

## CZECH REPUBLIC'S ENVIRONMENTAL DEVELOPMENT COOPERATION WITH CENTRAL ASIA

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### Abstract

The objective of this study is to provide an overview of the development assistance realized by the Czech Republic in Kazakhstan, Kyrgyzstan, and Uzbekistan since its beginning in 1998. We especially report on the environmental sphere, where main development problems of Central Asia can be found. The values of ecological footprint of countries of Central Asia are relatively low in world comparison (highest Kazakhstan 4.45 and lowest Tajikistan 0.90 hectares per capita), however, strongly polluted localities can be found there. The highest value of the gross domestic product (GDP) per capita (USD 11 800 in 2009), and therefore the highest value of the human development index (HDI) (0.807), is shown by Kazakhstan. If we compare years 1998 and 2008, the total official development assistance (ODA) provided by the Czech Republic to five Central Asian countries increased almost five times. The main focus of the Czech Republic's ODA in Central Asia has been recently redirected from Kazakhstan to Kyrgyzstan. According to official statistics of Czech Development Agency, ministries of the Czech Republic and other governmental organizations, 4 projects (total budget CZK 24.5 million) of the Czech Republic's ODA were realized in Kazakhstan, 5 projects (total budget CZK 38.47 million) in Kyrgyzstan, and 3 projects (total budget CZK 31.296 million) in Uzbekistan from 2004. The main importance of the environmental sector in development assistance in Central Asia is also underlined by a fact that some projects of other sectors (such as agriculture and health) contain works that can be characterized as environmental ones. Inhabitants of development projects localities benefit significantly from environmental activities and they also find suitable work opportunities.

**Keywords:** development assistance; environment; Central Asia; Czech Republic

### INTRODUCTION

The Czech Republic has been providing development assistance to countries of Central Asia since 1998. Czech organizations that realize the assistance (e.g. the company GEOMIN, Czech University of Life Sciences Prague - Institute of Tropics and Subtropics, civic association IRBIS, and others) can benefit from existence of ties of social capital to local inhabitants, however, they simultaneously work in an environment which is characterized by particular social and economic situation. Although the countries of Central Asia are not priority countries of the official development assistance (ODA) of the Czech Republic at present, they have been playing a significant role since the beginning of the Czech development cooperation. The activities of Czech organizations were (and they still are) considerably diversified here. However, the main development topic of Central Asia – the environment and its pollution – expressed itself by a high share of projects in this sector.

### Socio-economic situation of Central Asia and its connection with development activities

Development activities of Czech organizations in Central Asia are determined, to a considerable extent, by socio-economic situation in the region. The basic overview of this situation is in Tables 1 and 2. The highest value of the gross domestic product (GDP) per capita, and therefore the highest value of the human development index (HDI), is shown by Kazakhstan. This fact is connected with an intensive extraction of raw materials (the crude-oil production in particular) in this country. Significance of Central Asia in a global scale has been mainly determined by its oil and gas deposits and by its geopolitical position. Kazakhstan is major Central Asian player in the sphere of mineral raw materials. It is possible to identify interests of “traditional” powers Russia and the USA in the region, however, interests of Turkey (cultural and ethnic closeness), Iran, and especially China can be also identified. China gains an influence in Central Asia by

**Table 1:** Characteristics of countries of Central Asia

Country	Area km <sup>2</sup> (2010)	Population thousands	GDP (2009)		Share of sectors in GDP (2009)			Foreign trade with the Czech Rep. (2009)		Representation (embassy)	
			per capita US \$	world rank	agriculture %	industry %	services %	export from CR CZK million	import to CR CZK million	CR in the country	country in the CR
Kazakhstan	2 724 900	15 460.4	11 800	95.	6.4	38.1	55.5	2 400.0	5 386.9	yes	yes
Kyrgyzstan	199 951	5 508.6	2 200	185.	30.7	15.9	53.4	101.4	6.3	in Kazakhstan*	in Vienna
Tajikistan	143 100	7 487.5	1 900	191.	20.1	22.2	57.7	137.3	43.9	in Tashkent	in Berlin
Turkmenistan	488 100	4 940.9	6 700	131.	10.1	30.5	59.4	247.7	2.0	in Tashkent	in Vienna
Uzbekistan	447 400	27 864.7	2 800	170.	26.8	39.5	33.7	993.8	184.8	yes	in Berlin

\* The Czech Republic has a honorary consulate in Kyrgyzstan (Bishkek).

Sources: Ministerstvo průmyslu a obchodu ČR (2010), Ministerstvo zahraničních věcí ČR (2010), World factbook (2010).

