



# Islamic Development Bank Group

**SPCA**

**SPECIAL PROGRAM FOR CENTRAL ASIA**







# Special Program for Central Asia (SPCA)



**Enhanced Competitiveness, Increased Trade and Economic Growth  
(2016-2020)**

**PART I  
The Program**

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## Executive Summary

The Special Program for Central Asia (SPCA) is a regional program of the Islamic Development Bank Group (IDBG) that is aimed at supporting the cooperation efforts of its member countries in Central Asia. The Program is inspired by the Organization of Islamic Cooperation (OIC) Plan of Action for Cooperation with Central Asia (PACCA) and the IDB 10-Year Strategy, and is anchored on three of the seven priorities of PACCA and four of the six pillars of the 10-Year Strategy. It covers six member countries, namely, Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan.

The location of Central Asia on the landmass joining Asia and Europe adjacent to fast growing neighbors presents a significant opportunity that has contributed to making the Region dynamic. However, challenges abound. The economies are still not adequately diversified in addition to the lack of intrinsic economic complementarities, low intra-regional trade, low inter-country foreign direct investment flows, and limited regional cooperation. In this context, the intervention logic of the SPCA is based on the premise that trade offers countries one of the most obvious ways to sustainable development and is motivated, among other things, by three drivers viz; production of tradable goods; producing at competitive costs; and the ability to move the products from the production sites to markets. In the case of SPCA, the trade drivers are increased production of agricultural, industrial and SME goods; increased efficiency in production through increased energy supply; and the construction of an extensive transport network. Providing support for the production of agricultural, industrial and SME goods will result in excess supply that could be traded across borders. The reason for choosing these products is that a significant proportion of the population in the Region are engaged in agriculture and/or SME sector and by increasing incomes in these areas, the resulting economic growth can be made more inclusive. To enable the trading of the excess production across borders, the exports have to be produced more cheaply at the country of origin. In the case of Central Asia, energy loss resulting from aging infrastructure limits energy supply, thereby increasing the unit cost of production. Therefore, efficiency improvements and exchanges in the energy sector would result in competitive production in the Region. Once commodities are competitively produced, they could be moved across the borders through an extensive transport network. To address these constraints, SPCA will be supporting increased intra-regional and international trade, increased agricultural and industrial production, enhanced regional energy security, and an expanded regional transport network. SPCA will complement the ongoing regional cooperation efforts of the development partners, with particular focus on the productive sectors of the economy, and the Region's further integration into global value chains.

For the implementation of the SPCA, a total financing of US\$ 6 billion is targeted for the period 2016-2020, comprising US\$ 2.5 billion of ordinary financing, US\$ 375 million of concessional financing, US\$ 1.25 billion for trade financing, and US\$ 500 million of private sector financing. Additionally, conventional and innovative resource mobilization efforts and co-financing with development partners is estimated to yield over US\$ 1 billion. The SPCA will be monitored through regular implementation reviews and progress towards competitiveness will be monitored using the World Economic Forum's Global Competitiveness Index. To engage with the Governments and other SPCA partners on a structured basis, Annual Stakeholder Meetings will be organized. To leverage technical and financial resources from the development partners, donor community and member countries, particularly for the non-lending interventions, a tripartite cooperation mechanism will be set up, as a supplement to IDBG's regular business channels.

When effectively implemented, SPCA is expected to contribute to increased production, competitiveness and trade in the Central Asia Region and through these, enhanced inclusive economic growth.



## 1. INTRODUCTION

1. The Special Program for Central Asia (SPCA) is a regional program of the Islamic Development Bank Group (IDBG) that is aimed at supporting the cooperation efforts of its member countries in Central Asia to facilitate trade, enhance competitiveness and promote economic growth in pursuance of the Sustainable Development Goals (SDGs) (Annex 1). It is inspired by both the Organization of Islamic Cooperation (OIC) Plan of Action for Cooperation with Central Asia (PACCA) (Annex 2) and the IDB 10-Year Strategy (Annex 3). It is anchored on three of the seven priorities of the Plan of Action and four of the six pillars of the Strategy.
2. The SPCA covers six countries, namely: Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan. Even though Azerbaijan is geographically located in South Caucasus, it is included in the Program due to its socio-economic commonalities with other target countries. Throughout the report, any use of the terms “Region” or “Central Asia Region (CAR)” refers to the cluster of the six above-mentioned IDB Member Countries.
3. The SPCA documentation is in two parts. Part I is this document, which contains the Program with all its elements. Part II comprises the four independent analytical studies undertaken by four consultants on the sector analytics, which informed the formulation of Part I. The Program (Part I) is presented in seven sections including this introduction. A look at the regional context of recent economic developments and some key development challenges of relevance to the SPCA are given in section 2. The logic, strategic anchors and frameworks of the Program are outlined in section 3, while the sector analysis and priorities are contained in section 4. The indicative financing and implementation mode are given in section 5, followed by the monitoring and evaluation framework in section 6. The conclusion and recommendation are presented in section 7.

## 2. REGIONAL CONTEXT

### 2.1 Overview

4. The Central Asia Region (CAR) has a population of about 77 million living in an area of just over 4 million km<sup>2</sup> that stretches from Azerbaijan on the western coast of the Caspian Sea to Kazakhstan on the most easterly front, including Kyrgyz Republic, Tajikistan, Uzbekistan and Turkmenistan.
5. Nested between Iran and Russia, and bordering the Caspian Sea, Azerbaijan covers 86,600 km<sup>2</sup>. The country is home to a population estimated at 9.5 million inhabitants in 2014. The Azerbaijani population is young, with a median age of 30. The country has achieved strong economic growth rate in recent years, with an average annual growth rate of 14.15% between 2009 and 2014. Industry, notably the oil and gas sector, is the major contributor to growth with a share to GDP of 58.3%. Services and agriculture account, respectively, for 36% and 5.7% of GDP. In terms of Human Development, Azerbaijan ranks 76<sup>th</sup> out of 187 with a Human Development Index (HDI) value of 0.747, placing the country in the high human development category. The country’s GDP per capita was estimated at US\$ 7,884 by the World Bank in 2014.
6. Kazakhstan is the largest landlocked country in the world, covering 2.72 million km<sup>2</sup>. The country

is home to 17.3 million inhabitants sparsely distributed across its vast territory, as evidenced by a population density of 6.4 people per sq. km. Kazakhstan is endowed with various natural minerals and metals such as zinc, copper, uranium. The country also boasts of substantial reserves of fossil fuels, which have been the main drivers of growth. Kazakhstan has proven coal reserves of nearly 37 billion tones, or 3.9% of the world's total coal reserves. Currently, industry accounts for 36% of GDP, while service and agriculture represent 59.4% and 4.6% respectively. Although agriculture accounts for less than 5% of GDP, the sector employs nearly 30% of the labor force. In 2014, GDP per capita stood at US\$ 12,276, and the country ranked 70th with a HDI value of 0.757, placing the country in the high human development category.

7. The Kyrgyz Republic shares borders with China, Kazakhstan, Uzbekistan and Tajikistan. The country covers 199,950 km<sup>2</sup>. Its population is estimated at 5.8 million people. The country's GDP per capita is US\$ 1,269. The Kyrgyz Republic ranks 125<sup>th</sup> out of 187 countries on the HDI rank, with an HDI value of 0.628. The economy is dominated by the service sector, industry (minerals extraction) and agriculture (cotton, tobacco, wool). Service accounts for 56% of the country's GDP, industry represents 26.7% of the GDP, while agriculture accounts for 17.3% of Kyrgyz GDP. Remittances of migrant workers are major sources of economic revenue in the Kyrgyz Republic.
8. Tajikistan covers 144,100 km<sup>2</sup> with a population density of 59.3 people per sq. km. The country has a population of 8.3 million inhabitants, with a GDP per capita of US\$ 1,114. The Tajik economy is heavily dependent on remittances, mainly from Tajik migrants in Russia. In 2014, remittances from close to 1 million Tajik migrants contributed by as much as 40% to the GDP. Agriculture is a significant contributor to the country's GDP, representing 27.4% according to the latest statistics. The sector employs 30% of the labor force.
9. Stretching over 488,100 km<sup>2</sup>, Turkmenistan is bordered by the Caspian Sea to the West, with an estimated 1,768 km of coastline, and four countries in Central Asia: Kazakhstan to the Northwest, Uzbekistan in the North and East, Afghanistan to the Southeast, and Iran to the South. Turkmenistan is home to 5.3 million people. Economic activity is driven by industry (48.4% of GDP) and agricultural production (14.5% of GDP). Turkmenistan is endowed with large oil resources, with an estimated 600 million barrels of proven oil reserves as of January 2015. Furthermore, the country is the second largest dry gas producer in Eurasia. GDP per capita stands at US\$ 9,031.5, and Turkmenistan ranks 103rd on the HDI rank with an HDI value of 0.698, placing the country in the medium human development category.
10. As a doubly landlocked country, Uzbekistan covers 447,400 km<sup>2</sup> and is bordered by five landlocked countries: Afghanistan, Kazakhstan, Kyrgyz Republic, Tajikistan, and, Turkmenistan. The country has a large population size, with 30.7 million inhabitants, and a population density of 72.3. Like many other countries in the region, Uzbekistan has proven reserves of natural gas, oil, and coal. Industry accounts for 33.7% of the GDP, while services and agriculture account for 47.5% and 18.8%, respectively. Uzbekistan is ranked in the medium human development category, with an HDI value of 0.661. GDP per capita amounts to US\$ 2,037.7.
11. The region is estimated to have one of the largest energy resources, which could be one of the drivers of growth and prosperity. Azerbaijan and Kazakhstan hold significant levels of oil and coal reserves while Turkmenistan holds many years of natural gas reserves, with Tajikistan and

Kyrgyz Republic holding huge renewable energy potential. The Kyrgyz Republic has the 8<sup>th</sup> largest goldmine in the world, while Tajikistan holds large silver and aluminum reserves. The region also has huge production capacity in agriculture. It has one of the largest arable lands in the world and accounted for 4% of the world wheat production in 2008. Uzbekistan, Tajikistan and Turkmenistan possess significant cotton production and export capacity.

#### **Box 1 – Examples of natural resource endowments in the Region**

Azerbaijan, the oldest known oil-producing region in the world, experienced an oil boom at the beginning of the 20<sup>th</sup> century and later served as a major refining centre in the former Soviet Union. Currently, Azerbaijan boasts of reserves of 7 billion barrels of oil, and 30 trillion cubic feet of gas.

Kazakhstan has abundant raw materials and natural resources. With 50 billion barrels of proven reserves, Kazakhstan is 11<sup>th</sup> in the world in oil reserves and 14<sup>th</sup> in gas reserves with 2.407 trillion cubic meters. Kazakhstan owns 12 % of world's uranium and produces 36.5 %, which is the largest share of world's uranium supply. Kazakhstan is the most coal abundant country in Central Asia and 8<sup>th</sup> in the world with proven reserves of 31.3 billion tons.

Turkmenistan is the main gas exporter and possesses the largest gas deposits in Central Asia and one of the richest in the world. Turkmenistan is 6<sup>th</sup> in the world in natural gas reserves and 20<sup>th</sup> in gas production. Turkmenistan has proven natural gas reserves of approximately 265 trillion cubic feet and oil reserves of roughly 600 million barrels.

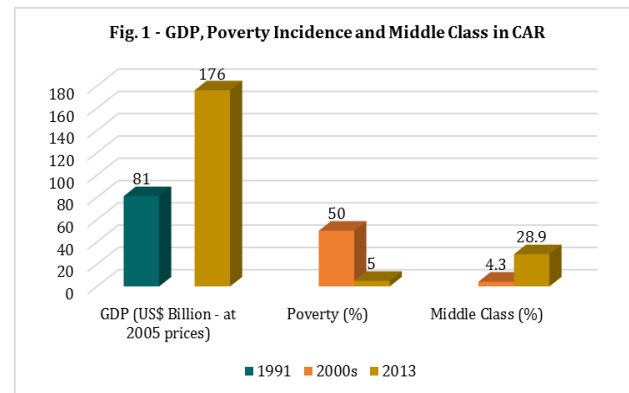
Uzbekistan has 594 million barrels of proven crude oil reserves and has 1.841 trillion cubic meters of proven natural gas reserves. Uzbekistan is rich in hydrocarbon resources, and about 60 % of its territory possesses potential oil and gas reserves. Uzbekistan ranks 3<sup>rd</sup> among the countries of the CIS and 15<sup>th</sup> in the world in terms of annual natural gas production.

Tajikistan and Kyrgyzstan, rely on tremendous hydropower reserves for generation and transmission. They account for more than 70 % of Central Asia's total capacity. Tajikistan, being an up-stream country, is the richest state in Central Asia in terms of its potential to produce hydroelectricity. Kyrgyzstan has deposits of locally exploitable coal, oil, and natural gas. Kyrgyzstan is the 3<sup>rd</sup> among CIS countries in gold production and 2<sup>nd</sup> after Kazakhstan in the CIS in coal reserves.

12. It is important to note that despite the significant progress made by the countries towards modernization, industrialization and urbanization, the region remains highly agrarian, with 40% of the population living in rural areas and agriculture accounting for over 45% of total number of employed and nearly 25% of the GDP on average. Therefore, agriculture continues to be critical for rural poverty reduction, employment, economic growth and food security in Central Asia and Azerbaijan. Agricultural production, processing, and related services remain an important source of income approaching 20% of the GDP in the majority of Central Asia.
13. Of particular importance to the Program will be the neighboring countries of Afghanistan, Iran and Pakistan who are also members of the IDB Group. Afghanistan is already involved in some of the regional projects and is therefore, a very important player in the region and one of the candidates for inclusion in an expanded SPCA.

## 2.2 Recent economic trends and developments

14. The region has experienced tremendous economic growth for more than two decades. From 1991 to 2013, the GDP in the region more than doubled, from US\$ 81 billion in 1999 to US\$ 176 billion in 2013 (constant 2005 US\$) (see Fig. 1). The economies remained resilient despite the global financial crisis. Per capita GDP in the region has maintained an upward trend over the past five years and countries such as Turkmenistan and Uzbekistan have achieved impressive growth rates in recent years (10.2% and 8% respectively in 2014).



15. On human development, the countries in the Central Asia Region have seen welfare indicators improve as their economies expanded. Kazakhstan has seen its GDP per capita increase from US\$ 7,165 in 2009 to US\$ 12,276 in 2014. Relative to other oil rich countries in the region, Kazakhstan has been successful in redirecting oil and gas revenues towards sectors such as machinery, chemicals and food processing. Azerbaijan has made significant progress in addressing poverty and inclusiveness issues. Poverty incidence is estimated to have decreased from close to 50% in the early 2000s to about 5% in 2013. Concurrently, the middle class has expanded from 4.3% to 28.9% of the population.

