In the much more competitive global environment, it is becoming more important for Caspian states to muster the political will and move forward on Caspian Sea delimitation<sup>9</sup> as well as on other contentious issues, ranging from security and economic governance in the Southern Caucasus to water and energy

7 See Annex, Table 2 and 2 bis: Shareholdings in key oil & gas upstream and pipeline projects of Kazakhstan and Azerbaijan and of Turkmenistan and Uzbekistan, respectively.

8 See Annex, Table 1: Caspian membership to key international energy-, economic governance and security frameworks.

9 See for a short and concise discussion of this complex legal conundrum Siradze, Eka and Suleimanov, Otabek (2013) *Legal Status of the Caspian Sea*, Natural Gas Europe, August.

management in Central Asia<sup>10</sup>. This should facilitate multilateral integration of the Caspian into the global governance system and stimulate cooperation among wider Caspian players, avoiding economic disparities and confrontations sharpening within the region itself. Formal and de facto rifts, such as between Azerbaijan, Turkey and Armenia over Nagorno-Karabach in the South Caucasus<sup>11</sup>, or between Uzbekistan and Tajikistan in Central Asia, severely constrain the type of development associated with the age-old traditions that bind Caspian societies through the movement of persons, goods and capital among themselves and along the silk road between adjacent economic powers. On the basis of the achievements of the past two decades – state building financed by resource-enabled growth and infrastructure investment – and the changing energy and political environment, the region has gained a vested interest in reclaiming free movement as a Caspian trademark, in expanding market size and access for investors and in spreading economic growth into other sectors to foster stable societies through increased cross border trade, investment and mobility<sup>12</sup>.

## FIVE VECTORS

There are five vectors along which the Caspian is integrating into the global governance and socio-economic system: 1) state building and foreign relations; 2) the evolving balance of trade and investment benefits between foreign investors and host governments; 3) regional cooperation and competition; 4) universal values, norms and stability; and 5) demographic trends. Different vectors lead at different times, depending on prevailing policy priorities or actual events and developments. Ultimately, these factors are interrelated and influence each other, amplifying or suppressing social-economic trends that in turn, depending on criteria, lead towards successful or unsuccessful development paths.

10 This also involves governance of the Aral Sea. See Grzybowski, *et alia*, UNRCCA (2012), Syr Darya and Amu- Darya River Flows: Water management, pollution, environmental and social economic degradation in combination with existing and newly planned hydro-electricity generation facilities require strong and consistent interstate cooperation.

11 At a public hearing before the US Trade Policy Staff Committee the Armenian National Committee of America's (ANCA) Director for Government Affairs argued that participation of Turkey in the new Trans-Atlantic Trade and Investment Partnership (TTIP) is conditional upon bringing an immediate end to the blockade of Armenia and occupation of Cyprus, arguing instead for a US-Armenia Trade and Investment Framework Agreement and Double Tax Treaty: See ANCA, *No New Trade Deals While Turkey Blockades Armenia, Occupies Cyprus*, Asbarez Newspaper, 30 May 2013, including Transatlantic Trade and Investment Partnership Public Hearing Document Number USTR-2013-0019, May 29, 2013, Washington, DC

12 See IMF and World Bank data on resource-enabled growth in Table 5: Gross Domestic Product Economic Forecast – Towards more inclusive growth

## **I State building and foreign relations in the global governance and social-economic system**

Since gaining independence in the early nineties, Caspian and Central Asian states have embarked on a difficult transition to market economic governance, setting up functioning sovereign state institutions and introducing independent judiciaries and democracy. The evolution from nominal sovereignty, obtained almost by default after the collapse of the Soviet Union in the early nineties, towards socially and economically empowered, self-confident, newly independent states, has differed per state as a function of individual starting conditions that varied strongly across the region, interaction with wider Caspian players and exposure to international developments. Kazakhstan and Azerbaijan have used their mineral resources to open up to world markets with IOCs that have a 'Western', Euro-Atlantic perspective. Uzbekistan and Turkmenistan have remained more self-reliant on the basis of the proceeds from agriculture and established energy flows to Russia (Pomfret, 2011), yet over the past decade both countries have opened up to NOC investment from the dynamically evolving economies of the Eastern Asian Pacific. Meanwhile, some IOCs are limiting their Caspian exposure to rationalise portfolios and adjust to a more competitive environment for upstream investment<sup>13</sup>.

Economic diversification, aided by strengthened regional cooperation and access to international trade and technology through expanding WTO and Energy Charter Treaty membership, remains an important key to unlocking the economic potential of the region. In this respect more 'regional' initiatives pursued by the EU, through the Eastern Partnership in the Southern Caucasus or the Eurasian Customs Union and Shanghai Cooperation Organization in Central Asia, could complement the agreed rule sets of these two multilateral frameworks. They could also augment variance and impose new non-tariff trade barriers that reflect socio-economic interests through competitive rule and standard setting between Euro-Atlantic, Eurasian and Asian Pacific governance traditions. The swift enactment in Central Asia and the Southern Caucasus highlights the particular relevance of the ECT's provisions on transit for the landlocked Caspian nations<sup>14</sup>. Yet because of the need for a more detailed transit regime, and with a multitude

13 See Annex, Tables 2 and 2 *bis* on Shareholdings in key oil and gas upstream and export projects.

14 See the Energy Charter Treaty (ECT), Part II Commerce, Article 7 on Transit, which finds its legal ancestry in the 1921 Barcelona Convention on Transit and in Article 5 of GATT on the Freedom of Transit. Article 7 of the ECT provides an obligation on contracting parties to facilitate transit in accordance with the principle of the freedom of transit and not interrupt transit in case of a dispute relating to such flows, in addition to upholding non-discriminatory and most favoured nation treatment among ECT parties. See the ECS, (2004) The Energy Charter Treaty and Related Documents, September, pp. 48-51.

of pipelines in play, the achievements of industry practice supersede government agreements or regulatory convergence<sup>15</sup>. Though transit concerns may appear less acute from the perspective of growing volumes of subsea or seaborne energy flows, especially through Turkey and Ukraine, the relevance of the multilateral transit provisions of the ECT remain central to energy market integration for the wider region. Due to the increasing difficulties in further deepening multilateral cooperation, regional governance initiatives have naturally taken over, through the EU's Energy Community and Eastern Partnership's deep and comprehensive trade agreements, the Eurasian Customs Union and other practices and arrangements, such as the mandate of the EU Council decision to facilitate negotiations on a Trans-Caspian Pipeline<sup>16</sup>, Russia's efforts regarding Baltic and Black Sea offshore infrastructure, or China's achievements in swiftly aligning Central Asian interests<sup>17</sup>. The ECT should ensure overall consistency and the economically viable and unfettered transit of Caspian resources to world markets that deliver returns to the region's economies. The effect of its WTO-inspired transit provisions, however, has been overshadowed by diverging market policies between producers and consumers and by expensive infrastructure investments, though their relevance may resurface in a more cost competitive environment.

## **II Evolving balance of benefits: Access to resources, shareholder value and supply security for revenue, capital, skills and technology transfer**

As emerging economies Caspian and Central Asian oil and gas producing countries have awarded development rights to IOCs and NOCs in order to generate budget revenue, gain access to capital, skills and technology, and stimulate local manufacturing and service industries. Operating in non-OPEC countries, they offer direct access to resources that IOCs and NOCs operating overseas add to their balance sheets, increasing shareholder value for companies while at the same time enabling more diverse energy flows that serve the security of supply concerns of their home country governments. Caspian states have

- 15 Negotiations on a more detailed Transit Protocol under the ECT were formally launched in 1999 but suspended in 2003, outstanding issues being long-term capacity booking, the creation of new infrastructure, cost reflectiveness of tariffs arising from auctions, and the regional integration clause proposed by the EU. After Russia's withdrawal of its signature in August 2009 (Van Agt, 2009), the Transit Protocol was reassessed and aligned with the changes in negotiating parties' positions and changes in constituency and energy markets. This resulted in a new mandated consolidated version. In 2011, however, it was agreed that this would serve as a basis for further negotiations only if further substantive interest of stakeholders and contracting parties were available according to the ECS notifications. See ECS Transit Trade Group document TTG 87 - *Last informal version of the draft Transit Protocol as it emerged from consultations among the member states of the Energy Charter Treaty*.
- 16 EU starts negotiations on Caspian pipeline to bring gas to Europe, *European Commission press release Reference: IP/11/1023* 12, September 2011. See also Annex, Table 4 and Map 1.
- 17 See Annex, Figure 1 and 1 bis on the Southern Corridor and Table 4 and 4 bis on existing and planned oil and gas infrastructure.

benefited from the tight and more multi-polar energy market. Incremental supplies and access to resources gain in strategic value in such an environment that is disproportionate to their flow rates when compared to the dominant oil and gas supply and demand patterns that set prices. With new oil and gas provinces opening up to foreign investment, more readily available supplies emerging from unconventional sources, and falling demand from OECD economies, the balance of benefits is being readjusted. Government focus on the Caspian's oil and gas resource base may lead to a more arm's-length engagement by the US, while the EU's relations with the region might broaden further beyond flagship pipeline initiatives. Oil and gas revenues for Caspian economies are likely to decrease in the more competitive environment<sup>18</sup>.

In addition to trade and investment guarantees provided in bilateral relations and multilaterally by the ECT, PSAs were critical in attracting investment in an untested environment. The strong ECT investor-state dispute settlement mechanisms<sup>19</sup> further facilitated oil and gas sector investment and subsequent revenue streams, providing newly gained sovereignty with economic substance. Various forms of resource nationalism have emerged as oil and gas and other raw material commodity prices have increased over the first decade of the new millennium, reflecting geopolitical concerns in Russia as opposed to economic bargaining positions between the host government and foreign investors in Kazakhstan (Domjan & Stone, 2010). ECT investor-state dispute settlement has been reassessed on the basis of the track records set by these and other countries and appears to be evolving towards more multi-dimensional investor-state relations (Maniruzzaman, 2013). Reciprocity has emerged as a new mechanism in IOC-NOC and consumer-producer state deal-making, while host government relations are characterised by hard negotiating tactics. This limits 'eligible' investors to 'big players' alone which may constrain market entry prospects for smaller players and contribute to delays and cost escalation in project delivery. Uzbekistan and Turkmenistan have been slow to accommodate major Euro-Atlantic energy sector investment, partly due to the market access and governance standards this requires.

18 See IMF and World Bank data on resource enabled growth in Annex, Table 5: Gross Domestic Product Economic Forecast – Towards more inclusive growth

19 See Part V Articles 26-28 on ECT Dispute Settlement provisions, in which the investor-state dispute settlement provisions under the International Centre for the Settlement of Investment Disputes (ICSID) were a relative novelty but were considered necessary, in particular to attract oil and gas investment in the then still untested Caspian risk environment. Today investor state arbitration is subject to reconsideration, as the surge in cases brought over the past decade and the fairly one-dimensional approach leaves out important factors. This has led countries such as Bolivia and Venezuela to leave the ICSID convention. See also: Maniruzzaman, Munir (2013) *A Rethink of Investor-State Dispute Settlement*, Kluwer Arbitration Blog, May.

### **III Regional cooperation and competition**

Constructive regional cooperation among Caspian and Central Asian states is critical to the region's successful and even-handed integration into the world economic system. Co-operation among Caspian States has had to be redefined as a consequence of state building and the transition from centrally planned to market economic systems. With the exemption of the strategic cooperation between Azerbaijan and Georgia along the Southern Caucasian energy transport corridor, competition and regionalisation also characterises relations between newly independent states, in contrast to the general multilateral upswing in the nineties and integration efforts of transition economies. Despite these difficulties, cooperation has moved forward to seize certain social economic opportunities between littoral states of the Northern Caspian. Yet in other areas, rivalry and uncertainty continue to burden cooperation among Southern Caspian States with respect to ownership of resources, transport and security: in the Southern Caucasus with respect to the legacies of ethnic and, more recently, territorial conflicts, and finally between Kyrgyzstan, Tajikistan and Afghanistan and downstream countries Uzbekistan and Turkmenistan over the use of water and energy resources. Codependency between energy, water and agriculture is tightening globally (Beisheim, 2013) and has become a conduit for tension rather than a vehicle for strengthening wider social-economic integration and stimulating growth in the Caspian (Jacoby, 2013). This now invites a strengthening of international cooperation especially in the wider Caspian region.

The absence of a comprehensive settlement on the legal status and use of the resources of the Caspian Sea among littoral states reflects diverging foreign policies, security orientations and economic priorities. Caspian state practice includes two key agreements concluded between Iran and the Soviet Union in 1921 and 1940<sup>20</sup>. These set important precedents in international law to which the Russian Federation and Islamic Republic of Iran, as Soviet Union and Persian successor states, respectively, have held on. After various multilateral summits in the nineties, bilateral agreements<sup>21</sup> took precedent over efforts to align diverging views held by the five newly independent states on Caspian Sea delimitation. Subsequent Caspian summits held in Ashgabat in 2002, Tehran in 2007 and Baku in 2010 failed to reach an agreement regarding a comprehensive settlement. Nonetheless, an environmental framework convention was

20 The 1921 Treaty on Peace and Friendship and the 1940 Treaty on Commerce and Navigation between the Soviet Union and Iran established the Caspian Sea as an exclusive Soviet-Iranian Sea with a *de facto* border line between the Astara-Hosseingholi line from the West- to East coast of Azerbaijan and Iran in the Southern Caspian.

21 Between Russia and Kazakhstan in 1998 and Azerbaijan and Russia in 2001, involving joint development of subsurface resources, which led to a trilateral agreement concluded between these Northern Caspian countries in Almaty in 2003.

concluded in Tehran in 2003, including a protocol on emergency preparedness for oil spills signed in Aktau in 2011, and technical work on a Caspian convention has progressed (Siradze and Suleimanov, 2013). The enduring uncertainty, however, remains an obstacle to the further integration of the Caspian, deterring trade and investment flows, while new dynamics occurring elsewhere are rapidly reshaping the global market environment<sup>22</sup>. More accommodating international engagement by and with Iran<sup>23</sup>, including towards other Caspian states on delimitation, may in future enable the Southern Caspian to follow the example set by Russia, Kazakhstan and Azerbaijan.

The return of Iraq as an oil and gas exporter through Turkish networks and port facilities at Ceyhan further augments the role of Turkey in international energy security and in facilitating Caspian exports. New developments in the Eastern Mediterranean off the shores of Cyprus and Israel<sup>24</sup> are creating new dynamics that could stimulate cooperation in the wider region, as shown by investment by Azerbaijan in the Med Ashdod oil fields off the shore of Israel (Abasov, 2012). Euro-Atlantic relations with Russia, Turkey, Iran and China are essential factors in being able to alleviate obstacles and strengthen cooperation and stability in the Caspian. The emergence of the Eastern Mediterranean as a new energy province against the backdrop of the Arab Spring and a runaway conflict in Syria, means that cohesion among these stakeholders has become all the more important for the Caspian, also with respect to relations with the wider Arab world. In this stark setting, future Caspian growth and integration rests not only on stability in Afghanistan after the ISAF withdrawal is completed in 2014, but also on stability in the wider region, in particular the Eastern Mediterranean, where the breakdown in international cooperation to bring an end to the bloodshed in

- 22 This assessment on Caspian Sea delimitation also draws on a meeting held on Caspian Oil and Gas and security held at the International Peace Institute of the United Nations on the 28<sup>th</sup> of June 2013. See also: Kelly, Ross (2013) *Once-Coveted Asian Oil Riches Take Back Seat to U.S. Shale*, Wall Street Journal, July.
- 23 Erlanger Steven (2013) *Britain and Iran Move to Repair Diplomatic Relations*, New York Times, October 8.
- 24 Shaffer, Brenda (2011) *Israel – New natural gas producer in the Mediterranean*, Vol. 39 Issue 9, Energy Policy Elsevier, September.

Syria must be overcome<sup>25</sup>. International relations here are defined by an ever more complex web of all but mutually exclusive alliances and associations. Constructive and forward-looking engagement over disputes and conflicts in the Caspian and wider region should regain momentum and move forward more productively in order to avoid the deepening of regional instability.

#### **IV Universal values, norms and stability**

Universal values and norms are in principle upheld jointly by most governments and societies gathered in the United Nations, which is the international custodian of generally accepted standards of achievement in human rights and rule of law. In practice they are observed or enforced in varied contexts in which reservations based on social economic priorities, local circumstance, culture and religion can and indeed are easily made that may defeat core values (Flinterman and Van Genugten *et alia*, 2008). In extreme cases their implementation is altogether sacrificed to overriding interests of stability and security and/or the preservation of the status quo by the ruling elite. The chasm between principle and practice is clearly visible in the Caspian region, from Tajikistan, China's Xingjian province and Uzbekistan's Ferghana valley, to the conflicts in Chechnya within a restive Northern Caucasus and the protracted conflicts in the South Caucasus. Energy and security interests engage both companies and governments in a fragile rule of law and human rights environment, be it through upstream investment and pipelines or through the NATO alliance, which shares an interest with other Caspian stakeholders in a secure withdrawal from Afghanistan, as this would enable the stable integration of the country into the wider region.

Over the past two decades the perspective of the Euro Atlantic has evolved from capitalising on the access to resources that the Caspian region offers in return for revenues, to financing state building by newly independent states while discretely pushing normative agendas (Melvin 2012). The new energy environment offers

25 The death toll passed the 100,000 mark this summer, says UN chief Ban, *BBC News Middle East* 25th of July 2013, after two years of brutal civil war. In addition to unknown numbers of internally displaced persons, more than 2 million Syrians have fled to neighbouring countries and the outpouring continues after the atrocities committed in chemical attacks sharpened international engagement. These include refugees moving to the South Caucasus which may increase tensions in Nagorno-Karabach and other protracted conflicts. The bloodshed reflects deep mistrust and discord in the UNSC over the Arab Spring as it still unfolds. These have centred on the interpretation of earlier resolutions enabling intervention in Libya and its outcomes. Positions have sharpened over the universal values the UN is mandated to uphold and over the use of diplomacy or force. The gridlock over the war in Syria in the wake of the Arab Spring is reminiscent of the Yugoslavian wars that erupted in 1991 after the fall of the Berlin Wall. The war in Yugoslavia lasted for more than a decade, culminating in the NATO intervention and UN governance imposed on Kosovo in 1999. In the face of multipolar and other rivalries, universal values are not equally shared or carried multilaterally and therefore continue to require support and proactive engagement. See also Kuchera Joshua (2012) *Caucasus, Central Asian Countries Warily Assessing Impending Attack On Syria* *Eurasianet September*.

better connections to Caspian resources and has led to progress in the convergence between markets. This makes diversification from dominant suppliers such as Russia and Iran, currently still subject to sanctions, less critical, thus diminishing the future significance of Caspian energy policy priorities. This could enable more comprehensive international engagement on universal norms and values and advance the region's subsequent integration into the global values community<sup>26</sup>.

Caspian states are focused on state building and the fulfilment of socio-economic requirements. This means that rule of law and good governance may be supplanted by a focus on stability and the strategic economic achievements of resource economies as the primary vectors for development. In future, Caspian states will be harder pressed to shift gears and harness further economic growth and stability through well-governed, open and more resilient societies. In a highly charged geopolitical environment, however, generating welfare through rule of law and guaranteeing individual freedoms remains a secondary consideration to a steadfast and defensive ruling elite. While poor governance standards were the cause of the Georgian Rose Revolution in 2003 and the Kyrgyz Tulip Revolution in 2005, the forceful suppression of protest in Andijon Uzbekistan that same year illustrates the risks of abrupt gear shifts.

Nagorno-Karabach, Chechnya and the Georgian war over Abkhazia and South Ossetia in 2008 have produced uneasy standoffs in the Caucasus. These remain mortgaged by countervailing geopolitical considerations of stakeholders that do not so much challenge the substance of these universal norms and values but rather the exercise of sovereign power and by which order they are implemented. This is why the settlement of social-economic issues may advance<sup>27</sup> but political and security aspects of tensions and conflicts remain in gridlock (Bulakh, 2013). The conflict between Georgia and Russia over Abkhazia and South Ossetia did not prevent the admission of Russia to the WTO in return for a suspension of a ban on Georgian exports to Russian consumers.

26 See, for instance, the recently launched EU strategic framework and Action Plan on Human Rights and Democracy, adopted on the 25th of June 2012, which enhances the visibility of the international engagement by the EU on universal norms and values and forms an integral part of the 2009 EU Eastern Neighborhood Policy and 2008 Central Asia Strategy. CEU (2012) EU Strategic Framework and Action Plan on Human Rights and Democracy, June 25, ref. 11855/12.

27 In this respect it is noteworthy that Russia has lifted its ban on Georgian wines, mineral water and other products after Georgia enabled Russia's accession to the WTO. Azerbaijan recently made the symbolically important offer of supplying Armenia with gas if it would change its negotiating stance on Nagorno-Karabach. See *Azerbaijan's SOCAR Announces Conditions for Armenian Gas Supplies*, Azernews, 11th of June 2013.

In the opening societies of the Trans-Continental Caucasus, Euro-Atlantic norms and values appear more entrenched than the authoritarian rule that dominates Central Asian societies, where Asian and Middle Eastern concepts prevail. On the basis of their cosmopolitan past, these open societies are maturing in the South Caucasus, whereas Central Asia's social texture has catered more to vested interest. The latter appears to have entrenched power structures and weakened effective governance. The region may well see presidential successions in Tajikistan, Uzbekistan, Kazakhstan and Afghanistan, for which the current transition of power in Georgia can serve as a reference point.

Broader international engagement with Caspian society is necessary to complement engagement with Caspian state authorities. Against the background of the Arab Spring, the shifts to new drivers for economic growth and prosperity have further exposed how energy security is linked to a social-economic stability that in turn is anchored in universal norms and values. Social tensions continue to come to the fore in the region, at times touching on oil and gas sector operations, as demonstrated by a strike of oil field workers at Zhanzen in Western Kazakhstan in December 2011. Protests in Azerbaijan have become a more regular occurrence, and its government acknowledges that its socio-economic integration with EU markets exposes it to scrutiny on human rights and other governance standards (EP, 2012 & 2013). The absence of dissent and similar international engagement on norms and values elsewhere in the region however is equally noteworthy.

Stability has become a more critical element in engagement with the region, notably with Tajikistan Kyrgyzstan and Afghanistan with regard to ISAF withdrawal, and with conflict areas in the Southern Caucasus and the wider region. In this respect effective cooperation among wider Caspian states remains a critical prerequisite.

