

Migration, remittances and climate resilience in Tajikistan

Working paper

Part I



PRISE

Pathways to resilience
in semi-arid economies

Research for climate-resilient futures

Migration, remittances and climate resilience in Tajikistan

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Contents

Boxes, figures and tables	6
Acronyms.	8
1 Introduction	10
2 A synoptic presentation of Tajikistan	11
3 Tajikistan’s vulnerability to climate change	14
4 Context of labour migration.	16
5 Remittances structure.	19
6 Development policies and measures.	20
6.1 National development strategies and plans.	20
6.2 Sector-based policies	21
6.2.1 Policies and programmes for labour migrants in Tajikistan and Russia .	21
6.2.2 Policies and measures on climate resilience.	24
6.2.3 Public and private finance programmes	24
7 Links between remittances and resilience	26
8 Key findings, conclusions and recommendations	27
8.1 Key findings and conclusions	27
8.2 Recommendations	29
References	32
Appendices. Appendix 1: list of interviewees	34

Boxes, figures and tables

Box 1	Tajikistan's Human Development	11
Box 2	Average disasters per year 2005–2014	15
Box 3	NDS (2007–2015): Key achievements	17
Box 4	Professional skills of labour migrants	17
Box 5	National policy for climate change	20
Figure 1	The economic dependence analysis for 2010–2015	22
Figure 2	Remittances inflow dynamics in Tajikistan for 2010–2015, bln USD	22
Figure 3	Labour migrants' education levels in 2004 and 2009, in %	24
Table 1	The “Bovari” Loan of Bank Eskhata	25

Acronyms

BIn	Billion
CAREC	Regional Environmental Centre for Central Asia
CIF	Climate Investment Funds
CIS	Commonwealth of Independent States
COP 21	21st Conference of Parties
DRS	Districts of Republican Subordination
EBRD	European Bank for Reconstruction and Development
GBAO	Gorno-Badakhshan Autonomous Region
GDP	Gross Domestic Product
HPP	Hydropower Plant
ILO	International Labour Organization
INDC	Intended Nationally Determined Contributions
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
kWh	Kilowatt/hour
LAPA	Local Adaptation Plans for Action
MJ/m ²	Megajoule/square meter
MTO	Money Transfer Operator
MW	Megawatt
NDS	National Development Strategy
NGO	Non-governmental organization
OSCE	Organization for Security and Co-operation in Europe
PPCR	Pilot Programme for Climate Resilience
SAL	Semi-arid lands
SDGs	Sustainable Development Goals
S&VEd	Secondary and Vocational Education
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar



Photo of Tajik pattern on fabric © Bakhridin Isamutdinov

1. Introduction

The “Migration, remittances, adaptation and resilience in arid and semi-arid regions of Senegal and Tajikistan” project is one of the research packages of the “Pathways to Resilience in Semi-Arid Economies” or PRISE. PRISE is a five-year, multi-country research project that generates new knowledge about how economic development in semi-arid regions can be made more equitable and resilient to climate change. PRISE is carried out under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), with financial support from the UK Government’s Department for International Development (DfID) and the International Development Research Centre (IDRC) of Canada.

The project covers Tajikistan and Senegal – the two countries where remittances’ contribution to economic development is significant. The Regional Environmental Centre for Central Asia (CAREC) is an implementing partner of the project in Tajikistan. The research is expected to provide solid evidence for enhancing socio-economic policies of the target countries to: (a) enhance management and coordination of labour migration between the host and destination countries, and (b) ensure more effective use of remittances for development to secure a long-term climate-resilient future of semi-arid economies of Tajikistan and Senegal.

An important component of the proposed research area is the study of remittances as one of the direct and potentially positive outcomes of labour migration. Remittances might have a positive impact on livelihoods when labour migrants stay in contact with their families or communities. As long as this link is present, labour migration can contribute to poverty reduction and diversification of household incomes, as well as to provide better means for coping with crises or investing in sustainable livelihood activities. Meanwhile, the benefits of remittances and their efficient use could have significant outcomes for the recipient communities not only in terms of enhancing their livelihoods, but also contributing to adaptation to the consequences of climate change.

As part of the research project, a multistep data collection approach was used to produce this paper. This includes: (a) a desk review of available literature on migration and remittances in Tajikistan and analysis of existing data, (b) a household survey to assess the level of awareness of key informants and household respondents about migration, remittances and their link with climate-resilient pathways. This will be then complemented with (c) a case study on gender aspects of remittances and climate resilience measures. The above steps will feed the comparative analysis of the findings, as well as commonalities and differences between Tajikistan and Senegal. Altogether, the above research stages will provide solid, up-to-date and accurate evidence and will guide (d) formulation of recommendations and developing a roadmap for a climate-resilient future through effective implementation of policies and more sustainable use of remittances¹.

Other objectives include²:

The present Working Paper, part 1 (hereinafter Paper) covers Tajikistan and: (a) captures key tendencies on socio-economic development and how migration and remittances contribute to these dynamics. Along with the narrative facts, the analysis also (b) looks through the possible ways of mainstreaming climate adaptation into current socio-economic development strategies and programmes, including those targeting migration and remittances, as well as (c) health, education and financial aspects as potential drivers towards using remittances for a climate-resilient future.

The document also reflects the main gaps and obstacles which hamper a successful progress towards climate resilience and sustainability of the remittances’ use. Based on the analysis, the paper suggests viable ways to improve relevant policies on migration, remittances, climate change, poverty reduction and economic development, considering migrants’ remittances as a contributor to climate resilient development³.

¹ A detailed description of the project deliverables/outputs is provided in the project proposal.

² What are the current trends of migrant remittances and linkages between receiving and sending countries, from Senegal and Tajikistan cases? To what extent remittances support climate resilient development into key socio-economic sectors in SALs of Tajikistan and Senegal?

³ Tajikistan: Country Situation Assessment, 2015, can be found at: <http://prise.odi.org/>

2. A synoptic presentation of Tajikistan

Administrative division. Administratively, Tajikistan is sub-divided into four main regions, including Sughd in the North, Khatlon in the South, Gorno-Badakhshan Autonomous Oblast (GBAO) [occupying about 45% of the country's territory] in the south-east, and the Districts of Republican Subordination) in the centre and western part of the country.

Population. The population of Tajikistan is 8,547 million (01/2016) with 2.5% annual growth rate. Tajikistan is considered a country with fast growing young population. The number of males and females is about the same (50.5% and 49.5% respectively). As the geography of the country is dominated by a mountainous landscape, the population density varies significantly, and the lowlands of northern and western Tajikistan are the most densely populated. Therefore, the population distribution is as follows: Khatlon – 35.5%, Sughd – 29.4%, DRS – 23%, GBAO – 2.6%, and 9.4% in the capital – Dushanbe (Agency on Statistics, 2015). Presently, 73.5% of the country's population live in rural areas and extensively rely on agricultural farming and forestry for their livelihoods, and so are dependent on natural resources.

Box 1. Tajikistan's Human Development

Human Development Index: 0.624 (129th out of 188 countries);

- GNI per capita: USD 2,517
- Life expectancy at birth: 69.4
- Expected years of schooling: 11.2
- Mean years of schooling: 10.4

Source: 2015 Human Development Report – Work for Human Development, Briefing Note

Geography. Tajikistan is a mountainous, landlocked country located in Central Asia, with an estimated area of 143,100 km². Tajikistan borders Afghanistan, China, the Kyrgyz Republic, and Uzbekistan. About 93% of the country's territory is covered by mountains, with glaciers being the main source of rivers. More than half of all glaciers of Central Asia are located in Tajikistan mostly in the North and East of the Pamirs. About one thousand rivers are located within the basins of Amudarya, Syrdarya, Pyandj and Vahsh (at the confluence of the latter two rivers Amudarya river begins). Since Amudarya and Syrdarya are the tributaries of the Aral Sea, about 50% of its total annual flow is formed in the territory of Tajikistan (Agency on Statistics, 2015).

Economy. During the last decade Tajikistan has steadily recovered from the economic slowdown with real growth of GDP at about 6–7% in the last 5 years (Trading Economics, 2016). The overall growing trend has been maintained by good performance in the mining industry, the growth in agriculture, as well as the increase in migrant workers' remittances.

Remittances. Since 2012, Tajikistan has been seen as one of the top countries with the highest ratios of remittance inflows to its national GDP in the developing world. In 2013 the high-record of remittance inflows to this country was estimated at about 4.2 billion USD or equivalent to almost 46% of GDP, which enhanced the internal private consumption and investment (Trading Economics, 2016). The present economy of Tajikistan could be defined as strongly remittance-dependent, which in turn means that the country's economy relies significantly on the economic situation of the countries of destination (e.g. Russia, Kazakhstan).

The following economic sub-sectors are specifically reviewed for the following reasons: (a) they are considered as a national development priority, and (b) they offer potential opportunities for attracting and using remittances for a climate-resilient pathway.

Agriculture. As one of the major sectors of Tajikistan's economy employs 63% of its workforce and accounted for up to 21.9% of the country's GDP in 2015 (Agency on Statistics, 2015). With over 2/3 of the population living in rural areas and their incomes being directly or indirectly derived from agriculture activities, the agricultural sector is the main source of well-being of the population in general, and rural population in particular. The resource base for agriculture is characterized by limited size of lands for cultivation, large dependence on irrigation and by significant areas of long-term pasture. According to the land balance of Tajikistan (2012), only 20% (830 thousand hectares) of the 4.1 million hectares of its agricultural lands used

for croplands, including 85% of irrigated land (720 thousand hectares). However, deteriorating conditions of the irrigation and drainage infrastructure, mire formation and salinization of the soil have contributed to the reduction in the croplands' size. Around 1/3 of irrigated arable land is unused because of the deterioration of infrastructure (UNDP, 2016). In Tajikistan the production of crops accounts for up to 98% of the total agricultural production (Agency on Statistics, 2015).

Agriculture is the largest sectoral consumer of water, accounting for over 90% of water use in Tajikistan (UNDP, 2016). Irrational use of agricultural land and water resources leads to degradation of lands, soil fertility reduction, soil erosion (especially on the slopes), which in turn exacerbate the consequences of climate change. Another reason for land degradation is a large number of small-sized farms, having less than 1 hectare of the cultivated land, which complicates maintenance of crop rotation, anti-erosion works, and improvement of soil fertility. Use of outdated technologies for tillage and overgrazing destroys pastures vegetation and soil contributing to land degradation.