## 2.3 Key development challenges

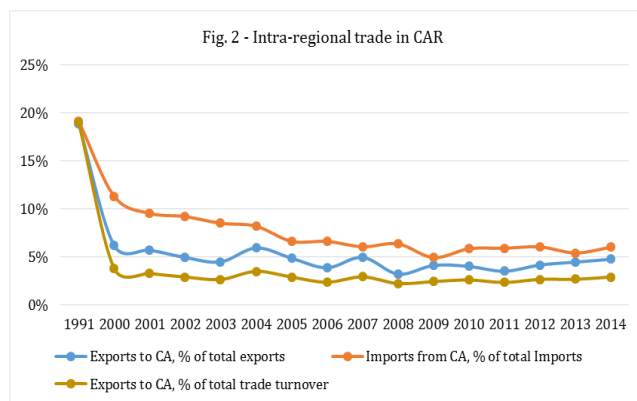
16. The immediate to medium-term challenges facing the Region include diversification of the product base and exports, meeting infrastructure needs, enhancing competitiveness, and ensuring environmental sustainability. The Region also needs further social and economic infrastructure investment, and policy and capacity development support to create an enabling environment for business and investment, improve governance, form an effective incentive structure for efficient distribution of resources, and strengthen the degree of competitiveness of those key sectors that have significant impact on their economic growth and development.
17. Key development challenges that are primarily related to regional competitiveness are briefly analyzed below, focusing on trade and transport, energy, and agriculture sectors. Structured around these three areas, the following review essentially covers the main factors of production and trade, which can be addressed through politically and economically feasible interventions at regional scale. Some other relevant areas such as human development, urban development, labor force productivity are to be analyzed in depth through IDBG's country-specific Member Country Partnership Strategies (MCPS), for IDBG's further interventions at country level.

### **Trade and Transport**

18. The landlocked nature of Central Asian countries is a key challenge for the region when it comes to shipping goods and products. Moreover, the difficult topography complicates transport logistics to other parts of the world. This is exacerbated by the poor quality of transportation

services and difficulties with transit through neighboring countries. The average distance between major cities in the region and the nearest ports, such as those in the Black Sea, the Arabian Sea and the Persian Gulf, is over 4,000 km.

19. Transportation routes from Central Asia to external markets always cross neighboring territories. Therefore, the construction/rehabilitation of transport infrastructure requires coordination and cooperation with neighbors. Similarly, the reforms in customs and border crossing rules and procedures, the elimination of technical barriers to trade and other trade facilitation measures can be effective only in the context of regional cooperation. Regional cooperation in trade policy and mutual opening of domestic markets is needed to expand intra-regional trade and bring it from informal to regular regime. SMEs and individual traders, who cannot afford high trade costs, mostly drive this trade.
20. As a reflection of the consequences of the above-mentioned challenges, the intra-regional trade in Central Asia has significantly declined over the years. For instance, in 1991 intra-regional trade turnover, exports to and imports from the region were each at 20%, but these have declined over the years to around 5% (see Fig. 2). The reduction of intra-regional trade was, in part, due to the disappearance of some enterprises and sectors, especially manufacturing as well as to trade diversion to markets outside the region,



especially in the case of exports of primary commodities. One of the key issues in trade development to be resolved is high trade costs, which undermine the competitiveness of manufactured exports from the region and prevent many Central Asian enterprises from fully participating in global value chains. The trade costs are high for many reasons including the region's geography (low density of the population and long distances between economic activity centers), poor quality of transport infrastructure, limited transport network, underdeveloped trade services, cumbersome customs administration, and insufficient economies of scale.

### **Agriculture**

21. There has been a doubling of the demand for food as the population of the region increased from 47 to 77 million in the last 30 years. By 2025, the population of the region is projected to be about 91 million. This has almost doubled the demand for food while arable land is very small. Out of the total agricultural land of about 288 Mha, (72% in Kazakhstan, 12% in Turkmenistan, 9% in Uzbekistan, 4% in Kyrgyz Republic, and 2% in Azerbaijan and Tajikistan), only 31 Mha is arable land, including 11.3 Mha under irrigation. Except rain-fed wheat in northern Kazakhstan, over 90% of crops is grown in the region under irrigation, which highlights the importance of water resources for agriculture. In addition to these, the Aral Sea Basin is considered the most water-short region. Renewable water resources of the region exceed 200 km<sup>3</sup>, of which a significant part is trans-boundary. These resources belong to the rivers flowing through the territory of several states of the region and their neighbors, thereby complicating the optimal use by any

single country.

22. Despite favorable climate conditions for diversifying crops, only one or two crops, wheat and cotton, dominate on the irrigated soils. For example: wheat covers 44% of the irrigated land in Azerbaijan; winter wheat and cotton cover 64% of the irrigated land in Uzbekistan; 77% in Tajikistan, and; over 90% in Turkmenistan. At the same time, there are good signs of crop diversification in Kyrgyz Republic, where in 2011 dry beans accounted for 25% and potato 9%; in Tajikistan dry onions accounted for 13% and dry fruits 9%; and grapes and fresh fruits in Uzbekistan accounted for 11% and 10%, respectively, of the total agricultural export of the country. Lack of forage and poor quality of available feedstuff, degradation of rangelands, and small-scale farming units, among other factors (World Bank 2004; FAO 2010) hamper livestock development despite the potential. The inability for meat and dairy products from the region to meet international food-quality standards compounds this challenge. At the same time, the fishing industry has faced significant decline since the 1980s due to the reduction of flows and the shrinking of natural lakes.
23. Since the global food crisis in 2006/07, several shocks have made food security in the region more fragile. The main concerns surrounding food security in Central Asia are three-fold: low agricultural productivity in the region, relatively high levels of poverty in some countries and vulnerability to earthquakes, floods, land degradation and scarcity of water. Food insecurity manifest itself in low birth weights in the region (6% in Kazakhstan, 5% in Kyrgyz Republic and Uzbekistan, 4% in Turkmenistan and 10% in Tajikistan (Sedik 2011) against 17% on average in developing countries (FAO 2009) and undernourishment in children (8.6% and 7.8% among male and female groups, respectively).

### **Energy**

24. The existing power related infrastructure in Central Asia, including generation facilities and transmission networks, is in disrepair or inefficiently operated as a majority of it dates back to the early era of the former Soviet Union. More than 77% of Kazakhstan's and 87% of Kyrgyz Republic's power generation assets are at least 20 years old, while for Tajikistan and Uzbekistan, the percentage of more than 20 years old equipment is 86% and 88%, respectively all resulting in huge energy and financial losses.
25. There has been only a marginal increase in the installed generation capacity of the region during the last 5 years. The only noticeable increase in installed capacity has been in Azerbaijan where it went up from 5.8 GW (in 2008) to 7.1 GW (in 2012) and, to a lesser extent, in Uzbekistan where it grew by 9% (from 11.6 to 12.6 GW) during the same 5-year period. On a cumulative basis, the 6 countries of Central Asia witnessed a mere 3.5% increase in generation capacity (from 45.7 to 49.3 GW) during the period from 2008 to 2012. This is a very low growth rate, especially when compared to the rest of the world which has recorded a 19.3% increase in total generation capacity during the same 5-year period.
26. Regarding regional energy exchanges, there was a dramatic reduction in power trade from 25 GWh in 1990 to 2.3 GWh in 2010, a 90% aggregate reduction in 20 years. This has led to wasteful

use of natural resources and suboptimal operation of power sector assets. Sub-optimal dispatch resulting from inefficient interconnections leads to an increase in operation expenses. Countries with large thermal generation are spending more money on fuel to maintain active reserves in the system needed to cover daily peaks. On the other hand, countries with significant hydro resources spill water in summer due to excessive levels of water and insufficient storage capacity. This results in wasted resources and lost revenue (see Box 2). The region was not able to realize huge economic benefits that would have resulted from power cooperation.

### **Box 2 - The Central Asia Power System (CAPS)**

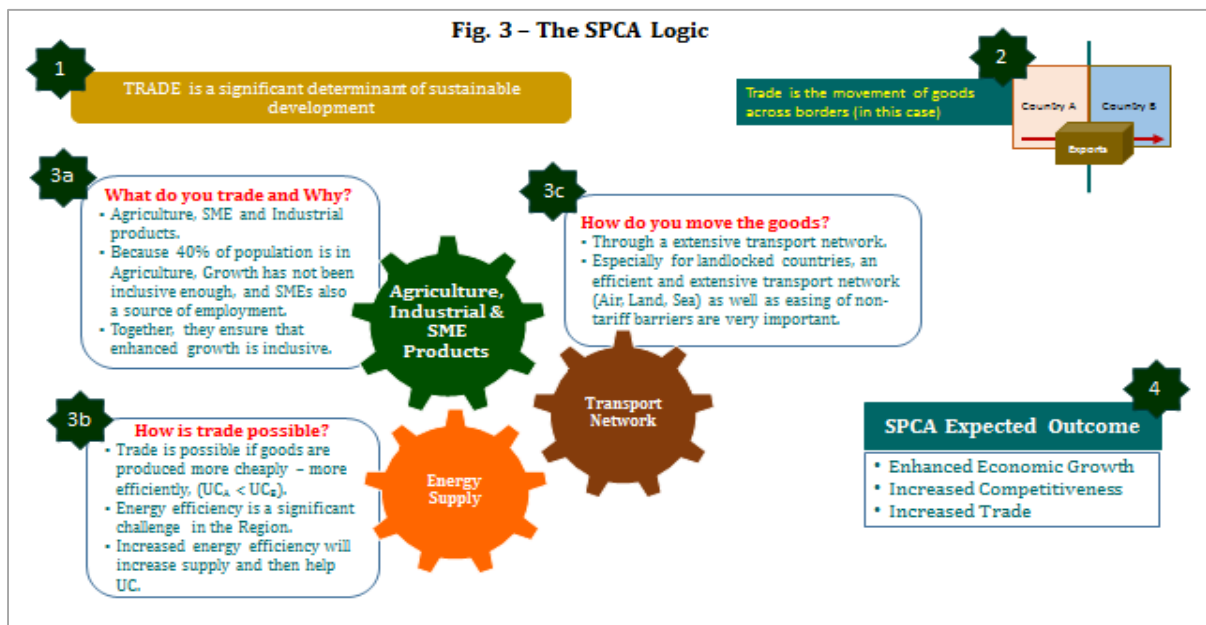
The CAPS was built in the Soviet era during 1970s-80s and comprised the electric power systems of Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan. The CAPS was established for the purpose of coordinating parallel operations of the Central Asian energy systems, ensuring integrated uses of fuel and energy sources and implementing coherent actions to assure compliance with intergovernmental agreements and bilateral and multilateral contracts between business entities in the power sector. CAPS allowed the exchange of electricity between the countries (then republics), taking into account the seasonal availability of hydropower (in the Kyrgyz Republic and Tajikistan) and thermal generation based on coal and gas available in Kazakhstan, Turkmenistan and Uzbekistan. Uzbekistan and Southern Kazakhstan used to supply electricity, coal and gas in the winter season to Kyrgyz Republic and Tajikistan and, in return, Kyrgyz Republic and Tajikistan were exporting hydropower for peaking loads.

The configuration of the high voltage regional electricity grid was designed accordingly, based on the requirements of the necessary exchange of electricity. These linkages were through the high-voltage 500 KV and 220 KV transmission line networks. An analysis of CAPS highlights the heterogeneous generation mix in the region, and the seasonality of it. In a regional CAPS structure, there is the potential balance between a regionally integrated generation system and one divided by national borders. Following the disintegration of the Former Soviet Union, the design, operation, and maintenance of CAPS gradually collapsed. The differences in the resource base for each country meant that the systems became unbalanced. Instead of sharing one another's resources, each country sought to achieve energy independence in terms of generation capacity and fuel supply.

### 3. SPCA LOGIC, STRATEGIC ANCHORS AND FRAMEWORK

#### 3.1 SPCA logic

27. The Central Asia region has grown impressively in the last decade. However, falling commodity prices and the Russia sanctions have adversely affected them, threatening the sustainability of these achievements. To assist the member countries in the Region sustain these growth levels, SPCA logic (see Fig. 3) is based on the premise that trade is a significant determinant of sustainable development and therefore, it will be the vehicle with which SPCA will help the member countries sustain their growth achievements. After all, trade is in the fabric of this region as evidenced by its history with the Silk Road. Trade involves the movement of goods and services across borders, but SPCA will focus on the movement of goods for now, because of the limited time of the program (5 years) and the need for focus and selectivity of the Program for maximum development impact.



28. Increased agriculture, industrial and SME production are the goods that are considered by SPCA. The reason for choosing these products is that a significant proportion of the population in the Region is engaged in agriculture and SMEs and by increasing incomes in these two areas, the resulting economic growth can be made more inclusive. SPCA will support the excess production of these goods, which will be traded across borders. In addition, excess energy generated will also be traded for regional energy security.

29. Excess production on its own is not enough to ensure trade. To enable the trading of the excess production across borders, the production cost of exports has to be lower in the country of origin than in the country of destination. In other words, the unit cost of production in country A has to be lower than the unit cost of production in country B. As in all parts of the world, one of the significant factors in the production of any good is the cost of energy and the Central Asia Region is no exception. However, energy loss resulting from aging infrastructure reduces the limits of the energy supplied, thereby making its production very costly. This translates into higher energy cost for agriculture and SME producers and higher unit cost of production, which reduces

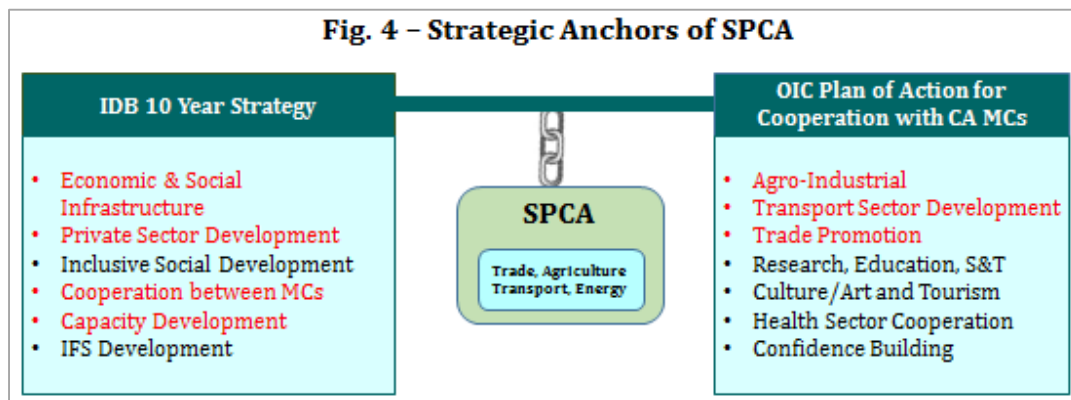


their competitiveness. By supporting efficiency improvements (by plugging the leakages) and exchanges in the energy sector, SPCA would contribute to increasing energy supply, reducing its cost of production which will hopefully result in reduced tariffs and lower unit cost of production for the agriculture and SME producers. In the same vein, SPCA will support the transmission infrastructure needed to move and trade the energy across borders from countries of excess supply to those with excess demand. These interventions will result in a competitive region.