## V Demographics

Population density varies greatly across the region, as do demographic dynamics. In the wake of the Cold War and Soviet social-economic and political legacies, this has led to conflicts and internal tensions with respect to minorities. Environmental constraints continue to exert adverse pressures among and within Caspian nations as well<sup>28</sup>. Unlike the Euro Atlantic, where population growth is in relative decline, most Caspian states are witnessing population growth on par with Turkey, with the exception of the Russian Federation. However, Central Asia

28 See Annex, Figure 3: Water management, environmental degradation and migration in Central Asia.

remains equally sparsely populated when compared to wider Caspian players such as China, India and Iran, the latter of which is a Caspian state from a demographic perspective (UN 2011). The relatively high population density around the Caspian and South-eastern Central Asia contrasts with the low density at the region's geographical centre<sup>29</sup>. This creates further socio-economic disparities and stimulates migration of the labour force to Caspian resource economies. Though Caspian states have followed different economic trajectories, more inclusive growth is required. This could be addressed by strengthening regional cooperation, trade and investment liberalisation among Caspian economies. In this respect, improving relations with Uzbekistan, the demographic heavyweight, and Afghanistan, a new entrant in the region, are key. Poor public services and development opportunities offered in constrained and informal conditions have encouraged a surge in migration to better performing economies such as Kazakhstan, Russia and EU countries<sup>30</sup>. This limits opportunities and increases the likelihood of social and economic tensions in urban and industrial centres throughout the wider region. Improving education (Horak, 2013), rule of law and institutional integrity is an essential ingredient in stimulating regional development for local employment opportunities and moving from poverty<sup>31</sup> to social inclusion. Finally, joint border controls, monitoring and assistance in setting up transparent, secure and swift visa and customs procedures are critical to building mutual confidence, enlarging markets and enhancing security in and around conflict zones.

## CASPIAN OIL AND GAS MARKET DEVELOPMENT

Development of the main upstream oil and gas and export projects in the Caspian region lies within the evolving context of the above listed vectors and priorities with respect to other resources and heritage in the region<sup>32</sup>. There are sizable oil and gas deposits under development in the Russian offshore section of the Caspian Sea. For

29 See Annex, Figure 2: Population density in the Caspian and Central Asia. Rekacewicz (2006) and UN/Department of Economic and Social Affairs, Population Division (2011): World Population Prospects: The 2010 Revision. New York, October.

30 Remittances made up 48 % of the GDP of Tajikistan and 29% of the GDP of Kyrgyzstan in 2011, of which most was sent from Russia and Kazakhstan. This is an increase from 45.5 and 19%, respectively, in 2007, when official aid accounted for about 10% of the GDP of each. UNDP (2013) in Europe and Central Asia Migration and Remittances and UN (2011) in Europe and Central Asia, Regional Human Development Report *Beyond Transition, Towards Inclusive Societies*.

31 About 6 million people live in poverty in Central Asia, and this number increases with each percentage point drop in GDP growth in the region. On a global scale the region compares reasonably well on MDG indicators. The ratio of employment to population in the Southern Caucasus and Central Asia rose from 56 to 59 in the region between 2007-2012, while the percentage of undernourished people halved relatively swiftly, from 14 to 7, over the same period. The risk of hunger and eviction, however, persists (UN, 2013, The Millennium Development Goals Report, and UNDP, 2011, in Europe and Central Asia, Regional Human Development Report *Beyond Transition: Towards Inclusive Societies*).

32 See Appendix 1, Resources and heritage.

example, in the Lukoil-operated Yuri Korcharin oil and gas field, discovered in 2000, production started in 2010 and is expected to plateau at 50 kb/d and the large Vladimir Filanovskoye field, discovered in 2005, which may produce as much as 210 kb/d after 2015-16<sup>33</sup>. Other recent offshore discoveries in the Russian Caspian will strengthen Russia's engagement in the region and stimulate development in Astrakhan, Makhachkala and Budennovsk in Southern Russia and the Northern Caucasus<sup>34</sup>. These include the Kurmangazy, Tsentralnoye and Khvalinskoye fields straddling the Russian and Kazakh territories. According to an intergovernmental agreement concluded in 2002, these will be developed jointly on a parity basis. Iran recently announced its first exploration success off its Caspian shore<sup>35</sup>. However, these resources held by incumbent stakeholders in the wider Caspian region, while sizeable, do not compare with the significance of the giant oil and gas resources currently being produced in the newly independent states of Azerbaijan<sup>36</sup>, Kazakhstan<sup>37</sup> and Turkmenistan. It are therefore the oil and gas projects of these states that are discussed below.

## KEY PROJECTS: MATURE AND MORE DIVERSE DYNAMICS IN UPSTREAM AND INFRASTRUCTURE DEVELOPMENT

The Tengiz gas field ranks among the world's largest. Together with the Karachaganak onshore gas deposit, the giant Kashagan field off the shore of Kazakhstan, and the Azeri Chirag Gunesli and Shah Deniz fields in the Azeri sector, it provides the

- 33 The development of the Lukoil operated Vladimir Filanovsky field may well involve the use of subsea oil pipelines to land production. The field contains 487 million barrels of oil equivalent in proven reserves. By the standards set for the development of Kashagan in this shallow environment, an oil output of 120kb/d by 2015 appears ambitious. See also Subsea IQ, July 15, 2013.
- 34 A discreet Russian Caspian oil boom may well be in the making, considering discoveries made over the past decade and company moves. See Moran, Mike (2013) *Russian PM Dmitry Medvedev Visits Lukoil Rig in Caspian Sea*, Metal Mining, October, and (2013) *Rosneft Takes 51% Stake in Russian Caspian Discovery Block*, Oil and Gas Journal, October.
- 35 Reports on Iranian oil and gas exploration in the Caspian has been notoriously vague and confusing, both in terms of volume and location. In 2009 Iran's oil minister Gholam-Hossein Nozari was cited by the Iranian Press TV in stating that exploration efforts with a semi- submersible rig had led to the discovery of 46 oil fields holding 17 billion to 44 billion barrels of oil reserves. See *Iran Touts Caspian Exploration Success*, Rigzone Staff, 23 July 2009, and Dalga Khatinoglu (2013) *Iran's Enigmatic Energy Exploration in Caspian Sea*, Trend News Agency, 14 January. In 2012 Iran announced an oil find of approximately 10 billion barrels in its deep water section of the Caspian. See Nasseri, Ladane and Daya (2012) *Ayesha Iran Finds Its First Caspian Sea Oil for More Than a Century*, Bloomberg, May. The location of some of these fields, however, remains unclear. See Kuchera, Joshua (2012) *Iran's New Oil Discovery May Be In Azerbaijan's Waters*, Eurasianet, June. The Sardar Jangal field is considered to be within the Iranian sector (EIA, 2013).
- 36 For new upstream in Azerbaijan, see Annex, Table 2 ter Azerbaijan: Potential for a third export stream by 2020-2025, retrieved from an IEA presentation on the *Role of the Black Sea and Caspian Region as an Energy Supplier: Past, present and future* by Marc Antoine Eyl Mazegga, 14 February 2013, London.
- 37 New upstream development in Kazakhstan includes, for instance, the Nazarbayev offshore block that may start commercial output in 2016, and the Kvalynskoe and Kurmangazy fields straddling the offshore territories of Russia and Kazakhstan. Exploration on the KMG-Rosneft operated Kurmangazy field is underway. Exploration might begin after a PSA is signed on Kvalynskoe with Lukoil as operator and KMG, Total and GdF as partners. *Role of the Black Sea and Caspian Region as an Energy Supplier: Past, present and future*, by Marc Antoine Eyl Mazegga, 14 February 2013, London.

mainstay of Caspian oil and gas production. Over the past two decades, development of these fields has been awarded mostly to IOCs. In combination with other existing and new tracts, they have proven the significance of the region in providing incremental supplies to world markets. The Caspian has emerged as an independent oil province on the world market, alongside established major oil producers such as Saudi Arabia, Iran and Iraq – aligned within OPEC – and other new and existing independent production centres off the shores of Sub-Saharan Africa, the Arctic, the Gulf of Mexico and Brazil. The Caspian business environment will face increasing competition for investment as new conventional and unconventional resources come available elsewhere. Its strategic role will change as new supplies come available more rapidly and more diversely (Maugeri, 2012). The mature Dauletabad gas field in South-eastern Turkmenistan is the basis of Turkmen gas exports. Other recent finds in Azerbaijan and the new giant Galkynysh gas deposit in Turkmenistan underscore the rising importance of the Caspian as a new Eurasian export hub of pipeline-borne natural gas. Notwithstanding current constraints on required infrastructure investment, this potential will continue to find its way to capital, technology and diverse markets. Terms and conditions will vary, however, and remain subject to changing circumstances brought about by the unconventional shale gas and light tight oil revolution or the advance of renewables to mitigate climate change and environmental degradation which, taken together over time, will impact project economics<sup>38</sup>.

### **Tengiz**

Kazakhstan, today's leading oil producer in the Caspian, set the pace for Caspian development shortly after gaining independence. It awarded the development rights for the giant Tengiz oil field to US major Chevron in 1993, leading the Tengizchevroil (TCO) consortium, which includes ExxonMobil, KMG and Lukarco<sup>39</sup>. This historic deal underpinned Kazakhstan's economic recovery and opened the region to Western investment and technology. The application of environmental safety standards and deployment of high-end technologies, necessary for the development of this technically challenging field, coincided with a re-evaluation of the balance of benefits by Kazakhstan and host government challenges to the consortium in the late nineties. After settlement of these issues, an expansion of production at Tengiz commenced in 2003 with the commissioning of the world's largest crude oil and sour gas processing unit. Reinjection of one-third of the sour gas has enabled production to rise to about 540 kb/d since 2008, with the remainder of the gas

38 See in particular Tables 2 and 4, Figure 1 and Maps in Annex.

39 See Annex, Table 2: Shareholdings in key upstream oil & gas and pipeline projects of Kazakhstan and Azerbaijan (IOCs & NOCs).

monetised through sales, liquids and sulphur stored or used in fertiliser and other products<sup>40</sup>. The Kazakh government has imposed fines for TCO's treatment of sulphur. In light of the environmental impact and risks associated with Tengiz operations, local residents have had to be relocated. Implementation of a 'future growth project' could allow production to reach 800 to 900 kb/d after 2015 (IEA 2010). Front-end engineering began in 2012 on sour gas injection technology, drilling and a wellhead pressure management programme, with total investment ranging between \$20 and \$25 billion<sup>41</sup>. Increased production will be accommodated by the CPC and other pipelines, Caspian tanker shipments and rail export capacities.

### CPC

The Caspian Pipeline Consortium (CPC) entered into operation in 2001 and serves as the main export conduit for Tengiz oil via Russia to its Black Sea port of Novorossiysk. A three-year, \$5.4 billion expansion programme enabling CPC throughput to reach 1.4 mb/d will accommodate the export of Tengiz production and that of other Kazakh products, such as liquids produced from the Karachaganak gas field and Kashagan's early oil that came on stream recently. A final investment decision was finally agreed in 2011 after a lengthy decision-making process by CPC's multi-public-private shareholders' group. The consortium's public parties consist of the Russian Federation's oil transport company Transneft and Kazakhstan's NOC, KMG. Private shareholders are Chevron, Lukarco, Mobil, the NOC-IOC Rosneft-Shell Caspian joint venture and the CPC company, in addition to minor shareholdings by BG, Eni, Kazakhstan Pipeline- and Oryx Caspian Pipeline Ventures<sup>42</sup>. All these have vested upstream interests in accessing CPC export potential. According to the Kazakh host government, the project would be completed on schedule by 2014<sup>43</sup>. However, the first phase of the CPC expansion project, with 200 kb/d capacity scheduled for delivery by the end 2012, have already slipped to late 2014 or even 2015, limiting export options for upstream producers, most notably the Kashagan Consortium.

### Barrelling beyond the Bosphorus

The reasons that no dedicated Bosphorus bypass options exist to date other than BTC<sup>44</sup> range from suboptimal cooperation among Black Sea littoral states to weak economics. Passage is not an issue; it remains assured, as the Montreux Treaty of

40 Major Expansion at Tengiz Field in Kazakhstan Completed, Chevron press release, September 2008.

41 Chevron Provides Further Detail on the Future Growth Project at the Tengiz Field in Kazakhstan, Chevron press release, February 15, 2012.

42 See Annex, Table 2: Shareholdings in key upstream oil & gas and pipeline projects of Kazakhstan and Azerbaijan (IOCs & NOCs).

43 CPC Expansion Project to be Completed in Time: Oil and Gas Minister, Tengri News, 21 May 2012.

44 See Annex, Table 4: Key Caspian oil and gas export options.

1936 guarantees it, allowing only for certain cost-related charges in accordance with established practice of international navigation and international law. The United Nations Law of the Sea Convention of 1982, the Energy Charter Treaty of 1994 and the establishment of the WTO in 1995 have further codified and broadened the scope of '*the freedom of transit*' as a rule of international law, both over land and through straits and internal waterways. Nonetheless, in business practice demurrage costs are rising due to sharpened safety procedures, as are waiting times due to stricter safety regulations and congestion associated with growing volumes and recurring poor weather conditions. In light of the increasing risks stemming from maritime oil and gas industry operations and shipments – illustrated all too clearly by the Macondo oil well disaster in the Gulf of Mexico in the recent past – plus the opening up of new Arctic exploration and shipment routes, initiatives and options to diminish the risks of tanker navigation in the Bosphorus and Dardanelles will likely only gain momentum. According to Turkish energy strategy, the Samsun-Ceyhan bypass oil pipeline limits tanker traffic on the Black Sea, offering a relatively environmentally friendly overland route to Ceyhan in the Eastern Mediterranean. Already existing infrastructure decreases the need for new port facilities elsewhere. Turkey, Italy and Russia last confirmed their support in 2009, but further development appears to have stalled since that time. More daring projects have been proposed, such as the construction of the Channel Istanbul, but these appear too grandiose and environmentally damaging to ever materialise in reality<sup>45</sup>. The high cost and slow development of the Samsun-Ceyhan project mean that the risk of westbound oil tanker shipment across the Black Sea through the Bosphorus and onwards to world markets will weigh in more heavily on the Caspian risk and reward balance for IOCs. Another low-cost option in easing Bosphorus congestion lies in the re-reversal of the Odessa-Brodi pipeline flow, which in time may be extended through Poland. CPC expansion and the emergence of a more accommodating Russian transit regime that takes better account of oil quality differentials, along with the opening of a direct oil link from the Caspian to China, will further impact the development of Trans-Caspian shipments.

Maturing production from the Caspian and Russia has increased oil exports from Black Sea ports as well as tanker traffic through the Bosphorus and Dardanelles to the Aegean Sea, where Caspian crudes gain access to world markets. Volumes shipped through the Turkish Straits fell from 3.4 mb/d to 2.7 mb/d between 2004 and 2009. Since then, oil flows from Russia have started to shift towards Baltic ports via the

45 Harvey, Benjamin and Nightingale, Alaric (2011) *Turkey Plans 'Channel Istanbul' for Russian Oil Shipments to Bypass Bosphorus*, Bloomberg, April and Harvey, Benjamin and Nightingale, Alaric (2011) *Turkey's \$12 Billion Bosphorus Bypass Speeds Oil Tankers: Freight markets* Bloomberg, May.

new Baltic Pipeline Systems (BPS) 1 and 2, connecting Western Siberian fields with the Gulf of Finland at the Russian terminals of Primorsk and Ust Luga and through the new Eastern Siberian Pacific Ocean (ESPO) pipeline at Kozymino on the Pacific. Just as the port of Ceyhan sidesteps congestion and safety issues in the Bosphorus Strait, in time the port of Murmansk in Russia may enable larger tankers than currently can pass through the Danish straits to service both Euro-Atlantic and Asian Pacific markets. The ESPO pipeline will be equally supplied from the Tomsk Region and the Khanty-Mansi autonomous Area in Western Siberia<sup>46</sup> but may well take on Caspian volume too. Tanker passage, however, is expected to rise structurally in the medium term, due to growing Caspian oil output and the expansion of CPC and other outlets. Volumes of oil shipped through the Turkish Straits today stand at around 3 mb/d, on par with shipments through the Danish Straits (EIA, 2012). Consequently, land-bound European East-West crude oil transport routes operate at lower throughput rates, with more capacity likely to become available due to stronger competition from new Russian-Turkish export facilities in the Baltic and Black Seas, the Eastern Mediterranean and the Pacific. Producers naturally favour more flexible tanker shipments that enable them to service growing global demand with flexibility rather than remaining locked into servicing low-growth EU markets through fixed transit infrastructure. Furthermore, the EU's refinery sector is under increasing global market pressures, including export duties that favour crude flows to local refineries levied by upstream producers. These capture the social-economic benefits and added value of their resources through the sale of high-end crude products rather than exports of resources alone. At the same time, shippers gain additional leverage on the terms for utilising overland transport routes such as the Druzhba pipeline through Belarus and Ukraine, which has been the main artery for crude supplies to Central European refineries since 1962<sup>47</sup>. Oil flows are shifting to the periphery of European demand markets, as is the case with gas, be it through the Transneft-operated BPS 1 & 2 and ESPO systems, the Black Sea via CPC expansion or the Eastern Mediterranean via the BTC and a future KCTS connection. This shift has implications for the downstream refinery sector and for EU supply security (Meijknecht, Coreljé, Van Holk, 2012).

Despite lengthy efforts, the construction of oil pipelines intended to bypass the congested Bosphorus has all but stalled. Notable exceptions are the BTC pipeline connecting the Caspian via the Caucasus and Turkey to the Eastern Mediterranean, and the Odessa-Brodi pipeline that connects with existing European networks in

46 According to information on the internet site of the President of Russia <http://eng.kremlin.ru>

47 Groszkowski, Jakub (2012) *Czech Concerns Over the Future of the Druzhba Oil Pipeline*, Center for Eastern Studies, 18 April.

Ukraine but which to date operates in reverse mode. Turkey's emerging energy export hub at Ceyhan enables Azerbaijan and Iraq, together with Kazakhstan and Turkmenistan, to supply the wider region and ship oil to both Euro-Atlantic and Asian Pacific markets. Turkmenistan exports volumes through BTC, since swap volumes via Iran had been blocked by tightening sanctions. Kazakhstan has been shipping through BTC since 2008 (EIA, 2012). While more transportation capacity will become available over time due to more moderate ACG production, and tanker and port facilities will take shape in the framework of the KCTS, overall volumes through BTC may well increase in the medium term. Together, BTC and KCTS will enable Caspian production to reach world markets more directly, bypassing navigation of the Black Sea and the Bosphorus. This might actually offer a more competitive and effective netback for Caspian producers. However, Trans-Caspian oil shipments between Kazakhstan and Azerbaijan may lose momentum. Contributing factors to this are CPC expansion and exports routes to new Russian seaports while Russia, and Kazakhstan further deepen their cooperation in the Eurasian Customs Union. Furthermore, CNPC has recently become a shareholder in Kashagan but not the CPC system. This would favour further eastbound exports. Indeed, Russian routes, from CPC to the KTO Transneft-operated Atyrau-Samara route, linking in with the BPS and ESPO systems, may be gaining traction in the overall export calculus for Northern Caspian producers.

### **Azeri Chirag Guneshli and the Baku-Tbilisi-Ceyhan Pipeline**

Not all exploration efforts in Azerbaijan have led to the same level of commercial success achieved by the offshore Azeri Chirag Guneshli (ACG) fields, awarded in 'the contract of the century' to a BP-led consortium in 1994. ACG provides up to 80% of total Azeri oil output and exported as much as 800 kb/d via the Heydar Aliev main export pipeline that opened in 2006, diversifying world oil markets with Caspian reserves via the Baku-Tbilisi to Ceyhan (BTC) route<sup>48</sup>. In addition to generating net oil supply growth and revenue streams through exports, ACG hands over associated gas not used for reinjection at the Shangachal Terminal to the State Oil Company of Azerbaijan (SOCAR) for industrial use<sup>49</sup> or onward delivery for power generation or distribution to consumers. Together with gas production discussed below, this has bolstered the security of gas supply in Azerbaijan and the Caucasus and enabled a

48 Prior to the entry into operation of the BTC pipeline, which could carry up to 1.2 mb/d, the Baku-Supsa and the Baku-Novorossisk pipelines, including a spur bypassing Chechnya, were used in addition to rail transport. Baku-Supsa remains in operation, but the Baku-Novorossisk route regularly falls out of grace over tariffs, oil quality and other issues. See Annex, Table 4: Key Caspian oil and gas export options.

49 Power generation at processing and petrochemical facilities such as Azerikimya and reinjection to enhance recovery at SOCAR's own upstream fields.

decrease of coal and nuclear-powered electricity generation in favour of a more sustainable regional energy mix<sup>50</sup>.

The ACG and BTC projects were considered economically unviable in the untested investment climate and low oil-price environment of the first decade of Azerbaijan's independence. Russia and Iran considered the award to be in breach of Caspian legal conventions and a threat to the Caspian marine and geopolitical environments<sup>51</sup>. The current market context appears to vindicate the project as a success. Aside from private shareholder returns, ACG and BTC serve public energy market diversification and anti-monopoly goals in today's high oil-price environment and, in bypassing the Bosphorus, also reduce environmental and safety concerns<sup>52</sup>. In their ramp-up stage, which coincided with the commodity price boom, ACG production and BTC exports contributed to a quarter of global oil supply growth at a time when the Caspian was believed able to contribute 10% to world oil supplies over the medium term (IEA, 2004). In the current, more diversely supplied oil market, ACG and BTC remain significant, having spearheaded Caspian access to world markets at the emerging Eastern Mediterranean oil hub of Ceyhan, Turkey, which will also be used by other Caspian oil producers such as Kazakhstan, Turkmenistan and, in time, Russia, Iraq and Iran. In the meantime, the ACG and BTC consortia, consisting mostly of OECD incorporated IOCs, have reconfigured on the basis of more abundant energy supplies coming available elsewhere and global demand growth shifting to Asia. Russia's Lukoil sold its ACG assets in 2003 to Itochu of Japan but remains a shareholder in the BTC pipeline, hinting at future usage for the export of Caspian oil qualities that Lukoil is beginning to produce from its Caspian assets. Subsequent portfolio rationalisation saw smaller companies refocus on core businesses and new opportunities opening up in better business environments. The US company Devon sold its assets in 2009, and Hess agreed in 2013 to sell its minority 2.72% ACG-,

50 Azerbaijan became dependent on gas imports from Russia in 2007. SOCAR concluded a first contract with Gazprom in October 2009 for the export of 0.5 bcm/y that began on the first of January 2010 and was later doubled. In 2010, during a visit by President Medvedev to Azerbaijan, a framework contract was concluded for the export of 2 bcm/y to Russia's Northern Caucasus region for the period 2011-2012. The CEO of Gazprom Alexei Miller stated at the time that he was ready to buy all the gas Azerbaijan was ready to supply. See *Russia, Azerbaijan to Sign Deal on Boosting Gas Supplies*, Azernews, 2 September 2010.