Energy. Tajikistan almost entirely depends on hydropower (98%) in electricity production. Such dependence on hydropower makes the country vulnerable to fluctuations in rainfall and climate change. The total share of electricity production from Hydropower Plants (HPPs) and thermal power accounts for 93.9% and about 6.1% of the total installed capacity, respectively. However, power shortages in winter months (2.2–2.5 billion kWh.) lead to interruptions in electricity supply particularly affecting the rural population. According to World Bank estimates, 24% of demand for the electricity consumption in the country is not met. Because of the limited electricity supply in rural areas the loss in productivity of agricultural production reaches up to 30% annually. However, in summer time there is abundance of electricity (3–7 billion kWh) due to water surplus of which leads to idle water discharge and could potentially mean economic loss (IEA, 2013).

Currently the share of electricity in total energy consumption in Tajikistan is nearly 60%. About half of all electricity is used by the local aluminium company "TALCO" followed by households (26%) and the agricultural sector. In the summer electricity is also used for irrigation (Energy Charter Secretariat, 2013). The cost of electricity is considered to be low. Due to this and the fact that the existing heating systems do not function at full capacity, electricity has become a major source of energy for heating (other sources are gas and coal).

Tajikistan also has a large potential for solar energy production which can potentially meet an estimated 10–20% of the country's energy demand (MFA, 2015). Solar energy can be seen as a driving force to meet the energy security targets, diversifying the national energy mix as well as providing opportunities for local communities to use power off-grid.

Industry, is an important economic segment, contributing to 12.8% of the country's GDP (2015). In 2015 the volume of industrial production increased by 11.2% in comparison to the previous year. The share of industrial sectors in total production include: manufacturing – 65.6%, power, gas, water production and distribution – 20.9%, and mining – 13.5%. Production is increasing in all industrial sectors. For example, production in the mining sector, which includes extraction of coal, oil, gas and non-metallic minerals has raised up to 16.5% for the last year. Even though there was a slight decrease in textile and clothing manufacture and petroleum products, manufacturing production increased to 10.2% in total due to the growth in production of food and non-metallic minerals. A significant increase was also observed in energy production in 2015; 3.4% increase in electricity and 60% in heat production.

The following social sectors are reviewed for the following reasons: (a) they provide relevant information about vulnerable population and families of migrant workers, and (b) education and healthcare are the two main components of developing human capital and resilience.

Social development: According to the Public Environmental Expenditure Review in Tajikistan undertaken by UNDP, between 2007–2014, Tajikistan's fiscal space (as defined by actual state budget spending) has almost quadrupled from 3.5 billion somoni (1.02 bln USD) in 2007 to over 13 billion (2.65 bln USD) in 2014. Specifically, the total state budget spending rose from 216 million somoni (63,5 mln USD) in 2007 to over 1.3 billion somoni (265 mln USD) in 2014. Social insurance and protection (18.5%), education (17.8%), and health (7.4%) in aggregate represent over 43% of the state budget (UNDP, 2016).

Education. According to the Ministry of Education the education system in Tajikistan includes secondary school (11 years), vocational education (3 years) and higher education (4 years) providing a bachelor degree. Enrolment rate in secondary schools increased and reached 98% in 2014. However, vocational and higher education are largely inaccessible, particularly for the most vulnerable community segments. Higher education facilities offer both free (state-funding) and paid (costs of tuition covered by the students) education. As a rule, the number of seats covered by the state budget is smaller compared to non-budgetary seats. Moreover,

there is considerably higher competition for the seats paid from the state budget. These provisions significantly reduce most vulnerable population groups' access to higher education in. Meanwhile, more than 70% of university students are from better-off families as compared to 13% of students from poorer households (World Bank, 2016).

The country's low educational level is characterised not only by low enrolment rates but also by the quality of education at universities. The number of degree programs offered by universities is limited and in most cases is not relevant to the labour market demands. For instance, according to the official statistics, about 40% of all students were admitted to the faculty of education, and 30% to economics. Enrollment in the most market-relevant faculties such as agriculture and industry, however, is only 6.2% and 12.7% respectively, mainly due to the restricted number of departments at universities (Agency on Statistics, 2015). In fact, the low level of education among the growing younger generation is in contrast to the increasing demand for skilled labour to meet the needs of economic development in Tajikistan.

Health. Although the state expenditures in the health sector have almost doubled from 4.15% in 2007 to 7.4% in 2014 (UNDP, 2016) and some of the health indicators have improved, the healthcare system in Tajikistan requires significant investments for development. The infant mortality rates (per 1,000 live births) has declined from 65 in 2005 to 33.6 in 2012. However, the overall under five mortality rate is still high reaching 42.4 per 1,000 live births (Agency on Statistics and Ministry of Health, 2012). The incidence of infectious diseases, including water borne diseases, increased by 8% in 2015 compared to the previous year, whereas the incidences of acute viral hepatitis and the acute enteric infection accordingly represent 8.5% and 73.3% of the total morbidity. Most likely, this is caused by the low quality or lack of water in rural areas. Chronic malnutrition still affects 26% of the population, and acute malnutrition (oligotrophy) affects 10% of children under the age of five years (National Development Strategy, 2016–2030). Many women and children also suffer from micronutrient deficiencies, and this is reflected in high levels of anemia and iodine deficiency. In addition, there is a limited access of the population, especially in rural areas, to medical services. According to the country's statistics, there is a very small number of hospitals in the country – only 444 (2012) with 47.7 hospital beds per 10 000 population located mostly in the cities. The country is also defined by the low public awareness about diseases. For instance, only 42% of women know about cervical cancer and only 48% of women heard about breast cancer (Agency on Statistics and Ministry of Health, 2012). Even fewer people know about climate induced risks such as waterborne and infectious diseases and heat waves (TNC, 2014).

The above-listed challenges related to access to health and education services are preventing the country from sustainable human development which leaves the most vulnerable population out.

Poverty and employment. Tajikistan's remarkable achievement during the last 15 years is its ability to significantly reduce the widespread poverty from 81% in 1999 to 36.4% in 2014 and further to 32% in 2015. This is widely believed to be the result of poverty reduction focused policies put in place by the country and remittances as a key contributor the country's GDP. Poverty in the country is predominantly rural, and about four out of five poor people live in rural areas (World Bank Group, 2015). About 60% of the population are of working age, with only about 43% registered as employed (2015), including half as self-employed. More than 60% of total employed people work in the agricultural sector, while others work in services and industry. The average monthly nominal salary throughout the country is about 117 USD per month, with the highest average monthly salary in the construction (280 USD) and the minimum salary in agriculture (35 USD) (World Bank, 2015). The average salary in Tajikistan also ranges throughout its provinces, with the highest in Dushanbe (appr. 220 USD per month); Districts of Republican Subordination most of which are located in proximity of the capacity city (~125 USD); GBAO (~116 USD); Sughd (~110 USD), and Khatlon (~90 USD) (Agency on Statistics, 2015). The prices are generally lower in Soughd and Khatlon as compared to other regions. Therefore, the average salaries do not directly reflect the level of population's vulnerability.

Even though Tajikistan has done a remarkable job in reducing income poverty, it has done less well in reducing non-monetary poverty. The World Bank data suggest that there is still limited access to education (secondary and tertiary), heating and sanitation. Unequal distribution of these services varies depending on the income level and location. Poverty forces the rural population to use land resources intensively, to graze on highly sensitive pasture lands on mountain slopes, to cut trees and to hunt illegally (World Bank, 2015).

3. Tajikistan's vulnerability to climate change

Currently Tajikistan has a low adaptive capacity to climate impacts and an extensive exposure to the risks of natural disasters. Most of the country's territory is qualified as arid and semi-arid. It has a continental climate conditions characterized by sharp fluctuations in daily and seasonal temperatures, with a high intensity of solar radiation, aridity, low cloud cover, and uneven distribution of seasonal rainfall.

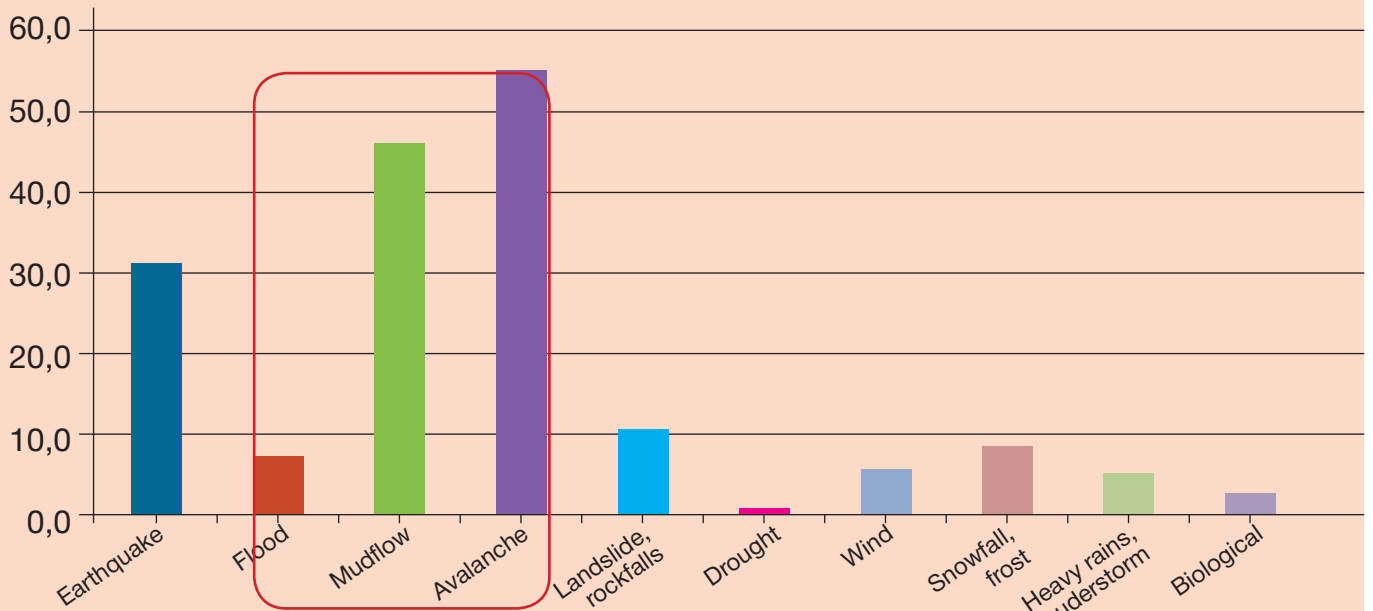
In addition, the complicated relief structure with huge variations in elevation peaks creates unique local climates with an abundance of air temperature differences. The precipitation depends on location and orientation of mountain ranges and on the air mass circulation. Mean annual precipitation in the hot deserts of southern Tajikistan and the cold high mountain deserts of the eastern Pamirs varies from 70 to 160 mm, while precipitation in central Tajikistan can exceed 2000 mm. Although July is the warmest month and January the coldest, mean annual air temperature varies widely from +6 to +17°C in the valleys and foothills to severe mean annual temperatures close to zero degrees Celsius and rising up to +8°C at lower altitudes. The climate is particularly severe in the eastern Pamirs where an average air temperature ranges from -1 to -6°C per year and the coldest temperature ever recorded (-63°C) was at the Bulunkul Lake. Only about 1% of the territory is considered as the one with sufficient humidity (1500 mm per annum) (TNC, 2014).