30. Once commodities are competitively produced, they have to be moved across the borders. Otherwise, excess supply could be created in the local markets resulting in a fall in price equilibrium and subsequently, a fall income, thereby adversely affecting the producers that SPCA wants to support. To address this concern, the Program will support the development of an extensive transport network in the region to facilitate the easy movement of the goods produced across the region. Because of these, SPCA will be supporting the key elements of the cycle that will result in increased production, competitiveness and trade and through these, enhanced economic growth in the Region.

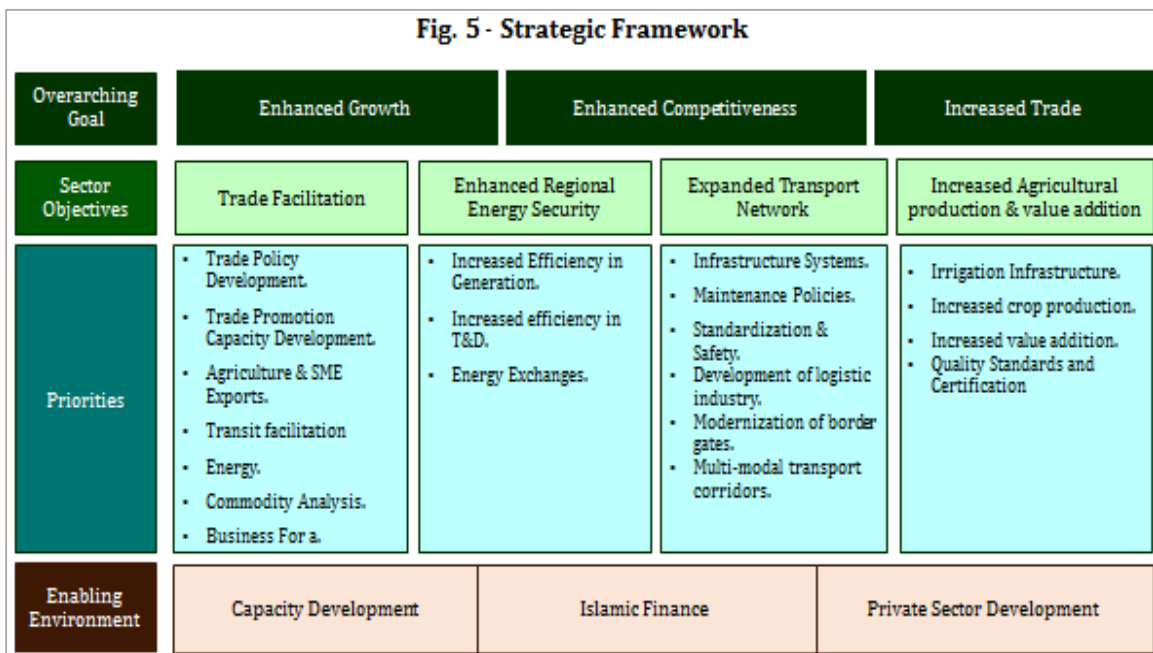
### 3.2 Strategic anchors

31. Both the Organization of Islamic Cooperation (OIC) Plan of Action for Cooperation with Central Asia Member Countries (PACCA) and the IDB 10-Year Strategy inspire the formulation of the SPCA. The OIC-PACCA is aimed at improving cooperation with Central Asia in the areas of agro - industrial sector, transport sector, trade promotion, poverty alleviation, vocational training, capacity building, research, education, science and technology, culture/art and tourism, health sector and confidence-building measures.
32. With respect to the IDB 10 Year Strategy, it has the strategic objectives of fostering inclusive growth; deepening connectivity in and between member countries and promoting the growth of Islamic Financial Services. These are anchored on six pillars of Economic and Social Infrastructure, Cooperation between Member Countries, Private Sector Development, Capacity Development, Inclusive Social Development and Islamic Financial Sector Development. The 10-Year Strategy is guided by six principles: managing for results, selectivity, strategic link to budget and resources, building capabilities in strategic pillars, resource mobilization and financial sustainability.
33. As mentioned above, the SPCA is anchored on three of the seven priorities of the OIC-PACCA and four of the seven strategic pillars of the IDB 10-Year Strategy as depicted in Fig.4.



### 3.3 Strategic framework

34. Given the development challenges identified above, the SPCA will focus its regional interventions in three sectors: Energy, Transport, and Agriculture for the purpose of enhanced competitiveness, greater trade within the region and increased economic growth. Within the context of the energy sector interventions, the SPCA will finance projects that will increase energy supply and exchange through the rehabilitation of existing energy infrastructure to improve efficiency and/or the construction of new ones. Priority will be given to energy plants, transmission and distribution networks in addition to energy exchanges to facilitate regional energy trade and enhance security.
35. In the realm of trade and regional interconnection, the SPCA will support policy development particularly in the area of trade facilitation, and the adaptation of international rules and regulations into national laws that will enhance their access to regional and international markets. Customs gates modernization and reform projects, establishment of electronic single window system, will also be supported with a view to reducing trade and transport costs to improve export competitiveness of the countries in the international markets. Furthermore, the program will also support the development of quality infrastructure, by assisting countries in adopting international quality standards, modernization of transport equipment, and implementation of maintenance policies and safety measures.
36. With respect to agriculture sector interventions, the SPCA will support the rehabilitation of existing irrigation infrastructure for increased efficiency as well as increased production of the critical commodities for food security and exports. At the same time, the SPCA will also promote value-addition to agricultural production by supporting SMEs in their efforts to fulfill export requirements with regards to quality, certification and packaging. It will also support the modernization of production and packaging lines, which will create new jobs and employment in the agriculture sector and enhance productivity (see Fig. 5).



## 4. SECTOR ANALYSIS AND PRIORITIES

### 4.1. Trade

#### 4.1.1. Current state

37. Trade has always been in the fabric of the region. For many centuries, the historic Silk Road was the most crucial land route connecting Asia, Middle East and Europe. Stretching over a vast expanse, the Silk Road was a unique path that not only became a source of prosperity and trade relationships, but also promoted exchange of knowledge and experience as well as cultural interaction among different communities. Presently, for many countries located on the ancient Silk Road, particularly landlocked Central Asia, the historic Silk Road-like trade system is one of the most vital alternatives to ensure sustainable growth and developmental resurgence.
38. In 2000-2013, Central Asia demonstrated very good growth in foreign trade. The total exports of the region increased from US\$ 17 billion in 2000 to US\$ 141 billion in 2013. For the same period, their imports increased from US\$ 12 billion to US\$ 99 billion – 8 times increase for both exports and imports. However, this trade growth was not uniform among the countries of the region. Oil and gas exporting countries (Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan) have seen exports grow by 100-200 %.<sup>1</sup> The Kyrgyz Republic and Tajikistan have very little of mineral energy resources and are net energy importers; their export growth was either close to zero (Kyrgyz Republic), or negative (Tajikistan). Imports grew fast in all countries of the region being financed mostly by either exports (Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan), or foreign direct investment (Azerbaijan, Kazakhstan, Kyrgyz Republic, Turkmenistan), or migrant workers' remittances (Kyrgyz Republic, Tajikistan, Uzbekistan).
39. The three largest trade partners of the region for both exports and imports are the European Union (EU), China and Russia. In the past decade, the EU and Russia have been gradually losing their status as the main export destinations, while China has become a very important partner for energy exporters. However, the recent economic slowdown in China and the impact of lower commodity prices are reversing earlier trends.
40. The trade performance of Central Asian countries is closely related to the region's geography, population, resource endowment, existing economic structure, macroeconomic and trade policies of the Governments, etc. All six countries are landlocked and rely on transit through the territories of one or more neighboring countries to trade. Uzbekistan is even doubly-landlocked, i.e. all its neighbors are landlocked countries. The Kyrgyz Republic and Tajikistan are effectively doubly-landlocked too, because with the currently existing infrastructure they cannot make transit to sea ports of China; all other transit routes require crossing borders of two or more countries. Being landlocked means increased trade costs and challenging export and import flows.

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<sup>1</sup> Here and below all measures of trade dynamics are based on 2013 prices and exchange rate values.

41. It is not surprising then that trade costs are extremely high in the region. Table 1 shows an aggregate measure of trade costs with major economies on the North (Russia), South (India), West (Germany) and East (China) of the region. This measure includes all transport costs, import and export

	Trade partner									
	China		Germany		India		Russia		Kazakhstan	
	2000	2010	2000	2012	2000	2012	2000	2012	2000	2012
Azerbaijan	304.1	202.1	188.1	160.4	379.8	232.9	77.4	94	117.7	105.7
Kazakhstan	111.8	85.5	115.2	91.9	188.1	167.7	<a href="#">66.8[1]</a>	56.1	n/a	n/a
Kyrgyz Republ	165.7	145.9	146.7	190.8	247.5	332.4	91.8	90.5	92.3	60
Tajikistan	229.6	152.6	235.4	253.9	264.7	222.5	86.3	133.2	109.6	86.9
Uzbekistan	241.3	125.7	158	179.2	265.4	213.9	62	90.2	110.9	72.2

Source: World Bank – UNESCAP trade costs database  
[\[1\] Data for 2002.](#)

tariffs, the costs of non-tariff measures and other costs associated with international trade. As evidenced by the data, geographical proximity and traditional economic linkages do matter - the costs of trade between Kazakhstan and Russia are much lower than with other partners.

#### **4.1.2. Proposed priority interventions**

42. Trade interventions under the SPCA would include:

- Trade policy development and integration to global value chains (towards creation of quality jobs, poverty reduction, and achievement of social & environmental sustainability);
- Capacity development for export promotion both in the public and private sectors (primarily focusing on Government Export Promotion Agencies and SMEs);
  - These capabilities would help to increase production potential especially in higher value-added manufacturing, and enhance Central Asian entrepreneurs' access to markets (compliance with technical requirements of foreign markets, development of web-portals, dissemination of market information, etc.).
- Support to SMEs in the development of export-oriented products through appropriate financial and institutional mechanisms (special economic zones/industrial parks, entrepreneurship development, PPP arrangements, providing medium and long term trade finance, etc.);
- Implementation of international trade facilitation agreements/conventions and development and implementation of trade facilitation programs based on strategic priorities (in close cooperation with relevant regional and international organizations);
- Conducting commodity analysis and business forums/trade fairs to identify niches for exports, and bringing together buyers and sellers of strategic tradable commodities from Central Asia to other IDB Member Countries (B2B communication);
- Facilitation of transit for truck drivers and other transport personnel as well as introduction of simplified visa or visa-free regimes for business travelers and tourists;
- Energy trade among member countries.

43. For more details on trade in the Region, refer to Annexes 4 and 5 and the sector report on trade and transport in Part 2.

## **4.2. Energy**

### **4.2.1. Current state**

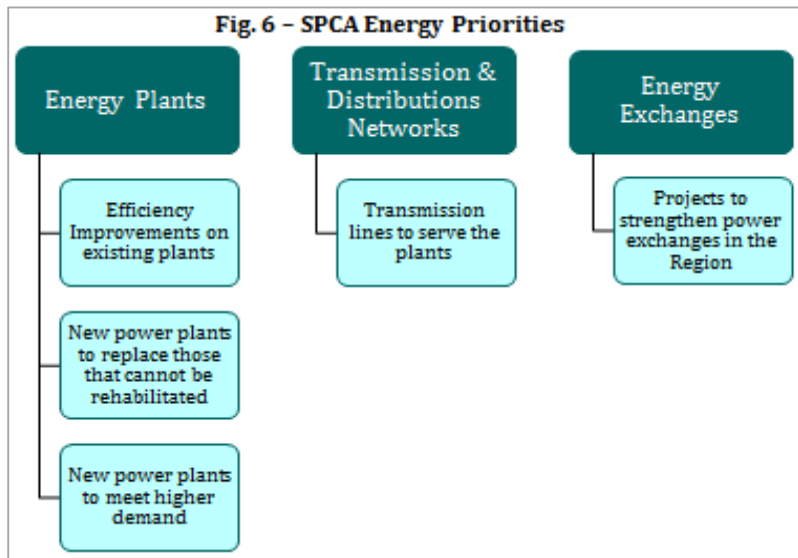
44. Central Asia is endowed with rich natural resources, especially fossil fuels and hydropower potential, having 6.5% of the world's proven reserves of natural gas and about 2.3% of its crude oil reserves. Turkmenistan is the fourth largest country in the world in terms of natural gas reserves, after Iran, Russia and Qatar. Although the region holds a significant part of total global natural gas reserves, actual production does not match this level. The region's total natural gas production is only 4.7% of net global production. This ratio has remained unchanged since 2000, implying that the region has large untapped natural gas reserves that need to be developed.
45. In addition to its rich natural gas resources, the region has also substantial oil reserves. The total proven oil reserves of Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan are estimated at approximately 38.2 billion barrels. Kazakhstan and Azerbaijan are the two main countries in the region in terms of oil production, accounting for about 90% of total regional oil production. Kazakhstan holds the largest (79%) of the region's proven reserves. Azerbaijan also has significant oil reserves, and revenue earned from their exports is an important source for its economic growth. In terms of production, the region has substantially increased its share in world oil markets over the last decade.
46. The key renewable energy resource of Central Asia is hydropower which has not been adequately exploited as evident from the fact that only 10% of the total potential of 450 Terrawatthours (Twh) is being actually put to use. The region's hydropower basically comes from water sources of the two largest rivers, Syr Darya and Amu Darya, on which more than 40 hydropower stations are installed which constitute the main source of electricity for Kyrgyz Republic and Tajikistan.
47. The distribution of energy resources in the Central Asia region is non-uniform and its countries can be stratified based on their dependence on hydropower or fossil fuels for their respective demands for electricity. The Kyrgyz Republic and Tajikistan possess a huge hydropower potential, but have scarce resources of commercially viable fossil fuels. On the other hand, Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan have significant, but varying, amounts of oil, gas, and/or coal reserves and, therefore, these resources figure prominently in these countries' planning outlook. Hydropower based generation accounts for nearly 90% of the energy supply in Kyrgyz Republic and Tajikistan, while in the remaining four countries more than 80% of energy generated is through the burning of fossil fuels - oil, gas and coal. The "skewed" nature of the energy resources is both a challenge and an opportunity. If the countries amicably share their available resources, the entire region can benefit through a sustainable development of its energy sector.