51 In demarcates of the time, Russia's and Iran's Ministers of Foreign Affairs objected to oil and gas development rights being awarded unilaterally by the newly independent Caspian States. Over time, established facts and subsequent bilateral agreements, including with Russian and Iranian oil and gas companies, have eased many objections and concerns in practice. Russia, however, remains strongly opposed to a Trans-Caspian gas pipeline on legal, environmental and other grounds while oil and gas development rights issues in relation to delimitation remain unresolved between Iran, Turkmenistan and Azerbaijan.

52 From the 4th of June 2006 to the end of Q2 2013, 2,227 tankers were loaded at Ceyhan with a total of about 1,715 million barrels (229 million tonnes) of crude oil transported via BTC and sent to world markets. *ACG first half 2013 results*, BP.com, August 2013.

and 2.36% BTC shares to ONGC Videsh of India. On the 2<sup>nd</sup> of April 2013, after a final host government approval and with the pre-emption rights of remaining consortium partners left unexercised, ONGC Videsh of India became the first non-OECD Asian partner<sup>53</sup> in these Caspian landmark projects<sup>54</sup>. Indian efforts to also enter the North Caspian Sea Production Sharing Agreement (NCPSA), which includes the giant Kashagan field, were rebuffed by the government of Kazakhstan when it decided to pre-empt the sale of ConocoPhilips' 8.4% NCPSA shares to ONGC<sup>55</sup> and subsequently sold them on to CNPC of China at a later stage (see further below).

IEA Analysis of oil production at ACG shows that output slipped by a total of 7% over 2012. According to the IEA, ACG production peaked at 823,000 b/d in 2010. Coinciding with the BP Macondo disaster in the Gulf of Mexico, ACG production sloped off to 718,000 b/d in 2011, reaching about 665,000 b/d in 2012 due to mounting technical challenges and a reappraisal of residual risk throughout the energy industry. Total liquid production in Azerbaijan dropped to 890 kb/d in 2012 from 1.037 mb/d in 2010 and is likely to reach 880 kb/d in 2013, resulting in lower government revenues and BTC throughput<sup>56</sup>. With ACG output once estimated to reach 1 mb/d at full field development, the setback has caused frictions<sup>57</sup> in the maturing relations between the host government of Azerbaijan and BP<sup>58</sup>, which have committed to keeping ACG production at 660-680 kb/d until 2020. The PSA that will terminate in 2024 may well be prolonged in due time. Some pundits estimate that output will decline further to 570 kb/d by 2014 until new facilities enter into operation to boost recovery<sup>59</sup>. This would free up considerable capacity in

53 *Indian Government Approves ONGC Participation in Azeri-Chirag-Gunesli*. Vestnik Kavkaza, 31 January 2013.

54 On the 2nd of April ONGC Videsh Ltd. completed its acquisition of Hess Corp.'s 2.7213% interest in the Azeri, Chirag, and deepwater Gunesli fields in the Caspian Sea off the shore of Azerbaijan and a 2.36% interest in the Baku-Tbilisi-Ceyhan Pipeline, for which agreements were signed in September. See Hess, *ONGC Videsh Complete Caspian Deal*. Oil and Gas Journal, April 2, 2013; and *Hess to Sell Interests in ACG Fields, BTC Line to ONGC for \$1 Billion*. Oil and Gas Journal, September 7, 2012.

55 *Kolyandr, Alexander et alia, Kazakhstan Buys \$5 Bllion Kashagan Stake from ConocoPhillips, Kazakh Intervention a Blow for India*. Wall Street Journal, 3 July 2013.

56 IEA OECD Oil Market Report 2013, April p. 21. Table reproduced and reformatted here from IEA OECD (2013) Oil Market Report April.

57 Contentious issues range from the sharing of profits from oil exports that depend on cost recovery by the consortium partners to development rights of deeper layer gas and other prospective fields.

58 BP suffered a gas leak and a blowout at the Central Azeri gas reinjection well at its ACG facilities. See Webb, Tim *Wiki Leaks cables: BP suffered blowout on Azerbaijan gas platform, Embassy cables reveal energy firm 'fortunate' to have evacuated workers safely after blast similar to Deepwater Horizon disaster*. The Guardian, 16 December 2010.

59 *Role of the Black Sea and Caspian Region as an Energy Supplier - Past, Present and Future* by Marc Antoine Eyl Mazegga on 14 February 2013 in London.

BTC for other Caspian producers to make use of. Unlike the ESPO<sup>60</sup> pipeline, which has seen throughput boom, reaching a record of 800 kb/d, of which 500kb/d was destined to China and the remainder to Asian Pacific markets, BTC has, together with ACG, underperformed expectations, with BTC exporting only 600 kb/d in the first quarter of 2013<sup>61</sup>.

#### Azeri Chirag Guneshli (ACG) Production (kb/d)

	1Q12	2Q12	3Q12	4Q12	2012	Y-o-Y % change
Chirag	80	74	74	70	74	0 %
Central Azeri	180	142	167	145	158	-17 %
West Azeri	190	182	204	186	191	-4 %
East Azeri	142	146	129	119	134	7 %
Deepwater Guneshli	119	113	110	86	107	-16 %
Total ACG	712	656	684	604	664	-7 %
Shah Deniz liquids	45	33	72	26	44	15 %

SOURCE: IEA ANALYSIS OF BP CASPIAN BUSINESS UPDATE

#### The Shah Deniz field and the South Caucasus Pipeline

The Shah Deniz (SD) field is operated by BP in a partnership with Statoil awarded under a separate PSA agreement, signed and ratified in 1996. The project is being co-developed by BP generating synergies and ACG, onshore oil and gas treatment facilities at Shangachal Terminal and export systems. The South Caucasus Pipeline (SCP) to Erzerum in Eastern Turkey uses the same right of way agreed for the BTC pipeline and in turn enables scalable capacity for Shah Deniz exports and other projects. Additional Shah Deniz shareholders are Socar, Total and companies from Iran, Turkey, Italy and Russia<sup>62</sup>. The current imposition of sanctions on Iran have thus far side stepped the participation of NIOC in this Shah Deniz project, due to the

60 The first section of the Eastern Siberian Pacific Ocean pipeline came onstream in December 2009, linking Taishet in the Irkutsk region of Eastern Siberia to Skovorodino in the Amur Region of Russia's Far East over a distance of 2,757 km at an expense of \$12.5 billion. The second stretch to the tanker port of Kozymino opened in December 2012. Total throughput capacity is projected to reach 1.6 mb/d. *Esibera Pacific Ocean Pipeline Construction* in Yakutia Today; and RIA Novosti Jan. 13, 2009 *Russia to Launch 1st Leg of ESPO Pipeline on Dec. 25, 2009*.

61 IEA OECD Oil Market Report 2013, September, p. 29: Former Soviet Union net exports of crude & petroleum products.

62 See Annex, Table 2.

strategic significance attributed to it by its main stakeholders<sup>63</sup>. To reflect the low price environment<sup>64</sup> of the time, most of the Shah Deniz phase 1 (SDI) volumes initially sold at fairly preferential prices to Turkey and Georgia. SDI entered production in 2006 and today operates close to the plateau of its 9 bcm/y production profile. The second phase in the development of the Shah Deniz field (SDII) for which a final investment decision was announced on the 17 December 2013<sup>65</sup> will add another 16 bcm/y, with a considerable upturn expected to be realised over time. In 2012, front-end engineering and design began to allow an export of 6 bcm/y to Turkey, where energy demand is growing rapidly, plus an additional export of 10 bcm/y, agreed in July 2012, to diversify EU supplies through the Trans-Anatolian gas pipeline (TANAP). The investment decision regarding SDII ultimately hinged on whether the proposed Western branch of Nabucco or the Trans-Adriatic gas pipeline (TAP) would be developed as the onward EU export route. By July 2013 a decision was made in favour of TAP, linking gas exports from Azerbaijan to Southern Italy via Georgia, Turkey, Greece and Albania. According to experts, this decision reflects, among other things, stakeholder positions in up- and midstream segments of the value chain and price concessions<sup>66</sup> given earlier by Gazprom to Central European off-takers amidst a rising sense of urgency among new and existing gas exporters to either gain or maintain market share in the changing energy landscape and therefore to simply 'just get on with it' (Rzayeva, 2013). Initially, production from SDII should ramp up by 2 bcm/y from 2016 onward, enabling gas to reach Turkey in 2018. Then, in the second half of 2019 it will reach the EU through Greece, which will be the first EU off-taker of Azeri-produced natural gas<sup>67</sup>. Noteworthy is that subject to EU approval, expected by the second half of 2014, SOCAR has further strengthened its midstream position downstream in Greece through the acquisition of 66% of DEFSA assets, DEFSA being the Greek transport subsidiary of DEPA. According to the EU's

63 Dadashova Gulgiz (2013) *U.S. Lifts Sanction on Iranian Companies Participating in Shah Deniz Project*. Azeri News, 4 June 2013. Security of gas supply concerns in Britain have also motivated the UK to seek exemptions to sanctions with the US and EU and enable BP to reopen development of a North Sea natural gas field in a 50% joint venture with IOC UK, an Iranian subsidiary of NIOC. The field was shut down in 2010 when it produced about 5% of UK gas output. See Williams, Selina and Faucon, Benoit (2013) *U.K. Seeks Exemption From Iranian Sanctions for BP Gas Field*, Wall Street Journal, September 16.

64 According to the Minister of Energy and Industry of Azerbaijan Mr. Natiq Aliyev, the gas price, based on an oil and products index, was agreed at \$120 per tcm in 2002. A new price in accordance with a new price formula was agreed in 2010 to reflect changes in the price environment. See: *Minister Aliyev Outlines Azerbaijan's Gas and Oil Exports*, Middle East Economic Survey, 5 June 2010.

65 *Shah Deniz Final Investment Decision Paves Way for Southern Corridor Gas Link with Europe*, BP Press releases, 17 December 2013

66 Bulgaria obtained a 22% discount, Romania 5%, Hungary 2 % and Austria 11 %, according to Rzayeva, Gulmira (2013) in '*The Southern Gas Corridor: Who stands where?*' Natural Gas Europe, June 17.

67 Antoniou, Dora (2013) *Greek-Azeri Gas Deal to be 'Mutually Beneficial'*, ekathimerini.com, September 15.

Commissioner for Energy Gunther Oettinger, the Southern Corridor will have the potential to provide 20% of the EU gas demand in the long term<sup>68</sup>.

Due to the already lengthy negotiations, as well as the future challenges that come with coherent field and infrastructure development of this duration and scale, delays in bringing SDII on stream in concert with export capacities are likely. This may well change the balance of benefits and project economics between SD consortium and host governments along the routes of the SCP, TANAP and TAP, which run through the Adriatic Sea to Italy via Greece and Albania. New gas discoveries in the Eastern Mediterranean and Black Sea regions as well as price and regulatory trends in downstream markets may see other more phased pipeline investment concepts such as the ITGI or SEEP re-emerge at some stage. This would be without legal prejudice to the original agreements inked today but could impact the underlying project economics. At the occasion of the final investment decision for SDII the duration of the PSA concluded in 1996 was extended to 2048 both to compensate for lengthy negotiations and enable the development of new resources within the contract area. This increases the net present value for shareholders in a gas market that is increasingly being exposed to downward price pressures. Subject to conditions being met in 2014, both SOCAR and BP purchased 6.7% and 3.3% respectively from Statoil shareholdings in both SD and SCP at the signing ceremony for the final investment decision hosted by President Ilham Aliev of Azerbaijan in Baku. BP has meanwhile concluded sales contracts for SDII, worth a \$100 billion over their 25-year run time, with most European gas incumbents<sup>69</sup>. These sales agreements have strengthened investor confidence for the further development of available gas resources off the shore of Azerbaijan<sup>70</sup>. Last but not least production of liquids from SD is expected to rise from 55 kb/d to 120 kb/d<sup>71</sup>.

68 *Gas from Azerbaijan: Commission welcome final investment decision to extract gas pledged for Europe*, European Commission Press release 17, December 2013

69 Offtakers include Enel of Italy, E.ON of Germany, GDF Suez of France, the energy trading arm of Royal Dutch Shell, Hera Trading, DEPA Public Gas Corp. of Greece and Spanish Gas Natural Fenosa. E.ON of Germany has committed to the purchase of 40 bcm of gas from Azerbaijan under a 25-year-long term contract amounting to 1.6 bcm/y, while GDF signed on to 2.6 bcm/y. Hera trading obtained 300 million cubic metres under the deal. Other offtakers including Shell, Bulgargas, Enel, Axpo and DEPA, and possibly others have not yet disclosed offtake volumes. Williams, Selina (2013) *BP-Led Group Inks Azeri Gas Deal Worth \$100 Billion; Consortium developing Shah Deniz gas field to sell gas direct to Europe*, Wall Street Journal September 19. Badalova, A. (2013) *Germany's Eon to Buy 40 bcm of Azerbaijani Gas Under 25-year Contract*, Trend, September 23.

70 See Annex, Table 3: Azerbaijan potential for gas exports by 2020-2035.

71 *Shah Deniz Final Investment Decision Paves Way for Southern Corridor Gas Link with Europe*, BP Press releases, 17 December 2013

## **THE SOUTHERN CORRIDOR AND THE RISE OF CASPIAN GAS RESOURCES**

In the well-supplied oil and gas markets of the nineties, Caspian gas reserves were stranded resources, and their significance was largely regional. The value of the gas was rarely monetised during the time that the newly independent states were transitioning from centrally planned to commercial market relations. When markets tightened in the ‘dash for gas’, as a function of EU energy market liberalisation in the nineties, economic recovery in new Central and Eastern European member states and the depletion of indigenous sources, focus sharpened on Russian investment and trade practices. These optimised portfolios by relying on relatively cheap and abundant Central Asian gas reserves to maximise margins while upstream investment in Russian reserves remained sluggish. After the gas cut-offs of 2006 and 2009, policy focus shifted to unlocking Caspian gas. In this new tight gas market environment, Russia concluded various long-term framework contracts with Turkmenistan and Uzbekistan for gas deliveries to support security of supply, while Turkey, the US and the EU sharpened their focus on Azerbaijan and the wider Caspian to enhance engagement and complement established Russian supplies to the EU from Caspian sources. Consequently, the so-called Southern Corridor became a rallying point in the EU’s quest to improve the diversity of EU gas supplies. The first supplies were to come from the Shah Deniz field which, at that time, was riding on the back of ACG and BTC development and already exported small gas volumes through the South Caucasus Pipeline to Georgia and Turkey. With the second phase sanctioned for final investment in December 2013 for exports to Southern Italy, development of further Caspian gas reserves might follow after 2020. Thus Shah Deniz has gradually stepped out of the shadows of the ACG contract of the century and has become pivotal to the westward market integration of the Caspian region with world energy markets<sup>72</sup>.

The considerable gas reserves of Turkmenistan (IEA, 2010), discussed further below, will serve Asian markets in the newly emerging energy market environment. The Trans-Central Asian pipeline through Uzbekistan and Kazakhstan to China, agreed with Turkmenistan in August 2007, entered into operation in December 2009. It has inspired innovative proposals from the EU for a new negotiating format to gain access to the gas export potential of Turkmenistan on comparable state trading terms (IHS CERA, 2010) and has increased calls for the establishment of an external

72 Badalova, A (2012) *Azerbaijan Has Potential to Become Major Transit Hub for Europe and Central Asia's Energy Supplies*, Trend, May.

EU energy policy<sup>73</sup> (de Jong and Schunz, 2012). Since 2009, when direct sales from Turkmenistan to Ukraine ceased as part of the agreement with Russia<sup>74</sup>, deliveries from Turkmenistan via the CAC pipeline to Russia have been made at the border and serve as a de facto back-up to Gazprom's export monopoly to Europe<sup>75</sup>. In the new international market environment, where EU demand has slumped and Russia's independent gas producers are increasing gas output in competition with Gazprom (Bochkarev 2013, Pirani, 2013), Caspian gas exports to Russia have decreased and are likely to regain regional significance to avoid the displacement of Russia's market share on the EU market. This increases the relative pull of China, the fastest growing demand market, especially on Central Asian gas supplies.

A Trans-Caspian pipeline to enable direct exports from Turkmenistan to Europe remains a Rubicon which, despite efforts aided by the EU, Turkey and US, Turkmenistan intends to cross only slowly if at all. Economic foreign policy and security perspectives on how universal norms and values are applied in specific contexts also hamper the development of a Trans-Caspian pipeline (Melvin, 2012, Boaz, 2012) and so push out Central Asian gas further towards Asian Pacific gas demand centres<sup>76</sup>. Aside from commercial considerations, the decision by Azerbaijan as the sole new market entrant in EU markets to opt for TAP as an EU export route provides a peripheral EU linkage. This may well reflect a demarcation of markets between incumbents and new market entrants that also accommodates the different perspectives on universal values and security agendas at play in the Southern

73 This included calls for enhancing EU solidarity and a 'Single Voice' in dealing with external energy suppliers. Various daring innovative proposals were made, some of which are discussed below, that sought to exploit the new Title on Energy in Article 194 in the Lisbon Treaty. See OJ (2008) C115 Volume 5 Notice 2008-C115-01, May 9. Ultimately they prompted the EU Council Meeting on Energy of the 4th of February 2011 to call for cohesion and consistency. 'There is a need for better coordination of EU and Member States' activities with a view to ensuring consistency and coherence in the EU's external relations with key producer, transit, and consumer countries.' CEU (2011) Council Conclusions on Energy, paragraph 11 p. 3

74 Pirani, Simon ed. (2009) *Russian and CIS Gas Markets and Their Impact on Europe*, Oxford Institute for Energy Studies p. 209.

75 The Ukraine and Turkmenistan are seeking to reinstate direct sales agreements in an agreement with Russia under the CIS that would enter into effect by 2015 Jafarova, Aynur *Ukraine Aims to Resume Direct Supplies of Turkmen Gas*. Azernews, 18 September 2013.

76 Jafarova , Aynur *China, Turkmenistan Expands Gas Coop*. Azernews, 13 Septeber 2013.

Caucasus and wider region<sup>77</sup>. In the present context, gas flows from Turkmenistan across the Caspian through Southern Corridors to diversify existing EU supplies on the back of available gas resources offshore Azerbaijan are unlikely in the medium term. This Gordian knot is the linchpin for Russian gas demand security and Asian Pacific diversity of supply through land routes.

The decision by Turkey and Azerbaijan to take ownership and move forward by way of an intergovernmental decision on the construction of a Trans-Anatolian gas pipeline in June 2012 and the subsequent selection of TAP a year later do, however, assure stakeholders of long-term linkage. The manoeuvring room this creates enables the EU to declare victory and move on with recalibrating market signals and policy instruments on the internal market. Between now and 2020 gas is expected to resurface in a ‘remarkable demand recovery’ as new realities sink in that are likely to favour gas consumption, as oil indexation of gas prices further loosens, market shares for coal and nuclear tighten and finally renewable subsidy schemes and climate targets beyond 2020 are rationalised.

Over time, the slowly moving but irreversible slide, taking place over the longer term, into a more readily and diversely supplied gas market<sup>78</sup> may make a Trans-Caspian gas link a more straightforward investment and less geopolitically fraught undertaking. In this scenario all Caspian gas export routes could well be needed in future, provided the EU gains confidence in embracing conventional pipeline gas supplies to maintain supply security in the transition to a low-carbon economy and Caspian stakeholders improve cooperation among themselves to attract further

77 In this respect resolutions by the EU parliament criticising Azerbaijan on human rights abuses and renegeing on agreements after the repatriation to Azerbaijan of a convicted prisoner from Hungary profoundly irked the Azeri leadership. Azerbaijan did not expect to be singled out among other Caspian states and to have called upon itself such public scrutiny in the build-up of hosting the Eurovision Song Festival in May 2012 and certainly not from EU quarters, for which it risked relations with Russia to serve its energy security concerns. President Aliyev opened the 19th Caspian Oil and Gas Conference, underlining its sovereign powers in response: ‘Azerbaijan is independent in exporting its energy resources opposing the use of ‘the energy factor’ as a tool for political aims....Azerbaijan has seven pipelines transporting oil and gas by different routes....we have lent a helping hand at a time some countries faced challenging times ... as a state, we primarily ponder Azerbaijan’s national interests’. Cited from Azeri News staff President Aliyev: Azerbaijan Independent Energy Exporter. Azerinews, June 6, 2012. See also the European Parliament resolution on Human Rights Abuses in Azerbaijan of 24 May 2012 and European Parliament resolution on Azerbaijan: the Ramil Safarov case of 13 September 2012

78 Giant new conventional oil and gas finds have been confirmed off shore Brazil and Mozambique. The Tupi field off the shore of Brazil now renamed Lula (not after the Brazilian President but Portuguese for squid) with a subsalt reservoir comparable in size and complexity to Kashgan off the shore of Kazakhstan is slowly turning the South Atlantic in to a new exploration and production province and Brazil into a global oil producer. The Rovuma field is the largest discovery in the history of the Italian IOC ENI and is considered to be among the world’s three biggest gas basins, according to Wood Mackenzie. The find off the shore of Mozambique has further shifted interest to East Africa as an newly emerging oil and gas province that is well positioned to meet Asian Pacific demand growth. (2011) *Brazil’s Offshore Oil in Deep Waters*, The Economist, February 3; (2012) ‘Majors Court Kingpin ENI on Mozambique Gas Bonanza’, Reuters, December 11.

investment and assure project delivery within a well governed, wider Caspian environment. The alternative scenario means that apart from incidental capacity increases on existing scalable pipelines in the Southern Corridor, upstream gas field development will remain limited to Azerbaijan and the Eastern Mediterranean- and Black Sea regions. Final investment decisions will be few and far between, and other southern corridors will only make staggered process, remaining largely mutually exclusive undertakings.

Finally, while the TAP decision may be counter intuitive to SEE gas diversification needs, it is not counter intuitive to the understanding that the stakeholders in SD and TAP projects will have had to reach to accommodate Russia's security of demand interests in EU markets and their Russian investment ambitions. This may raise questions of market demarcation with competition authorities but most importantly, however, a link between the Caspian and EU market is established, in which Turkey and Southeast Europe combine transit and off-take functions to serve what appear to be higher public interests in maintaining both security and diversity of gas supplies. Over time, as volumes increase, interconnections will grow and EU market rules will no doubt find deeper implementation in the region. Caspian gas will flow further into South-eastern and Central Europe on its commercial merits and not be relegated to Southern Italy alone, which represents one of the EU's more diversely supplied regions.