**Table 2:** Development indicators of countries of Central Asia

	Kazakhstan	Kyrgyzstan	Uzbekistan	Turkmenistan	Tajikistan
Human development index value 2006	0.807	0.694	0.701	0.728	0.684
Life expectancy at birth (2006, years)	66.4	65.7	66.9	62.8	66.5
Adult literacy rate (% aged 15 and above) 1999 – 2006	99.6	99.3	96.9	99.5	99.6
Ecological footprint (hectares per capita)	4.45	1.87	2.65	3.62	0.9

Sources: UNDP (2009, adjusted), NationMaster.com (2008).

its “soft diplomacy” at the expense of Russia and other possible applicants for the wealth of this region (Horák, 2009), which is apparent in Kyrgyzstan in particular<sup>1</sup>.

With respect to the future of Asia as the main global industrial producer, the Asian Development Bank (ADB) will be more and more engaged in the prevention of the environmental pollution, and in the implementation of so-called cleaner production (Evans and Hamner, 2003). The ADB plays, in addition to international organizations such as the UNDP, one of the main roles in the development of countries of Central Asia. This international financial organization is owned by its 67 member countries, out of which 48 are Asian. Its purpose is to help its developing members to lower the poverty rate and to increase the quality of life of their inhabitants. The ADB co-operates with majority of institutions at national, regional, as well as municipal level, and also with NGO's and private sector. The infrastructure (including energet-

ics and development of municipalities), environment, regional co-operation, and development of the financial sector and education (Asanova, 2006) are main spheres (with 80% of loans in 2012) (Asijská Rozvojová banka, 2010) of ADB's activities. The development activities of the Czech Republic in Central Asia correspond with main spheres of interest of the ADB to a considerable extent.

Mutual relations among the Czech Republic and countries of Central Asia (the development assistance is a part of the international relations) have passed through changing development since the beginning of the 1990s. The Czech Republic opened its embassies in Kazakhstan and Uzbekistan as early as in 1995 (Uhl, 2001). Since the beginning of the Czech ODA<sup>2</sup>, Kazakhstan was the most significant country of Central Asia regarding the amount of provided finances. Projects were realized in this country that were aimed at the railway (modernization of Almaty – Astana railway connection) and urban

<sup>1</sup> In economic sphere, Chinese goods come into Central Asia through Kyrgyzstan and up to three quarters (Kaminski and Raballand, 2009) of this amount are further exported into other Central Asian countries. These incomes from export are substantial part of Kyrgyzstan's incomes.

<sup>2</sup> The Czech Republic has been providing the ODA since OECD accession in 1995.

<sup>3</sup> The diseases and psychosocial impacts as a consequence of Aral Sea crisis (since the 1960s) is described by Crighton et al. (2003). Ploughing of virgin land (*celina* in Russian) in Kazakhstan and its environmental consequences are described by Kokaisl and Pargač (2007).

<sup>4</sup> The ecological footprint is indicator (unit hectares per capita) of „demandingness“ of an average citizen of country on the consumption of natural resources and, therefore, on the environment in general. Developing countries still have at present (2011) lower ecological footprints than developed countries at average.

**Table 3:** Financial means provided to Central Asia by the Czech Republic as an official development assistance (ODA)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Kazakhstan	0.22	0.12	0.05	0.08	0.08	0.18	0.17	0.45	0.90	0.41	0.52
Kyrgyzstan	0.06			0.02	0.10	0.12	1.14	0.49	0.54	0.55	0.80
Tajikistan					0.04	0.03	0.05	0.13	0.09	0.01	0.07
Turkmenistan						0.01			0.01	0.01	0.01
Uzbekistan	0.09	0.08		0.02	0.09	0.14	0.31	0.39	0.31	0.45	0.26

Notice: The data are only ODA (however, they are all identical with total financial flows). Data in USD million (current prices). Source: OECD (2010).

transportation (part in the new capital Astana build-up). A total amount of these projects (realization from beginning to 2001) reached CZK 20 million. A total amount of Czech Republic's development projects in Kazakhstan to the present (2011) have achieved almost CZK 45 million (BusinessInfo.cz, 2010).

However, the main focus of the Czech Republic's ODA in Central Asia has been recently redirected from Kazakhstan to Kyrgyzstan. Table 3 shows amounts of financial means provided by the Czech Republic to countries of Central Asia in particular years as the ODA. These data confirm a recent trend: Kyrgyzstan receives more than Kazakhstan.