### **4.2.2. Proposed priority interventions**

48. Informed by the regional initiatives currently existing, and the involvement of other MDBs in the energy sector, the SPCA was conceptualized to complement these existing initiatives for greater development results. Active cooperation among international financial institutions is essential

to meet the funding requirements for developing regional projects. The main goal of the energy interventions under the SPCA is to enhance regional energy security through efficiency improvements, energy saving measures, generation capacity increase, and energy exchanges.

49. A key investment that countries can make is to rehabilitate their existing power plants, transmission lines, substations and distribution network. Besides, converting simple cycle turbines to combined cycle turbines and minor retrofits to HPPs will lead to energy efficiency improvements. Years of neglect have caused a reduction in the capacity of HPPs and rehabilitating them will come at a high cost. If not



done, it poses the greatest challenge to the security of the entire power system of Central Asia. Rehabilitation of existing power assets deserves the highest priority while developing future energy sector plans of the region. Five priorities are identified for system expansion as shown in Fig. 6. They relate to energy systems, transmission and distribution networks and energy exchanges between countries in the Region. For the first, the priority is to rehabilitate existing plants to make them more efficient, and then replace those that could not be rehabilitated and/or build additional ones if needed. Rehabilitation of the existing energy infrastructure essentially offers the highest rate of return on investment. The priority under the transmission lines would link these power stations to consumers (households and industries). The fifth priority will ensure that excess production is traded with other countries in the peak periods so that energy is used efficiently in the region.

50. The region has immense partnership and investment opportunities in renewable energy. However, they require varying levels of assistance to develop this potential namely capacity building, and strengthening of policy and regulatory environment, and most importantly developing an investment program. The region has abundant hydropower particularly in Kyrgyzstan and Tajikistan, wind power potential, especially the entire Caspian Sea coastal areas as well as the rest of Kazakhstan, and solar power, which has bigger potential in Tajikistan, Turkmenistan and Uzbekistan and is becoming increasingly viable for off-grid locations across the whole region. All countries of the region have strong commitment to materialize their potential in meeting domestic and regional energy needs. More than 95% of electricity generated in Tajikistan and Kyrgyzstan for domestic needs and regional markets come from hydropower. Uzbekistan has made it a goal to become the region's solar knowledge and technology hub, and it is targeting 21% renewable energy capacity by 2031, with at least 4 GW of solar capacity. The competitive cost of renewable energy generation, especially wind and hydropower is making these technologies attractive and worth consideration on a large scale. The induction of wind and

solar power projects offers the opportunity to diversify the generation mix and gain energy security in a sustainable way. Active pursuance of PPP arrangements and Government facilitation are key, as renewable energy projects are considered attractive by the private sector due to their short gestation period. Besides, the possibility of cooperation in the PPP knowledge exchanges exists within the region and the sharing of good practices will benefit all countries. In the same vein, the sharing of water resources of the region in an amicable way would contribute to the development of the region's energy potential for the benefit of all countries.

51. For more details on energy in the region, refer to Annexes 6 and 7 and the sector report on energy in Part 2.

### **4.3. Transport**

#### **4.3.1 Current state**

52. Roads remain the dominant modes of transportation in the region. They serve about 85% of total freight traffic and 99% of passenger traffic. The role of road transportation has increased considerably between 2000 and 2013. Railways are important for long-haul freight traffic (the average distance for goods transported by railways is 670 km vs. 44 km for roads); and aviation serves long-haul passenger traffic. The region also has potential to benefit from a combination of transport and high-speed communication infrastructure projects. In general, economies of the region have experienced sustained growth in transport during last 10-15 years. Freight and passenger traffic has increased between 2000 and 2013 in all countries and for almost all transportation modes. Pipelines are very important for countries exporting crude oil and natural gas (Azerbaijan, Kazakhstan, Turkmenistan, and Uzbekistan). Water transport is much less important. Besides, urban transport requires special attention with increasing population.
53. With respect to transport programs, countries of the region are implementing an ambitious program of transport infrastructure development, coordinated by the Central Asia Regional Economic Cooperation Program (CAREC)<sup>2</sup>. This includes the construction, rehabilitation and modernization of railways and roads, airports and logistical centers. All CAREC transport infrastructure projects have been organized into six transport corridors, which connect the region in all directions. These corridors include virtually all regionally important roads and railways. The countries of the region are also participants in other initiatives in the area of transport infrastructure including Transport Corridor Europe-Caucasus-Asia (TRACECA,) and Asian Highway Network (AHN).

#### **4.3.2 Proposed priorities interventions**

54. Complementing the ongoing national and regional initiatives, transport interventions under the SPCA would include:
- **Development of quality transport network**, by assisting countries in the construction of missing links, upgrading existing transport infrastructure, and adopting international

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<sup>2</sup> CAREC Program, initiated by the Asian Development Bank, is a partnership of 10 countries and six multilateral development partners, including the Islamic Development Bank, working to promote development through cooperation, leading to accelerated economic growth and poverty reduction.

quality standards;

- **Provision of adequate maintenance policies and necessary equipment** for transport infrastructure to avoid the risk of degradation of newly built/rehabilitated roads, railways, airports etc.; while public-private partnerships in new infrastructure and maintenance would be piloted and scaled up;
- **Implementation of safety measures**, including national and regional awareness campaigns;
- **Modernization of border gates and transport equipment** (including rolling stock, vessels, and transportation fleet), in order to make them compliant with modern economic and environmental requirements inside and outside the region;
- **Development of logistics industry** through development of a regional network of interconnected dry ports/logistics centers;
- **Promotion of regional institutional partnership** among the logistics and transport operators and public sector authorities, and integration of national projects (including development of region-wide standards, technical regulations, and costing benchmarks);
- Reduction of time and cost of transportation from/to Central Asian countries through **development and promotion of multimodal transport corridors** with a focus on the connection to maritime ports of the neighboring coastal countries;
- Implementation of **regional and international transport facilitation agreements/conventions** in the region.

55. Technical assistance and capacity building activities will be closely coordinated with the other related regional and international development organizations.

56. For more details on transport in the region, refer to Annex 8 and the sector report on trade and transport in part 2.

#### **4.4. Agriculture**

##### **4.4.1. Current state**

57. Agriculture is crucial for employment and food security in Central Asia. The rural population, most of which is associated with agriculture, averages 58% of the total for the region. It exceeds 63% in Kyrgyz Republic, Tajikistan and Uzbekistan and is below 51% in Azerbaijan, Kazakhstan and Turkmenistan. Even the share of agriculture in the national GDPs is less than 6% in Azerbaijan and Kazakhstan, and is in the range of 14-20% in Kyrgyzstan, Turkmenistan and Uzbekistan and at 27% in Tajikistan. The GDP per capita per year in agriculture-driven economies in Kyrgyzstan, Tajikistan and Uzbekistan is low, less than USD 1,000. The high percentage of rural population and low GDP per capita indicate high poverty levels among the rural communities of the region.

58. Potential agricultural land totals about 288 million hectares (Mha), out of which 31 Mha is arable land, including 11.3 Mha under irrigation. Except rain-fed wheat in northern Kazakhstan, most of crops are grown in the region under irrigation. Most of the irrigated land, or 9.92 Mha, is spread



in Aral Sea basin covering south and southwestern part of Central Asia.

59. Renewable water resources of the region exceed 200 km<sup>3</sup>, of which significant part recently became trans-boundary and belong to the several basins. Two rivers, Syrdarya River and Amudarya River, originating in the mountain zone are shared between the states for beneficial use. Key reservoirs, installed in the mountain zone regulate the rivers' flow for the upstream and the downstream needs. These water resources support irrigation, which is highly energy-consuming. For example, 50% of the irrigated land of Uzbekistan and 40% in Tajikistan are under lift irrigation, where big pump stations lift water for irrigation of crops on foothills and highlands. Unfortunately, most of the irrigation schemes needs revitalizing to reduce water losses because they are old and lack appropriate maintenance. This makes the schemes very inefficient.
60. In addition, intensive leaching of salt-affected irrigated land leads to high return flow from the irrigated land to the rivers causing degradation in water quality and water salinization. About 30% of the water intake from the rivers returns back and deteriorates the river water quality downstream. The increasing salinity of the river adversely affects yields of agricultural crops in downstream localities and household water supply, especially in rural areas. Revitalizing options for the irrigation schemes could include no-energy groundwater capture schemes; groundwater development; installing drip and sprinkler systems; shifting to low water-consumptive market-oriented crops, among others.

### **Box 3 - Building Capacity through select Regional Centers of Excellence**

**Center of excellence on biological agriculture.** Establishing Centers of Excellence on biological agriculture under the leading Universities of the Region could aim at: developing new types of bio-fertilizers, mineral fertilizers and bio-pharmaceuticals; generating and disseminating databases on environmental friendly technologies and products; certification for organic clean agricultural products; and capacity building.

**Center of Excellence on Salinity Management.** A Genetic Bank of plants tolerant to salinity is important to develop new varieties of crops to grow under saline environments. Establishing a laboratory of Plant Biotechnology and a laboratory of Plant tolerance to salinity could be very instrumental in the region.

**Center of Excellence on Advanced Irrigation Technologies.** There are needs in the region to establish centers with the capacity to produce irrigation technologies such as drip irrigation or micro-sprinkler technologies, offer demonstration to farmers and capacity building. Such centers could be established in collaboration with the Kazakh Research Institute of Water Management, Tashkent Institute of Irrigation and Melioration and Azerbaijan Irrigation Institute.

**Center of Excellence of hydro-chemical studies of glaciers of Central Asia.** Glaciers in the region have already shrunk by 20% due to climate change. Monitoring glaciers is very important for future supply of agricultural water users. The proposal is to establish a Center of Excellence in collaboration with the Institute of Water Problems of Kyrgyzstan, which will be capable of applying hydro chemical methods to monitor glaciers.

#### **4.4.2. Proposed priority interventions**

61. In response to the above-mentioned regional challenges faced in the agriculture sector, IDBG's interventions under the SPCA would focus on the following priorities with a regional perspective, in addition to the regional capacity building interventions (see Box 3). Joint programs will be

developed with other donors and partners. Besides, OIC's food security agenda will be promoted, and particular attention will be paid to the regional environmental issues, including those related to the Aral Sea basin.

- **Upgrading irrigation infrastructure and ground water management:** Old irrigation schemes are now inefficient in terms of both water-loss and energy-consumption. Lift irrigation covers 50% of the irrigated land in Uzbekistan and 40% in Tajikistan. Groundwater development, for irrigation purposes, mitigates competition for trans-boundary surface water resources; in lift irrigation projects areas; and in irrigated and residential areas prone to salinization and waterlogging;
- **Enhancing cooperation on trans-boundary river management** between CA states and with the neighboring states by promoting dialogue on trans-boundary water management (considering water quality and quantity issues, and need for improving monitoring system, these activities can be linked with Aral Sea Program);
- **Increased crop production** through diversification, development of a regional seed market, integrated pest management programs, pasture management, soil fertility management, and combatting livestock diseases;
- **Implementation of quality standards and certification**, including Halal certification (establishing laboratories for Agricultural Quality Standards and certification, including seed quality standards, certification of livestock and plant products, etc.);
- **Development of storage, distribution, and consolidation hubs** for agricultural and other products;
- **Value addition by supporting agro-processing industries and SMEs** to widen market opportunities and integrate into the global value chains;
- **Supporting risk and disaster management** and improving monitor systems at all levels;
- **Promoting knowledge sharing among the states** in potential areas of further development, including pest management and organic farming.

62. For more details on agriculture in the region, refer to Annexes 9 to 13, and the sector report on Agriculture in Section 2.

#### **4.5. Enabling environment**

63. A number of priorities are essential to create an enabling environment for the effective implementation of SPCA. These include private sector development, capacity development and Islamic Finance.

##### **4.5.1. Private sector development**

64. Private sector plays a critical role in the socio-economic development of the Central Asian countries. Although the private sector tends to be the main driver of economic growth, its contribution to economic development in the region's economies has remained stagnant. The region-specific economic and structural challenges including the sectoral diversification, competitiveness, employment and accelerated growth underscores the need for a more effective

supporting policies and interventions for private sector development in the region.

65. Private sector Entities of IDBG, namely, the Islamic Corporation for the Development of the Private Sector (ICD), the International Islamic Trade Finance Corporation (ITFC), and the Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC) are equipped with a wide range of investment tools and advisory services to maximize the utilization of the unrevealed potential of the private sector in Central Asia. In addition to ITFC's trade financing and trade promotion activities under the "trade" pillar of the SPCA, further interventions by ICD would help to support the private sector of Central Asia within the framework of the SPCA.
66. **Easing private sector access to finance, particularly SMEs:** The channel strategy of ICD bears appropriate mechanisms for addressing the financial requirements of the private sector. The strategy provides full-fledged framework to target banks and non-bank financial institutions of the region with the aim of extending Line of finance as well as equity investment. These investment modes are tailored to provide adequate financial and physical capital to SMEs which are the ultimate beneficiaries.
67. **Enabling the business environment and building capacity through advisory services:** The types of advisory services provided by ICD include guiding financial institutions on realigning their operations to comply with Shariah guidelines, helping governments and government-linked companies to gain access to capital, supporting capital markets and advising on large scale project finance transactions. ICD also has Industry and Business Environment Support (IBES) program, which is customized to address the capacity related constraints of private sector actors and governments at different levels. Through the IBES program, ICD can provide the following set of interventions:
- At national level, to support business environment enhancements;
  - At spatial level, to support special economic zones initiatives;
  - At sectoral level, to support value chain enhancements;
  - At firm level, to support firm productivity and innovation.
68. **Addressing various industry-specific needs through dedicated equity funds:** Currently, ICD is in the final stages of operationalizing two major funds that could to be very efficient tools for assisting the corporate sector and vibrant industries with initial and growth capital. These funds include Renewable Energy Fund, Food & Agriculture Fund, and SMEs Fund.
- **Renewable Energy Fund:** This is the first regional initiative of ICD that focused on the renewable energy sector of the Central Asia. ICD has been able to achieve a first close of US\$ 50M for the Fund that is managed in partnership with strong local partners: The Lancaster Group, a premier business group of Kazakhstan and National Agency for Technological Development (NATD), a Kazakhstani government institution for the development of renewable energy projects in the region. The Fund structure allows ICD to attract external capital and multiply the developmental impact of its investment in this strategically vital sector in Kazakhstan, Azerbaijan, Turkmenistan, Tajikistan, Kyrgyzstan, Uzbekistan, Turkey, Albania, Bosnia and Herzegovina and Kosovo.