## KASHAGAN: FROM FLAGS AND STANDARDS TO RATES AND ROUTES

### *Flags and standards*

In 2009 the North Caspian Operating Company B.V. (NCOC) became the successor to Agip KCO as the delegated operator of activities for participating companies in the North Caspian Sea Production Sharing Agreement, signed in 1997 (NCPSA)<sup>79</sup>. The consortium consists of ENI, which remains the operator for the first phase, Shell, ExxonMobil, Total and the National Oil and Gas Company of Kazakhstan Kazmunaigaz (KMG), each holding 16.81%, the Chinese National Petroleum Corporation (CNPC) that recently acquired 8.33% from ConocoPhillips of the US, and Inpex of Japan, holding 7.6%<sup>80</sup>. After pre-empting the sale of the 8.33% ConocoPhillips share to ONGC Videsh of India for \$5 billion in July 2013, the Presidents of Kazmunaigaz and CNPC signed an agreement at the occasion of the

79 The NCPSA includes Kashagan East-1, discovered in 1999, and other structures discovered in 2002 and thereafter including Kalamkas, Kashagan South West, Aktote and Kairan. Source: NCOC and Nadia Campaner and Shamil Yenikeyev, *The Kashagan Field, A Test Case for Kazakhstan's Governance of Its Oil and Gas Sector*, Note de l' Institut Français des Relations Internationales (IFRI), October 2008.

80 See Table 2: Shareholdings in key oil and gas upstream and export projects

state visit of President Xi Jinping of China to Kazakhstan on the 7<sup>th</sup> of September 2013. With that agreement, CNPC took over the 8.33% pre-empted ConocoPhillips-ONGC Videsh share transaction for the same amount<sup>81</sup>.

KMG became a consortium member in 2005. Under the terms of the subsoil law it pre-empted the sale of the BG stake that the British company offered to Kashagan shareholders and subsequently to the Chinese National Offshore Oil Corporation (CNOOC) and Sinopec of China in 2003<sup>82</sup>. KMG further expanded its shareholding in 2008 as recompense by the consortium partners for delays in bringing the project on stream by 2005 as had been agreed. Earlier withdrawals from the project by BP and Statoil after the discovery was made in 2000 cited corporate strategy and governance concerns<sup>83</sup>. Their shares were purchased by the remaining consortium partners, that at the time did not involve KMG.

When partners took over development and operation duties for phase two in 2009 according to their corporate strength, ENI remained responsible for phase 1. ConocoPhillips's decision to reconsider its Caspian exposure and sell its share to the Indian NOC ONGC Videsh<sup>84</sup> followed on the heels of a successful \$1 billion share purchase by ONGC Videsh offered by US company Hess in the ACG upstream development and BTC pipeline project of Azerbaijan. While the purchase of assets in Kashagan by ONGC Videsh was pre-empted by the government of Kazakhstan, as happened with the sale of the BG stake in 2003, discussions and reconsiderations were apparently still going on up to the last minute, showing competition among BRIC energy import-dependent economies<sup>85</sup>. Indian interest and possible participation in the Kashagan project would have underscored the further successful integration of the Caspian region into the world economic system and diversified access to Caspian resources for Asian Pacific stakeholders. Other consortium partners have waived their pre-emption rights, reluctant to increase their exposure to further cost escalations and Caspian risk<sup>86</sup>. Meanwhile, to recover expenditures<sup>87</sup>, the

81 Update 4-China Buys Into Giant Kazakh Oilfield for \$5 Billion. Reuters, September 7, 2013.

82 Pre-emption rights allow the state of Kazakhstan to intervene and acquire the subsoil rights other contracting parties transfer at the market price. See Articles 12 and 13 of the Law of the Republic of Kazakhstan on Subsoil and Subsoil Use, dated 24 June 2010. The right was first invoked when BG sought to sell its shares and when the beleaguered Canadian owners of Petrokazakhstan sought to sell their assets to foreign parties. See *Petrokazakhstan State Rights: Ministers cites pre-emptive rights on oil company*, Market Watch, 29 June 2005.

83 The Companies regional vice president for the Caspian stated that '*Even with the huge discovery, the position on Kashagan does not meet our criteria for maturity and governance*'. See: Statoil Sells Kashagan Stake (2001) The Scotsman.com, Februari 13.

84 Isabel Gorst and James Fontanella-Khan, India Oil Groups in Talks on Kashagan Field. Financial Times. June 8, 2011.

85 Chaturvedi, Saurabh *India in Touch with Kazakhstan After Bid Fails*. Wall Street Journal, July 3 2013.

86 *Kashagan Consortium Partners Not Willing to Purchase ConocoPhillips's Stake: Oil Minister*. Tengri News, 19 April 2013.

87 John Roberts, *Kashagan: A Great Oil Supply Hope Has Big Troubles* Platts, March 28, 2001.

consortium is seeking to extend the production-sharing agreement that expires in 2037 by an additional 20 years.

It would have been too much of a financial burden and beyond the management capabilities of KMG to hold on to the ConocoPhillips share, considering the exposure KMG has in the project already. Indeed part of the deal with CNPC includes a \$3 billion payment to help KMG finance the second phase of Kashagan development. While in this first round Chinese NOCs appear to have refrained from making any public efforts to purchase ConocoPhillips shareholdings in Kashagan, China has now successfully made a major step forward into the premier league of the Caspian oil and gas projects, joining forces with major IOCs. A successful Indian purchase may have diluted the interests that Chinese companies have managed to build up in Kazakhstan and helped to diversify Asian Pacific engagement within the region. IOCs, meanwhile, will continue to weigh their exposure in Kashagan with other newly emerging provinces that require premium skills and technologies. These may well offer better investment conditions and shorter lead times. This could, however, lead to an erosion of Caspian oil and gas sector performance in accordance with best internationally available standards and practices<sup>88</sup>.

### **Rates & routes**

The slow development of the offshore Kashagan field in Kazakhstan testifies to the challenges of bringing a project of such scale and complexity on stream in the Caspian environment<sup>89</sup> but also stands out as an example of poor expectations management<sup>90</sup>. The costs associated with bringing phase 1 online have surged to \$41.2-\$48 billion<sup>91</sup>, albeit with first oil and gas production flowing since September 11<sup>th</sup> 2013 after eight years of delays<sup>92</sup>, which may reach 70 kb/d by year end 2013<sup>93</sup> but are expected to remain modest in the short term also to identify and overcome

88 After 7 years of negotiating the start of exploration in the Abai offshore block, Statoil notified Kazakhstan authorities of its withdrawal from the 2.8 billion barrel project in which it would partner with KMG. See: Gizitdinov, Nariman (2013) *Statoil Abandons Kazakh Caspian Oil Project After 7 Years*. Bloomberg, February 13.

89 Technical challenges in the development of the Kashagan field that may contain some 9 billion barrels of recoverable reserves range from managing poisonous hydrogen sulphide gas and winter ice to an ecologically sensitive shallow marine environment.

90 Nadia Campaner and Shamil Yenikeyev, *The Kashagan Field, A Test Case for Kazakhstan's Governance of Its Oil and Gas Sector*, Note de l' Institut Français des Relations Internationales (IFRI), October 2008.

91 41.2 billion is the latest official NCOC report on the costs for phase 1. Estimates and reports vary widely and are subject to dispute, including by the government of Kazakhstan, as it affects state revenues . IEA cites total development cost to have risen to \$136 from an initial \$ 57 billion and the costs for phase 1 to have been marked up by \$8 billion to \$46 billion IEA OECD. (2013) Oil Market Report October, *Kashagan Start-up Poses Questions*, October, p. 28. Bloomberg reports costs for phase 1 to have risen to 48 billion. See Gizitdinov, Nariman (2013) Kashagan Project Produces First Oil After Eight Years of Delay. Bloomberg, September 11, 2013.

92 *Kashagan Oil Field Starts Production*. Oil and Gas Journal, September 11, 2013.

93 Lee, Julian (2013) *Limited Export Options for Kashagan Partners*, FSU Oil & Gas Advisory Service, 26 September.

teething problems<sup>94</sup>. The deadline has supposedly been met to avoid compensation losses by the consortium and volumes from phase 1 that could rise in the range of 170/180 to 200/380 kb/d by the end of 2014 and ultimately reach 450 kb/d with gas injection beyond that time<sup>95</sup>. With development cost ranging from \$100- to 136 billion for the entire project and anything between \$50 to \$68 billion<sup>96</sup> for phase two – which is still in the initial design phase – runaway costs for the consortium, of which the lion's share are still ahead, mean that Kashagan sets the record as the most expensive oil project ever (IEA OECD, September 2013). The latest budget proposals for phase two development were considered prohibitively high by the Kazakh government, prompting a rejection of development plans that have left the development of phase 2 in an indeterminate state for a while<sup>97</sup>. Phase one could see production rise to 370-380 kb/d, but in view of established track records and outages<sup>98</sup>, commercial volumes may only ramp up slowly to 75 kb/d and reach 180 kb/d only by the end of 2014. While development for phase two is scheduled to commence in 2018, further rises beyond 450 may not be achieved before 2020. Full field development involving all phases, including those still in a conceptual phase today, could see volumes rise to as much as 1.5 mb/d, according to earlier expectations. These bullish expectations now look defeated by established practice, involving complex technical challenges and multifaceted NOC-IOC host government-consortium relations as well as the slow-moving expansion on CPC and other export routes.

This means that the KCTS concept, for which the Presidential endorsement of a draft IGA between Azerbaijan and Kazakhstan was withheld at the last moment in 2010, may lose further momentum, in particular now that CNPC is participating in Kashagan, implying oil exports via Atyrau across Kazakhstan to Alashankou, China. A pipeline link to China that is developed in phases may now well enter into operation more swiftly in accordance with Chinese practice, if indeed flows are reversed on the Atyrau-Kenkiyak section. In addition to these two routes, other options, including the expanded CPC and the Atyrau-Samara connection to the Transneft system – which lacks a mechanism to take account of quality differentials but opens up to various other sea ports – are formally still under review. An agreement to use the Atyrau-Samara link was apparently concluded by ENI with KTO and Transneft to export initial volumes via Russia to the Baltic Sea via the BPS and

94 IEA OECD (2013) Oil Market Report September, *Former Soviet Union* p. 29.

95 Production rates for phase one varied over time. Here the lowest and highest flow rates are given for start-up and ramp up from various sources IEA, EIA, GCES and international press

96 Richard Orange, *Shell Slashes \$18 bn From Kashagan Costs*. The Telegraph, October 25, 2010.

97 John Roberts, *Kashagan: A Great Oil Supply Hope Has Big Troubles*. Platts, March 28, 2011.

98 Scheid, Brian (2013) *Production Resumes at Kazakhstan's Kashagan Field After Gas Leak*. Platts, October 7.

the ESPO pipelines. In principle this enables physical or contractual swap deals of Kashagan exports to China at Skorovidino in Eastern Siberia and Japan and other Asian Pacific markets at the port of Kozymino on the Bay of Nakhodka. Rosneft and other Russian producers already swap oil by supplying the Pavlodar refinery in North-eastern Kazakhstan in return for Kazakh oil exports to China through the Atasu-Aleshankou oil pipeline. Routes chosen for physical export flows largely depend on netbacks<sup>99</sup> and mechanisms being in place to account for quality differentials between Caspian and Russian crudes which, combined, provide an effective netback. Direct sales of Kashagan oil to China at Aleshankou, through the KCTS-BTC link to Ceyhan, or to Skorovodino and/or Kozymino via ESPO, would have to be competitive with other outlets.

Against the backdrop of the Macondo oil spill management and the Fukushima nuclear disaster of 2011, ‘residual risk’ is re-evaluated globally by operators, and the precautionary principle has gained further substance for insurers. Any major incident in the Caspian will be a game changer that all stakeholders will want to avoid. IOCs will therefore have to move forward more prudently, at greater cost, and/or limit their exposure. Without a major re-alignment of expectations, this will not ease consortium dynamics and host-government relations but will only add challenges. There is an absence of a majority stakeholder with sufficient voting power and the technical wherewithal to assume responsibility and push the project forward responsibly. This is unlikely to change, given the project’s scale and the growing desire of IOCs to hedge Caspian risk. Bringing in NOCs that abide by different standards and practices and may therefore be less constrained, also in respect of community relations, might on the one hand reduce development cost, while on the other hand it could ensure continued access to capital and growth markets. In sum, Kashagan appears more and more pivotal to servicing growing Asian Pacific demand<sup>100</sup>.

The Bolashak plant near Atyrau was opened on the 1<sup>st</sup> of July 2013 in the presence of Prime Minister David Cameron and President Nazarbayev. The plant will enable oil and gas extracted at the Kashagan field to be treated and processed for export. NCOC has planned to market the sulphur and store the remainder in sealed containers isolated from the environment<sup>101</sup>. In anticipation of first deliveries, the plant will gradually increase its design capacity to 450 kb/d and 3.2 bcm per year, or

99 A netback is obtained by taking the sales value of a unit of oil minus all costs associated with bringing that unit to market.

100 IEA OECD (2013) Oil Market Report September, *Former Soviet Union* p. 29

101 NCOC H<sub>2</sub>S and Sulphur management

around 8.8 million cubic metres of gas per day<sup>102</sup>. In the meantime, Kazakhstan has matched investments of up to \$6 billion from South Korean LG-Chem and China's SINOPEC engineering with \$4 billion, of which Kazakhstan will borrow two-thirds for the construction of two new petrochemical facilities in the Caspian port of Atyrau. Resources from Kashagan and other fields will arrive there for processing and onward transport. According to estimates by LG-Chem, these facilities will produce 1.6 million tonnes of ethylene and polyethylene per year and should be commissioned in 2016. This rivals capabilities in the Middle East<sup>103</sup> and enables Kazakhstan to capture social-economic benefits by increasing local employment and manufacturing capabilities in the Caspian energy value chain<sup>104</sup>.

### Karachaganak

The Karachaganak gas field in North-western Kazakhstan, close to the Russian border, is operated by BG and ENI with Lukoil, Kazmunaigaz and Chevron as consortium partners. The field was taken into production already in Soviet times and contains over 1.2 trillion cubic metres of gas and up to 9 billion barrels of liquid condensate, including 5 billion barrels of crude oil in deeper layers. Karachaganak is one of the world's largest gas condensate fields, of which less than 10% has been produced to date. After independence, ownership passed to Kazakhstan, which granted BG and ENI exclusive rights in 1992. In 1997 the Karachaganak Petroleum Operating (KPO) partnership formed, with Lukoil and Chevron as partners. Liquids were first produced in 2003, and exports to world markets commenced through the CPC oil pipeline, transiting through Russia to the Black Sea in 2004, and through the Atyrau-Samara oil pipeline linking in with the Russian transport system since 2006. Karachaganak is one of the key international projects in Kazakhstan, with foreign investment amounting to \$16 billion. In 2011 production lay at 240 k/bd of liquids and 17 bcm of natural gas. The majority of gas not used for reinjection is exported<sup>105</sup> and sold on the Russian market through the gas processing plant at Orenburg. To ready the project for a \$20 billion final investment decision on its third development phase, KPO partners agreed in December 2011 to accommodate the National Oil and Gas Company of Kazakhstan, Kazmunaigaz (KMG) with an acquisition of a 10% interest in KPO, in exchange for a net share transfer to KMG of \$2 billion. The deal includes a settlement of all taxation issues, irrevocable cost recovery and allocation of additional throughput capacity as KPO production ramps up and CPC

102 *Bolashak Plant Launched in Atyrau Region*. Central Communications Service for the President of Kazakhstan. 1 July 2013.

103 Cutler, Robert M., *South Korea Deepens Role in Central Asia*, Asia Times. September 2, 2011.

104 More than 1,200 local companies pre-qualified for contracts and \$1.5 billion was invested in the local economy in 2012 alone. *Bolashak Plant Launched in Atyrau Region*. Central Communications Service for the President of Kazakhstan, 1 July 2013.

105 *Caspian Gears Up To Make Waves*, World Gas Intelligence, January 2, 2012.

pipeline expansion is completed in the coming years<sup>106</sup>. The deal became effective only in the summer of 2012, when joint KPO operators BG and ENI decreased their interests from 32.5% to 29.25% each, while Chevron and Lukoil lowered their shares from 20% to 18% and from 15% to 13.5%, respectively<sup>107</sup>.

Yet even with disputes over taxation solved for the time being, including an exemption from export custom duties until the production sharing agreement ends in 2038<sup>108</sup>, issues around the environmental impact of the project and with local communities continue to linger. In July 2012 an inter-district economic court and appellate court of Western Kazakhstan upheld a claim filed by environmental authorities imposing substantial fines on the company for chemical and other waste discharges<sup>109</sup>. KPO is now beyond its cost recovery phase and thus provides the state budget of Kazakhstan with considerable revenue through taxes and royalties, in addition to KMG's sharing in the projects proceeds directly, while continuing to contribute \$20 million in expenditures per year to the social-economic development of the region, stimulating local industries and public infrastructure construction using only Kazakh contractors<sup>110</sup>. A critical issue for moving forward with the final investment decision on third phase development is the conclusion of an agreement on the gas price and off-take arrangements with Russia.

### **Galkynysh and Bagtyiarlyk gas fields of Turkmenistan**

In December 2009 a consortium of Asian and Middle Eastern firms entered into a \$10 billion deal to develop South Yolotan; a cluster of fields that was renamed Galkynysh in 2012<sup>111</sup>. CNPC of China, LG International and Hyundai Engineering of South Korea, as well as Petrofac of the United Arab Emirates, contracted the first development phase and gas export rights from the Galkynysh fields<sup>112</sup>. The deal between Asian Pacific NOCs and the government of Turkmenistan mirrors the 'contracts of the century' that Euro-Atlantic IOCs concluded with the governments of Kazakhstan and Azerbaijan in the nineties, as discussed above. Euro-Atlantic

106 *BG Group: Kazakhstan Agrees to Join Karachaganak Gas Project*. Oil & Gas Eurasia, December 14, 2011.

107 *Karachaganak Field Agreement Takes Effect*. Oil & Gas Journal, June 2012.

108 in conformity with the Eurasian Customs Union and Common Economic Space that entered into effect between Kazakhstan Russia and Belarus in 2012 and to which Armenia plans to accede shortly.

109 *Company Overview of Karachaganak Petroleum Operating B.V.* Bloomberg Business Week, January 2012.

110 Deputy Prime Minister of Kazakhstan Krymbek Kusherbayev Familiarised With KPOP Activities, [www.kpo.kz](http://www.kpo.kz) December 20, 2012.

111 The oil and gas fields of Southern Yolotan, Minara and adjacent structures comprise one field and were renamed Galkynysh, meaning 'Revival', by Presidential decree. The Galkynysh fields are also translated as 'renaissance'. According to Turkmenistan the field(s) contain 26.2 tcm of gas and are the second in the world as confirmed by independent audits. (2011) *Turkmenistan's Super-Giant Gas Field Renamed as 'Galkynysh'*. Turkmenistan.ru, 20 November.

112 Gurt Marat (2011) *S. Korea, China, UAE Win Turkmen Gas Deal – Sources*. Thomson Reuters, December.

companies such as Sofregaz and Technip of France are involved as subcontractors in the construction of gas treatment plants that were recently opened. The contract reflects Turkmenistan's desire to diversify export markets and trading partners in order to balance its dependency on Russia as its main export market and replace declining production in the Daulatebad fields, the mainstay of gas production and exports of Turkmenistan since Soviet days. Before the economic crisis of 2008, Russia purchased the lion's share of the 51.2 bcm Turkmenistan exported in 2007, aside from smaller volumes sold to Iran<sup>113</sup>. The contract was signed on the heels of the opening of the Trans-Central Asia pipeline at the Saman-depe gas field in the Bagtiyarlyk contract area on the Eastern shore of the Amu Darya River on the 14<sup>th</sup> of December 2009, where CNPC had earlier obtained a first onshore license in Turkmenistan. The deal marks an important victory for Chinese energy diplomacy. In addition to gaining rights to onshore resources in Turkmenistan, China aligned Turkmenistan, Uzbekistan and Kazakhstan in August 2007 along the pipeline route to China, completing construction and thus successfully implementing the framework agreement that former President Saparmurat Niyazov and Chinese President Hu Jintao had concluded in 2006<sup>114</sup>, merely two years earlier.

### **President Xi's summity**

Recent Chinese oil and gas acquisitions have revealed a more accommodating posture by IOCs and OECD governments since the \$18.5 billion failed takeover attempt by CNOOC of US major Unocal in 2005. The \$15 billion acquisition of the Canadian oil and gas producer Nexen by CNOOC<sup>115</sup> marks the international turning point on which also IOC-NOC engagement in Central Asia spins. During the recent visit of President Xi Jingping to the region from the 3<sup>rd</sup> to the 13<sup>th</sup> of September between the G20 Saint Petersburg- and Bishkek Shanghai Cooperation Organization summits, President Xi Jinping visited all Central Asian states but Tajikistan. In Kazakhstan CNPC of China was welcomed as a partner among IOCs in the Kashagan venture discussed above, and the Beineu-Bozoi gas pipeline was opened. This pipeline interconnection can link production in the South and Northwest of Kazakhstan to its Eastern provinces where most demand centres are located. After completion in 2014, including an extension to Akbulak and Shymkent<sup>116</sup>, the 10 bcm/year pipeline will diversify imports to normalise prices and supply volumes for consumers in Southeast Kazakhstan<sup>117</sup> and export gas to service growing demand

113 Pirani, Simon ed. (2009) *Russian and CIS Gas Markets and Their Impact on Europe*, Oxford Institute of Energy Studies p. 275.

114 Cutler, Robert (2008) *Gas pipeline Gigantism*. Asia Times.

115 This involves, among others, the low-cost 210 kb/d-producing Buzzard oil field, which is the largest contributor to the Forties oil grade off the shore of the UK, effectively setting the dated Brent benchmark for international oil trade. See Campbell, Robert, *Nexen Buy Moves China Into Heart of Global Oil Benchmark*. column, Reuters July 23, 2012.