The alternatives to the development assistance appear at present. Remittances, or transports of money or goods from citizens of developing countries that live and work in developed countries (Stojanov, 2010), figure at the forefront. Nevertheless, this topic is difficult to elaborate at present, for the amount of finances that drain away from the Czech Republic to Central Asia per year is difficult to capture.

### Environmental sector at the development assistance

Perception of environmental problems generally is one of differences between developing and developed countries. Developing countries often perceive the problem of devastated environment, however, they do not account themselves (as a consequence of perceiving their weaker position in the world economy) to be the one who should remove the environmental pollution. An exploitation of natural resources for purpose of the development is needed according to them and this exploitation has a priority over environmental protection (Krpac, 2006).

In Central Asia, the main sectors which the Czech Republic is engaged in are environment, agriculture, and transportation (Table 4). Projects aimed at environmental protection or pollution removal are preferred and this is in accordance with the main development problem of Central Asia. Origin of environmental problems can be found in Soviet as well as post-Soviet era. The encroach-

ments in the landscape have been realized since the inter-war period (Kokaisl a Pargač, 2007)<sup>3</sup>.

Although the values of ecological footprint<sup>4</sup> (Table 2) of countries of Central Asia are not high in the global comparison, it is necessary to take into account that this indicator is calculated for the entire country and, therefore, heavy local environmental damages do not show themselves in it. The ecological footprints of countries of Central Asia show a tendency to grow with the growth of HDI as shown by Kment and Krepl (2010), who ascribe this dependence to one of the HDI's components, the GDP per capita.

Together with the pollution of particular components of the environment (water, soil, atmosphere), a heavy local problem of Central Asia is a threat of dam failure of mountain lakes. This is reflected by the most significant development project of the Czech Republic in Central Asia - "Analysis of risks and limitations of effects of dam failure of mountain lakes". This project was realized in Kyrgyzstan during 2007 - 2010 and its total budget was CZK 15.5 million (BusinessInfo.cz, 2010). The official documents say that "*intention of the project is to help the Kyrgyz government with securing of safety in endangered valleys and, thus, create pre-conditions for their long term development. The objective of the Czech - Kyrgyz co-operation project is to help Kyrgyz partners with study of selected lakes in various areas of Kyrgyzstan and evaluation of their actual dangerousness.*" (Ministerstvo životního prostředí, 2010). This project was thematically preceded by the project "Monitoring of mountain glacial lakes and protection of population from disastrous consequences of floods", which was under way in this country during 2004 - 2006.

During 2005 - 2007, the project "Protection of biodiversity of southern Altai in the context of present-day environmental transformations and socio-economic development" was further under way in Kazakhstan. During 2004 - 2006, the project "Geo-environmental survey and evaluation of ecological loadings and risks in the surrounding of mining complexes" was realized in Kyrgyzstan and "Environmental evaluation of Fergana valley" was realized in Uzbekistan. During 2003 - 2005, the project "Application of preventive processes in selected

**Table 4:** Projects of the Czech Republic's ODA in Central Asia since 2004

Project (original Czech title in italics)	Country	Budget (CZK thousands)
Analysis of risks and limitations of effects of dam failure of mountain lakes. <i>Analýza rizik a omezení důsledků protržení hrází vysokohorských jezer.</i>	Kyrgyzstan	15 500
Geo-environmental survey and evaluation of ecological loadings and risks in the surrounding of mining complexes. <i>Geoenvironmentální průzkum a zhodnocení ekologických zátěží a rizik v okolí těžebně-úpravářských komplexů.</i>	Kyrgyzstan	7 800
Monitoring of mountain glacial lakes and protection of population from disastrous consequences of floods. <i>Monitoring vysokohorských ledovcových jezer a ochrana obyvatelstva před katastrofálními následky povodní.</i>	Kyrgyzstan	9 150
Complex study of the development of urban and suburban personal transport in Bishkek. <i>Komplexní studie rozvoje městské a příměstské osobní dopravy v Biškeku.</i>	Kyrgyzstan	2 320
Elaboration of the general traffic plan of Kyrgyzstan. <i>Výpracování dopravního generelu Kyrgyzie.</i>	Kyrgyzstan	3 700
Environmental evaluation of Fergana valley. <i>Environmentální zhodnocení Ferganské kotliny.</i>	Uzbekistan	11 988
Improvement of the quality of drinking and irrigation water in the Aral Sea region by cleaning equipment and sorbents produced in the Czech Republic. <i>Zlepšení kvality pitné a závlahové vody v oblasti Aralského moře použitím zařízení sorbentů české výroby.</i>	Uzbekistan	10 000
Support of small farming in the rural communities of Qaraqalpaqstan in Uzbekistan. <i>Podpora malého farmářství ve venkovských komunitách Karakalpakistanu v Uzbeké republice.</i>	Uzbekistan	9 308
Protection of biodiversity of southern Altai in the context of present-day environmental transformations and socio-economic development. <i>Ochrana biodiversity jižního Altaje v kontextu současných environmentálních transformací a socio-ekonomického rozvoje.</i>	Kazakhstan	10 000
Application of preventive processes in selected enterprises coupled with a transfer of Czech technologies and know-how. <i>Aplikace preventivních postupů ve vybraných podnicích, spojená s přenosem českých technologií a know-how.</i>	Kazakhstan	5 000
Development of natural healing sources for application of the health care into the health system in Kazakhstan. <i>Rozvoj přírodních léčivých zdrojů pro aplikaci léčebné péče do systému zdravotnictví v Kazachstánu.</i>	Kazakhstan	9 000
Ensuring of radiation protection with emphasis on medical exposures. <i>Zajištění radiační ochrany s důrazem na lékařské expozice.</i>	Kazakhstan	500