- Food and Agriculture Fund: ICD is in the final stages of achieving its first close of US\$ 300 million in the Food & Agribusiness Fund which is expected to be launched in the beginning of 2016. The fund invests in equity and quasi-equity in selected food and agribusiness companies across the full value-chain to (a) generate attractive commercial returns; while (b) promoting the development of the food and agribusiness sector in the various target countries. The fund is set up in partnership with top tier regional private equity fund firm in Dubai and with knowledge partnership from Rabobank, a Dutch-based global leader in Food and Agribusiness financing and sustainability oriented bank.
- SMEs Fund: Given the vital importance of SMEs in a broad range of facets of development, ICD offers a solution of “access to finance” for its region’s underserved SMEs Sector through deployment of mezzanine capital in well planned, properly capitalized and skillfully managed businesses. Over the past two years, 2014-2015, ICD was able to launch two SMEs funds across selective high growth geographic markets (Saudi Arabia and Tunisia). Going forward, ICD looks for opportunities to launch similar funds in other countries of its operation, including the countries of Central Asia region.

69. Regarding investment and export credit insurance, the region’s benefit from ICIEC’s available products and services have been limited so far (see Box 4). Among six countries covered under the SPCA, only Kazakhstan is currently a member of ICIEC. ICIEC has already covered some trade credit insurance operations for imports of mining machinery and also extended reinsurance cover to the country’s Export Credit Agency for the export of diesel freight locomotives to Azerbaijan Railways. If other Central Asian countries join ICIEC. ICIEC can enhance trade and investments among these countries as well as from other parts of the world.

70. Studies reveal a lot of investment opportunities in Central Asia. As such, the investment promotion agencies (IPAs) of the region need to intervene in order to improve and invigorate the inflow of foreign direct investment to the sectors identified. The IDBG Investment Promotion Technical Assistance Program (ITAP) could assist in building the institutional capacity of IPAs in CAR. In addition, ITAP could provide technical assistance in the identification of investment opportunities; organizing targeted marketing campaigns and country promotion events related to the sectors identified. OIC's ongoing efforts to organize Investment Forums in Central Asia will complement IDBG's activities and interventions to mobilize and galvanize intra-OIC and international support for the implementation of the OIC Plan of Action for Cooperation with Central Asia.

#### **4.5.2. Capacity development**

71. Underpinning the successful implementation of the interventions above will be member countries that have the capacity to implement them. In view of this, IDBG shall support capacity development in the member countries to effectively implement the Program. The capacity development needs for all sectors of the SPCA can be divided into three broad categories:

- The need for stronger national policies and regional strategies to solve critical capacity development issues in the energy, trade, transport and agriculture sectors;

- The need for enhanced institutional capacities to sustain the development gains from interventions that will be undertaken as part of the SPCA;
- The need to update the skills of professionals in all four sectors in line with their regional contexts, as well as international best practices so that they are able to effectively and efficiently manage their institutional affairs and contribute positively to creating an enhanced enabling environment that will sustain development gains.

#### **Box 4 - How Central Asian countries can benefit from ICIEC**

If they become members, the countries will benefit immensely from ICIEC. The potential benefits are summarized under four main categories as follows:

##### **1) Equity Investments:**

ICIEC can insure political risks of foreign direct investors up to 15-20 years. Political risks are A) war, civil disturbance B) transfer restrictions C) expropriation D) breach of contract by the host government. The idea behind this insurance is to attract foreign direct investment (FDI) to member countries.

If an investor from anywhere in the world, is making a green-field investment in a member country or expanding its existing investment or purchasing shares from a third party of an existing investment, then, this investor is eligible for ICIEC's Foreign Investment Insurance (FII).

##### **2) Financing of Investments:**

The above-mentioned investments can be financed by foreign banks. Then the financing foreign banks are eligible for ICIEC's cover up to the financing amounts. If the financing is for a public project and the host country government itself or a sub-sovereign entity (such as municipalities) is the counter party of a loan agreement, then, ICIEC can cover the banks under the Non Honoring of Sovereign Financial Obligation (NHSFO) policy. Please note that for conventional financings ICIEC's cover is only for the principal amount of the loan. Project financings in infrastructure investments are eligible for ICIEC cover.

##### **3) Trade Credit Insurance:**

ICIEC can support its member countries in their exports of all goods and services to anywhere in the world. ICIEC insures the non-payment risk of the buyers due to commercial and political reasons. The tenor can be short-term or medium-term (up to 7 years).

ICIEC can support its member countries in their imports of capital goods (equipment, machinery) and strategic commodities (oil, gas, wheat, rice etc.) from non-member countries. Here, ICIEC insures the non-payment risk of the buyers in member countries due to commercial and political reasons. The tenor can be short-term or medium-term (up to 7 years).

ICIEC can support its member countries' banks in their exports operations by insuring Letters of Credit that they are receiving from all over the world. ICIEC insures the non-payment risk of the Letters of Credit issued by other banks due to commercial and political reasons. The tenor can be short-term or medium-term (up to 7 years).

##### **4) Support to local Export Credit Agencies (ECAs)**

ICIEC can support its member countries' exports by re-insuring the local ECAs. This way, the local ECA is increasing its capacity for more insurance. ICIEC can also extend technical support if the member country is planning to establish an ECA.

72. More specifically, in the short term, IDBG seeks to support the following capacity development

needs:

- Assist governments in building their agriculture, transport, energy and trade policies and strategies by providing advisory services and technical assistance grants;
- Improve energy efficiency by transferring expertise from other Member Countries through the Technical Cooperation Program (TCP) and Reverse Linkage (RL) modalities, specifically aiming to make better use of the existing hydropower potential as well as enhancing power trade between countries of the region;
- Improve agricultural productivity, specifically targeting efficient use of arable land, trans boundary water management, advanced irrigation and farming techniques by transferring expertise and technology from Member Countries through TCP and RL modalities;
- Contribute to the development of the transport sector by helping establish national quality infrastructure systems and support their management by bringing in expertise from other Member Countries on road infrastructure management and maintenance as well as implementation of road safety measures;
- Formulate regional RL and TA projects in order to design regional strategies to provide solutions for acute issues affecting cross-border trade, efficient and fair use of water resources, joint customs management, as well as other areas of regional interest;
- Develop capacity in existing national/regional Resource Centers (RC) in all four priority sectors identified under the SPCA. Whenever it is identified that RCs in particular sectors/sub-sectors are non-existent, IDBG will facilitate the creation of new ones. This will ensure that the development results achieved by the SPCA are sustainable in the long-term by the Member Countries' own institutions.

73. IDBG shall utilize the following instruments in order to fill the capacity development gaps of the Member Countries targeted by the SPCA:

- Provide TAs for the development of sector policies and strategies, as well as other capacity development interventions, at the national as well as regional levels;
- Enable the establishment of “reverse linkages” with institutions in Member Countries of choice for the transfer of expertise, technology and resources in order to solve specific development challenges;
- Provide grants from the Technical Cooperation Program as well as other suitable programs to build individual capacity by promoting expert exchanges, on-the-job training, and attending important networking events;
- Build capacity to enhance regional and international trade and align the existing business environment with international standards via the programs of IDBG entities such as ICIEC, ICD and ITFC.

74. While using IDBG's regular business models for the capacity development interventions, a tripartite cooperation mechanism will be also set up between the IDB Group, Member Countries, and development partners. The modus operandi of this cooperation mechanism is further

explained in the following chapter on financing and implementation.

## 5. FINANCING AND IMPLEMENTATION

### 5.1. Indicative financing

75. The SPCA shall support projects with high regional impact, by using various conventional and innovative financing modes, including ordinary and concessional resources, PPP financing, direct investment, as well as other mobilization mechanisms such as co-financing, establishment of special trust funds and project development funds, issuing sukuk, and other off-balance sheet resources. Total financing estimated for the Program amounts to US\$ 6 billion as detailed on table 2.

Type of Financing	Annual Approval	Total
Ordinary Capital Resources	500	2,500
Regional Concessional Allocation (including mobilized concessional resources)	75	375
Trade Finance	250	1,250
Private Sector Financing	100	500
Resource Mobilization/Co-financing		1,375
<b>Total</b>	<b>925</b>	<b>6,000</b>

Source: IDB Staff Projections

76. The program aims to raise an average of US\$ 500 million per year from the Bank's ordinary capital resources (OCR) during the 5-year implementation of the SPCA considering: (i) the Bank's positive approval trend in the region during the past 20 years, and (ii) the existing pipeline in the eligible areas of intervention based on the Bank's recent programming activities in the region. Therefore, total OCR financing is projected to amount to US\$ 2.5 billion for the five years of the Program.

77. The Bank is assumed to earmark 15% of the SPCA financing envelope to concessional resources<sup>3</sup> for eligible regional activities, including financing infrastructure and agriculture development projects, providing technical assistance, preparing feasibility studies, and capacity building. Five percent of the concessional funds, totaling US\$ 18.75 million for the 5-year period, will be allocated for soft-type non-lending interventions as a grant component of the total financial envelope.

78. For regional projects in infrastructure (transport & energy) and agriculture development, the IDB will provide ordinary and PPP financing coupled with soft loans and feasibility study grants for

<sup>3</sup> The proposed indicative financing envelope and instruments, including special fund for regional projects, are fully consistent with the practices of other MDBs in effective promotion of regional cooperation. For instance, the share of concessional and ordinary funding earmarked for regional projects at Asian Development Bank (AsDB) reached nearly 25% of the total approvals in 2010 before settling back to 22% in 2014. AsDB's medium-term Strategy 2020 targets to increase the share of regional operations to 30% of the total by 2020, mainly by supplementing conventional modalities with innovative financing with private sector and using PPP models. Another comparator financial institution, African Development Bank (AfDB) also prioritized promoting regional cooperation in Africa by earmarking around 22% of its funding to regional projects, in accordance with its Regional Integration Policy and Strategy for 2014-2023.

targeted Member Countries. Resource mobilization efforts and co-financing with international partners, including the Arab Coordination Group, UN Agencies, European Union, Asian Development Bank, World Bank (through the Deep Dive Initiative) and philanthropic engagement (through the Lives and Livelihood project with the Gates Foundation) is estimated to yield over US\$ 1 billion with concessional and non-concessional contributions.

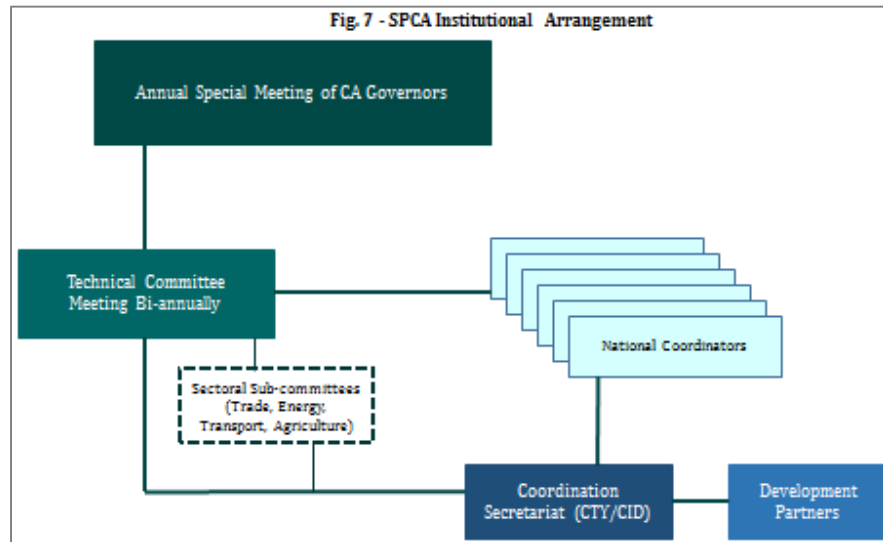
79. IDBG shall provide trade financing lines to banks, import and export financing to corporations, structured commodity trade financing, and trade related technical assistance interventions in order to promote intra-regional trade and trade with other IDB Member Countries. This is estimated to be US\$ 1.25 billion in total for the implementation period.
80. IDBG shall support private sector development in the region through equity participation in Shariah compliant leasing companies, investment companies and banks, providing lines of financing for SME development, providing Shariah compliant microfinance services, and making joint investments in the private sector together with national Governments and international investors to lower the risks and to leverage resources.
81. IDBG shall also introduce and support applicable national and regional Islamic Financial Services. It is envisaged that Sukuk will be issued for at least two projects in the region during the program implementation. Besides, IDBG shall support the establishment of Shariah compliant leasing companies, Shariah compliant investment companies and Banks through equity participation, providing lines of financing, and leveraging resources of its partners in the Gulf countries. Technical Assistance Grants will be provided to the Governments interested in introducing or expanding Islamic Financial Services. As of now, Tajikistan and the Kyrgyz Republic are introducing Islamic Financial Services and establishing relevant Islamic Financial Service Institutions. Kazakhstan has also declared its interest in becoming the regional center for Islamic Financial Services as a part of Astana International Financial Center.
82. In addition to financing, SPCA will support the Member Countries with non-financial support including policy-relevant knowledge products and reverse linkage opportunities.

## **5.2. Program implementation**

83. Drawing from experience and lessons learnt from similar initiatives in the Region and beyond, the following principles will guide the implementation of the SPCA:
  - effectiveness and simplicity, to minimize unnecessary formal arrangements and to maximize practical results;
  - fairness, ensuring shared benefits for all the countries involved;
  - flexibility in accommodating the unique and specific conditions and requirements of each participating country; and
  - Sustainability.
84. The Program will be implemented through regular fora of joint high-level (policy) and technical (operations) (Fig. 7) discussions by all stakeholders, including government representatives, IDB and partner organizations on the overall direction and key policy decisions. The six Ministers of Finance (IDB Governors) of the Region will meet annually to give policy direction, and overall strategic guidance as well as decide on new regional initiatives (e.g. programs, projects,



activities).