116 Nazarbayev and Xi Jinping Launch Beineu-Bozoi Gas Pipeline. Tengri News, September 9, 2013.

117 KMG (2008) *Breakthrough Projects of the National Company Kazmunaigaz*, November.

on Chinese markets by 2015. This could include exports from major fields such as Karachaganak (Brill Olcott, 2013 and Boulegue, 2013). In Turkmenistan agreements included an increase in gas exports from the Galkynysh and other fields to reach 30 bcm/y by 2014 and 65 bcm/y by 2020. This includes the construction of new pipeline capacity that may possibly involve segments or run in the same right of way area as that of the Soviet-built Central Asia Centre system. This involves routes through Kyrgyzstan and Tajikistan and may help to diversify their gas supplies and alleviate tensions with Uzbekistan over energy and water supplies.

### **CONCLUSION – BACK TO A NEW ‘NORMAL’?**

The rapid tightening of gas markets and succession of geopolitical events coincided with China’s expanding role in Central Asia and international energy markets. This sparked fears of a scramble for gas resources between the dynamically evolving economies and ever more import-dependent OECD economies. Russia’s rising importance as an energy exporter and its straightforward use of growing market- and geopolitical power in wider Europe culminated in gas supply cuts to Ukraine and new Eastern European EU member states in 2006 and 2009. The combined impact of Chinese dynamism and Russian heavy-handedness intimidated the enlarged EU into a review of its longstanding foreign policy posture, which had been geared towards value-driven international cooperation and non-discriminatory open market integration<sup>118</sup>, in favour of more innovative approaches. The entry into force of the Lisbon Treaty in 2009, which included a new article dedicated to energy<sup>119</sup>, enabled the EU to sidestep its fundamental engagement towards multilateral open market engagement and pursue a more differentiated external energy policy based on a more calculated projection of the EU’s market purchasing power internationally, as argued for by senior EU officials and a vast array of experts (Andoura *et alia*, 2010). New policy proposals of the European Commission regularly refer to this new Lisbon Treaty article on energy and its accommodation of more differentiated and innovative approaches<sup>120</sup>. The concept of a Caspian Development Cooperation (CDC) was

118 See, for instance, the Treaty on European Union, in particular Title V Chapter 1 General Provisions on the Union’s External Action, in the *Official Journal of the European Union* (OJ) (2008) C115 Volume 5 Notice 2008-C115-01, May 9 as well as the 1991 Declaration on an European Energy Charter and the 1994 Energy Charter Treaty,

119 See the the Treaty on the Functioning of the European Union, Title XXI Article 194 Energy in the *Official Journal of the European Union* (OJ) (2008) C115 Volume 5 Notice 2008-C115-01, May 9,

120 The Former Presidents of the European Parliament and European Commission Jerzy Buzek and Jaques Delors took this a step further by declaring in May 2010 that energy should be to be the centre of EU integration and economic recovery and that rules granting equitable access to common resources no longer existed. Beyond market liberalisation and interconnection, new bolder approaches were required. Their new ‘European Energy Community’ proposes a variety of initiatives, including the creation of combined purchasing concepts, possibly involving a degree of regionalisation of the internal market through enhanced cooperation among its member states. Recent Commission efforts to forge a common EU energy policy continue to be premised on the findings of these eminent statesmen and surprisingly have indeed moved forward roughly along these lines.

launched by the European Coordinator for the Southern Corridor (Van Aartsen, 2009) and further conceptualised in a report commissioned jointly by the European Commission, World Bank and European Investment Bank (IHS CERA 2010). Together with the negotiating mandate for a Trans-Caspian pipeline that the European Union issued on the 12<sup>th</sup> of September 2011<sup>121</sup>, it stands out as an exponent of these innovative approaches in the external energy policy of the EU. This drive, however, which was further developed by the EC in its Communication on Security of Energy Supply and International Cooperation, adopted on the 7<sup>th</sup> of September 2011, seems to have been surpassed by the new emerging geopolitical and market realities in the wake of the Arab Spring and the shale gas and light tight oil revolution, as well as by the new conventional oil and gas discoveries made in more readily accessible regions. In this new environment in which concerns about security of supply and politically motivated resource nationalism in both producer and consumer countries are subjected to a structural shifts, cohesion and consistency in the application of well-established market and foreign policy principles and governance norms in relations between the Caspian and the wider world should resurface. Fundamental market rules and governance principles had lost their appeal during the energy and commodity price boom of the past decade. Now that this cycle is drawing to a close in a new energy and geopolitical landscape the EU may regain a more self-confident posture and reaffirm its well-established and fundamental principles for foreign and security policy driven by international engagement through multilateral frameworks.

According to the IEA's new policies scenario, 'Caspian Export Projection Beyond 2020'<sup>122</sup>, oil exports will range between 3.7 to 4.5 million barrels a day and gas export<sup>123</sup> will hover around 100 billion cubic metres in the period 2020-2025. In the medium term this seems ambitious but not impossible, due to the increased pull on Caspian resources from Asian Pacific importers and possible breakthroughs at large upstream projects that may occur over that period. However, in reality Caspian oil output peaked in 2010 due to delays in project delivery in Kazakhstan and a more paced development at ACG hovering around 2.4 mb/d in 2012 (EIA, 2013)<sup>124</sup>. This means that in order to make good on the new policy scenario IEA laid out for the Caspian in 2010, development has to accelerate and move against the established trend that shows sloping output on technical challenges within a highly complex

121 EU Starts Negotiations on Caspian Pipeline to Bring Gas to Europe. *European Commission Press release*, Reference: IP/11/1023 12, September 2011.

122 World Energy Outlook (OECD/IEA) 2010 p. 502.

123 Defined as net trade; the balance between consumption and production. World Energy Outlook (OECD/IEA) 2010 p. 496-497.

124 See Annex, Figure 4: Caspian oil and gas production 2000-2012.

operating environment and a fundamentally changed international energy market landscape. Caspian demands for wider socio-economic growth and integration do not take issue with the technical feasibility of such bullish growth but do question its desirability. Developing Caspian oil and gas resources in ‘fast forward’ mode poses risks to the balanced global integration of the Caspian along the five vectors outlined above and will contribute to adverse macro-economic and governance effects<sup>125</sup>. Infrastructure planned and in operation today will be fit to underwrite the predicted growth in exports from present developments. Investment in infrastructure to serve full field development and accommodate a second wave of Caspian projects coming on stream beyond 2020 will need to get underway, but routes and upstream development dedicated to Asian Pacific markets appear to have taken over the momentum from exports to Euro-Atlantic markets. Though the Caspian remains key to net supply growth for global energy markets<sup>126</sup>, upstream development could progress more even-handedly, in pace with the other long-term requirements of the region that at this juncture have become more fundamental to ensuring a stable and sustainable development of Caspian potential.

125 These would range from Dutch disease to resource curse phenomena, further entrenching corruption and autocratic tendencies. Social economic disparities within the region would also sharpen, creating a fertile context for instability and conflict

126 Kazakhstan is listed as the fourth largest contributor to net oil supply growth (including crude and natural gas liquids) after Iraq, Brazil and Canada. It would thus supply an increment of 2mb/d in the IEA New Policies Scenario 2011-2035. See IEA/OECD (2012) World Energy Outlook, p. 114.

## PART II INTERNATIONAL COOPERATION: FRAMING OPPORTUNITIES & CHALLENGES

The Caspian is part of a wide range of international cooperation and security structures. Caspian states are members of open and multilateral as well as more exclusive, multipolar frameworks on economic cooperation, energy and security. These agreements and platforms are used to pursue aligned and competing interests and have varied over time in importance, effectiveness and membership<sup>127</sup>. Russia, Iran, China and Turkey are the pivotal stakeholders in the wider Caspian region. After a rapid advance in the nineties, multilateral cooperation slowed down with the turn of the new millennium due to the rising complexity of moving beyond past achievements and to the multipolar trends left in the wake of the geopolitical turmoil of 9/11 that coincided with the ‘rise of the rest’<sup>128</sup> on international energy markets<sup>129</sup>.

Meanwhile, with the entry into force of the Lisbon Treaty, the launch of the Eastern Partnership in 2009 and the establishment of a Eurasian Union by 2015, perceptions and realities of resource scarcity, global shifts and a more competitive integration in wider Europe are stimulating more regional governance approaches. This is leading to opposition and split signals between the norms of established foreign economic and security policy and energy market integration in wider Europe. Energy resources are no longer a vehicle for social-economic integration but have become policy goals themselves, as reflected in the security of supply considerations of import-dependent regions such as China and the EU and in the budget dependency of producers such as the Russian Federation and Caspian producers.

127 Established international cooperation frameworks that manage to translate a high degree of legitimacy with well-functioning institutions and mechanisms to deliver on objectives show expanding memberships or serve of models for new initiatives as is arguably the case for the Eurasian Economic Union (EEU), North Atlantic Free Trade Agreement (NAFTA), Association of South East Asian Nations (ASEAN) or Asian Pacific Cooperation APEC. These emulate the success of socio-economic integration effort of the European Union (EU) and or European Free Trade Area (EFTA) revealing how ‘soft power’ is projected internationally. In this sense the Eurasian Economic Union points out how the EU is in fact secretly admired (Shumylo Tapiola, 2012). Other initiatives such as the Commonwealth of Independent States (CIS) and Collective Security Treaty Organization (CSTO) and Energy Charter Treaty show changing memberships revealing changing circumstances and problems with legitimacy. See also Annex, Table 1. for an overview of Caspian and wider region membership in these frameworks

128 For a comprehensive discussion of global governance trends from an EU perspective, see the discourse given by Professor Dr. Jan Rood for the acceptance of his chairmanship at Leiden University on the 16th of September 2013, entitled ‘De Europese Unie in de wereld van morgen’.

129 China became a net importer of oil in 1993. In 2013 China will import about 6.2 to 6.4 mb/d, mostly from the Middle East, surpassing the US as the largest oil importer. Yet the share of oil in the country’s energy mix has dropped from 22% to 18% of total energy consumption as a function of a strong GDP-driven demand response for cheap coal. Government policy meanwhile boosts gas utilisation, which has risen from 2 to 4 % in total energy consumption between 2000 and 2009 in which domestic production and imports from Central Asia are key. See IEA (2012) Oil & Gas Emergency response of IEA countries - People’s Republic of China, and *China’s Crude Oil Imports Increase to Record as Economy Expands*. Bloomberg News, October 13, 2013.

The Arab Spring and the rapid deployment of new energy technologies bringing about the US ‘shale revolution’ bring home the significance of comprehensive policies for energy security and social-economic values for consumer, producer and transit countries alike. The rapid deployment of this technological breakthrough demonstrates how above ground conditions are essential socio-economic prerequisites for human resourcefulness to be able to thrive. The social-economic room for taking entrepreneurial initiative and the ‘right to fail’ advance innovation and technology. This in turn improves competitiveness, growth and resource efficiency, which as a rule together alleviate most scarcities. The Arab Spring, on the other hand, demonstrates that a ‘hands-off’ economic diplomacy focused on upstream investment and security of supply concerns alone, and in which good governance is assured through energy export revenues, does not automatically improve the integrity of the social-economic environment to advance and diversify economies. This one-dimensional approach rather narrows opportunities, endangering progressive social economic development to the detriment of reliable trade and investment flows in energy and other resources. In short, a strict focus on energy security as a foreign policy objective has proven to be counterproductive from both consumer and producer perspectives. The impact of these trends on global energy markets, governance and international relations should in time enable a more constructive engagement by stakeholders to the benefit of more multi-dimensional integration within the global system, beyond energy and resources alone. For the Caspian this is taking place along the previously mentioned vectors.

The Caspian is at the geographic epicentre of a more dynamically evolving energy and security system in search of new reliable moorings. This brings about more varied viewpoints and policy initiatives on how to regulate Eurasian relations in the post-Cold War era, ranging from transient policy optics to other more persistent efforts that have gained traction in practice. The geopolitical tensions over perceptions of resource scarcity and uneasiness with new and existing co-dependencies have sharpened security issues and pushed the multilateral integration efforts of the nineties into retreat. As a consequence, this has inspired a narrow project-specific vision on energy security.

### **GAME OVER**

The start of the new millennium’s booming commodity prices and perceptions of resource scarcity have fanned resource nationalism, as a function both of geopolitical ambitions, rent-seeking behaviour and security concerns (Domjan and Stone, 2010). Instead of following through on economic transition through restructuring and seeking more regulatory convergence with OECD norms, aspiring Caspian producer

governments have leveraged their resource wealth over mature OECD economies increasingly preoccupied with their growing import dependency. With energy markets responding to the high energy price cycle by investing in new technologies and conventional sources from Brazil, East Africa to the Arctic and Eastern Mediterranean, the calculus for investing in the Caspian is altering, too. More diverse energy trade flows should ease much of the geopolitical tensions in the region that came into play in the tight energy market of the past decade.

Meanwhile, in order to remain competitive in the global energy market, Caspian states must enlarge and solidify their investment environment by strengthening cooperation and improve market conditions while enabling more inclusive growth throughout the wider region. WTO accessions and ECT modernisation aimed at balancing Euro-Atlantic and Asian Pacific relations remain essential, also in light of new regional initiatives gaining ground. Relations with Afghanistan and the Middle East will require more constructive cooperation and engagement to ensure a viable and secure integration of the Caspian into the global economy and governance system. Recent acquisitions of Asian Pacific NOCs in flagship Caspian projects show that cooperation in the Northern Caspian is growing. This blends Euro-Atlantic and Asian Pacific stakeholder interests in strategic projects and falsifies the geopolitical rivalries of the past.

### **COHESION IN MULTILATERAL FRAMEWORKS**

During the first decade of independence, Former Soviet Union states entered a phase of restructuring and economic transition towards the open economic market model shared by developed economies gathered in the Organization for Economic Cooperation and Development (OECD). International financial institutions such the European Bank for Reconstruction and Development (EBRD), established for this purpose in 1990, and the World Bank played a key role, in addition to the multilateral frameworks such as the 1994 Energy Charter Treaty (ECT) and World Trade Organization (WTO)<sup>130</sup>. Accession of Caspian states to the WTO represents a process of economic trade integration, rooted in the post-Second World War (1948) Havana Charter. This charter is part of a fundamental and well-established multilateral governance trend that gained worldwide momentum in the nineties, when the WTO was finally institutionalised in 1994 and the Energy Charter Treaty was signed.

<sup>130</sup> In the early nineties the world embarked on a fast track multilateral negotiating train. After the establishment of the WTO and signature of the Energy Charter Treaty in 1994, policy momentum was already lost, despite strenuous on-going efforts that only led to the suspension of the OECD initiated Multilateral Agreement on Investment (MAI) in 1998 and prolonged negotiations on an Energy Charter Transit Protocol, which stretched over more than a decade and which were finally shelved in 2011. See ECS Transit Trade Group document TTG 87 - *Last informal version of the draft Transit Protocol as it emerged from consultations among the member states of the Energy Charter Treaty*.

In agreeing to a common denominator of terms and conditions utilised in bilateral investment and trade agreements, and by making these available on a non-discriminatory basis multilaterally, rolling back further trade and investment barriers in future, the ECT and WTO provided important long-term direction to policy makers in the first years of independence, along with much needed reassurances to foreign investors. Recent accessions by Russia in 2012 and Tajikistan in 2013 show that although WTO rules do not cover the energy sector explicitly like the Energy Charter does, multilateral trade rules are still extending their scope and remain particularly important in the Caspian region to balance and maintain a level playing field between Eastern Partnership, Eurasian Union and Shanghai Cooperation Organization and other governance perspectives in what China has dubbed 'open regionalism'<sup>131</sup>.

### **EUROPEAN UNION**

EU relations with the Caspian region have matured beyond the early technical assistance provided through the 'Traceca'<sup>132</sup> and 'Inogate'<sup>133</sup> programmes, which have become more self-sufficient, and through the partnership and cooperation agreements launched in the nineties that have enabled a more comprehensive open-ended engagement. The Central Asia Strategy was agreed by the European Council in 2007 under the stewardship of Ambassador Pierre Morel, who had been appointed Special Representative for the region in 2006. With the appointment of Ambassador Patricia Flor as his successor, the approach was found to be effective at its fifth year anniversary in 2012. Complemented with new orientations on good governance, human rights and security issues and integrating the region in the WTO, the strategy also brought energy and water relations in the region into sharper focus, including through a negotiating mandate on a Trans-Caspian pipeline that the

131 World Bank & Development Research Center of the State Council of the PR of China (2013) *China 2030: Building a Modern, Harmonious, and Creative Society*, March, p. xxiii.

132 The Transport Corridor Europe Caucasus Asia (Traceca) programme was established upon signature of a Basic Multilateral Agreement on International Transport for Development of the Europe-the Caucasus-Asia Corridor in 1993 between partner countries and EU member states in 1993. Traceca was funded under the EU Technical Assistance Programme for the CIS (TACIS) programme until 2006 and thereafter by EU and partner countries. Iran signed on to the Traceca project in 2009 but does not participate due to outstanding EU and US sanctions. Partner countries include Armenia, Azerbaijan, Bulgaria, Georgia, Iran, Kazakhstan, Kyrgyzstan, Moldova, Romania, Tajikistan, Turkey, Ukraine and Uzbekistan. See also: <http://www.traceca-org.org/en/home/>

133 The Interstate oil and gas to Europe (INOGATE) programme was established as a regional programme under the EU Technical Assistance Programme for the CIS (TACIS) in 1996 upon signature of the Inogate umbrella agreement between partner countries and the EU. Since 2006 it has been funded by the EU Neighbourhood and Partnership Instrument and development cooperation instrument of Europe Aid. INOGATE Partner countries are all EU Eastern Partnership Countries and Central Asian republics excluding Mongolia and Afghanistan. The programme provides technical assistance for oil and gas network rehabilitation and investment projects including but not limited to Trans-Caspian infrastructure projects. In cooperation with the EIB and EBRD and at times the World Bank, it has leveraged considerable public and private EU investment, predominantly in cross-border Caspian energy sector projects. See also:

European Council issued in 2009 (Boonstra, 2012; Boaz, 2012; Melvin, 2012). The Eastern Partnership was adopted under the Czech EU Presidency in 2009. It allows for more diversified and conditioned engagement based on the ‘more for more’ principle and mutual interest between the EU and the Southern Caucasian states of Georgia, Armenia and Azerbaijan, along with Belarus, Ukraine and Moldova in Eastern Europe. While the Eastern Partnership remains a framework that does not offer a window for enlargement, it does offer the conclusion of EU association agreements. The Eastern Partnership summit held under the Lithuanian EU Presidency meeting on 28-29 November 2013, however, failed to conclude such an accord with Ukraine sparking of mass protests in Kiev, while Georgia and Moldova only initialled association agreements with the EU<sup>134</sup>.

In light of the Arab Spring and the need to reconfigure the EU’s foreign policy posture as a value community rather than a block of energy import-dependent consumers alone, the EU adopted a Strategic Framework on Human Rights and Democracy and an action plan for it in 2012. This promotes the universality of human rights and enables a more comprehensive inclusion of values and norms throughout EU policy, including energy security relations with Caspian states<sup>135</sup>. The EU had distanced itself from the multilateralism pursued in the nineties under the ECT by moving forward more independently with internal energy market liberalisation and establishing the Energy Community Treaty as a regional pre-accession tool for energy markets in South-eastern Europe in 2005. Today the Energy Community transposes EU energy legislation to countries of the Eastern Partnership as part of the EU’s engagement with the region under the Eastern Partnership . Ukraine and Moldova have become contracting parties, while Georgia<sup>136</sup> is to date still a candidate country, Turkey and Armenia are observers, and Azerbaijan and Belarus, although ECT members, have chosen to remain outside the Energy Community<sup>137</sup>.

## RUSSIA

Russia’s withdrawal from the Energy Charter Treaty in 2009 formalised Russia’s sovereign exemption to the previously agreed principles and rules that strive towards

134 Joint Declaration of the Eastern Partnership Summit, Eastern Partnership: the way ahead, President of the Republic of Lithuania, Press Releases, 29 November 2013

135 CEU EU Adopts Strategic Framework on Human Rights and Democracy, 25 June 2012.

136 The Minister of Foreign Affairs of Georgia Maia Panjikidze applied for membership to the Energy Community on the 29th of January 2013.

137 See also Annex, Table 1: Caspian membership to key international energy-, economic governance- and security frameworks; and the Annual Implementation Report 2013 of the Energy Community that unsurprisingly takes note of a widening implementation gap.

open, non-discriminatory energy market integration and that mobilise and safeguard investment across the wider European continent, in favour of more transactional energy market relations among big players only. Proposals on international cooperation in economic, energy and security affairs<sup>138</sup>, including visions on a free trade area and a harmonised community of economies stretching across the Eurasian continent from Lisbon to Vladivostok<sup>139</sup>, launched under the Medvedev Presidency, couched this shift towards more reciprocal energy sector relations and sought to allow Russia to gain rule-setting initiative with constructive governance visions as engagement tools. OECD countries, however, have been reluctant to pick up on these. Under the new Presidency of Vladimir Putin, Russia appears to have retrenched itself in a more assertive negotiating stance, notwithstanding more than a decade-long EU-Russia dialogue that endures<sup>140</sup> and the reset pursued by the US government after 2008 by which it may have made its Caspian engagement into sub-set of its foreign policy towards Russia and Iran.

## EURASIAN INTEGRATION

Regional cooperation initiatives by Caspian states themselves have thus far had only limited success. The idea of a Eurasian Economic Community, promoted by President Nursultan Nazarbayev of Kazakhstan in 1994, forms an important exception. Implementation has gained considerable momentum over the past years since the establishment of the Eurasian Economic Community<sup>141</sup> (EurasEC) in 2000 (Kasenova 2012). This shows how the perspective on the integration of newly independent states in a global multilateral system that opened in the nineties is now superseded by more regional governance trends. Despite suspicions of a revival of Moscow-centred, Soviet-inspired governance structures, the notion of a Eurasian Economic

138 Russia's Minister of Foreign Affairs Sergei Lavrov proposed that the UN General Assembly elaborate a Convention on International Energy Security covering all aspects of global energy cooperation and taking account of the balance of interests of all actors in the international markets. 'Russia Calls for Energy Security Convention'. UN News and Media, 27 September 2011. The draft convention that Russia put forward in April 2009 is now considered in the context of the modernisation of the Energy Charter process. See also 'Konceptual'nyj podchod k novoj pravovoj baze mezhdunarodnovo sotrudnichestva v sfere energetiki (celi i principy)' President of Russia, Official Web Portal, 21 April 2009. Another proposal on the international security architecture in Europe was launched in the wake of the 2008 Georgian War. For an assessment see Makarychev, Andrey 2009.