Agriculture being the main economic sector of Tajikistan (about 22% of the country's GDP) is characterized as the most vulnerable to climate change due to its direct dependence on the weather, nature and land conditions. Moreover, this sector is mostly owned by the rural population, who generally does not have enough financial resources for adaptation measures to climate change.

Due to its arid climate Tajikistan has already suffered from low agricultural productivity, water stress, and high losses from natural disasters. The geographical characteristics and the complicated socio-economic situation of Tajikistan make it the most vulnerable to climate change in Central Asia and Eastern Europe, particularly sensitive to climate trends and with a low adaptive capacity (World Bank, 2015). The impacts of climate change, however, are already evident in Tajikistan. The country can witness up to 500 of natural disasters annually, resulting from 20 to 100 million USD in losses and damages. Melting of glaciers, fluctuation of the main river runoff and its effect on hydropower production and agriculture are few among numerous phenomena of climate change impacts in Tajikistan. While in the past decades the total glacial area was recorded as 6% out of total country's territory, by 2013 this estimate equalled to 5%. For example, the largest glacier Fedchenko has shrunk up to 1 kilometre by now. In this rate based on the estimated forecasts the glaciers could lose to 20% of its volume by 2050. This leads to changes in water availability and runoff. For example, the river runoff in the Aral Sea basin, which to the most extent originates in Tajikistan, nowadays comprises 53 cubic kilometres, which is 4 cubic kilometres less than fifty years before. Climate risks seriously undermine agricultural development, damaging soil productivity and causing natural disasters and land degradation. The drought of 2001–2002 caused a critical drop in crop yields by 30–40% in dry farming areas of Tajikistan, whereas the drought of 2008 led to a 40% decline (TNC, 2014).

Box 2. Average disasters per year 2005–2014

Tajikistan faces a constant threat from disasters, including climate induced. Over 2005–2014, avalanches and mudflows were the most frequent contributors to disasters. For the same period, mudflows resulted in an average of 18.8 million USD in officially registered damage, greater than any other type of disaster experienced in Tajikistan, followed by floods (2.8 mln USD/year average).



Source: Strengthening Disaster Risk Reduction and Response Capacities, Project Document, UNDP Tajikistan, 2016

The long-term observations of the Intergovernmental Panel on Climate Change (IPCC) show increasing climatic variability in Tajikistan. A succession of extremely hot and dry years, followed by extreme cold is becoming a conspicuous feature of the climate. Despite the high uncertainties, more intense and sporadic precipitation, leading to more frequent flood and drought periods is predicted in the country (IPCC, 2014).



Photo from Nurek Dam © Victor Teplov

4. Context of labour migration

The present economic development status of Tajikistan is often viewed as a major driving factor for labour migration. Limited employment and income opportunities make labour migration as the most widespread and effective coping strategy for many vulnerable and poor population segments. Based on the World Bank data, about 40% of Tajikistan's workforce look for employment opportunities outside their country. Labour migrants may constitute up to 10–12% of the total population of Tajikistan, and about 20–25% of the able-bodied male population aged 18–40 years (Popov, 2015).

The International Labor Organization (ILO) study in 2010 identified four main types of migrants: (i) long-term migrants that have been away from Tajikistan for more than two years with no home visits during this time; (ii) long-term migrants that have been away from Tajikistan for more than two years, but with several short home visits during this time; (iii) short-term migrants living outside of Tajikistan for several months a year and returning to Tajikistan for several months (seasonal); (iv) recently (less than 2 years ago) emigrated from Tajikistan. The majority of the Tajik labour migrants fall under the 2nd and 3rd categories (35% and 34% respectively).

The Russian Federation is the main destination of labour migration from Tajikistan, receiving more than 90% of all Tajik labour migrants. Others go to Kazakhstan and other countries. The selection of these countries as a place for work is based on several factors such as higher wages as compared to those offered in the home country, Soviet past, which makes adaptation easier to the Russian environment, and the existence of Tajik communities with established relationships. In Tajikistan migration has seasonal dynamics. Spring and summer months are characterized as the peak period of migrant outflows with many of them returning back home towards the end of the year. These seasonal peaks of labour migration outflows are, in fact, consistent with increased inflows of remittances (Ministry of Economic Development and Trade, 2013).

Migration is also an increasingly gender-sensitive phenomenon in Tajikistan. Men comprise the biggest number of migrants, although over the recent years, the number of women leaving the country as labour migrants has increased from 11.8% in 2010 to 15.8% of all migrants in 2015 (internal data from the Ministry of Labour, Employment and Migration). Traditionally, in Tajikistan, women are responsible for family care and do not work outside the home, having literally no sources of income other than relying on money earned by their husbands. In the absence of the husband, the wives usually live with their husband's family, who are, often, able to claim remittances sent from husbands working abroad (OSCE, 2012).

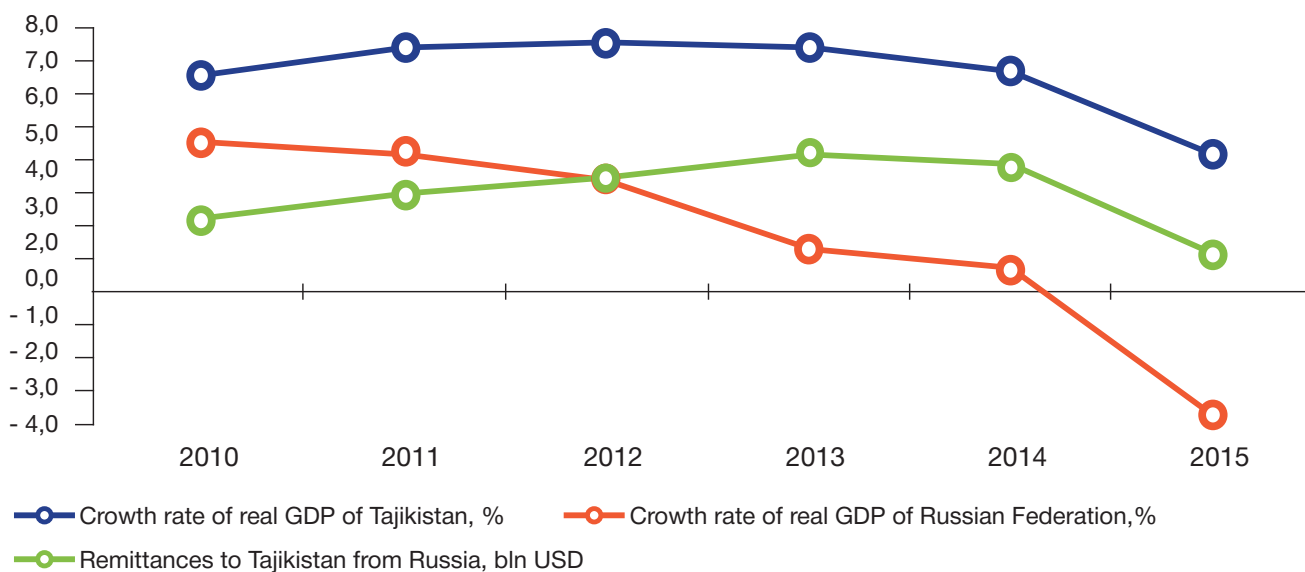
The overall migration outflow for the recent years had an increasing trend until 2014 when the number of migrants has declined significantly by about 11% in 2015 and by 13% compared to 2013. This slowdown has been caused by the economic crisis in the receiving countries resulting in job cuts. According to the national statistics of Tajikistan the registered number of external migrants left the country in 2015 was 552 576 which is twice less than the Federal Migration Service of the Russian Federation data on the number of immigrating citizens of Tajikistan including those with two citizenships (990 275 in 2015). Such difference in estimations is explained by the fact that the Ministry of Labour, Migration and Employment did not take into account 400 000 Tajik people, who have earlier acquired Russian citizenship in the framework of the existing agreement on dual citizenship. In 2016, however, according to Russian Federation's statistics (April, 2016), the number of labour migrants increased again (878 536 Tajik citizens, including 727 330 male and 151 206 female) (Migrant Organizations Forum, 2016). It is obvious that Russian citizenship provides migrants higher chances to secure a decent job and receive higher salaries, which in turn implies more remittances outflow back to Tajikistan from this group of migrants.

According to the data from the Ministry of Labour, Migration and Social Protection of the Republic of Tajikistan, and based on the fulfilled migration cards, on 01.12.2016, 569 860 citizens went out the country, from which 498 315 were labour migrants (419 725 – men, 78 590 – women). Compared with the same period last year the number of migrants was 54 281 people less (a 10% decrease). It should be mentioned that from the total number of migrants 486 905 went to the Russian Federation and 11 410 migrants went to the Republic of Kazakhstan. At the same time, the country returned 401 021 migrants – citizens of the Republic of Tajikistan, which is 12 428 people (or 3%) more than in the same period last year.

About 89% of labour migrants regularly send remittances to their relatives and households in Tajikistan (ILO, 2010). The majority of families receive remittances at least every 3 months. The collected data suggests that the longer the duration of migration, the more likely the labour migrants will send remittances (Kern J., Magallon D., 2014). After 2013 mainly due to economic slowdown in Russia and tighter immigration control policies,

the flow of migration together with the levels of remittances sent back home has decreased. Comparison of Tajikistan and Russia's GDP growths vs the volume of remittances sent by the Tajik labour migrants indicates that the three are directly correlated (Figure 1). To date changes in remittances coincide with the changes in annual GDP in Tajikistan and the Russian Federation. The highest dependence of Tajikistan's economy has been observed in 2014–2015, when stagnation in Russia's economy affected the receiving country growth. In these two years Tajikistan's economic growth went down from 7.4% to 6.0% compared to 2013, with a significant fall in the value of remittances by 30% mainly due to the economic recession in Russia and devaluation of the Russian rouble.