85. At the operational level, a Technical Committee made up of senior officials of the six member countries, will meet bi-annually to implement the decisions of the Special Meeting of CA Governors. Accordingly, the main responsibilities of the Technical Committee will include: reviewing and assessing regional, cross-sectoral and other operational issues, and making recommendations to the Ministerial-level Meetings for approval, in addition to preparing for the Special Meetings of CA Governors. Four sectoral sub-committees<sup>4</sup> will be formed. They will be tasked with preparing the draft sector action plans for the endorsement of the Technical Committee. Teams of experts would support and backstop the Technical sub-committees when necessary.
86. To support the administration of the Program, the Bank will create a permanent Secretariat that will be responsible for providing technical, administrative and coordination support for program implementation, including organization of policy and operational level meetings. It will also prepare annual progress reports on the SPCA to be presented to the Special Meeting of SPCA Governors.
87. To ensure the effective follow-up at the national level, each country will designate a National Coordinator for the SPCA program whose key role will be to ensure effective coordination among concerned government agencies and departments as well as other interested parties in matters related to the program. The National Coordinator should be in a senior and authoritative position to more effectively coordinate all the stakeholders. The Coordinator should also dedicate all his/her energy on delivering the objectives of the SPCA, and not distracted by too many other functions. The National Coordinator will be the main contact person on technical and operational matters with IDB Group.
88. The meetings of the Technical Committee will serve as a forum to discuss the progress, review the tentative SPCA project pipeline, share good practices, disseminate knowledge products, and

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<sup>4</sup> Trade, Energy, Transport and Agriculture

mobilize further resources from the international development finance community. This will help to ascertain that the program is on course and to institute remedial actions, if necessary, to reset the course of implementation. Mechanisms for knowledge exchange through quarterly meeting and frequent informal knowledge exchange would be built into the Program.

89. Projects identification will be done through development of Sector-Specific Action Plans by the Technical Committee in close consultation with the Governments and IDB Group including the Regional Office in Almaty at its bi-annual Stakeholder Meetings. The Sectoral Action Plans will consist of regional projects and non-lending activities with defined outputs and timelines for delivery. The national components of the Action Plans as well as selected projects will be based on the needs, potentials and national development plans of the Member Countries. The selected regional projects will feature in national priorities and captured in Member Country Partnership Strategies (MCPS) or country programs.
90. To ensure the complementarity between the national level operations and ongoing and future regional initiatives, regional projects identified by the Sectoral Action Plans will follow the existing project cycle of the Bank with higher priority in resource allocations. Based on an agreed eligibility criteria, a special screening process will classify the projects under the following three main categories: (i) multi-country regional investment, (ii) single-country investment with cross-border/regional impact, (iii) soft regional partnership initiative. The concessional element of the total financing will vary depending on the type of the intervention.
91. The interventions will focus on the areas where countries' interests are compatible. The built-in governance process will ensure active participation of the Member Countries in the decisions, which essentially aims at building country ownership. The key elements of the governance process will be trust, transparent communication, joint monitoring, and clear definition of the roles of the national, regional and international institutions.
92. Whenever feasible, tripartite arrangements, as found in technical cooperation and reverse linkage projects, will be used to deliver soft-type non-lending interventions. The tripartite arrangements will consist of Member Countries willing to transfer knowledge, expertise and resource to Member Countries of the SPCA to address development challenges through cooperation and capacity development. IDBG will enable and facilitate these exchanges by providing seed funding, as well as by leveraging resources from development partners and donor community. The tripartite cooperation mechanism will be instrumental in leveraging technical and financial resources from the SPCA partners.
93. Calls for project proposals, for a predetermined time period will be made with project selection and appraisal undertaken by a project selection committee comprising the relevant IDBG Departments/Complexes/Entities and partnering development organizations. The funding decision will be based on an agreed selection criteria and project implementation will be monitored based on the implementation partnership agreements with the project owners and implementation support agencies.

## 6. MONITORING AND EVALUATION

94. The over-arching goal of SPCA is to enhance growth, competitiveness and trade across the region. The progress towards competitiveness will be monitored using the World Economic Forum's (WEF) Global Competitiveness Index (GCI) for the countries<sup>5</sup> covered under this index. The GCI is one of many definitions of competitiveness that abound in the literature. Yet, its popularity augmented by the traction that the World Economic Forum has garnered over the years, has made it one of the most quoted references on competitiveness. It is in this regard that the definition of the WEF is used for measuring competitiveness for SPCA.
95. SPCA will directly affect economic growth (GDP) through increased agricultural production (both of bulk commodities as well as value addition to agricultural production) and SME output. Similarly, SPCA's contribution to increased trade will be monitored through increased trade of agricultural and SME products financed through the Program. The main interventions of the Program will be in infrastructure because as seen above, even for agriculture, the rehabilitation of irrigation systems to reduce water-loss will be key. This will be in addition to the energy and transport interventions.
96. Infrastructure is one of the twelve pillars<sup>6</sup> of the GCI identified by WEF as determinants of competitiveness. This pillar looks at the quality of overall infrastructure, which is informed by the quality of roads, railroad, port, air transport, electricity supply, available airline seats, mobile phones subscriptions and fixed-telephone lines. Of the 12 pillars, the first four are considered basic requirements, while the next six are efficiency enhancers and the last two are innovation and sophistication factors.
97. In terms of development stages, countries are grouped according to the factors driving their development: factor-driven, efficiency-driven, innovation-driven and transitions between two stages. Kyrgyz Republic and Tajikistan are among 35 economies categorized under the first, factor driven process. Meanwhile, Azerbaijan and Kazakhstan, along with 14 more economies, are in transition from the factor-driven to the efficiency-driven (stage 2). Innovation-driven is stage 3. Different weights are given for the factors of development<sup>7</sup>. For the two stages relevant to the Region, infrastructure is a basic requirement and is critical for a country's competitiveness.
98. By positively affecting the infrastructure architecture of the region, SPCA will directly contribute to the competitiveness of the member countries in the region. As baseline, the 2015-2016 Global Competitiveness Report data on the four countries (see table 3), will be used. SPCA is expected to contribute to the increase in the index and improve the ranking of each respective category

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<sup>5</sup> The WEF GCI covers Azerbaijan, Kazakhstan, Kyrgyzstan and Tajikistan. Turkmenistan and Uzbekistan are not covered.

<sup>6</sup> The pillars are Institutions, Infrastructure, Macroeconomic environment, Health and Primary Education, Higher Education and Training, Goods market efficiency, Labour market efficiency, Financial market development, Technological readiness, market size, Business sophistication and Innovation.

<sup>7</sup> Weight for basic requirements is 60% for stage 1 and 40-60% for Transition to stage 2; weight for efficiency enhancers is 35% for basic requirements and 35-50% for Transition to stage 2; and that for innovation and sophistication factors, the weights are 5% for stage 1 and 5-10% for the transition stage.

over time.

**Table 3- Value and rank (out of 140) of infrastructure pillar**

	Azerbaijan		Kazakhstan		Kyrgyzstan		Tajikistan	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Quality of overall infrastructure	4.8	41.0	4.2	62	3.3	104	3.8	85
Quality of roads	4.0	72.0	3.1	107	2.6	131	3.6	82
Quality of railroad infrastructure	3.8	41.0	4.2	27	2.4	77	3.4	46
Quality of port infrastructure	4.3	61.0	2.9	114	1.5	138	2.1	133
Quality of air transport infrastructure	5.0	43.0	4.0	85	2.9	126	4.1	78
Quality of electricity supply	4.9	65.0	4.6	74	2.9	115	3.2	106

Source: The Global Competitiveness Report 2015-2016, World Economic Forum

99. Within the context of the Sustainable Development Goals (SDGs) and targets, the effective implementation of SPCA will positively contribute towards the achievement of nine<sup>8</sup> out of the 17 goals and about 30 of the 170 targets. Furthermore, the targets and indicators of the projects in the Action Plans will be inspired by the targets and localized indicators of the SDGs for the member countries.

## 7. CONCLUSION

100. In order to address key regional development challenges in Central Asia, the Islamic Development Bank Group's support under the SPCA shall focus on trade, transport, energy, and agriculture sectors, along with the cross-cutting areas of private sector development and capacity development. An indicative package of US\$ 6 billion is estimated for the SPCA implementation for the period 2016-2020. When fully and effectively implemented, SPCA is expected to result in increased production and value addition of agricultural, industrial and SME products, increased trade within the Region, increased regional energy security, and an expanded transport network in the Region. All these would be contributing to enhanced competitiveness and economic growth.

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<sup>8</sup> SDG 1: End poverty in all its forms everywhere; SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture; SDG 6: Ensure access to water and sanitation for all; SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all; SDG 8: Promote inclusive and sustainable economic growth, employment and decent work for all; SDG 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation; SDG 11: Make cities inclusive, safe, resilient and sustainable; SDG 12: Ensure sustainable consumption and production patterns; and SDG 17: Revitalize the global partnership for sustainable development.

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## ANNEXES

### Annex 1 – Sustainable Development Goals

Sustainable Development Goals		Targets
Goal 1	End poverty in all its forms everywhere	7
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	8
Goal 3	Ensure healthy lives and promote well-being for all at all ages	12
Goal 4	Ensure inclusive and quality education for all and promote lifelong learning	10
Goal 5	Achieve gender equality and empower all women and girls	9
Goal 6	Ensure access to water and sanitation for all	8
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all	5
Goal 8	Promote inclusive and sustainable economic growth, employment and decent work for all	12
Goal 9	Build resilient infrastructure, promote sustainable industrialization and foster innovation	10
Goal 10	Reduce inequality within and among countries	10
Goal 11	Make cities inclusive, safe, resilient and sustainable	10
Goal 12	Ensure sustainable consumption and production patterns	11
Goal 13	Take urgent action to combat climate change and its impacts	5
Goal 14	Conserve and sustainably use the oceans, seas and marine resources	10
Goal 15	Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss	12
Goal 16	Promote just, peaceful and inclusive societies	12
Goal 17	Revitalize the global partnership for sustainable development	19
<b>Total Targets</b>		<b>170</b>



## Annex 2- OIC Plan of Action for Cooperation with Central Asia



### I. PRIORITY OBJECTIVES AND ACTIONS

1. Agro-Industrial Development
  - Promote FDI for export commodities;
  - Organize an International Investment Forum building on IDB Group experiences;
  - Provide necessary technical assistance within the framework of Investment and Technical Assistance Programme (ITAP);
  - Regional Food Security Programme (RFSP);
2. Transport Sector Development
  - Promote multi-modal regional transportation network to open up the region to world markets;
  - Execute on-going Railway Projects in the sub-region:
    - Kazakhstan-Turkmenistan-Iran Joint Railway,
    - Railway link Dushanbe - Mazari Sharif – Heart
    - China-Kyrgyz Republic-Uzbekistan railway
    - Almaty- Bandar Abbas line
    - ECO/ IRU Silk Road Project
  - Mobilize funding for reconstruction of a motorway Bishkek-Naryn-Torugart; Taraz-Talas-Suusamyр motorway; as well as Karakorum Highway;
3. Trade Promotion
  - Support projects related to Trade that have been identified based on the ITFC Aid for Trade (AFT) initiative for Central Asia;
  - Popularize ICIEC' export credit insurance, as well as ITFC trade finance services;
  - Promoting conditions for trade in strategic goods, including cotton and grain, as well as resolution of problematic issues on water and energy resources;
  - Developing a special programme for private sector participation in the economic transformation of Central Asia by strengthening public private partnership;
  - Developing cooperation with Islamic financial institutions and companies;
  - Facilitation of transit of goods and services between OIC Member States and Central Asia;
  - Organizing regional Trade Fairs for Central Asian Countries;
  - Promoting Trade and Investment between the Central Asian Member States and other OIC Member States through staging special Forums;
  - Organizing sensitization seminars on TPS-OIC Agreements, as well as providing assistance in the multilateral negotiations;
  - Developing training programmes in the field of international trade;
4. Poverty Alleviation, Vocational Training and Capacity Building
  - Design a programme with participation of both Private Sector and Civil Society in Central Asia for micro-credit, woman empowerment and vocational training for the youth including OIC-VET Programme, as well as combating Malaria, HIV/AIDS, and Tuberculosis;
5. Research, Education, Science and Technology

- Establish networking among Centers of Excellence in Central Asia to promote science, economic research and technological transfer within the region, including expansion of the relevant OIC scholarship scheme;
  - Provide grants and scholarships to researchers in social and exact sciences from Central Asia;
  - Support the universities from Central Asia which are Members of the Federation of Universities of the Islamic World (FUIW);
  - Developing a regional plan for combating illiteracy and providing expertise and content material with a focus on vocational literacy;
6. Culture/ Art and Tourism
- Explore the possibility of staging the OIC Festival of Art and Culture to develop potentials in Central Asia and encourage culture tourism building on the expertise of IRCICA, ISESCO and ECO respectively;
  - Elaboration of an action plan on cultural cooperation with Central Asian Countries;
  - Support the restoration of prominent cultural monuments and the ones in danger and pay special attention to manuscripts;
  - Complete the restoration of the Mosque of Sultan Beybars in Cairo;
7. Health sector cooperation
- Encourage and improve multidimensional advocacy on polio eradication with the aid of various OIC institutions, including Islamic Fiqh Academy, and explore donors' support for polio vaccine supply and delivery;
    - Promote advocacy on maternal and child-care.
8. Confidence Building Measures:
- Fostering closer socio-economic collaboration between Central Asian Member States and other OIC Countries with a view to promoting socio-economic renewal and strengthening peace, security and integration in the entire OIC community.
  - Improving the legal bases for cooperation against organized crime, human trafficking, illegal migration, etc.
  - Conducting conferences on the fight against crime, organizing training courses, experience and information exchange between law enforcement agencies in the OIC Member States.

## II. IMPLEMENTATION MECHANISM

For the purpose of the implementation of the Plan of Action the following mechanism is agreed:

- **Establishment of Executive Committee:**

- Mandate:

1. Identify common projects within the priority sectors;
2. Steering and Monitoring the implementation of programmes under the Plan
3. Mobilize and establish multi-stakeholder partnerships both intra-OIC and other partners.
4. Organize OIC Economic Forum to publicize, create awareness and mobilize resources for the various activities in this Plan of Action. The Forum will include, among other invitees, members of Private Sector and Civil Society.