139 Putin, Vladimir, (2011) *A New Integration Project for Eurasia: The future in the making* (article by then prime minister Vladimir Putin), Inzvestia, October 4

140 See the EU Russia energy roadmap to 2050 of March 2013.

141 The Common Eurasian Economic Community (EurasEC) was established through the Treaty on the establishment of EurasEC that Belarus, Russia, Kazakhstan, Kyrgyzstan and Tajikistan signed on the 10th of October 2000 and which entered into effect on the 30th of May 2001. Its purpose is to effectively further the process undertaken by the Parties to form a Customs Union and Common Economic Space, as well as for the realisation of other goals and objectives related to enhanced integration in the economic and humanitarian fields. EurasEC obtained observer status at the UN General Assembly. See (2011) *EurasEC Today* Eurasian Economic Community Integration Committee Secretariat. Uzbekistan joined in 2005 but withdrew in 2008.

Community is not an international precedent but well established practice. In the Asian Pacific similar initiatives have been pursued today and equally invoke counter proposals among regional powers<sup>142</sup>.

President Vladimir Putin of Russia co-opted the idea by signing a new treaty with Belarus and Kazakhstan on a Eurasian Customs Union in 2007. This led to a common import tariff as of the 1<sup>st</sup> of January 2010 and a Common Economic Space entering into effect on the 1<sup>st</sup> of January 2012. The latter was adopted with a view to speedily move towards a full-fledged Eurasian Economic Union after 2015 that other adjacent states would be able to join in due course (EBRD, 2012). The Eurasian Customs Union strengthens the Common Economic Space that EurasEC also envisioned and had agreed with Ukraine, Kazakhstan and Belarus in 2003. Ukraine, however, abandoned further Eurasian integration after the 2004 Orange Revolution under the Presidency of Victor Yushchenko in favour of EU membership and the closer EU association. Ukraine has now deferred further EU association under President Victor Yanukovich to avoid economic sanctions and received discounted gas prices and \$ 20 billion loans from Moscow in return illustrating how integration in wider Europe has become a zero sum game<sup>143</sup>.

The vision of a Eurasian Union includes the establishment of supranational structures such as the Eurasian Economic Commission, which already served as the executive body of the EurasEC and the previously adopted Common Economic Space. Other supranational bodies include an Inter-State Council, comprising both heads of state and heads of government as the supreme body of authority, a Community Court and an Inter-Parliamentary Assembly. The latter could be the precursor to a Eurasian Parliament that pools sovereignty of newly independent states according to the present distribution of seats<sup>144</sup>. The institutional framework implies that Russia's vision on Eurasian integration, while economic in orientation, is geared towards the pursuit of a political union in its ultimate incarnation. Younger echelons of the ruling elite and populations in the newly independent states that have embraced the attributes of their new nations are likely to oppose this, even according to Russian expert opinion (RIAC – Institute of Oriental Studies RAS (2013). The Communiqué of the G8 UK presidency meeting of 2013, however, endorsed Russian integration initiatives in the region and other regional initiatives such as between the EU and the US and the US and Asian Pacific countries, referred to further below. At the same

142 These include the ASEAN Economic Community, the APEC Trans-Pacific Partnership launched by the US with the region, and a wider Regional Comprehensive Economic Partnership recently proposed by China.

143 See Marson, James *Russia Bails Out Ukraine in Rebuke to US and Europe*, Wall Street Journal, 17 December 2013

144 The seats available in the Inter-Parliamentary Assembly of EurasEC for parliamentarians from each member state are divided as follows: Belarus – 16; Kazakhstan – 16; Kyrgyzstan – 8; Russian Federation – 42.

time it underlined the commitment of G8 countries to strengthen the multilateral trading system of WTO that indeed finally secured a trade facilitation deal as part of the Doha 2001 agenda in December 2013<sup>145</sup>. No doubt the theme of competing regional integration efforts and multilateral policy cohesion will be revisited at the upcoming G8 meeting at Sochi under the Presidency of Russia in 2014.

### **SHANGHAI COOPERATION ORGANIZATION**

The Shanghai Cooperation Organization (SCO) was established in 2001 after Uzbekistan joined the so-called Shanghai Five cooperation formed by China, Russia, Kazakhstan, Kyrgyzstan and Tajikistan in 1996 (Gao, 2010). The SCO fosters cooperation between its members that over time evolved from addressing security issues in the region – referred to as the three evils of separatism, terrorism and extremism – towards a more positively worded engagement among its members to strive towards enduring peace, friendship, prosperity and harmony<sup>146</sup>. The Bishkek summit held under the Kyrgyz Presidency focused on stability in Afghanistan and economic cooperation<sup>147</sup>. Today the SCO counts India, Iran, Mongolia Pakistan and Afghanistan as observer countries and Belarus, Turkey and Sri Lanka as dialogue partners. The SCO shift from a multilateral security framework towards more economic cooperation has included energy cooperation as an item as well. At the SCO summit which took place in Bishkek in 2007, SCO member states agreed to create a ‘unified energy market’, bringing energy resources from energy-producing member countries to consuming countries in order to promote their development, highlighting the security of supply interests of China. Recent energy agreements concluded by President Xi Jinping during his recent tour through Central Asia underscore the rising influence of China in the region. Of particular interest is that the new gas pipeline China agreed to construct from Turkmenistan through Uzbekistan and Kazakhstan will also supply Kyrgyz and Tajik gas demand, thus easing tensions over tight co-dependency in energy, water and agriculture. The SCO has a legitimate role to play in coordinating security and economic issues among its member countries, which have few other effective regional instruments available. A more engaging stance would enable the SCO to become a useful counterpart to Euro-Atlantic stakeholders and enable it to play a constructive role in future. While the SCO may be considered a Chinese framework to engage with Russia and Central

145 See the Preamble of the Communiqué from the 2013 G8 meeting at Lough Erne under the UK Presidency that ‘welcomes the trade and economic integration of Russia with some countries in the region which will be pursued in line with WTO principles’.

146 According to the concluding paragraphs from the Communiqué of the SCO summit meeting in Bishkek on the 13th of September 2013. See SCO (2013) *Bishkekskaya Declaratsia Glav Gosudarstv-Chlenov Shankhajskoj Organizatsii Sotrudnichestva SCOSummit2013.org*

147 *SCO Summit Focuses on Afghanistan, Economic Cooperation*. Radio Free Europe, Radio Liberty, September 13, 2013.

Asia on shared interests, distinct from those pursued by the EurasEC and the Eurasian Customs Union, Prime Minister Recep Tayyip Erdogan of Turkey referred to the SCO as an alternative available to Turkey for its encumbered integration with the EU<sup>148</sup>. Turkey applied for membership to the then European Economic Community in 1987 and was declared eligible in 1997. Formal accession talks opened in 2005 but stalled over Turkey failing to apply the additional protocol to the 1963 Ankara Association Agreement to Cyprus<sup>149</sup>. This casts a shadow over the EU's ambitions under the Eastern Partnership of seeking closer integration with the region, that remains entangled in unresolved conflicts too.

### THE OECD AND TRANS-OCEAN GROWTH MODELS

Reflecting the post-Second World War vision on cooperation reconstruction and development, the Organization for Economic Cooperation and Development (OECD) promotes the highest possible sustainable economic growth, employment and living standards, while maintaining financial stability and contributing to the development of the world economy. OECD countries committed themselves to contributing to sound economic expansion, not only in member countries but also non-member countries in the process of economic development. They also committed to contributing to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations<sup>150</sup> from which the WTO and ECT disciplines stemmed. By 2011, in order to push faltering economic growth forward and deepen multilateral integration, the United States and the European Union announced plans to initiate negotiations on a Trans-Atlantic Trade and Investment Partnership to address a wide range of trade and investment policies as well as global issues of common interest, to the benefit of both sides of the Atlantic<sup>151</sup>. Turkey, as both a NATO and OECD member, was invited to join. A similar initiative was launched within the context of the Asian Pacific Economic Cooperation for a Trans-Pacific Partnership to enhance trade, investment, innovation, economic growth and development, and the creation and retention of jobs among partner countries<sup>152</sup>. This year at the Asian Pacific Cooperation Summit, which took place during the US government shutdown, President Barack Obama left the stage to President Xi

148 Erdogan: Turkey Considers Shanghai Organization an Alternative to EU. Today's Zaman, Januray 25, 2013.

149 For detailed information on Turkey see European Commission Directorate General for Enlargement Countries.

150 OECD Convention on the Organization for Economic Co-operation and Development, Paris, 14 December 1960, Article 1.

151 See the Final Report of the High-Level Working Group on Jobs and Growth established by President Obama and EU leaders at the November 2011 Summit Meeting of February 11, 2013 and the letter of the President of the United States Trade Representative Ambassador Demetrios Marantis (acting) addressed to the Speaker of the United States House of Representatives Hon. John Boehner of 20 March 2013.

152 TPP Countries include Australia, Brunei Darussalam, Chile, Malaysia, New Zealand, Peru, Singapore, Vietnam and the United States. See The Unites States in the Trans-Pacific Partnership at the Office of the President of the United States Trade Representative.

Jingping of China to launch a Regional Comprehensive Economic Partnership that will embrace more countries than APEC alone<sup>153</sup>.

### The OSCE

Finally, the Organization for Security and Cooperation in Europe (OSCE) was established in the détente of the seventies with the signature of the Helsinki Act on the 1<sup>st</sup> of August 1975 to manage Cold War relations in accordance with the Helsinki process<sup>154</sup>. Today the OSCE comprises a very broad membership of 57 highly diverse European, Central Asian and North American member states. With the Charter of Paris for a New Europe signed in November 1990 and the Budapest Summit of December 1994, the OSCE became the institution to manage the transformation of post-Cold War relations towards a ‘New Europe’ and respond to future challenges. As the world’s largest security organisation, the OSCE is unique in that it takes a comprehensive approach with respect to security, social-economic, environmental and normative relations among its constituency. The OSCE’s Cold War history means that an emphasis on dialogue prevails and that decisions can be taken only by consensus. Dialogue, considered a value in itself, means that the diplomatic process prevails in resolving conflicts in practice. Notwithstanding the organisations’ strong presence and past achievements in the Caspian region, this means that OSCE engagement risks becoming detached from the realities it seeks to address. The OSCE-Minsk process to overcome outstanding positions on the resolution of the Nagorno-Karabach conflict could well be overtaken by other organisations and policy dynamics in future.

Kazakhstan, which successfully held the chairmanship of the organisation in 2010 as the first newly independent state of the Caspian region, does not appear to have taken full ownership and has placed the OSCE at a distance again. Under the chairmanship of Ukraine in 2013, the OSCE is engaging more strongly with the Caspian region, mindful of growing disparities in governance and social-economic disparities and of transnational threats<sup>155</sup>. The clear interconnection between energy security and the integration of the Caspian region in the wider global system has prompted the OSCE to take a stronger profile on energy and security relations among its members, particularly by clarifying and enabling the implementation of

153 *China More Visible as U.S. Stays Home*. New York Times, October 5, 2013.

154 This includes member state engagements on security, economic, environmental and human rights and 10 fundamental principles known as the ‘Decalogue’ that should govern the behaviour of States towards their citizens, as well as towards each other. See OSCE.org

155 *OSCE Chair, On Visit to Central Asia, Discussed OSCE Engagement and Transnational Threats*. OSCE Press release, 18 October 2013.

existing arrangements and hosting high-level conferences on energy security and sustainability in the region<sup>156</sup>.

### **LAWS OF ATTRACTION**

Notwithstanding the all but global WTO compliance and the embrace of EU integration model in the Eurasian context including through the vision of a Eurasian Union, the effect of these initiative is that the so-called ‘common neighbourhood’ – including Belarus, Moldova, Ukraine, the Southern Caucasus and Central Asia, which Russia shares with the Euro Atlantic, Asia Pacific and the Middle East – risks becoming subject to mutually exclusive laws of attraction. Here the Eurasian integration effort may supplant rather than complement the values, rules and standards implied by an economic transition to OECD or WTO standards or a closer EU association. These range from EU energy market law being advanced by the Energy Community Treaty rather than being agreed multilaterally in the context of a modernized Energy Charter, to the protection of the social-economic and individual human rights upheld by the United Nations or Council of Europe in both open and autocratic societies.

The above governance trends combined reflect, on the one hand, a resurgence of new multipolar governance dynamics reminiscent of Cold War comfort zones, while on the other hand they might point to a more efficient distribution of regional governance efforts among comparable economies that are in different stages of development. While existing multilateral frameworks may still expand their geographic scope, they are unlikely to deepen their application in the current dynamic and highly volatile global context. Since the geopolitical landslide that ended the Cold War, the application of social-economic and human rights norms between the Asian Pacific and Euro-Atlantic regions has become more universal but also more varied in different contexts. Mutually exclusive policy perspectives on how these can best be applied in any given environment have become levers for advancing economic interests and the projection of state power rather than challenges to these norms and disciplines themselves.

While relations between Russia and the EU have unduly polarised and negatively affect integration of Caspian economies, the social contract concluded by the ruling classes and business elites with the Caspian societies in the nineties is subject to change. Although Caspian governance has not detached from societies as certain

156 *Turkmen President Urges OSCE to Intensify Talks to Fulfil Plans of Turkmen Gas Supplies to Europe*. Itar Tass, October 18, 2013.

North African and Middle Eastern states have over a much longer period of resource-driven growth, social inclusion shows increasing disparities across the region, while Caspian governments must implement other economic and governance norms more deeply in order to modernise and move forward reliably in future.

Caspian countries now described as being ‘mid transition’ (EBRD, 2012) did not enjoy the benefit from the institutional reform, investment and trade integration that the EU enlargement process brought about in Central and Eastern Europe. Economic growth remains locked in a one-dimensional development path of energy and resources exports<sup>157</sup>. The Eastern Partnership that today *de facto* provides for wider EU market convergence through association agreements, including deep and comprehensive trade agreements to advance the European growth model (Gill, Indermit S. *et alia*, 2012), does not apply to Central Asia. Notwithstanding the EU Eastern Partnership and Central Asia Strategy, EU governance institutions are unlikely to be sufficiently mandated or equipped, let alone entrusted by current Caspian leadership. The role of the EU and OECD countries, particularly in Central Asia, appears to be more limited and may only assist in this process by ensuring that integration efforts are complementary and remain mutually re-enforcing.

### **WIDER EUROPE IN BALANCE**

Regional economic development and integration continues to spiral around increasingly diverging multipolar governance trends in foreign policy and security agendas. This derails comprehensive Caspian development and integration along the five vectors highlighted earlier. To deepen the application of the wider multilateral disciplines entered into, greater inclusion of the Caspian in more informal policy platforms, from the G20 meetings to the International Energy Forum or in support of G20 and UN Millennium Development or Sustainability Goals<sup>158</sup>, may enhance regional cohesion among Caspian states more than the EU’s Eastern Partnership and Central Asia Strategy or Eurasian Union and Shanghai Cooperation Organization might do.

157 The Extractive Industries Transparency Initiative (EITI) reports that Azerbaijan saw revenue decline by as much as 11% in 2012. EITI (2013) Azerbaijan’s Oil and Gas Revenue Decline. 13 August 2013.

158 The United Nations Millennium Development Goals agreed at the UN Millennium Summit in 2000 set a framework for collective action to achieve 8 objectives by 2015, namely to eradicate poverty, provide universal primary education, achieve gender equality and the empowerment of women, reduce child mortality, improve maternal health, combat infectious diseases, ensure environmental sustainability and develop a global partnership for development. While some of these goals are pertinent to the Caspian region in particular in respect to environment, water management, biodiversity and position of land-locked nations, equitable access to energy and energy security or reducing energy poverty is not included specifically but remains a condition for achieving any of these. This in turn points back to the global importance of Caspian energy and other natural resources. See also UN.org.

In this context the OECD, WTO and ECT provide for elementary governance standards and a comprehensive trade, transit and investment regime, including investor-state dispute settlement mechanisms. To maintain the stability and collective policy cohesion that socio-economic development in wider Europe depends on, modernisation and maintaining visible political support for these frameworks is key. The much wider scope of WTO rules do not apply to the oil and gas sectors of producers such as Russia or Iran and enjoy only limited application in the Caspian. The ECT's wide-ranging membership and application of WTO rules by reference over and above its other provisions, however, do set a unique standard for energy market governance for the wider region under the aegis of the Energy Charter Conference. The EU and ECU, as well as Trans-Atlantic or Pacific governance initiatives with the US, should seek to accommodate and complement their effect to the benefit of trade and investment relations with other regional governance zones. They should avoid setting new barriers, as this would harm modernisation and the integration of Caspian societies into the global market and governance system. From a Caspian perspective, non-exclusive engagement with governments and business communities in each of these frameworks is key.

Despite Russia's tactical decision to withdraw its signature from the 2009 Treaty<sup>159</sup> referred to earlier, the significance of the multilateral energy governance that the Energy Charter Conference provides and the rule set the Treaty offers for investment promotion in Caspian energy resources and integration with global energy markets is well entrenched in legal practice. The importance of multilateral governance for energy markets has been underscored by subsequent initiatives by Russia for a global convention on energy security. However, this has failed to gain traction with partners and now forms part of ongoing efforts to align the Energy Charter process with new realities and challenges that is likely to pick up further momentum in 2014.

The enduring importance of the Energy Charter framework itself became apparent when Afghanistan ratified the Energy Charter Treaty early this year making it the ECT's 54<sup>th</sup> contracting party<sup>160</sup>. The move is not only important for the development of energy resources and the transit corridor Afghanistan can provide, allowing Caspian energy to reach South Asian Markets and contribute to wider energy security, particularly that of India and Pakistan (Bochkarev, 2012). Above all, the decision marks the further entry of Afghanistan into the multilateral energy

<sup>159</sup> Russia withdrew its signature from the Treaty in 2009, ceasing provisional application on the 18th of October. See for a discussion Van Agt, Christof (2009) *Tabula Russia Escape from the Energy Charter Treaty*. Clingendael International Energy Programme Briefing paper, October.

<sup>160</sup> *Afghanistan About to Become the 54th Member of the Energy Charter Conference*. Energy Charter Secretariat News, 19 February 2013.

governance system of the wider Caspian region, much like the Charter initiative brought the former Soviet space closer to the generally accepted governance practice of OECD countries. The move serves to strengthen policy cohesion and energy security with Southeast Asian and international energy markets, in which the recent Caspian acquisitions of the Indian NOC ONGC Videsh figure prominently.

Kazakhstan recently nominated a vice-chairman to the Energy Charter Conference to strengthen the profile of the Charter in Central Asia and help facilitate the modernisation of the process, including through the negotiation of a new modernised version of the 1991 Energy Charter<sup>161</sup>. The move is of interest in light of Kazakhstan's membership in the Eurasian Customs Union, which aims to forge a Eurasian Union by 2015 and promote the transit of oil and gas through pipelines across the vast territory that Kazakhstan shares with Russia and Belarus. The latter are two jurisdictions where the Energy Charter Treaty does not apply, but they provide a strategic land bridge between Euro-Atlantic and Asian Pacific energy markets. The Eurasian Customs Union may augment the goals and objectives of wider multilateral frameworks such as the WTO and Energy Charter. After Afghanistan's accession, other Asian Pacific states, foremost China, India and Pakistan, may sharpen their focus on the Charter as well.

### **DOES IT BLEND?**

Much has been achieved in advancing economic growth and socio-economic integration through initial upstream oil and infrastructure investments in the Caspian. Making interconnections for the vast gas resources of the Caspian has proven much more difficult in the Euro-Atlantic dimension. The energy landscape there appears more diverse and better supplied, with unconventional and conventional resources coming available. While it is still much too early to discuss the effects of the shale revolution, changing trade and investment patterns will affect the Caspian region strongly. Recent departures of oil and gas companies from key ventures testify to this<sup>162</sup>. Lowered economic growth forecasts due to waning income from energy exports and remittances for the Caspian region, including Russia, show that change is afoot<sup>163</sup>. This could, on the one hand, blunt the impact

161 *Mr. Jambulat Sarsenov of Kazakhstan Appointed New Vice-Chairman of the Energy Charter Conference*. Energy Charter Secretariat News, 27 March 2013.

162 See Table 2: Shareholdings in key oil & gas upstream and pipeline projects of Kazakhstan and Azerbaijan (IOCs & NOCs).

163 Economic growth in the transition region is set to decelerate due to a significant slowdown in Russia and downturns in Poland and Turkey which will affect the Caspian, too. Russia's slowdown is due to stagnating commodity prices and export revenues. Only Turkmenistan and Mongolia continue to ride the natural resource-induced boom on the back of Asian Pacific demand growth. See Regional Economic Prospects in EBRD Countries of Operations: May 2013, from the EBRD Office of the Chief Economist.

of resource nationalism by producers or project-specific approaches and usher in a return to more systemic reforms being advanced in the energy sector. This would allow for more diverse and equitable participation by foreign investors – NOCs as well as IOCs and avoid sacrificing wider Caspian integration goals to the narrow focus of securing access to resources through project specific measures or fortifying governance and market structures with protectionist measures.

# CONCLUSIONS AND FUTURE PERSPECTIVES

Euro-Atlantic governments are likely to return to a more classic foreign economic and security policy stance towards the region. The European External Action Service should ensure that EU policy towards Caspian states and society reclaims its long-term foreign policy principles geared towards multilateral open market integration and take confidence from achievements in Europe. ISAF withdrawal from Afghanistan, sanctions on Iran and a runaway conflict in Syria affect the region and should further cement Euro-Atlantic engagement to facilitate social economic modernisation in and integration of the Caspian in the global economy and governance system. Initiatives to unlock the gas resources of Turkmenistan to diversify EU gas supplies make for poor policy optics in the newly emerging energy and political environment, without observable progress being made in governance reform and cooperation with and among Caspian states themselves.

Fears over growing resource scarcity in a tightly supplied oil market have placed considerable emphasis on the Caspian since the nineties. After an initial progressive transition phase, the need to entrench past achievements in an increasingly complex geopolitical environment has played down calls for reform and modernisation. Today new energy market dynamics are applying different pressures that are easing geopolitical tensions on oil and gas market development in the region and advance various forms of cooperation between NOC and IOC stakeholders. More diverse investment options and downward pressure on energy revenue will further impose more discipline on host governments to diversify and modernise their economies. This should facilitate the wider global economic integration of the Caspian on a geopolitically less cumbersome and more multidimensional course that moves beyond energy security interest alone while strengthening governance and institutional integrity in favour of a more resilient Caspian societies.

Though the Caspian is less of the geopolitical energy chess board than certain stakeholders and observers make it out to be, serious concerns exist about stability and security and over the application of rule of law and universal values in what remains a challenging governance environment. There is a risk that the region will remain a function of the more multipolar outlook of stakeholders in the wider region. This would lead to further marginalisation and stunt social economic growth, bringing about greater disparities and fragility to the detriment of all.