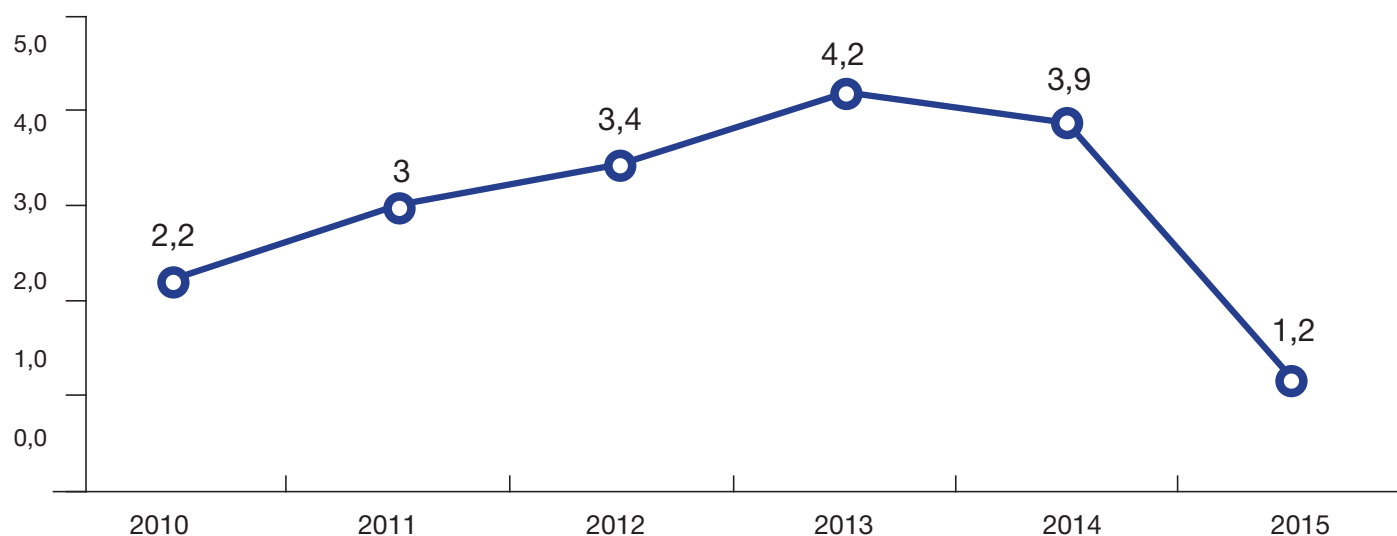
Figure 1. The economic dependence analysis for 2010–2015



Source: Trading economics 2016: Tajikistan and Russia

According to the interdepartmental data of the Ministry of Labor, Migration and Employment, the value of the total remittance in Tajikistan dropped by 30% in 2015 as compared to 2013.

Figure 2. Remittances inflow dynamics in Tajikistan for 2010–2015, bln USD



Source: Ministry of Labor, Migration and Employment, 2016

The reduction of remittances in dollar terms in relation to the previous year was due to the reduction of migrant income in US dollars which in turn was due to the weakening of the Russian ruble and reduction in the number of migrants (mainly deportees who are forbidden to travel to Russia). Reduced incomes of migrants and remittance recipients lead to a reduction in aggregate demand, which is a consequence of reduced remittances. labour. According to the National Bank of the Republic of Tajikistan, the total amount of remittances received in Tajikistan in 2013 was more than 4 billion USD, and these transfers in the last 10 years were the main engine for economic growth, an important source of income, and have had a significant impact on poverty reduction. GDP growth weakened markedly in response to reduction in remittances inflow. According to the results of 2016, the volume of remittances increased compared to the previous year from 1.2 billion USD to 1.9 billion USD. Such a noticeable increase in remittances may be due to the increase in the price of oil on the world market, which is the main exported raw material of the Russian Federation , and also as consequence of the strengthening of the Russian economy. This trend, once again confirms the dependence of the economy of Tajikistan on external economic factors, in particular, the economic situation in the Russian Federation.

According to the ILO study (2010), the majority of migrants (87%) send remittances through official channels – banks and Money Transfer Operators (MTOs), 12% through friends or other people who travel to Tajikistan and 1% of migrants personally bring the saved money with them when travelling home. For the most part these funds are channelled through MTOs with points of service located within banks, rather than via account-to-account transfers (ILO, 2010). Based on the World Bank data from 2014, 90% of all remittance transactions are done from Russia. According to Central Bank of the Russian Federation, in 2014 3.83 billion USD was sent to Tajikistan from Russia through the MTOs (Popov, 2015). However, in 2016, the National Bank of the Republic of Tajikistan introduced the changes in the procedure for foreign exchange transactions, which states that the transferred money can be given only in the national currency, i.e. Tajik Somoni. The exchange rate is not in favour of receivers which in turn reduces the use of official bank transfers. Interviews with key informants suggest that labour migrants are increasingly sending cash through their friends and relatives going to Tajikistan. Considering the volume of remittances being sent and perceived high levels of corruption, this is not a safe practice since remittances may not reach the end users on time or in full amount.



5. Remittances structure

The main cause of labour migration, as available data suggest, is lack of employment and income opportunities in the country. As some studies claim, the lack of clear policies in the domain of migration and remittance-use contribute to the fact that the spending of received remittances is not used for adaptation measures to climate change and as investments in other types of interventions. The major share of remittances is mostly spent on daily household consumption: food, clothes, consumer goods, weddings and funerals (WFP, 2015). In this regard, the repair of housing requires a significant amount of spending mostly as the result of natural disasters such as flood and mudflow. However, over the recent years migrants and their families started investing in local infrastructure (water, gas, roads, etc.), start-up their own businesses, set-up small and medium-sized enterprises, like shops, guest houses, restaurants and cafes, as well as community-based farms where households grow vegetables, fruits and grains for export. In many cases remittances are deposited in savings accounts. However, this causes a short-term effect as the money usually cashed back for household needs shortly (Ryazantsev and Bozhenko, 2014). Since labour migrants' remittances are to a large extent spent on daily household consumption, it can be assumed that the contribution of remittances in development of small enterprises is rather limited. On the other hand, because the total volume of remittances sent to Tajikistan is significant, remittances can play a significant role in economic growth, including creation of employment and self-employment opportunities, provided that the major portion of remittances is channelled for development of small enterprises. For instance, in Rasht Valley, UNDP implemented some 15 social and economic projects [costing from \$9,000 to \$10,000] with remittances amounting up to \$5,200 in cash per project exceeding the project target by 17%. It is widely believed that the main contributors are (a) financial and other [e.g. finding job in Russia] support a potential labour migrant gets from peers (fellow community members); and (b) training on family budget planning provided to the labour migrant families to explain the benefits of savings. A similar initiative was implemented in Zerafshan valley, however the projects were considerably smaller costing up to \$2,500. As further UNDP discussions with the communities have shown that the main difference lies in labour migrants' trust. The labour migrants in Zerafshan valley and elsewhere in the country pointed out the two main conditions for attracting remittances: (a) there is a need for a Trust Fund – a transparently managed channel for sending remittances, and (b) remittances should be spent in communities where labour migrants come from.

The ILO study showed that migrants send home around 47% of their income. About 33% of migrants' income is spent in the country of destination (e.g. Russia), and about 15% is saved in the country of immigration (e.g. Russia). At the same time, decision making for investing the money earned abroad differs. Around 66% of households make the decision on the use of remittances independently from migrants. In 20% of cases it is a joint decision (migrants and households), and in 14% of cases the migrant alone makes a decision on how to invest the money earned (ILO, 2010). Based on the findings of the study on remittances in Tajikistan, on average, remittances could cover 10% of urban households' and 15% of rural households' annual consumption costs. Therefore, it was estimated that the welfare of families receiving remittances was generally higher than that of average families in the country (Danzer and Ivaschenko, 2010).

Even though cash transfers from migrants significantly contribute to the country's poverty reduction, remittances from migrant workers are substantially used for financing consumer demands rather than for stimulating national production, boosting small and medium businesses and creating new jobs. However, the empirical literature on the use of remittances shows that little savings from remittances still flow into the formal financial sector. Other than covering the costs for necessities, they are spent on housing, land, education, and small entrepreneurship (IOM, 2007). The ILO study on remittances suggests that about 21% of households spend up to 81–100% of their remittances on immediate consumption needs. Applying the weighted average method, it was estimated that on average, 57% of remittances spend on immediate consumption needs; 12% of remittances are saved for less than six months (short-term savings) and 11% saved for more than six months (long-term savings) (ILO, 2010). This data suggests that, to a large extent, the recipients of remittances heavily depend on them and are prone to income insecurity.

Another point to mention is the negative socio-psychological aspect of households with family members working abroad. In most cases, the head of family, i.e. father leaves his family to earn money outside of the country. This situation has raised increasing concern of the families left behind, since women take on greater responsibilities for their families. Especially in the households where an additional source of income is agriculture (community-based farms) women have to care for and educate children as well as control the farming process by themselves. To help the mother children start working in the field from early ages and do not plan to get higher education. Considering that labour migrants are predominantly of young age (SocService Information and Research Centre, 2010), one can assume that the young population is likely to go on migration rather than pursue higher education.

6. Development policies and measures

6.1 National development strategies and plans

Analysis of the main strategies and plans provides information on the measures already taken by the Tajik Government and local authorities in consideration of migration and climate resilience.

In 2007 the Government of Tajikistan adopted the National Development Strategy (NDS, 2007–2015) to define the state priorities and actions for the period to 2015⁴. The Strategy focused on poverty reduction, sustainable economic growth, improvement of social welfare, promotion of environmental sustainability and gender equality among others. In general, NDS (2007–2015) was viewed as an ambitious document with general focus on development rather than on sustainable development issues. Stable economic growth and the significant decline of poverty are among the main achievements of NDS (2007–2015) implementation. Yet, GDP growth during 2014–2015 showed instability and high dependence of the economy on external factors. Furthermore, the NDS did not consider the climate change aspects, its consequences and adaptation measures.