Sources: BusinessInfo.cz (2010), Česká rozvojová agentura (2010), Ministerstvo práce a sociálních věcí ČR (2010), Ministerstvo zahraničních věcí ČR (2010), Ministerstvo životního prostředí ČR (2010).

enterprises coupled with a transfer of Czech technologies and know-how” was under way in Kazakhstan. The above-mentioned environmentally-aimed projects are realized in the gestion of Ministry of the Environment of the Czech Republic.

Further sphere, which the Czech Republic is engaged in, is agriculture. In this sector, the project “Improvement of the quality of drinking and irrigation water in the Aral Sea region by cleaning equipment and sorbents produced in the Czech Republic” was realized in Uzbekistan dur-

ing 2004 - 2009. The project “Support of small farming in the rural communities of Qaraqalpaqstan in Uzbekistan” was realized in Uzbekistan during 2005 - 2007.

In the transportation sphere, development projects “Complex study of the development of urban and suburban personal transport in Bishkek” (2006 - 2009) and “Elaboration of the general traffic plan of Kyrgyzstan” (2002 - 2004) were realized in Kyrgyzstan under the auspices of Ministry of Transport of the Czech Republic.

Together with the above-mentioned more significant sectors, the project "Development of natural healing sources for application of the health care into the health system in Kazakhstan" in the health sector was under way in Kazakhstan during 2005 - 2007 and the project "Ensuring of radiation protection with emphasis on medical exposures" was realized in Kazakhstan in 2004 in gestion of the Ministry of Labour and Social Affairs of the Czech Republic (Česká rozvojová agentura, 2010).

## CONCLUSIONS

Since the beginning of the Czech Republic's ODA in Central Asia in 1998, the main focus has been redirected from Kazakhstan to Kyrgyzstan. However, Kazakhstan remains main partner of the Czech Republic in the foreign trade. If we compare years 1998 and 2008, the total ODA provided by the Czech Republic to five Central Asian countries increased almost five times. According to official statistics of Czech Development Agency, ministries of the Czech Republic (see Table 4) and other governmental organizations, 4 projects (total budget CZK 24.5 million) of the Czech Republic's ODA were realized in Kazakhstan, 5 projects (total budget CZK 38.47 million) in Kyrgyzstan, and 3 projects (total budget CZK 31.296 million) in Uzbekistan from 2004.

Environmental problems are acute in countries of Central Asia and this has been also reflected by aiming of development activities of organizations from the Czech Republic at environmental sector. The highest HDI and, simultaneously, highest ecological footprint is shown by Kazakhstan and this is significantly influenced by the intensive extraction of strategic natural resources in this country. Although the values of ecological footprint of countries of Central Asia are relatively low in world comparison (highest Kazakhstan 4.45 and lowest Tajikistan 0.9 hectares per capita), many localities still are affected by extremely high environmental pollution. The organizations from the Czech Republic contribute in the region to the removal of damages on the environment, and, in the case of strongly polluted localities, they contribute to making those localities inhabitable. Although some projects are realized in the sector of agriculture and in health sector, they contain works that can be characterized as environmental ones (pollution removal, technologies of radiation protection, etc.). This fact underlines main importance of the environmental sector in development assistance in Central Asia. Inhabitants of development projects localities benefit significantly from environmental activities and they also find work opportunities in the above-mentioned projects.

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