## FUTURE PERSPECTIVES

- 1 Broader engagement across a wider spectrum:** Mature Euro-Atlantic economies are weathering an economic crisis, while the global energy economy is trending towards new turning points. Perceptions of resource scarcity and rigid producer-consumer relations helped to push Caspian resources to the market in the past. As a new energy environment emerges, with more varied options and diverse relationships, energy- and foreign policy must adapt in order to better accommodate and align these new variables and to seize the opportunities and manage the risks that new resources and technologies present in a changed political context. The focus is shifting from supply security to governance, legitimacy and accountability, including conflict resolution and delivering collectively on shared longer-term policy goals. This changes the pressures on the Caspian. Pursuit of more consistent ‘soft power’ foreign policy and security goals to stimulate economic diversification, regional cooperation and growth will limit the exposure of Caspian economies to Dutch disease or the resource curse phenomena that rent-seeking behaviour invokes<sup>164</sup>. For the Southern Caucasus to be able to move forward in the Euro-Atlantic perspective based on the energy linkages already agreed, conflicts must be resolved and regional cooperation broadened with confidence-building measures. For Central Asia and Mongolia, this will increasingly depend on Asian Pacific growth perspectives, and managing resource dependency will be less straightforward. This is where Euro-Atlantic models can offer significant added value to socio-economic development and regional cooperation. The EU should therefore strengthen its international engagement with Caspian states and societies through more coherent policies and move beyond pipelines and energy security, broadening cooperation across a wider spectrum including with Central Asian stakeholders.
- 2 Multilateral engagement with international partners on trade, investment and good governance:** The Caspian region benefits from open land-bound trade and investment opportunities between the Asian Pacific and Euro-Atlantic regions. In the ebbs and flows of world economic integration it has strengthened relations with the international trade and governance system by acceding to multilateral institutions and policy frameworks based on open rule-based market integration as well as universal values and norms. Regional cooperation among Caspian states, however, remains weak and cumbersome due to legacies and differences in available factors – from resources to access to

<sup>164</sup> Van der Linde, Coby (2013) *FAQ Dutch Disease*. Clingendael International Energy Programme, May.

markets, technology and education – that drive development. WTO membership is key to the region's secure integration into the world economic system. Russia's and Tajikistan's recent accessions also bring this goal within closer reach. The advances in industry standards brought about by the Eurasian Customs Union (ECU) could help to reinforce this process by diminishing trade barriers and stimulating modernisation but may also blunt competition through increasing non-tariff barriers to protect vested industrial interests. With a more confident and cohesive framework for engagement with the region, Euro Atlantic and Asia Pacific stakeholders could strengthen their engagement with the Caspian and move beyond the diverse 'zero sum' strategies towards a more intentional long-term vision on engagement with the region. This should build on both regional and international initiatives which, beyond natural resource issues, aim to realise the social-economic potential of the region and further embed growth within rule-based market integration and the universal values and norms. Open multilateral frameworks such as the Energy Charter and WTO remain of fundamental importance to the landlocked Caspian.

- 3 Caspian society in sharper focus:** Strategic oil and gas sector investments, sanctioned in the nineties, serve both host government revenue flows and foreign security of supply concerns. Improving social mobility in Caspian societies through a rule of law enforced by an independent justice- and strengthened governance and education system is fundamental to stable economic integration. With energy security and budget concerns served, the social contract focus can shift from sovereign state-building objectives towards serving wider social-economic goals. Caspian societies can become more cohesive through the robust and proper functioning of both government and civil organisations that accommodate demographic dynamics with matching development and growth opportunities. Investment in institutional capacity, education, training and exchange programmes in addition to cross-border interconnections will assist small and medium-sized enterprises in unlocking new economic opportunities in non-energy sectors ranging from agriculture to technology and innovation. This will boost regional trade and investment opportunities and will better fulfil local content requirements in major foreign investments in Caspian resources and growing markets. Increased mobility and interconnectedness will further improve the international visibility of the Caspian and broaden the basis for international engagement with the region. Euro-Atlantic stakeholders have strong capabilities to support these developments, for which essential elements are the strengthening of institutional capacity, infrastructure- and network interconnections, education and human resource development that includes a visa regime enabling travel abroad.

# ANNEX 1 RESOURCES AND HERITAGE

According to best available estimates<sup>165</sup>, the four key Caspian oil and gas producing states (Kazakhstan, Azerbaijan, Turkmenistan and Uzbekistan<sup>166</sup>) hold the following natural and human resources:

## *Oil reserves*

Forty-eight billion barrels of proven oil reserves, equal to 3.5% of proven world oil reserves. With 39.8 billion barrels, Kazakhstan holds the lion's share of Caspian oil production potential and remains a key source for global production growth. Bordering China, it is responsible for major demand/import growth in the Asian Pacific. Azerbaijan takes a modest second place with 7 billion barrels. The oil reserves of Turkmenistan and Uzbekistan, each estimated at 0.6 billion barrels, are primarily of regional significance. On- and off-shore exploration efforts in relatively under-explored areas in the Caspian or in and around the Aral Sea basin may, together with field optimisation, lead to some readjustment.

## *Gas reserves*

Turkmenistan owns the largest share of Caspian gas reserves. Estimates for Turkmenistan have recently been adjusted upward to 20 trillion ( $10^{12}$ ) cubic metres, increasing the region's share of world gas reserves to 13-14%, up from 7.2% of proven world gas reserves. This makes Turkmenistan the fourth largest conventional gas resource holder after Iran, Russia and Qatar<sup>167</sup>. Azerbaijan, Kazakhstan and Uzbekistan hold approximately 1.4, 2.0 and 1.7 trillion cubic metres, respectively. The development of these landlocked resources defines the Caspian as a 'pipeline-constrained' new market entrant. Wider Caspian supplies from incumbent Russia dominate, while Iran, holding the world's largest conventional production potential, continues to loom over increasingly prolific gas finds and production potential which are coming on-stream in a gas market that is steadily globalising due to seaborne gas shipments.

165 World Energy Outlook 2010.

166 Notwithstanding exploration and production successes in the Russian and recently also Iranian sectors of the Caspian Sea, both countries are considered part of the wider Caspian region. Their main oil and gas resources are located outside of the Caspian basin and, as the former powers that governed the Caspian until independence of the Southern Caucasus and Central Asian states, the middle Caspian, their interests differ.

167 Eyl-Mazzega, Marc-Antoine (2012) The Caspian's Future Oil and Gas Export Potential IEA, 2 July, BP and Gaffney Cline & Associates assessments.

### ***Mineral resources and metals***

Other minerals and natural resources abound across the region. With 33% of world output, Kazakhstan is the world's largest uranium producer and holds various other important minerals, in addition to coal. Gold dominates the mining industry in Kyrgyzstan which, apart from small hydrocarbon deposits, holds other mineral reserves, including rare earths (USGS, 2010). Interest in the rare earth potential of Central Asia is also growing in Tajikistan. Security of supply concerns stemming from the export constraints China imposed on rare earths in 2010 will further stimulate the development of new and more diverse resources that the Caspian offers. Mongolia holds huge coal reserves that to date remain underdeveloped, along with other large mineral reserves including rare earths (Peyrouse, 2012).

### ***Water energy and agriculture nexus***

The Central Asian republics of Kyrgyzstan, Tajikistan and Afghanistan are situated upstream from the transnational Amu- and Syr-Darya waterways and use flows for hydroelectricity generation both for domestic use and exports. Downstream states Uzbekistan, Turkmenistan and, to a lesser extent, Kazakhstan rely on Russia as well for water cooperation and are codependent on flow rates for electricity supply and downstream agricultural irrigation to maintain e.g. cotton and cereal harvests and exports. After independence, rising gas export prices and cut-offs in gas supplies from Uzbekistan, upstream countries are seizing their hydroelectricity potential and are proposing to see downstream water use monetised as well. While Azerbaijan, Kazakhstan, Uzbekistan and Turkmenistan have used their oil and gas resources for economic recovery and state building, hydro-rich Kyrgyzstan and Tajikistan have realised this potential. Tajikistan seeks investment for the project of the 335 metre-high Rogun dam, which should generate 3.6 Gigawatts (GW) of hydroelectricity along the Vaksh, a tributary of the Amu Darya river, while Kyrgyzstan intends to invest in a new dam called the Kambarata that would generate 1.9 GW along the Naryn, a tributary of the Syr Darya river. Together, these projects would enable both countries to diversify electricity exports to Afghanistan and Pakistan through the World Bank-sponsored CASA 1000 (WB, 2012) project (Bochkarev, 2012). However, this would impact flow rates in Uzbekistan and Turkmenistan<sup>168</sup>. A comprehensive agreement among Central Asian republics on energy and water management (UN, 2010) is necessary.

<sup>168</sup> See Annex, Figure 6: Water management, environmental degradation and migration in Central Asia.

### *Natural habitat and environment*

The management of Amu Darya and Syr Darya river flows to the partially depleted Aral Sea, as well as of the ecological integrity of the Caspian Sea – habitat of species such as the beluga sturgeon – are central to environmental concerns. Environmental degradation around waterways and reservoirs affects agriculture and prospects for the socio-economic development of local communities. Environmental concerns have rapidly moved to the forefront of global agendas<sup>169</sup> over the past two decades, including in the Caspian, where co-dependencies between energy, water and agriculture are tightening. Emphasis has shifted from attracting investment and securing revenue to the safety of oil and gas industry operations and hazardous waste disposal. Against the backdrop of the Macondo oil well leak in the Gulf of Mexico, the increasing complexity of producing deeper Caspian fields pose new challenges and risks to environmental sustainability and host government relations with license holders. More stringent engineering and management requirements translate into cost increases and production delays, as observed in the slow development of the Kashagan field, and may have contributed to the reduction of output in the Azeri Chirag Giuneshli fields observed since 2012. Environmental concerns are also exploited for geopolitical motivations, as is the case with Trans-Caspian pipelines, which Russia and Iran oppose on environmental grounds that appear to apply differently when concerning Gazprom's flagship pipeline projects: the Blue-, and South Stream through the Black Sea, and Nord Stream through the Baltic Sea. Finally, environmental concerns can also camouflage rent-seeking behaviour by host governments aimed at extracting additional value from underdeveloped resources or building up a negotiating position in order to eventually obtain other allowances from the operating company. The region's economies rely on technologies with high energy-intensity, while in some countries such as Kazakhstan the share of coal in electricity generation will remain dominant, notwithstanding growing gas use. Strong GDP growth and recovery in the region is not sufficiently decoupled from either energy use or environmental integrity criteria. The region's emissions are marginal on a global scale. Still, while pollution levels dropped upon the collapse of the Soviet Union, they are likely to increase in industrial and urban centres as a function of aging industries and rapidly growing traffic-related emissions.

169 The United Nations General Assembly has declared 2013 as the United Nations International Year of Water Cooperation. See: UN Resolution Adopted by the General Assembly on 20 December 2010, A/RES/65/154. The EU Council meanwhile adopted its conclusions on Water diplomacy on the 22nd of July 2013 with explicit referrals to tension and potential for conflict in Central Asia and the Nile basin, among other regions. See: CEU (2013) Council Conclusions on EU Water Diplomacy, Foreign Affairs Council meeting, July.

### *Human resources*

The Caspian region is a vast but relatively thinly populated land mass centrally situated amidst established and rising global geo-economic powers. Throughout its history the region has defined itself as a land bridge between Asia, the Middle East and Europe and by the social-economic exchange along trade routes. Modern day globalisation and interconnectivity has led to the rediscovery of these functions along with its culture and traditions. Since gaining independence in the nineties, Caspian states have sought to capitalise on the considerable trade and investment potential offered by hydrocarbon and other mineral resources, thus reviving ancient trade and transit routes along multiple oil and gas pipelines, rail and road connections that primarily run westward and eastward. Global energy and security agendas have taken over from silk and spices to fuel socio-economic development and global integration on the one hand, while on the other they have enabled a strengthening of sovereign independence and national identity to balance the equation. Social-economic engagement with Caspian civil society to further integrate Caspian society in the global values community through good governance and the anchoring of universal values and norms seems to be the next step. The Caspian has not only been a conduit for trade and exchange between civilisations but has also made considerable contributions to these in the past, for instance in medicine and astronomy. Modern history has brought the region into a closer and more steady orbit with Euro-Atlantic and Asian traditions in addition to those of the Middle East. In light of the norms and values at stake in Afghanistan and the Arab Spring, Euro-Atlantic and Asian Pacific normative perspectives have gained in appeal and may find deeper implementation in the region.

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# ANNEX 2 MAPS AND TABLES

**Table 1 Caspian membership to key international energy-, economic governance- and security frameworks;**  
**Middle Caspian Region; South Caucasus & Central Asia**

	CIS	WTO	EurasEC	Customs Eurasian Union	Eastern Partnership (EU)	ECO	Energy Charter Treaty	Energy Community (EU)	IAEA (UN)	Kyoto (UNFCCC)	IEA (OECD)	IEF	EITI	GECF	OPEC	SCO	OSCE	NATO (PfP)	CSTO
Armenia	●	●	○	○	●	X	●	○	●	●	X	●	X	X	X	X	●	...	●
Azerbaijan	●	○	X	X	●	●	●	X	●	●	...	●	●	X	X	X	●	...	>
Georgia	>	●	X	X	●	X	●	●	●	●	X	X	X	X	X	X	●	○	>
Kazakhstan	●	○	●	●	X	●	●	X	●	●	...	●	○	○	X	●	●	...	●
Kyrgyzstan	●	●	●	○	X	●	●	X	●	●	X	X	●	X	X	●	●	...	●
Tajikistan	●	●	●	○	X	●	●	X	●	●	X	X	X	X	X	●	●	...	●
Turkmenistan	○	X	X	X	X	●	●	X	X	●	X	X	X	X	X	●	●	...	X
Uzbekistan	●	○	>	...	X	●	●	X	●	●	X	X	X	X	X	●	●	...	>

Wider Caspian Region; pivots & edges

Afghanistan	X	○	X	X	X	●	●	X	●	X	X	●	○	X	X	X	...	...	X
China	X	●	X	X	X	X	○	X	●	●	...	●	X	X	X	●	X	X	X
India	X	●	X	X	X	X	X	X	●	●	...	●	X	X	X	○	X	X	X
Iran	X	○	X	X	X	●	○	X	●	●	X	●	X	●	●	○	X	X	X
Iraq	X	○	X	X	X	X	X	X	●	●	X	●	○	...	●	X	X	X	X
Mongolia	X	●	X	X	X	X	●	X	●	●	X	X	●	X	X	○	...	X	X
Pakistan	X	●	X	X	X	●	○	X	●	●	X	●	X	X	X	○	...	X	X
Russia	●	●	●	●	X	X	>	X	●	●	X	●	X	●	X	●	●	...	●
Turkey	X	●	X	X	X	●	●	○	●	●	●	●	X	X	X	●	●	●	X
Ukraine	○	●	X	...	●	X	●	●	●	●	X	X	X	X	X	●	...	X	

○ Observer or Candidate

● Member

X Non Member

... Outreach Partner

> Withdrawn

**Table 2 Shareholdings in key oil & gas upstream and pipeline projects of Kazakhstan and Azerbaijan (IOC & NOC's)**

	Tengiz TCO	Kashagan NCOC	Karachaganak	CPC Pipeline	ACG AIOC	BTC Pipeline	Shah Deniz	SCP Pipeline	Transanatolian Pipeline	Trans Adriatic Pipeline
BG		>	29.25*	2						
BP		>			37.5*	30.1*	28.8*	25.5*	12	20
Chevron	50		18	15	11.3	8.9				
ConocoPhilips		8.4 >				2.5				
Eni		16.8*	29.25*	2		5				
Eon										9
ExxonMobil	25	16.8*		7.5	8					
Fluxys										16
Hess					>	>				
Inpex		7.56			11	2.5				
Itochu					4	3.4				
Lukoil	5		13.5	12.5	>			10		
Shell		16.8*								
StatoilHydro		>			8.6	8.7	15.5*	25.5*	**>	20
Total		16.8*				5	10	10	**>	10
Rosneft Shell				7.5						
CPC company				7						
LukAgip							10			
Other				3.5						5
BOTAS TU										15
TPAO TU					6.8	6.5	9	9	5	
CNPC CHN		<8.4								
KMG KAZ	20	16,8	10	19						
ONGC IND		<(...)			2.72	2.36				
Rosneft RU										
Transneft RU				24						
SOCAR AZ					10	25	16.7	10	68	20
NIOC IRN							10			
Naftiran IRN								10		

\*Operator

> Sold

(..) Subject to preemption

< Entrant

\*\* Option

SOURCES IEA AND EIA, COMPANY WEBSITES, INTERNATIONAL PRESS

**Table 2 bis Shareholdings in key oil & gas upstream and pipeline projects of Uzbekistan and Turkmenistan (IOC & NOC's)**

	Block 1 Diyarbekir	Block 21	Block 23	Cheleken	Burren Nebit dag	Bagtiyarlyk Gas	Galkynysh Gas	SW Gissar Ustyurt	Khauzak Kandym	Umid	Mingbulak
BG											
BP											
Chevron											
ConocoPhilips											
Eni					2009%*						
ExxonMobil											
Hess											
Lukoil								2008%*	2004%*		
Shell											
StatoilHydro											
Total											
Rosneft Shell											
CPC company											
LukAgip											
Other											
Petronas	MAL	%*									
Dragon Oil	UAE				%*						
Burren						>					
RWE Dea			2009%*								
Itera		2009%*									
Zarubezhneft		2009%*									
BOTAS	TU										
TPAO	TU										
CNPC	CHN					%*	^			%*	%*
LG International	SKO						^				
Hyundai Engrng	SKO						^				
Petrofac	UAE						^				
Turkmenneftegaz	TKM	%	%	%	%	%	%	%			
Uzbekneftegaz	UZ							%	%	%	%

200x award date

% Shareholders

\* Operator

> Sold

^ Service provider

SOURCES IEA AND EIA, COMPANY WEBSITES, INTERNATIONAL PRESS

**Table 3 Azerbaijan: potential for a third export stream by 2020-2025**

Field/project/structure	Reserves, proven or estimated	Companies	Status	Planned/potential production plateau	Estimate production start
Shah Deniz 2	1.2 Tcm	BP 25.5%, Statoil 25.5%, Socar 10%, Total 10%, LukAgip 10%, OIEC 10%, TPAO 9%.	- Front End Engineering and Design studies - FID 17 December 2013	16-20 bcm	Q3 2018
Absheron	150-350 bcm	Socar (40%), Total (40%), GDF Suez (20%)	- 27/02/2009: PSA - Exploratory well drillings - 2012 Notice of Discovery and Commerciability - Ongoing field assessment	6-15 bcm	2020-2022
Umid	200 bcm; 40 Mt condensate	Socar, Possibly Nobel oil	- Discovery in 2010 - Two exploratory wells drilled since 2009 - Technical production started Sept. 2012 from one well - Five more wells to be drilled - PSA yet to be agreed and signed	1Mcm/gas/day; 2-10 bcm/year	2014
Babek	400 bcm; 80 Mt condensate	Socar, foreign partners	- Seismic surveys	6-15 bcm	2020-2025
Zafar-Mashal		Socar	Exploratory work done in 2000 could be newly undertaken		2025
ACG deep gas	300 bcm	Socar, foreign partner is very likely	PSA or specific contract yet to be agreed and signed	6-15 bcm	2020
Nakhichevan	300 bcm; 40 Mt condensate	Socar, RWE	- MoU signed in 2010 - PSA yet to be agreed and signed	6-15 bcm	2020-2025
Shafag-Asiman	200-500 bcm; 65 million tonnes of condensate	Socar, BP	- 2009 MoU with BP - 2010 PSA with BP - 2011-2015 seismic surveys and data processing - 2016-2017 exploratory well drilling	2-10 bcm	2020-2025

SOURCE: ©IEA/OECD 2012

**Table 4 Key Caspian gas export options**

**Existing**

Name	Source(s)	Transit Routes	Capacity Bcm	Sponsors & Stakeholders	Status	Destinations	Cost Est. Billion €
Central Asia Centre	TKM Dauletabad UZ	UZ KAZ KYR	90 (100)	RU (Gazprom) TKM UZ KAZ	Operational Aging	RU KYR UKR BEL TU EU	-
Blue Stream	RU CASP	BLSEA	16	RU (Gazprom) EU Eni TU	Operational	TU EU	
South Caucasus SCP	AZ Shah Deniz (TKM KAZ)	AZ GE TU (CASP)	8 – (25-37-55)	SCPC (BP Statoil) TU (Botas) EU GE	Operational	GE TU EU	1.7+
Trans Central Asia	TKM Galkynysh	UZ KAZ	6 (30-100)	CNPC TKM UZ KAZ	Operational	CHN	20-60+
Turkmenistan Iran 1&2	TKM West & South East	IRN	8 & 12	TKM IRN	Operational	IRN TU AR	-
Iran Turkey	TKM IRN	IRN	14	IRN (NIOC) TU (Botas)	Operational	TU (EU)	\$0.6+

**Planned**

Nabucco	Caspian IRQ IRN	GE TU EU (SEE)	8 – (31)	EU(OMV, GdF, MOL, Bulgargaz, Transgaz)	Deferred	EU	7.9-10+
Italy Turkey Greece Interconnector (ITGI)	Caspian East Med	GR TU GE	8 – (20)	DEPA Edison	Deferred	EU	2+
Greece Bulgaria interconnector	Caspian East Med	-	-	Edison DEPA EAD	Pre FID	EU	-
Pre/Coastal Caspian (CCP)	TKM	KAZ-RU	20	RU (Gazprom) KAZ (KMG)	Pre FID	TU UKR EU	-
South Stream	RU Caspian	BLSEA	63	RU(Gazprom) EU (ENI, EdF, Wintershall)	FID end 2012	EU	17+
Trans-Adriatic (TAP)	Caspian East Med	TU GR ALB	10 – (20)	EU(Statoil EGL E.On)	2013 FID	EU	1.7-2+
Trans Anatolian (TANAP)	AZ IRN IRQ TKM KAZ	TU	16–(24–30–60)	AZ TU (SOCAR – BOTAS- TPAO)	2013 FID	EU	5+
Trans Afghan (TAPI)	TKM	AFG PAK	30	TKM AFG PAK IND	IGA	PAK IND	8+
Trans-Caspian Pipeline (TCP)	TKM UZ KAZ	CASP	30	EU AZ TKM	Concept	AZ GE TU EU RU UKR	2+
Trans-Caspian Link	Block 1-ACG	CASP	10	-	Pre FDI	AZ GE TU EU	2+
Turkmenistan East West	TKM Galkynysh	-	30	TKM	Construction	RU EU	2+
Kazakhstan West East Beineu-Bozoi-Akulak	KAZ Karachaganak	-	10	KMG	Trail runs	KAZ CHN	4+