Building on the achievements and lessons resulting from NDS (2007–2015) implementation, the new NDS for 2016–2030 differs from its predecessor in many ways. First of all, it takes into account the Sustainable Development Goals (SDGs) and international obligations of the country, approved by the 70th session of the United Nations General Assembly in September 2015. Secondly, the draft of the strategy sets the ultimate goal of long-term development of Tajikistan as an improvement of the living standards of its population based on the sustainable economic and human development. In order to reach the goal the strategy focuses on the improvement of the country's economic and social state. To ensure the population's well-being and agricultural development, the environmental problems are considered as an important aspect to be addressed, especially in the rural areas and in the context of mitigation and adaptation to climate change. These challenges are of great importance for SDGs.

Box 3. NDS (2007–2015): Key achievements

- Poverty is halved from 53% in 2007 to 32% in 2014;
- Sustainable economic growth is ensured at average 7% per annum;
- Macroeconomic stability is achieved and inflation reduced to a single digit;
- Incomes are significantly increased; the budget maneuvers become possible allowing to concentrate more resources for the development of human potential;

Source: NDS (2016–2030)

The strategy defined three main areas to focus on, which include **the strengthening of the country's institutional capacity, development of the human capital and provisions of the economic growth**. However, the environmental problems, adaptation to climate change, and migration aspects are not considered explicitly in the strategy, and there are no expected results or indicators for improvement of the agricultural lands, water management, employment and poverty reduction.

The strengthening of the institutional capacity mainly focuses on improvements in administrative management and regulations. The only thing related to climate change consequences mentioned in the strategy is the development of a national policy for disaster risk management as a long-term strategy.

One of the economic development goals of the strategy is **transition from an agrarian-industrial to an industrial-agrarian economy**, which focuses on the development of the industrial sector in a longer-term future. As it was mentioned in the previous chapter, agricultural sector to date is responsible for 63% of the total employment and contributes 21.9% to the country's GDP. It means that the transition to the industrial economy would take more efforts and require larger scale investments, qualified specialists and sufficient resources. Another important aspect of the industrialization is its potential impact on the worsening of the environment (water pollution, land degradation, atmospheric emissions) and climate change. Diversification of

⁴ For the full text of the strategy please refer to the link [http://planipolis.iiep.unesco.org/upload/Tajikistan/Tajikistan-Dev-Report-2007\(MDGs\).pdf](http://planipolis.iiep.unesco.org/upload/Tajikistan/Tajikistan-Dev-Report-2007(MDGs).pdf)

the national energy mix through the deployment of coal, gas and oil is also the national priority goal, which, if not sustainably managed, would also add on to more pressure on the environment.

As it was mentioned in the previous chapter, labour migration plays an important role in economic growth of Tajikistan. In this regard, the strategy supports the significant value remittances can play in the country's economic development. For this reason, the strategy considers the legalization of migration, social protection, and assistance in the training of migrants by the development of a special curriculum. However, again the strategy does not set explicit goals or indicators, and does not consider migration and remittances as a separate point of the development agenda.

6.2 Sector-based Policies

6.2.1 Policies and programmes for labour migrants in Tajikistan and Russia

Tajikistan: In 2001, the Government of Tajikistan ratified the International Convention on the Protection of the Rights of Migrant Workers and Members of Their Families adopted by the UN in December 1990. The country signed an agreement on cooperation in the area of labour migration and social protection of migrant workers in the CIS, as well as cooperation to fight against illegal migration⁵.

The legislative basis on labour migration is provided in the Article 24 of the Constitution of the Republic of Tajikistan, which stipulates the citizens' rights on free movement and choice of residence, a way of leaving the country and returning back. The overall framework of the migration regulations is provided by the Law "On Migration" approved in 1999 and amended in 2010.

Since 2000, the Government of Tajikistan has been implementing a number of policy measures for regulating the labour migration. These measures are mostly seen in reviewing and improving the legal frameworks, strengthening the migration monitoring system and developing vocational trainings for labour migrants. However, the labour market in the country is still characterized by the continuous increase in informal employment. One of the reasons is low awareness of migrants about employment legislation and opportunities (e.g. quotas for foreign labour in Russia), which results in getting work permit and registration through intermediaries and cost more money (IOM, 2015).

During 2000–2010 the state migration policy mainly focused on fighting against illegal migration by forming legal bases and economic mechanisms for coordination of migration processes. In 2002 the Programme on External Migration of the Citizens of the Republic of Tajikistan for 2003–2005 was adopted. In 2004 the Government Decree on "Mechanism for Migration Control" was introduced, together with the next phase of the "National Programme on External Migration for 2006–2010". Considering that Russia is the main destination country, in 2004 an agreement on "Labour and Protection of the Rights of citizens of the Republic of Tajikistan in the Russian Federation and Citizens of the Russian Federation in the Republic of Tajikistan" as well as a cooperation programme in the exchange of labour have been signed by the Tajik and Russian Governments. In the context of these agreements, the Tajik authorities guarantee to provide labour force with a certain level of qualifications required by the Russian labour market, while the oblast administrations in Russia guarantee to grant the worker contractual agreements, social insurance and protection of their rights, and assure favourable living and working conditions (Jones and Black, 2007).

A joint working group was created to address issues related to the implementation of this Agreement, which organizes regular meetings on the subject. In 2012, the countries signed a "Memorandum of Intent of the Republic of Tajikistan and the Russian Federation for further develop cooperation in the field of migration". Based on the memorandum, and as a result of joint work signed two important documents that have been ratified by the parliaments of the countries, allowing to increase the registration of migrants up to 15 days and permits registration deadlines to work up to 3 years. These documents facilitated the conditions of residence and employment of migrant workers-citizens of the Republic of Tajikistan in the Russian Federation. It is also worth noting that labour migration issues are regularly discussed in the framework of the Intergovernmental Commission on Economic Cooperation between the Republic of Tajikistan and the Russian Federation.

All of the above mentioned bilateral agreements aimed to formalize the status of labour migrants in the receiving country and ensure provision of employment and social guarantees. These were sought as necessary due to acute cases of reported abuse and violations of migrants' rights in Russia. To complement the accurate implementation of the governmental decrees, various Tajik Diaspora Associations have been established in Russia to provide legal assistance to Tajik migrants on a voluntary, philanthropic or commercial basis.

⁵ <http://www.osce.org/ru/eea/34468?download=true>

The Republic of Tajikistan signed an agreement on labour migration with the Russian Federation, Republic of Kazakhstan, Kyrgyz Republic, Republic of Belarus. Therefore, the Government pays special attention to the solution of issues related to the migration. For more than 10 years now there is a bilateral intergovernmental agreement on the protection of the rights of migrant workers, and also actively developing contacts at the interagency, intergovernmental, inter-parliamentary and interregional levels.

In 2011 the “National Strategy of Labour Migration of the Citizens of the Republic of Tajikistan for 2011–2015”⁶ was adopted to contribute to the implementation of the “National Development Strategy (NDS) of the Republic of Tajikistan for the period to 2015”. The main objectives of the National Strategy foresee not only control over migration processes but also to develop the skills and capacity of the labour migrants through professional trainings before the departure and increase the understanding about their role in the development processes of the country of origin. However, there are no clear and attractive mechanisms in place to stimulate the return of the skilled migrants back home, encourage their re-integration to the appropriate level of the job market and provide favourable conditions for their investments and savings (remittances) in a sustainable way (ILO, 2010).

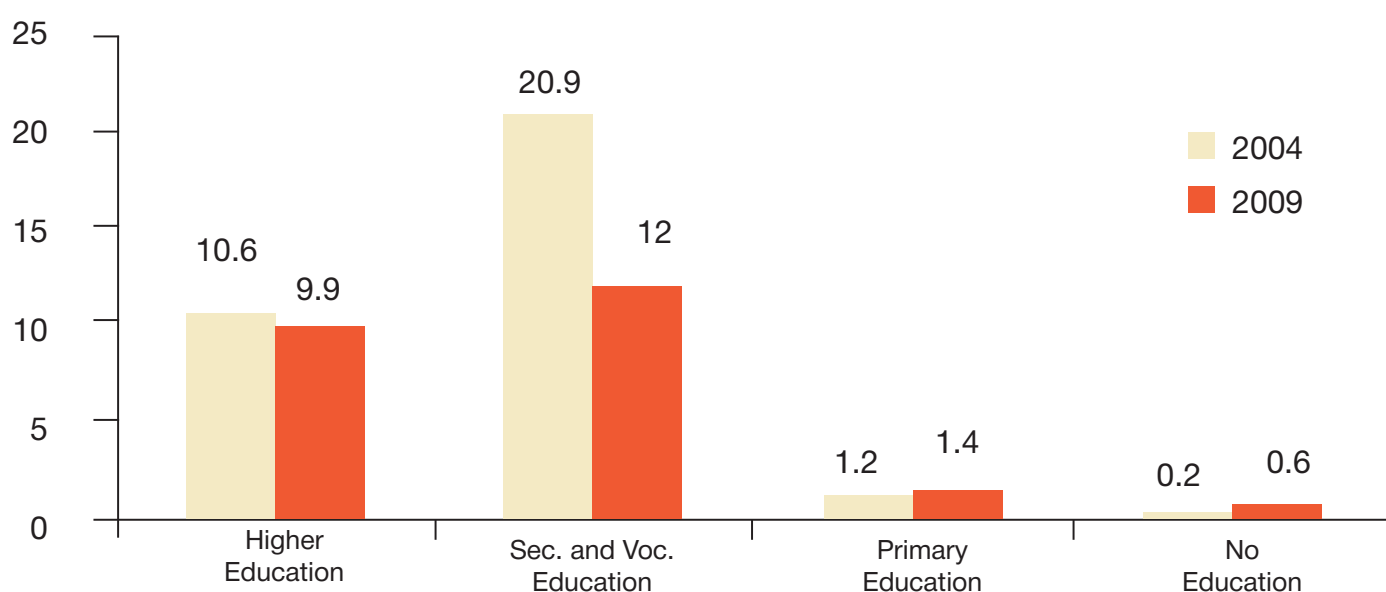
Although many of the national policies on migration stressed the importance of qualified labour force, there is no specific curriculum focusing solely on educating migrants or young generation, who is about to leave for seasonal work. The exception is short-term projects financed by the international agencies which tackle capacity building of this particular target group. In 2012, Tajikistan and Russian’s Migration Services organized vocational trainings for potential labour migrants, which also envisaged learning the Russian language (Tajik Migration, 2012). One hundred trainees have passed exams and have been employed in the Russian Federation, which is insignificant as compared to the total number of labour migrants from Tajikistan. Yet, such examples are very sporadic. On the one hand, the organization of regular vocational trainings requires resources, while on the other hand, training is not mandatory and most of migrants prefer to travel independently without being educated prior to departure.