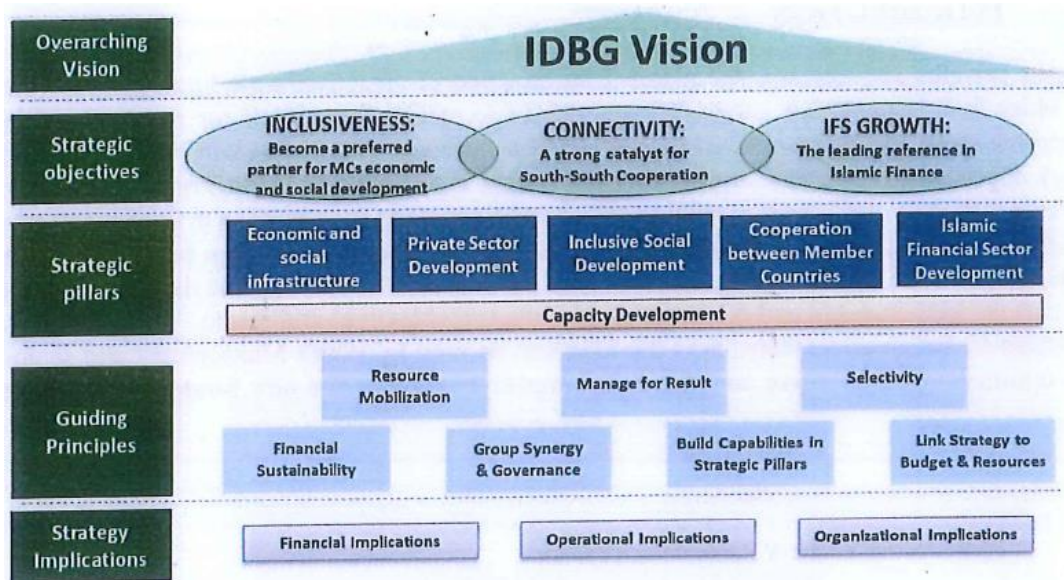
- Composition:

1. OIC countries in Central Asia (Kazakhstan, Kirgiz Republic, Tajikistan, Turkmenistan and Uzbekistan);
2. OIC institutions (OIC General Secretariat, COMCEC, COMIAC, SESRIC, IRCICA, IDB, ICDT, ISESCO and ICCI);
3. The Executive Committee may co-opt in other OIC Member States and Institutions as may be required from time to time;

- Chairmanship:  
Rotating chairmanship among the Five Central Asian Member States
- Convening of the Meetings:  
The Convener of the meeting is OIC General Secretariat in consultation with the Chairman whose country will host the Executive Committee.
- **Identified funding sources for the various programmes and projects as OIC Member States, OIC Institutions, Regional and International Development Partners, Private Sector and Philanthropists.**
- **Timeframe for implementation of Action Plan is 5 years;**

**Jeddah,  
24 April 2011**

## Annex 3 – IDB 10-Year Strategy Framework



## **Annex 4 – Trade in Agriculture and Accession to Regional and Global Markets**

CAA has tremendous underutilized potential to develop a robust agriculture and agro-processing sector, foster trade within the region, and well beyond. While countries have targeted food self-sufficiency as a priority for many years, the different agro-climatic conditions within the region imply that there is very high production complementarity and significant potential for trade in agricultural commodities based on comparative advantages between countries. In addition, there are relatively well-established domestic consumer markets for high value cash crops within each state in the region; food consumption is increasing in response to population growth, which makes internal markets important.

The region has under-developed markets while its potential is much higher. Most countries focus their commodity exports on few strategic crops. High percentage of commodity export belonging to one crop makes some of the states especially sensitive to risks, such as climate change, droughts, weeds and diseases. Monoculture is also one of the causes of land degradation in the region.

Trade limitation between the countries has its impact on agricultural producers, because it limits their revenues. Trade limitations with states outside the region result in other supplies occupying those markets, which may have long-term consequences and significantly reduces the potential to return to those markets. Moreover, countries of the region compete for buyers on the same external markets. Rather than competition, regional specialization could be reinforced to strengthen business enterprises and make them more competitive with other food suppliers for markets of Russia, EU, OIC and India. Unfortunately, governments in the region use sanitary and phyto-sanitary reasons to justify import restrictions, while the real reasons lie more in the area of inter-governmental competition.

Export of fresh vegetables, fresh and dry fruits are mainly driven by small and medium enterprises (SMEs), individual farmers, which have access to markets in Russia and Kazakhstan. The expansion in horticultural and vegetable exports to Russia may become a significant additional source of income for farmers due to recent EU embargo on exports of agricultural products to Russia. However, disorganized export of fruits and vegetables may not be able to meet the expanded market requirements of Russia. It would be necessary to reconsider: (a) trade and tariff policies regulating the export of food products and limiting actors of the market; (b) the needs to ensure the presentation of the products in order to meet the standards. Most of the regional exports of fruit and vegetables involve fresh produce that is subject to sanitary and phyto-sanitary controls imposed by importing countries. Despite these difficulties, there are good opportunities for export of agricultural products. Another under developed high potential trade opportunity exists for fruits and vegetables with the Gulf and other OIC countries.

## **Annex 5 - Multilateral Development Institutions and Other Initiatives in the Region**

### **Select Multilateral Development Institutions**

*World Bank:* The World Bank cooperation in the Region centers around four main pillars: i) enhancing competitiveness and employment, ii) strengthening the financial sector; iii) addressing the infrastructure gap; and iv) building capacity.

While the Bank finances projects mainly at the country level, few projects with a regional dimension are currently being implemented. The South-West Roads Project (SWRP) is a salient example. It is one of the bank's largest projects in financial terms (US\$2.1 billion) and consists of upgrading and reconstructing 1,150 km road sections along with the West Europe-West China (WE-WC) corridor.

Other similar projects such as the Central Asia Road Links Project, which aims to enhance transport connectivity between Kyrgyz Republic and Tajikistan, are under preparation.

#### *European Bank for Reconstruction and Development:*

EBRD work in CAR consists of two main objectives: i) easing the transition to a market economy; and ii) promoting innovation, growth, and transparency. As such, the Bank intervenes primarily in the private sector (banks, businesses, industries) and operates in various sectors such as agribusiness, and transportation. Various projects are currently underway.

In Kazakhstan, the EBRD provided 180 million dollars to the ongoing South-West Corridor Road project of the Central Asia Regional Economic Cooperation Program (CAREC). The project aims at promoting regional integration and easing the flow of goods between Kazakhstan, the Russian Federation, the People's Republic of China, and Europe.

Among future projects in CAR, the Bank is further considering extending a sovereign loan of up to 1.5 million euros to support the Batken Water Sub-Project in the Kyrgyz Republic.

#### *The European Union:*

Considering Central Asia as a region of strategic importance, the European Union (EU) remains committed to sustaining a strong, durable and stable relationship with Central Asian countries. The main objectives and priority areas of the EU Strategy for Central Asia that are consistent with the SPCA objectives include strengthening trade and energy links between the EU and Central Asian countries and sustainable management of natural resources.

In trade facilitation, the EU has an important role in promoting a reliable and attractive investment climate, interconnections with the international business community and regional integration, thus building on progress in WTO accessions. The EU plans to increase exchange of experience and know-how in innovative technologies, notably in the field of energy efficiency, agriculture and rural development, to encourage the sustainable development of the region.

Regarding the energy and transport sectors, the cooperation between the EU and Central Asia prioritizes the integration of the Central Asian countries among and between each other and into international markets and corridors. The EU will continue to seek to expand the Southern Energy Corridor to Central Asia and to further promote the EU's multilateral energy initiatives. The EU also stands prepared to support the development of renewable energy and energy efficiency in Central Asia, including through the implementation of cost-reflecting energy tariffs to spur a rational use of

energy. The EU is ready to offer its experience and know-how to promote the adoption of high safety, security and environmental standards in all transport modes and to facilitate links along the Europe-Caucasus-Central Asia transport corridor. Energy and transport cooperation with Central Asia should also build upon existing synergies with the relevant initiatives.

*The United Nations:*

The United Nations (UN) agencies in Central Asia are very active in the SPCA areas of focus and have initiated several transport-and trade-related activities. Featured UN initiatives include the *United Nations Special Programme for the Economies of Central Asia* (SPECA), which was launched in 1998 to strengthen sub-regional cooperation in Central Asia and its integration into the world economy. The countries of SPECA are Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The United Nations Economic Commission for Europe (UNECE) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) jointly provide overall support to the Programme. SPECA focuses on regional dialogue and research in such areas as aid for trade, regulatory barriers to trade, road safety, paperless trade etc.

ESCAP also hosts the secretariats of the *Asian Highway Network* and the *Trans-Asian Railway Network*, which aim at improvement of the highway and railway systems in Asia. Altogether there is a plan to have eight transcontinental road routes, some of which cross Central Asia from east to west (route AH5) or from south to north (route AH7). In addition, there are many sub-regional routes in each part of Asia including Central Asia.

*Eurasian Economic Community:*

EurAsEC is an international Economic Organization regrouping Belarus, Kazakhstan, Kyrgyz Republic, Russia, Tajikistan, and Uzbekistan. Its objectives center around four key areas: transport, energy, workforce migration, and agriculture.

EurAsEC activities include harmonizing tariffs and simplifying customs procedures, addressing water management issues and shortages in energy supply, developing a common agrarian market, and providing better safeguard for migrant workers.

*Economic Cooperation Organization:*

Established in 1985, ECO main objective is to promote economic development and integration, and foster technical and cultural cooperation among its 10 Member Countries. ECO financed various projects in trade liberalization, food security and alternative energy sources.

## **Annex 6 - Ongoing Regional Initiatives and Energy Trade Patterns in Central Asia**

Detailed regional studies have been conducted to identify actions that could be undertaken at little cost to help re-establish some trade patterns. These studies include detailed national analyses of the benefits and risks of trade, needed investments to increase alternative trade routes, and assessing the potential for tradable reserves and strengthening of information management of CAPS members. Besides, power export from Central to South Asia has been under active study for over a decade and its realization is beginning to seem imminent. Some examples of regional cooperation projects (at different stages) are given below.

Baku-Tblisi-Ceyhan (BTC) Crude Oil Pipeline (in operation): Detailed studies and investment planning for the BTC Crude Oil Pipeline Project date back to 1990s. It was completed and has been in service since 2006 and is being used to meet the energy needs of participating countries as well as for energy export to Europe. The history of successful development of the BTC Pipeline, which is used for the export of crude oil from Azerbaijani Caspian Sea to the Mediterranean coast of Turkey through Georgian territory, offers useful lessons for regional cooperation in the energy sector. The key ingredients of this project's success are: (i) Availability of substantial, export-dedicated volumes in Azerbaijan; (ii) Commercial championing; (iii) Confirmed economic viability, especially in the absence of viable alternatives; and, (iv) Strong political support in all relevant countries.

Turkmenistan-Afghanistan-Pakistan-India (TAPI) Gas Pipeline: The TAPI project aims to export up to 33 billion cubic meters per year of natural gas, through a proposed 1,800-kilometer pipeline, from Turkmenistan to Afghanistan, Pakistan and India. TAPI gas pipeline, reached some important milestones recently. With the completion of the project, Pakistan will be in a position to increase its power generation capacity by importing gas from Turkmenistan. The availability of natural gas will increase power generation prospects in Afghanistan as well.

Central Asia-South Asia Regional Electricity Market (CASAREM) Development Program: CASA-1000 Power Transmission Line is the first phase of the CASAREM development program. The project will transfer surplus generation in Kyrgyz Republic and Tajikistan during the summer months just at the time when there are huge shortages in Pakistan and Afghanistan. Being an electricity project that integrates four countries, it is much more technically complex than an oil pipeline as it involves HVAC link between Kyrgyz and Tajikistan (the exporters) and HVDC link between Tajikistan, Afghanistan and Pakistan. An important undertaking under CASAREM is TUTAP (the interconnection between Turkmenistan – Uzbekistan – Tajikistan – Afghanistan – Pakistan) which is a long-term program having several sub-projects. The program is still in early stages of formulation. When implemented it would result in a broad energy market covering the entire Central Asia and South Asia. TUTAP is based on the idea that power supply from the thermal power sources in Turkmenistan and Uzbekistan, and from hydropower resources in Tajikistan and Kyrgyz Republic, can be connected to a national grid in Afghanistan, for meeting Afghanistan's power requirements, and for power transfer to Pakistan on a "round-the-year" basis. The TUTAP program supplements the on-going CASA-1000 project and, offers an alternate link between Uzbekistan and Tajikistan thus improving the possibility of meeting the latter's winter shortages.

Turkmenistan Gas Export to China: In 2007, Turkmenistan signed an agreement with the Peoples' Republic of China (PRC) to export 30 billion cubic meter of gas to PRC annually for 30 years. The final



phase of project will result in a pipeline capacity to transport 25 billion cubic metres of natural gas per annum. The pipeline, which passes through Kazakhstan and Uzbekistan, has brought an opportunity for these countries to also supply gas to China.

Azerbaijan – Iran – Turkmenistan Gas Trade: Iran is a significant market for exports from Turkmenistan, receiving just under 30 percent of all Turkmen natural gas exports in 2011. Between July 2011 and June 2012, Iran's imports from Azerbaijan and Turkmenistan have averaged 28 million cubic meter per day. Imports of Turkmen natural gas are essential to Iran's ability to meet both seasonal peak demand and industrial demand in northern Iran. It is possible that imports from Turkmenistan may grow in the coming years. Turkmen export volumes to Iran exceed Iranian export volumes to Turkey, and analysis suggests that Iran has flexibility to substitute some of the volumes intended for export for those it currently receives from Turkmenistan. Besides, there is a reasonable amount of gas trade between Azerbaijan and Iran. Iran's exports to the isolated Azerbaijani enclave of Nakhchivan averaged just over 700,000 cubic meters per day from July 2011-June 2012. In exchange, Azerbaijan exports natural gas to Iran's Northern provinces.

## **Annex 7 - Involvement of the MDBs and Regional Organizations in the Energy Sector**

The IDB Group, WB Group, ADB, EBRD, and EIB are among the active MDBs involved in the energy sector of the Central Asia. In term of regional initiatives, the Central Asia Regional Economic Cooperation (CAREC) is playing a lead role in regional cooperation on energy. CAREC has a membership of 10 Central Asian countries, of which 8 are IDB Member Countries (excluding PRC and Mongolia). The following are among the CAREC Program's energy sector priorities:

- a. Developing the Central Asia-South Asia Energy Corridor,
- b. Resolving regional energy dispatch and trade issues,
- c. Mobilizing funds to build energy assets.

Based on the advancements in electricity transmission technology that are continuously increasing the capacity for long-distance transportation of power, the UNESCAP has presented the concept of an Asian Energy Highway to achieve the vision of an interconnected electrical network covering entire Asia. This concept basically states that once they are interconnected, Asia's sub-regions will be able to benefit through the sharing of entire Asia's energy resources. The sub-regional linkages between Central Asia and South Asia, and between South Asia and South East Asia are already being developed.

The SPECA Program under the United Nations Economic Commission for Europe was established in 1998 by the presidents of Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan. Azerbaijan joined it in 2002 and Afghanistan in 2005. It is supported jointly by the UNECE and UNESCAP. A working group of SPECA developed the cooperation strategy for the rationale and efficient use of Energy and Water Resources in Central Asia. Under the Program, information resources and knowledge sharing of energy sector developments is taking place.