**Table 4 bis Key Caspian oil export options (excluding road and rail)**

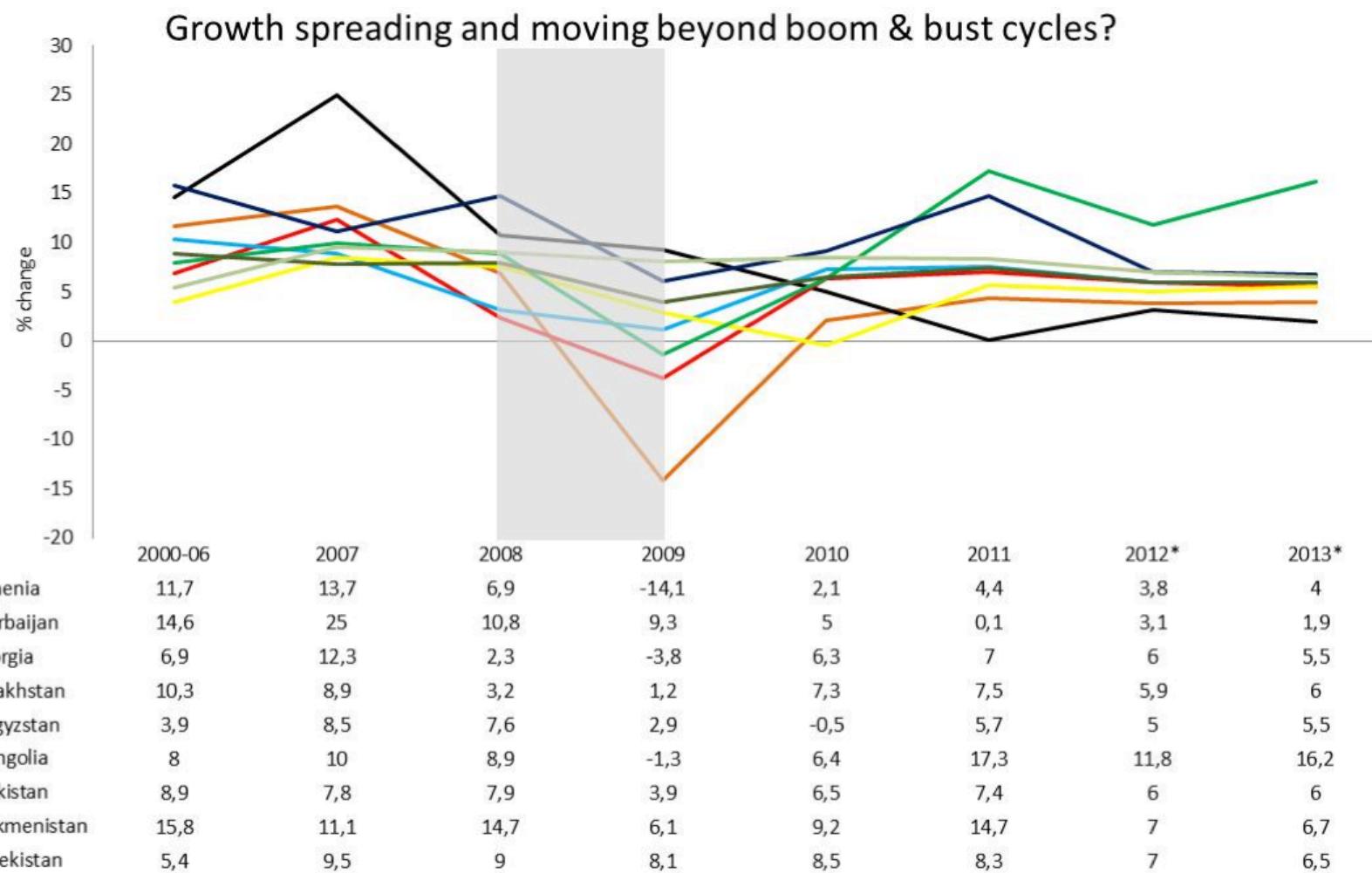
**Existing**

Name	Source(s)	Transit Routes	Capacity-upgrades kb/d	Sponsors & Stakeholders	Status	Destinations	Cost Est. \$ Billion
Caspian Pipeline Consortium (CPC) Tengiz Novorossiysk	RU KAZ Tengiz (Kashagan)	RU BLSEA Bosphorus	650-(1.34)	RU KAZ Chevron Mobil Rosneft-Shell Oryx BG ENI Lukarco	Operational expanding	RU BLSEA Med	2.5+
Atyrau-Atasu-Alshankou	KAZ (Kashagan) RU	-	240-(400)	KAZ CNPC	Operational expanding	CHN	0.8+
Atyrau-Samara	KAZ Uzen RU	-	600	KAZ RU	Operational	RU EU	-
Baku Tbilisi Ceyhan (BTC)	AZ Azeri Chirag-Gunesli KAZ	CASP GE TU	1.200	BP AZ Chevron Statoil Total TU ENI	Operational	TU East Med	4
Baku Supsa (Western early oil route)	AZ KAZ TU	GE	150-(300-600)	AIOC (Socar)	Operational	GE BLSEA	-
Baku Novorossiysk Makhachkala	AZ RU KAZ TU	RU BL	170	AZ (Socar) RU (Transneft)	Operational	RU BLSEA Med	-
Odessa Brodi (Plotisk)	UKR BLSEA	UKR	200-(300)	UKR	Operational	UKR EU BEL	
(Kirkuk Ceyhan)	IRQ	-	1.000-(1.500)	IRQ TU	Re-entry	TU East Med	-

**Planned**

Kazakhstan Caspian Transport System (KCTS) Tanker Shuttle Key Bosphorus Bypasses:	KAZ AZ	AZ GE	300- (1100)	KAZ AZ	MoU	East Med	-
Odessa Brodi (Plotisk)	UKR BLSEA	UKR	200-(300)	UKR	Operational	UKR EU BEL	
Constanta Trieste Omisalj	RO BLSEA	RO SER CRO IT	480-(600-800)	RO SER CRO IT	Delayed	EU Adriatic	2-(3+)
Burgos Vlore (AMBO)	BU BLSEA	BU MA ALB	750	BU MA ALB	Delayed	ALB Adriatic	1-(2+)
Burgos Alexandropoulos	BU BLSEA	BU GE	700 -(1000)	BU GE RU	Deferred	GR Aegean	-
Samsun Ceyhan	TU BLSEA	TU	1000-(1500)	TU (Calik) IT (Eni)	Stalled	TU East Med	1.5-(2+)

Table 5 Gross Domestic Product Economic Forecast – figures and forecasts



IMF (2012) 'CAUCASUS AND CENTRAL ASIA SET FOR SOLID GROWTH, BUT GLOBAL RISKS LOOM LARGE',  
REGIONAL ECONOMIC OUTLOOK MIDDLE EAST AND CENTRAL ASIA DEPARTMENT UPDATE, APRIL WORLD BANK (2012) MONGOLIA.

Figure 1 Overview of key Southern Corridor gas pipeline capacity

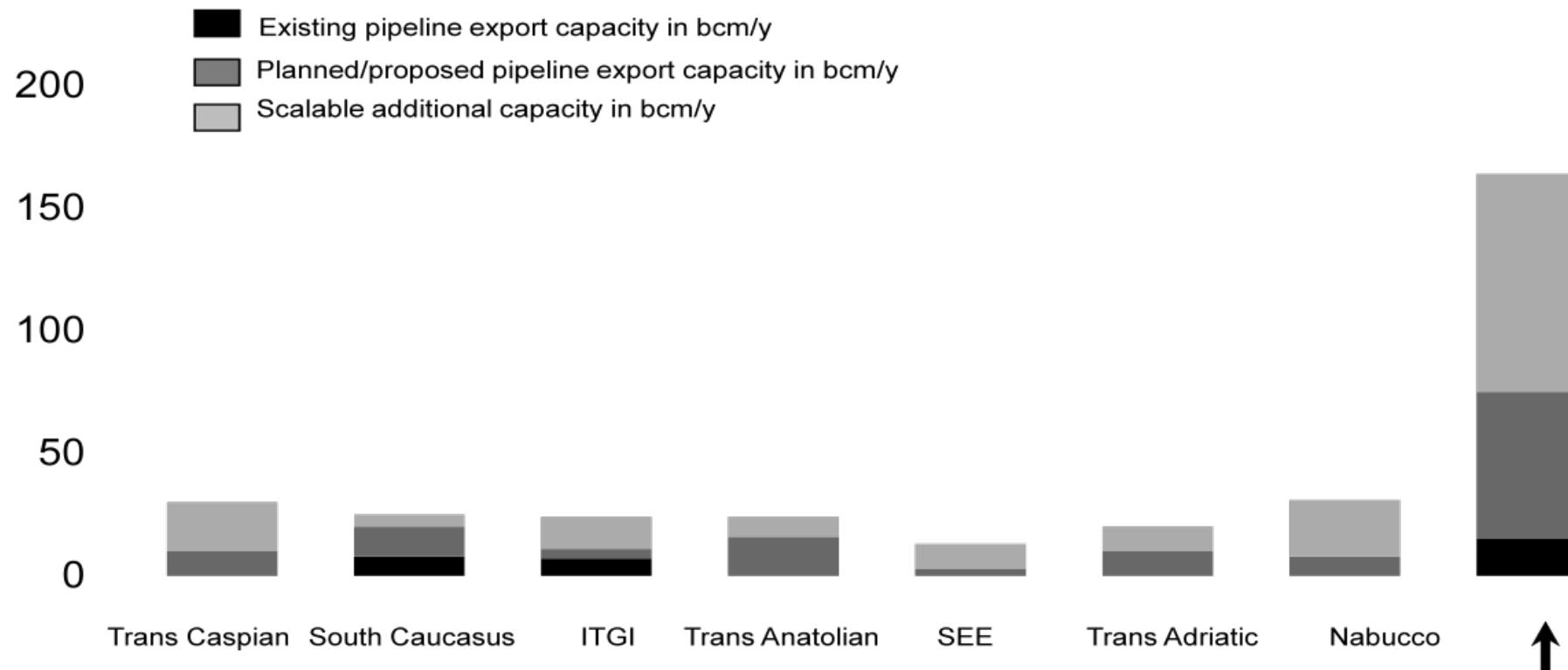
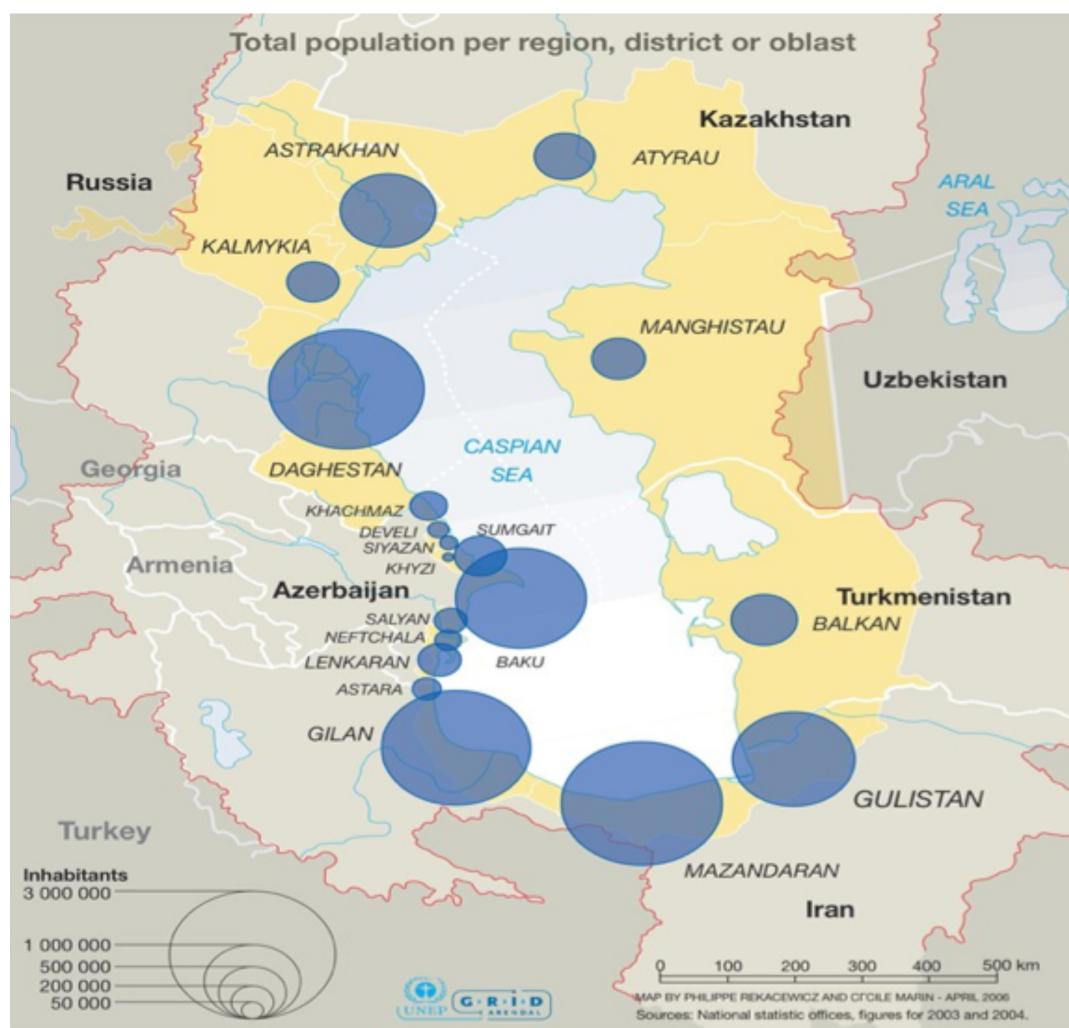
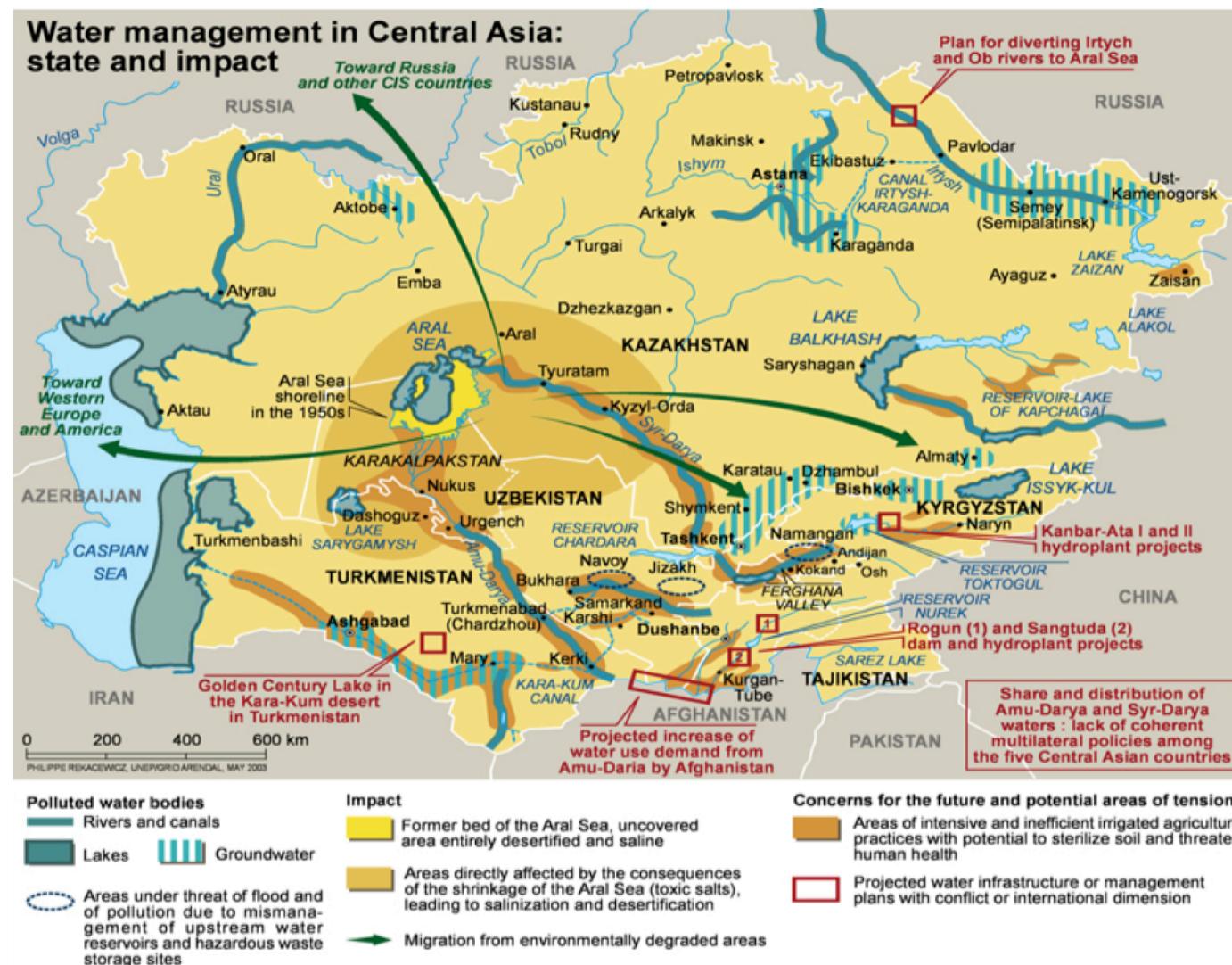


Figure 2 Population density in the Caspian region and Central Asia



©REKACEWICZ, PHILIPPE (2006) UNEP/GRID-ARENDAL

Figure 3 Water management, environmental degradation and migration in Central Asia

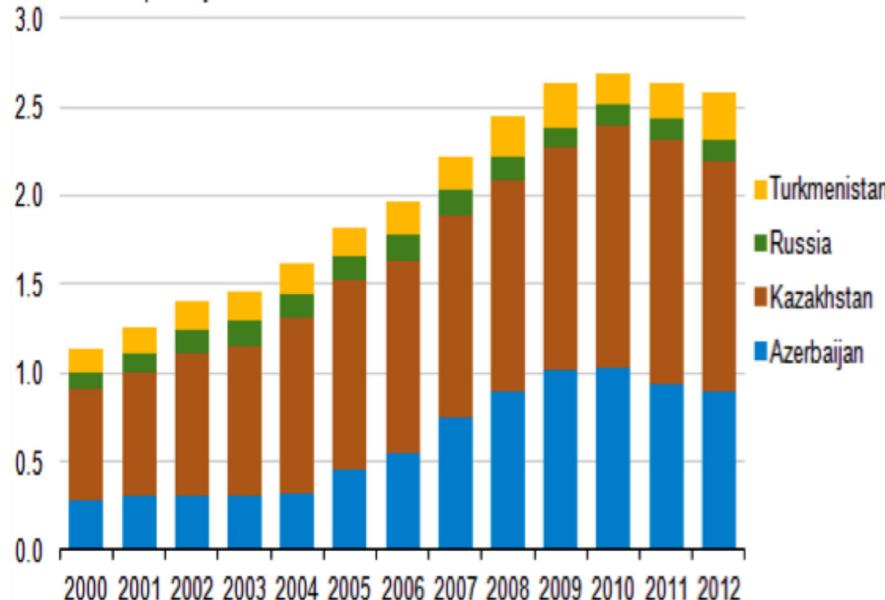


SOURCE: GRID-ARENDALE UNEP, REPRODUCED WITH PERMISSION 2012

Figure 4 Caspian oil and gas production 2000-2012

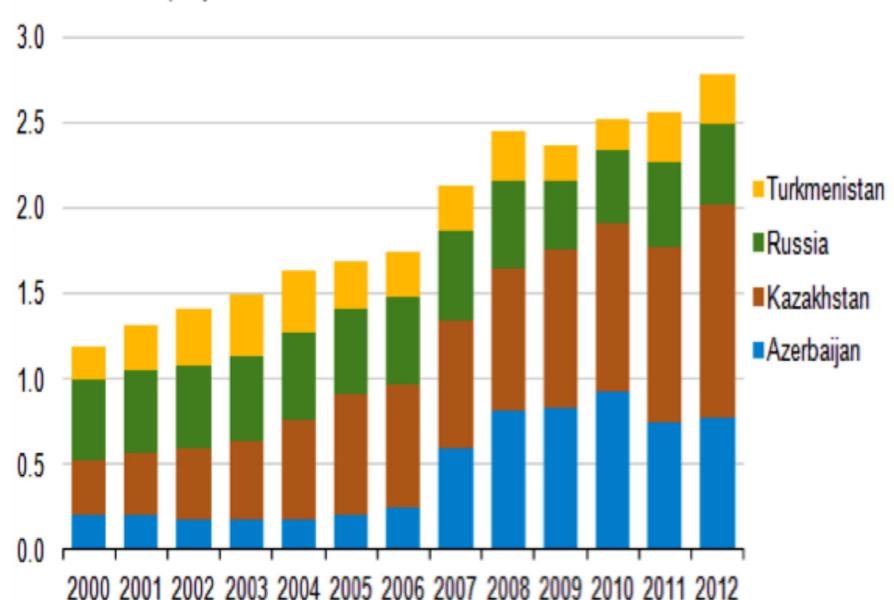
Caspian Sea region oil production (2000-12)

million barrels per day



Caspian Sea region gross natural gas production (2000-12)

trillion cubic feet per year



SOURCES: US ENERGY INFORMATION ADMINISTRATION, IHS EDIN, EASTERN BLOC ENERGY, RIGZONE, AND RYSTAD ENERGY

NOTE: OIL PRODUCTION INCLUDES BOTH CRUDE OIL AND LEASE CONDENSATE.

IRAN AND UZBEKISTAN DO NOT HAVE SUBSTANTIAL PRODUCTION IN THE CASPIAN REGION.

ALL PRODUCTION OUTSIDE THE CASPIAN REGION IS EXCLUDED. VALUES ARE PRELIMINARY ESTIMATES.

Map 1 Overview of key Shah Deniz-Southern Corridor gas pipeline export routes



(SOURCE: TRANS ADRIATIC PIPELINE 2012)

Map 2 Main gas pipeline infrastructure: weak in relation to reserves



©IEA/OECD 2012

Map 3 Main oil pipeline infrastructure, Bosphorus bypasses and security of supply



©IEA/OECD 2012



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