Box 4. Professional skills of labour migrants

Observations show that labour migrants from Tajikistan possess low-level professional skills and are employed in lower-paid jobs, e.g. cleaning, construction, trade. The biggest share of migrants comes from the poor rural areas of the country, where the quality of education is lower than in cities. The proportion of labour migrants with higher education decreased from 10.6% in 2004 to 9.9% in 2009 (Figure 3). This data suggests that new generation of labour migrants is less educated than the previous one (IOM, 2015).

Source: NDS (2016–2030)

Figure 3. Labour migrants’ education levels in 2004 and 2009, in %



Source: Analytical reports on the labour force survey for 2004 and 2009, Agency for Statistics under the President of the Republic of Tajikistan

⁶ See details of the NDS in the above chapters

Russian Federation: The basis for Russia's current migration policy was laid back in the early 1990s. In 2002, the Government of the Russian Federation adopted the Law "On the Legal Status of Foreign Citizens on the Territory of the Russian Federation". It is anticipated as a tool for legalizing irregular migrants, setting transparent procedures for migration control and granting legal status for different groups of migrants (Focus Migration, 2010).

Since 2006, the migration policy witnessed a critical shift towards liberalization. In the face of a declining and aging population, Russian authorities began to consider labour migrants as an important resource for the country's economic and demographic development. Policy reforms were directed primarily at regulating immigration from the countries of the Commonwealth of Independent States (CIS), securing simplified procedures for visa-free entrance, registration and work permits in Russia (Focus Migration, 2010). Furthermore, in 2010, Russian authorities legalized the status of foreigners who worked in the private sector by introducing patent-based work permits. As a result, the number of migrants from Uzbekistan, Tajikistan and the Ukraine, the largest suppliers of foreign workers, increased significantly (Ryazantsev, 2014). Meanwhile, Russian authorities continue to promote a so-called 'quota controlling system' for foreign employees, which is a way to regulate the inflow of labour migrants. For example, in 2007 the 'quota system' was quite liberal, but since 2009, Russian authorities have started reducing quotas on work permits issued to foreign nationals (The Moscow Times, 2011).

In June 2012, a new concept of the state migration policy until 2025 was adopted, which prescribed further drawing of foreign labour in the country and called for improvements in the system. The document tightens Russia's immigration policies by introducing a series of additional measures aiming at punishing foreign nationals for violations of migration or administrative regulations, including the creation of an electronic centralised database of foreign nationals with re-entry bans (Kluczewska, 2014). The mentioned policy is yet to be implemented, with the second phase starting in 2016.

In October 2013, Russian authorities signed the Protocol to Protect Tajik Migrant Workers in Russia, which allows Tajik citizens to obtain work permits up to 3 years instead of those with one-year duration. At the same time, several amendments to the regulations for entry and exit of foreign citizens to the Russian Federation were introduced in 2014. The amendments restricted some migration policies, which have been adopted in 2007 and introduced rigid rules for foreigners, including CIS citizens, to stay on the territory of the Russian Federation. Once the amendments entered into force in 2015, some 276 thousand of Tajik migrants have been banned to enter the Russian Federation for violating the rules of stay in the country, as reported by the Minister of Labour, Migration and Employment of the Republic of Tajikistan. Another 400 thousand of Tajik citizens, who currently work in Russia, comprise a so-called 'risk group' due to limited knowledge of the Russian language, which is also a part of the new policy (Popov, 2015).

Nowadays, one of the beneficial ways of working in Russia is to acquire Russian citizenship. This gives numerous positive opportunities to foreign migrants, including better paid jobs, integration into the domestic society, upgrading professional and language skills. The "State Programme to Assist the Voluntary Resettlement to the Russian Federation of Compatriots Living Abroad" (President's Decree #1289 as of September 14, 2012) grants Russian citizenship to the residents of Tajikistan and other CIS counterparts through simplified emigration procedures. In 2015, around 882 Tajik citizens and their families moved to the Russian Federation for a permanent stay in the context of this program.

Based on the policy developments described above current regulations of labour migration in Tajikistan as a sending country, and Russia as a receiving country, are largely based on the countries' economic and political interests. As a sending country, Tajikistan intends to protect the rights of its citizens abroad and see their potential to contribute to the development of the country, while Russia, as the host country, attracts cheap labour and controls its quantity and quality (Kluczewska, 2014). Labour migration is still not organized and properly regulated. Low level of education among labour migrants often leads migrants to be heavily exploited, and their basic rights at work are systematically denied. Their health is notably worsening and exposed to very high risks affecting their safety and security with a limited (if at all) access to social and medical services (IOM, 2015). This also has implications on the family of labour migrants. Due to poor working conditions, labour migrants are at high risk of tuberculosis, which is known as the disease of the poor and HIV/AIDS due to poor awareness on prevention and transmission. When they return home, their health status directly impacts the family members [due to risk of transmission or the high cost of treatment] and further deteriorates the living conditions of the family.

Box 5. National policy for climate change

1998 Ratification of the UN Framework Convention on Climate Change (UNFCCC)
1998 First National Communication
1998 National Action Plan for Climate Change Mitigation
1998 Second National Communication
1998 Third National Communication
1998 Signing of the Paris Agreement

6.2.2 Policies and measures on climate resilience

Tajikistan is a party of numerous international conventions on environment and climate change⁷. In 2015, the Government of Tajikistan prepared and submitted its Intended Nationally Determined Contribution (INDC) to support the global commitment to reduce greenhouse gas emissions and accelerate its transition to a climate-resilient path in the context of the Paris Agreement on Climate Change (PACC). In 2016, the Government of Tajikistan signed PACC⁸ and supported its global objective to keep the global temperature within the 1.5°C warming threshold and provide technical and financial assistance to developing the most vulnerable countries to fight against climate change by introducing modern technologies, capacity building and sector-based policies (UNFCCC, 2016).

In its INDC the Government of Tajikistan once again highlighted its dramatic vulnerability to climate risks and the prioritized introduction of climate change adaptation measures. They are meant to reduce the adverse impacts of the extreme weather events, climate-induced disasters through modernization of the hydrometeorological observations, introduction of new technologies in agriculture, industry, transport sector and energy as well as assure sustainable economic growth and meeting the national priorities of the country.

In the national context, one of the most awaited policy documents, which envisage to tackle climate change at the country level, is the National Strategy on Climate Change Adaptation until 2030. The document is still under the final review and suggests considering most of the priorities seen from a climate change angle in the frames of the National Development Strategy (2016–2030). The particular role of the new adaptation strategy is to link the national level (policies, decision-making) with the community-based needs and priorities. As such, the governmental officials in close cooperation with the civil society organizations nowadays develop Local Adaptation Plans of Actions (LAPAs) for the top 5 vulnerable rural areas of the country. The suggested actions and measures will feed-in to the national policy documents and inform the decision-makers about further steps to be taken towards a climate-resilient path.

Despite the promising progress achieved in developing of climate-related policies in Tajikistan, which are to foresee both national development priorities and realities of global climate change agenda, there is still a way to go. Most of the sector-based programs do not explicitly consider climate resilient measures in a long-term run. For example, the National Development Strategy until 2030 does not consider climate resilient measures in their strategic development areas such as agriculture, industrial development or social aspects of sustainable human development. Neither the sector-based document on education or migration foresees such climate resilient measures, as raising awareness, outreach or transfer of clean technologies, establishment of 'green' jobs, which will be in demand in a short-term future.

6.2.3 Public and private finance programmes

The financial sector of Tajikistan is represented by commercial banks, which cover 80% of financial sector assets, while remaining 20% is held by non-financial segment, principally micro finance institutions. According to the National Bank of Tajikistan, the country's banking sector is collectively well capitalized, but with generally poor quality of assets. Big banks are characterized by poor performance, while the quality of the services of the smaller banks and micro finance institutions (e.g. Bank Eskhata, IMON International) is relatively good.

Although the climate change agenda is well developed in the country, there are no large-scale finance programs to support investments to the climate resilience. The emerging program, which has been launched recently by the European Bank for Reconstruction and Development (EBRD) and Climate Investment Fund (CIF) showcases a good example of the Climate Resilience Financing Facility, mostly known as CLIMADAPT. The Facility targets on allocating investments to the improved climate resilience technologies and support the country's private sector. Through its liable partner institutions (Bank Eskhata, Humo and Imon International)⁹,

⁷ See details in the Country Situation Assessment at: http://carececo.org/upload/02/eng_CSA_Tajikistan.pdf

⁸ List of the countries to have signed the Agreement on climate change available at: https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&lang=en

⁹ More details are available at: <http://climadapt.tj/>

it offers loans to entrepreneurs, farmers and households to promote the transfer of new technologies, water-saving and energy-efficient techniques, sustainable land management practices, etc. Award of loans is based on criteria that compliment measures on climate change adaptation and mitigation. Loan grantees have access to free and open consultations on selection of appropriate technologies and practices. For example, one of the requirements to get the loan is to assure that the practice or technology selected for funding will bring 20% of energy saving, 10% of water use efficiency and 10% in reduction of soil erosion. CLIMADAPT provides loans for three main sectors including residential, agricultural and private (business). Each sector is given a list of eligibility criteria for potential projects and proven technologies.

The example of the CLIMADAPT is an excellent approach in attracting the resources for climate-smart agriculture and technologies, and outreaching the most vulnerable segments to climate resilient agenda (rural population and private sector). However, in order to assure the sustainability of the program, one should envisage the regular co-sharing contribution from the loaners. Remittances or incomes acquired from migrants and their families can play an important role in setting up such a mechanism. Some episodic examples, where migrant remittances are used as a contributing factor, already exist within the existing financial schemes of the Tajik banks (Table 1).