Economic Cooperation Organization (ECO) has also studied electricity interconnections among the ten ECO member countries.

## **Annex 8 - Multilateral and Bilateral Initiatives in the Region on Transport**

Asian Development Bank, Islamic Development Bank, World Bank, European Bank for Reconstruction and Development are key players in development of transport infrastructure and logistical systems in Central Asia. The IMF is a key player in the development of trade policy in the region. UNDP is instrumental in institutional upgrade of the national trade and transport systems. Activities of these organizations are coordinated under the umbrella of CAREC. In addition, there are few other international organizations, which provide financial support to different activities in the region, including OPEC Fund for International Development. Economic Cooperation Organization (ECO), EEU and Shanghai Cooperation Organization (SCO) are other major initiatives in regional transport and trade.

Many important recent initiatives in the area of trade and transport have been supported by major countries outside the region. China has been instrumental in upgrading and diversifying the transport infrastructure in the region by financing and implementing construction of major pipelines, roads, railways. USA financed construction/rehabilitation of some infrastructure objects, too (e.g. bridges over Vaksh river between Tajikistan and Afghanistan). Governments of Gulf countries provide substantial financial support for roads construction and other infrastructure projects. Republic of Korea supported the development of Navoi air and multi-modal hub in Uzbekistan. The governments of USA, Germany, Switzerland, Japan and some other countries as well as European Union provide massive technical assistance in trade and transport policy development and capacity building.

## **Annex 9 - Key Crops and Nutrition Patterns**

All states of CAR have wheat based nutrition system. Despite attempts by other states in the region to develop their own wheat production, high quality rain fed wheat produced in northern Kazakhstan is highly demanded within and outside of the region, including in Afghanistan.

The independent states have chosen different approaches to agricultural policies. Uzbekistan and Turkmenistan boosted their wheat respective production in order to achieve grain self-sufficiency after their independence but still maintained cotton production at high levels. Wheat production is marginal in Tajikistan and Kyrgyz Republic, these states form their food policies on import of wheat from Russia, Ukraine and Kazakhstan. Except Kazakhstan, the other countries grow irrigated winter wheat.

Fruits and vegetables represent another important component of the nutritional ration. The region is generally self-sufficient in producing consumed fruits and vegetables and is a significant exporter of fresh fruits, fresh vegetables and dried fruits to Russia. However, the supply of fresh fruits and vegetables is highly seasonal and the peak consumption is in summertime. Lack of support infrastructure such as greenhouses and cold storage facilities limit the availability of most agriculture produce in winter and early spring, thus substantially raising prices.

Despite tremendous potential, only Turkmenistan produces meat in quantity which meets nutrition standards. Even in Kazakhstan which has high potential for livestock, meat production covers 82% of nutrition requirements. The coverage of meat consumption, probably, is unaccounted in all states because most of the families in rural areas have unaccounted cattle, sheep and poultry. Nevertheless, there is insufficient meat consumption in the region, especially in Tajikistan and to some extent in Azerbaijan and Uzbekistan. Fish consumption in the region is far below the global average per capita fish consumption, which was about 17 kg in 2010. While the demand for fish is much higher than current consumption, limited supply and high prices prevent an increase in consumption. There is drastic decline of freshwater and marine fish production.

Milk production in the region is close to nutrition requirements except in Azerbaijan and Tajikistan which produce about 63% of requirements. Milk production in other states exceeds 90% of requirements.

## **Annex 10 - Development Partners' Support in Agriculture**

**German Agency for International Cooperation (GIZ).** Institutional development through promoting cooperation at the governmental level was the main goal of the Phase 1 of the Transboundary Water Management in Central Asia project implemented by GIZ. Most of the donors shifted to realization of projects at national level, because implementation of regional projects in water management became complicated due to transboundary nature of the main rivers. It improved the process of approving the projects from policy makers, but has limited impact on regional cooperation.

**International Fund for Agriculture Development (IFAD).** IFAD supports agricultural and rural development projects in Central Asia and Azerbaijan. Ongoing projects focus on: promoting rural financial services (credit, savings and insurance) establishing links to markets so that smallholders can sell their products at good prices; developing small and medium-sized enterprises, as well as roads and other infrastructure to bolster the rural economy; enhancing the productivity of the livestock sector and introducing community-based management of pasture resources; harnessing the potential of remittances in advancing agricultural capacity; creating jobs and reducing unemployment in rural areas, especially among young people.

**Swiss Agency for Development and Cooperation (SDC).** The SDC Strategy for Central Asia outlines six domains of interventions: regional water resource management, water supply and sanitation, health, public sector reform and infrastructure, private sector development and rule of law. SDC supports the countries to implement their national development strategies in cooperation with other donors, engages in policy dialogue with government authorities, and supports projects at local, national and regional levels. This Cooperation Strategy has focus at the three national programs for Kyrgyz Republic, Tajikistan and Uzbekistan. Risk management remains key for the success of the program.

**Multilateral Development Banks.** Several important projects were supported by Asian Development Bank (ADB), Islamic Development Bank (IDB) and World Bank (WB) in different parts of Central Asia and Azerbaijan to rehabilitate irrigation and drainage infrastructure. For example: the WB Fergana Valley water management loan project (Phase 1); several WB and ADB projects in Makhtalar Irrigation Project area, Kazakhstan and projects focused on rehabilitation of pump stations in Uzbekistan and Tajikistan. While these interventions improved water use efficiency in the project target areas, farmers income in those areas has often remained low, which complicated the pay-back of the investments by 'beneficiaries'. Impact analyses are required and lessons learned to build trust with local governments. Recently ADB and WB moved their strategy from rehabilitation of the infrastructure to revitalizing of water management. IDB implements country wise specific strategies in the region. For example in Kazakhstan, one of the main pillars is supporting economic diversification through the enhancement of non-protractive industries to ensure sustainable economic development and agricultural productivity through modernizing of irrigation systems (to minimize water losses and enhance safety of dams) and increasing livestock production' (ISDB, 2012). Some of the projects implemented by IDB in the region projects include: Tashsaka canal rehabilitation project in Khorezm, Uzbekistan; and the construction of Khanarc canal in Azerbaijan.

## **Annex 11 - Value Chains, Investment in the Sector and Quality Improvement**

The transformation of agricultural production and markets in CAR after gaining independence has coincided with the process of globalization and deepening trade relations inside the region and worldwide. These countries are often engaged in multiple trade negotiation processes at the same time, each with their own challenges and benefits.

At the same time agricultural systems in the region are still highly influenced by the process of political and economic transition. Trade policies with regards to agricultural and food products vary greatly in the region from very liberal to quite protectionist. Furthermore, changes in trade policy inside and outside the region are happening so fast that agri-business does not have time to adapt, which creates additional complications in the application of trade agreements and benefitting from trade facilitation in the agricultural sector.

The old value chains in agriculture have broken down since the 1990s, and have been replaced by new private business structures and chains, governed by market relationships. The pace of refocusing and building new value chains differs from country to country, but almost all of them need capacity development in order for producer organizations and agribusinesses to be able to make use of available comparative advantages and opportunities.

Attention has to be given in CAR to trade facilitation because of the growing importance of global value chains (GVC) and potential benefits for the developing economies. Global value chains are established by slicing up the production process across countries and trading tasks rather than finished goods and are based on benefitting from comparative advantages of countries and regions involved in global value chains. The success of GVCs depends critically on low cost of crossing borders, just-in time delivery and minimal inventories. In most countries in the region, physical infrastructure (transportation) was somehow improved, but little attention was paid to trade facilitation or soft infrastructure.

There are needs for economic diversification, and particularly in the agricultural sector. Diversification has not happened due to high trade costs which discourage farmers, potential foreign investors and others from identifying new products that could be produced competitively. Furthermore, Central Asia is little integrated in global value chain apart from a few cases in the Kyrgyz Republic, which managed to join international value chains for clothing and beans. Promotion of agricultural diversification and joining regional or global value chains is multi-faceted, requiring change not only in production but also beyond the farm-gate. Details vary by crop and location, specific institutional setting, the costs of doing business. In Central Asia, reducing trade costs and promoting agricultural diversification will most likely favor small and medium-sized farms, reducing inequality as well as promoting growth. Reducing trade costs involves improvements in both hard and soft infrastructure. Reduced trade costs are necessary to improve the availability of inputs, access to best-practice equipment and technology transfer, as well as for market access. Some of the impact will be at the farm-level, but intermediaries may also be an efficient mean to integrate local production into global value chains.

## **Annex 12 - Water and Irrigation**

Transboundary nature of water resources in the region complicates agricultural water supply. Facing energy shortage, the states upstream try to change the operation regime of key reservoirs from irrigation to power generation. The increasing generation of power for heating during the winter months reduces the reservoirs level and leaves less water available downstream during the crop-growing season. In response, the states downstream also try to increase their storage facilities to accumulate winter flows or construct new pump stations to compensate for summer water shortages for agriculture. These costly measures provide temporary relief, most of them reduce sustainability of water management and lower the water productivity at the basin scale.

Water and energy nexus in Central Asia may significantly affect food security of both, the upstream and the downstream states. It may make the region dependent on world energy prices and highly affect dense populated states like Uzbekistan. At the same time energy production, sufficient for needs of the region, will create a favorable environment for bringing investment to the region.

Irrigation in Central Asia is highly energy consuming. For example, 50% of the irrigated land of Uzbekistan and 40% in Tajikistan are under lift irrigation, where big pump stations lift water for irrigation of crops on foothills and highlands. Such irrigation schemes consume significant amount of energy. Revitalizing such irrigation and reducing water losses can decrease energy consumption significantly. Revitalizing options include: no-energy groundwater capture schemes; groundwater development; drip systems installation; shift to low water consumptive market oriented crops, etc. Transboundary gravity water transfer is another way of cooperating and reducing energy requirements of the lift irrigation schemes.

## **Annex 13 - The Impact of Climate Change to Agriculture and Environment**

Over the last 70 years, air temperature in Central Asia has been increasing by around 0.03°C per year while precipitation exhibited multi-annual and multi-decadal fluctuations. The main consequences of climate change for the region are the reduction of glaciers volume and area in the mountain zones and an increase in extreme events: floods, mudflows and landslides in foothill zone, froze and droughts in the foothills and the wide lowlands. It is already recorded that the glacier volume in the region has reduced by 20%. Farmers of Fergana Valley lost yield of grapes, apricots, cherry and other fruit trees due to one-day freeze in April 2015.

River floods occur mainly in the spring and summer on the main rivers and their tributaries. Snow- and rain-fed rivers tend to flood in the spring and much more quickly those fed by snow and glacial melt, which flood in summer. Landslides during flood periods contribute to backwater through blocking channels, which when broken can suddenly release significant surges. River flooding occurs most frequently in the mountain areas of Central Asia; the areas of particular concern are: alluvial plain of the Chu River, the middle reaches of the Naryn River and the Talas River in Kyrgyz Republic, and; in the Zerafshan, Pyanj and Vaksh river basins in Tajikistan, an average of over 70 events per year. On small rivers such as Yakhsu, flows during flood periods can exceed the monthly average by a factor of five or more. River flooding in Central Asia has become more prevalent in the last 20-30 years. In the big river basins of Central Asia, the Amudarya and Syrdarya, hydrological extremes occur every 5-7 years.

The number of mudflows has increased in the last century, according to available records. The rate of frequency is strongly linked with cycles of wet and dry years. Owing to rising intensity of rainfall events, flash floods and mudflows have become increasingly problematic. Mudflow hazard acquires a transboundary nature in the heavily populated Fergana Valley. Here, floods originating in mountain river areas of Kyrgyz Republic and Tajikistan threaten foothill and lowland areas of Uzbekistan. There is a considerable population exposed, as the exposed area contains the cities of Fergana, Osh, and Andijan, as well as rural areas in the southeast and northeast portions of the valley where population density is often 400 persons/km<sup>2</sup> or more.

It is projected that climate change will significantly increase flash flood and mudflow hazard in most areas of Central Asia due to: more intense rainfall events; warming in winter resulting in rainfall occurring instead of snow, extend the seasons in which flash floods and mudflows occur; high rates of evaporation leading to increased soil aridity, with the result that the upper layer of soil will wash away more readily; reducing forest and other vegetative cover in some areas owing to greater aridity, which will accelerate erosion processes. Increased volume of moraines and groundwater in high mountain areas may also accelerate the melting of glaciers.

The arid continental climate of Central Asia exposes large areas of Central Asia to meteorological drought conditions 50% or greater precipitation deficit. This occurs in foothill areas around three times per century, while moderate drought (a 20-25% deficit in seasonal precipitation) happens in three to four-year intervals. The hydrological drought is heavily influenced by water management at regional, national, and subnational levels. Overuse of water for irrigation in the upstream and midstream of the main rivers and the shift of the upstream reservoir from irrigation to hydropower



generation mode makes the downstream areas highly susceptible to hydrological drought in summer.

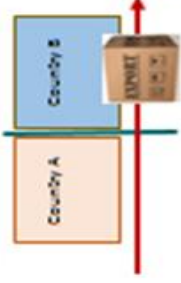
The indicated risks form significant economic losses to the CAR states. Droughts affect the largest number of people, more than 70% of the total affected population in the region, followed by floods, which impact about 19% of the population. Outmigration increased in downstream areas with no water. In some areas, at least two to three members of each family migrated elsewhere in search of a better livelihood. Hydrological drought also profoundly affects drinking water supplies.



# The SPCA Logic

**1** TRADE is a significant determinant of sustainable development and has been in the fabric of the region since the Silk Road days

**2** Trade is the movement of goods over borders (in this case)



**8** SPCA Expected Outcome

- Enhanced Economic Growth
- Increased Competitiveness
- Increased Trade

## **4** How is trade possible?

- Trade is possible if goods are produced more cheaply – more efficiently; ( $UC_A < UC_B$ ).
- Energy efficiency is a significant challenge in the Region.
- Increased energy efficiency will increase supply and then help reduce unit cost.

## **5** How would SPCA move the goods?

Especially for landlocked countries, an efficient and extensive transport network (Air, Land, Sea) as well as easing of non-tariff barriers are extremely important

**6**

Efficiency  
Efficiency  
Efficiency

## **3** What would SPCA trade?

Agriculture, Industrial & SME Products

### Why?

- 40% of population in Agriculture, Growth has not been inclusive enough,
- SMEs also a source of employment
- Together they ensure that enhanced growth is inclusive.

**7** Hence SPCA will support increased and efficient agricultural and SME production, and easy movement across borders

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