Table 1. The “Bovari” Loan of Bank Eskhata¹⁰

The “BOVARI” LOAN		
	<ul style="list-style-type: none"> • Special and unique offer for those who constantly receive remittances • Regular remittance receivers are provided loans on very favourable terms 	
	Somoni	USD
Amount	From 500 Somoni to 25,000 Somoni	Equivalent in USD
Interest rate	For new customers 38% per annum	For new customers 34% per annum
Regular clients	36% per annum	32% per annum
Loan maturity	Up to 12 (twelve) months	
Pledge security	Based on trust, i.e. it goes without any collateral or guarantors	

Source: Bank Eskhata, 2016

Some commercial banks have started to actively promote ‘green’ loans for sustainable use of agricultural resources, promoting rational use of water, as well as water saving techniques etc. which are directly or indirectly related to climate resilience. For example, Bank Eskhata in the context of its existing socio-ecological finance program provides loans for installation of drip irrigation systems. The loans are provided at the lowest interest rate, which is 16% per annum¹¹. The finance program of Imon International Bank also foresees the so-called ‘green’ credits and loans. Most of them target improved access to energy resources and sustainable energy solutions (efficiency, saving, expansion of renewable energy) or smart agriculture through sustainable land management and water saving techniques (drip irrigation, sprinkler irrigation, smart cultivation, mulching, membrane planting, wick watering, spiral water pumps, etc). The interest rates set for ‘green’ and climate-resilient credits and loans are lower than the average interest rates (28% per annum). One reason of the reduced percentage of such loans is an intention to attract new consumers and clients to the environmentally friendly solutions, but another reason is the subsidized investments, provided by the international financial institutions (German/British KfW Bank, CIF) or multilateral development banks (ADB, EBRD).

Upon the analysis of credit programmes offered by commercial banks and micro-credit institutions it can be concluded that the average interest rates are very high in Tajikistan and there is a very small number of loans dedicated to climate resilience. Another issue is the lack of knowledge and awareness of the population, especially in rural areas, about the benefits of using the loans targeting on climate-resilience or ‘green’ technologies. Some can be attributed to bank officers who need regular capacity building trainings to acquire up-to-date knowledge about climate resilient practices and methods on land management, sustainable energy and water saving techniques, to better advice on their respected credit programs and expand the network of their customers.

Finally, there are still no programs considering migrants remittances as an investment into the development of adaptation measures. However, the existing separate programs as for climate change measures and migrants support could be merged and used further.

¹⁰ Details are available at: http://eskhata.com/individuals/lending/lending_types/

¹¹ Interest rates for regular loans provided by most local banks and finance institutions in Tajikistan are as high as 35–40% per annum

7. Links between remittances and resilience

In September 2015, at the UN General Assembly, Sustainable Development Goals were adopted defining the world's development agenda for 2016–2030. The SDGs are interlinked and call for an integrated approach while pursuing development goals at the global, regional or country level. Thus the progress or setback under one SDG can have an immediate [positive or negative] impact on the other.

Under the above context, as never before, development directions, such as climate change play a critical role in sustainable development. This is especially relevant for the countries such as Tajikistan which are very vulnerable to climate change and climate induced risks. These vulnerabilities are mainly defined by the (a) geographical terrain and associated disaster risks and climate conditions, (b) narrow economic base, adding to the country's vulnerability to external shocks, such as instabilities or crises in neighbouring/destination countries; (c) limited institution and technical capacities; (d) weak banking system, etc.

High risks and frequency of disasters can result in inequalities and exclusion. This brings into play the issues of vulnerability rather than poverty since in case of disasters everyone can be affected if not duly prepared. When discussing labour migration vulnerability should be viewed against the family of labour migrant and against the labour migrants themselves.

Families of labour migrants: As the collected data shows labour migration has been chosen as a coping strategy for improving the well-being of the labour migrants' households. In other words, labour migration is chosen as a path to reduce vulnerability of the family to income, food, health and other types of human insecurities. Thus the link between remittances as the main intended outcome of labour migration and resilience can be considered as direct. As the data shows, the major volume of remittances is spent on immediate needs of the labour migrants' families. One can assume that remittances enhance the resilience of the family by preventing food shortages and consequent health problems caused by malnutrition. Remittances' impact can go beyond the family and benefit the entire community. For instance, if remittances are used for local development activities in the community, the gains from these activities such as creation of jobs or improved access to health and education facilities will benefit the neighbourhood of the labour migrants' families. Along with the benefits, there are different implications of labour migration. As mentioned in preceding sections, labour migration leads to socio-cultural changes such as a shift or delegation of the household management functions, such as family budget management, to the wife of labour migrant in addition to her daily functions such as childcare, water management, etc. Inability to cope with additional tasks may make the wife of labour migrant more vulnerable to cultural and societal pressures. For instance, if the wife of labour migrant is expected to manage a farm she will need to interact closely with her peers which are predominantly male.

Labour migrant: the data collected as part of the present paper shows that labour migrants' level of education is declining. Lack of specialized skills and knowledge of Russian language can significantly minimize the chances for securing a decent job. This vulnerability minimizes the likelihood of sending remittances home and thus the well-being of the family might further worsen.

Lack of labour migrants' rights and health awareness will add to risk of labour migrant to catching infectious diseases, including the sexually transmitting diseases the cost of which at home is likely to exceed the volume of remittances sent during the period of labour migration. In addition to this, the labour migrant might face stigma and discrimination. As the data suggests, almost half of Tajik labour migrants were able to get Russian citizenship. This category of labour migrants is likely to turn into safe migration due to higher salary pay and other benefits of Russian citizenship. Yet, the second half of labour migrants remain at risk of earning lower income and other types of insecurities explained above.

In view of the above summary, one can assume that the link between remittances and resilience is very high. However, the consequent costs/implications of unsafe labour migration can be higher than benefits. Without a sound, well financed and timely implemented state policies and programmes to ensure social protection of labour migrants and complemented with favourable financial and investment products based on mutually beneficial grounds, sustainable human development and consequent resilience can be questionable. Experience of development partners in Tajikistan has shown that remittances can be used for boosting local economic development and this is an increasing trend, which creates the momentum for paying efforts to make sustainable returns of the investments made by the labour migrants via remittances.

8. Key findings, conclusions and recommendations

8.1 Key findings and conclusions:

A combination of internal and external social, economic and environmental factors, including the country's development context, institutional set-up, people's well being, geographical location and consequent threats related to natural disasters and response, as well as adaptation capacities, greatly contribute to Tajikistan's vulnerability to climate change. Tajikistan is viewed as the Central Asian country most vulnerable to climate change. For instance, geographical location of the country in arid/semi-arid climate zone and with a mountainous landscape adds to the country's vulnerability and exposure to climate-induced disasters. Secondly, the human capital directly defines the adaptive capacity to climate change. It has to be noted that in the last years remittances sent by labour migrants are growing, which could be considered as a positive factor that could increase resilience to climate change impacts.

The main findings and conclusions of this paper include, but are not limited to:

Economic aspects:

- Tajikistan has a complicated socio-economic situation characterized by poverty, unemployment, under-developed real economic sectors, higher ratios of remittance inflows caused by the outflow of labour migrants abroad. Tajikistan's narrow economic base and consequently high dependence on labour migrant remittances makes the country's economy to be heavily dependent on external factors. In the context of labour migration, the external factors apply to the ongoing economic recession in Russia, which has a negative impact on the volume of remittances and consequently on GDP growth.
- Although, the country's lowest wages are paid in agriculture sector, it is considered as the country's largest employer, especially in rural areas. Deteriorating infrastructure and services coupled with land degradation caused by the irrational use of agricultural lands and water resources, overgrazing by livestock, use of outdated technologies and other factors minimize space for diversification of the economy and employment and income choices of the active and potential labour migrants. All these factors make the country more vulnerable to climate change. In addition, the absence of internal economic mechanisms for addressing these socio-economic problems makes the vulnerability to climate change even higher.
- Restructuring of agricultural farms has resulted in a considerably higher number of small-sized farms (dehkan/community-based farms with less than 1 hectare). This complicates the planning and management of agricultural activities such as crop rotation and anti-erosion works. These conditions of cultivated lands are more sensitive to climate change risks, particularly to droughts and floods.
- Tajikistan, to a large extent, depends on hydropower. This makes the country vulnerable to fluctuations in rainfall and climate change. To date the country experiences significant electricity shortages in winter months due to low river flow which can even be enforced by the global warming.
- Shortage of electricity also results in losses equivalent to 30% of agricultural production. In the short run this has an impact on immediate benefits to the farmers from the agricultural productions, while in the medium and long run the limited access to power supply can also significantly hamper development of value chains, especially when it comes to processing and packaging.
- Climate resilience of agricultural sector could be characterized as low since the sector is highly exposed to climate risks and remains dependent on weather patterns. The impact is exacerbated by a low adaptive capacity of governance and policies, as well as farmers, who have limited knowledge on proper land use and water management in the face of climate change.

Social aspects:

- The main social characteristics of Tajikistan are determined by the fast growing population most of which live in rural areas. Despite the growing budget allocations for social sectors (social protection, health and education) access to basic services such as health and education remains limited due to: (a) quality of service provision resulting from poor/outdated qualification of teachers and inadequate learning conditions (infrastructure and technology); and (b) inadequate skills supply [inconsistent volumes and spheres of teaching] versus labour market demands.
- Enrolment rate in higher education facilities was experiencing a decline during the last years. This could potentially be the cause of increasing trend in labour migration, especially among the youth, which represents majority of labour migrants. Limited education level of the young creates a generation gap in learning about adaptation practices at home, which again, increases the exposure of the main employment sectors to climate vulnerability.
- The existing mortality and morbidity rates, increased number of infectious diseases, including water borne diseases mainly caused by lack or shortage of quality drinking water, high levels of anaemia and iodine deficiency caused by malnutrition, low public awareness about various disease types, and limited access of the population, especially in rural areas, to the medical services [demand for number of beds in hospitals and physicians is higher than the system provides] demonstrate the need for significant improvements in enhancing access and affordability of health services for the population, especially the most vulnerable community segments.
- Since the social sector is seen as the main driver of sustainable human development, lack of/limited access to basic services will further add to vulnerability of isolated and hard to access communities which are typically most prone to natural disasters, including climate induced risks.

Labour migration and remittances:

- Labour migration has become a phenomenon in scale and importance to the Tajik economy both at the national and household levels, having made invaluable contributions to the country's development and significantly reducing poverty over the last decade.

However, labour migration has also created strong dependencies, with whole families relying entirely on income earned abroad by migrants. The overall migration outflow for the recent years has an increasing trend, but with a significant slowdown in 2015 caused by the economic crisis in the receiving countries. However, from 2016 the economic situation is quite stabilizing, which in turn can result in the increase of the number of migrants. As collected data shows the level of labour migrants education is declining. This significantly minimizes the choices in finding decent jobs. Therefore, increasing the number of labour migrants will not necessarily result in increased volume of remittances.

- Vulnerability and adaptive capacity of the majority of the migrants' families are obviously lower, since most of them are poor, living in rural areas and do not have neither extra money for measures to adapt to climate change nor appropriate knowledge how to adapt.
- The 'face' of labour migration is changing due to the increasing number of female labour migrants. On one hand, this may contribute to economic empowerment of women. However, on the other hand, there are social and cultural implications of this trend. For instance, when the father leaves for labour migration, household management functions, including in management of the family budget is likely to be delegated to the wife in addition to child care and all associated family functions. However, if both parents leave, then the burden of the household will either be on aging family members or children left behind. In addition, the growth in the number of young women among the migrants would likely force them to stay single without creating a family. Therefore, there is a need for a closer review of the costs [of vulnerability] and benefits [remittances for short and long term investments] of the above trend and promote empowerment of women affected by labour migration.
- Lack of clear policies in the domain of migration and use of remittances contributes to irrational spending in a view of adaptation measures. In Tajikistan, to a large extent, remittances are spent on repairing housing as a result of natural disasters. However, over the recent years the migrants started investing in their own businesses, starting-up small and medium-sized enterprises, as well as community-based farms. In the long run, if properly managed, this will enhance the basis for sustainable investments of remittances for climate resilient future.

8.2 Recommendations:

Coming back to the research objective, whether economic consequences of migration are positive or negative and whether migrants' remittances allows households to adapt efficiently to climate change, depend on an array of socio-economic, political, financial and institutional conditions. Therefore, based on the analysis of the current situation in Tajikistan, the following recommendations are suggested for further consideration.

For national strategies and plans

Transition from an agrarian-industrial to an industrial-agrarian economy of the country is one of the main goals for a long-term economic development set in the National Development Strategy for 2016–2030. This means the country is focused on the industrial sector development rather than on an agricultural. On one hand, the development of industry has several advantages like attracting foreign investments, transfer of new technologies, creating new workplaces, and increasing economic security. In comparison to the agricultural sector, industry does not have direct dependance on climate conditions. However, many industries depend on energy produced largely by hydropower, and therefore are seriously impacted by climate change. On the other hand, such transition will require a considerable increases in the volume of financing, introduction of new technologies and enhancing human capital.

To ensure sustainable use of the existing financial, natural and human resources the country's strategic documents need to take into account the following:

- **Education:** Since the Strategy sets the goal to develop the human capital by improving its education system, the focus on the creation and expansion of technical and engineering specializations would meet the demand for local qualified specialists and will decrease the dependency on and the costs of foreign experts. At the same time, this approach would ensure greater employment opportunities for the local specialists, especially for youth. The current gap in the supply of local specialists in the job market could also be minimized via vocational training for the active and potential labour migrants.
- **Private investments:** It is obvious that development of industrial sector needs significant investments. In case of Tajikistan, most of the investments are expected from outside the country. However, as an option, labour migrants' remittances could be potentially used as an additional source for development of the industrial sector. However, this will require formulation of policies to encourage non-consumption use of remittances by providing mutually beneficial grounds for both the government and the labour migrants who can and are willing to invest locally.
- **Green technologies:** Another important aspect of the industrialization is its impact on the environment and climate change process. In this regard, the NDS (2016–2030) sets the goal to diversify the domestic energy sources through the development of coal, gas and oil resources. This will lead to more pressure on climate change and the environment. Since the industry is a power-consuming sector it is suggested considering the introduction of sustainable energy sources to increase energy production and decrease the possible impact on the environment.
- **Climate change:** Considering the country's vulnerability to external shocks, its narrow economy as well as vulnerability to climate change, the regulation of climate change consequences and adaptation measures needs to be well reflected both at the levels of the goals and objectives, as well at the level of measures and indicators. For this reason, better linkages of the country's documents with SDGs would help to better align global and national priorities and ensure more targeted development financing.

For sector-based policies and programmes related to labour migration

The existing legislation of Tajikistan is still not regulating labour migration to a full extent due to lack of: (a) accurate, reliable and up-to-date information on the number of labour migrants, (b) policies for encouraging the return of skilled labour migrants as well as reintegration of returning migrants for stimulating investments and savings, and (c) programmes to increase labour migrants' education level. In addition, the Russian Federation's legislation tightens migration policy by introducing measures aiming at punishing for violations of migration or administrative regulations, which in turn place Tajik migrants in more complicated situations. The social aspects in the migrant households are getting worse and poverty is still the main issue. Based on the analysis of the current stance of the country on migration, the following is suggested to be taken into consideration during the development of appropriate policy and programmes for migrants:

- **Social Protection:** NDS (2016–2030) envisages providing social protection for labour migrants. However, these commitments are not explicit and require greater emphasis while developing and/or implementing the relevant policy measures. Key consideration would be the development and use of clear criteria to define the level of labour migrants' and their families, especially women and children, vulnerability for more effective targeting and coverage with social protection schemes.
- **Education:** Increase the education level of labour migrants which would contribute to the development of long-term human capital and make Tajik labour force more qualified to meet the international labour market demands and enhance their chances for job security, which in turn would result in greater income and livelihood security of their families at home.
- **Health and rights awareness:** good knowledge of labour migration policies of the destination countries would ensure better preparedness for labour migration and better protection of labour migrants from human rights violations while in labour migration. Labour migrants also need to have a good understanding of prevention and transmission of infectious diseases, such as Tuberculosis as well as sexually transmitted diseases such as HIV/AIDS to which labour migrants are highly prone.
- **Family budget planning:** Families of labour migrants need to be trained on effective family budget planning and management. This would ensure more effective use of remittances for development of small enterprises and consequently, the creation of employment and self-employment opportunities. This behaviour in managing the family budget would have several benefits, including: (a) more taxes for local budget; (b) more financing of local development activities; (c) more savings and deposits in local banks. The long-term impact would be a more effective use of labour migrants' remittances for the long-lasting social and economic benefits of the family and diversification of the local economy. Since agriculture is the dominant employer in rural areas, the likelihood of using remittances for adaptation to climate change would increase provided that labour migrants' families are aware of the benefits of climate change adaptation measures.

For policies and measures on climate resilience

The only one existing policy document addressing climate change in Tajikistan is the National Action Plan on climate change mitigation. Meanwhile, the country is about to adopt the National Strategy on Climate Change Adaptation as a key national policy document, which addresses climate resilience for the period until 2030. Based on the analysis of the existing legislation the study suggests considering the following aspects in developing legislation in order to successfully adapt to climate change:

- Develop and introduce appropriate adaptation measures to climate change in each economic sector, especially in agriculture and industry. Keep track of the progress and expenditures dedicated to climate resilient measures.
- Increase the population's awareness and education level, including the farmers, householders and young generation on climate change adaptation measures.
- Stimulate and promote the implementation of appropriate adaptation measures to climate change at the national, local and household levels, as well as mainstream them into the local and community based development plans.
- Provide financial support to households most suffering from the consequences of climate change. This could be done by providing grants, affordable loans or other types of technical assistance.
- Consider the use of labour migrant remittances as a measure to adapt to climate change and ensure economic development remains resilient to climate impacts.

For public and private finance programmes

Currently, the financial market of Tajikistan needs further strengthening in order to ensure financial stability and access to finance. Commercial banks have higher interest rates that do not let the population, especially the rural poor, to use their financial products appropriately. The CLIMADAPT programme introduced in Tajikistan by EBRD and CIF to specifically help the Tajik private sector to become more resilient to climate change, can be a good example for the development of financial facilities and programmes for labour migrants and climate change adaptation measures by the government and commercial banks. Such financial programmes could benefit all parties, including commercial banks, government and migrants by attracting more customers to the banks, supporting government in economic strengthening and helping householders to get access to affordable finance. Several examples of such programmes are already provided by some micro-credit banks, which can also be taken into account for the development of future financing programmes. In addition, the higher bank transfer fee in most cases is not allowing migrants to use bank services for remittances transfer

which in turn affect appropriate monitoring of transferred money by the government and also makes it harder for migrants to transfer money via official channels.

In view of the above, the study suggests the following options for the development of specific programmes for adaptation to climate change and supporting the labour migrants:

- Lower interest rates on loans issued as adaptation measures to climate change, for the education of the younger population, including favourable terms and conditions for labour migrants' families.
- Regular capacity building of the bank staff, particularly experts, for appropriate consultations and advice on the technologies and adaptation measures the loan can be given to, and on the most profitable loan terms for costumers.
- Extensive and substantive consultations and advice from the credit/loan officers to be able to explain in sufficient detail the financial and other relevant benefits of the green and climate-resilient products being promoted to the costumers.
- Loans without any collateral or guarantors for costumers, who regularly receive the remittances and are to use the loan for climate resilient measures (example is the "Bovari" loan provided by Bank Eshkata).
- Public and private partnerships could be used and promoted for attracting remittances as additional investments to the diversification of the economy, and development of industrial sector given the clean technology transfer.

Some of the measures listed above are already being practiced by the banks and microfinance institutions (MFI). However, the main limitations include: (a) most of these banks operate in urban and densely populated rural areas, thus the products and services of these banks are out of the reach of the communities located in remote and hard to access areas of the country, which are as a rule most vulnerable to climate change; (b) the awareness of MFIs on best practices on 'green' loans and those related to climate change is limited, which minimizes the changes for replicating and scaling up. Thus, the Association of Microfinance Organizations in Tajikistan (AMFOT) could be used as a connecting link with all the MFIs operating in Tajikistan for promoting the above measures or scaling up the best practices such as those demonstrated by EBRD via Eshkata Bank and Imon International.

In general, the Governance of the Republic of Tajikistan does not consider remittances as a tool for adaptation to climate change in the national policy. However, different episodic programs on climate change and remittances are existing separately in the country. It is suggested to consider the remittances from labour migrants as a tool for adaptation to climate change in the policy, namely in the National Strategy on Climate Change Adaptation.



Photo of building materials factory © Victor Teplov

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Appendices

Appendix 1: List of Interviewees

Government

Khayriddin Mahmaddulloev, Ministry of Labour, Migration and Employment
Moinsho Mahmadbekov, Ministry of Labour, Migration and Employment
Muzaffar Salimov, Committee for Environmental Protection under the Government of Tajikistan
Mahmad Kholov, Ministry of Labour, Migration and Employment (Yavan)
Firdavs Umarov, Ministry of Labour, Migration and Employment (Zeravshan)
Shahlo Azizbekova, Committee for Environmental Protection under the Government of Tajikistan
Zarina Nazarova, Committee for Environmental Protection under the Government of Tajikistan (Khatlon Oblast)
Sherali Safarov, Ministry of Agriculture
Rustam Abdullaev, Ministry of Energy and Water Resources

Academia & Research Institutes

Kurbonjon Kabutov, Renewable Energy Sources Institute
Yarash Pulatov, Institute of the water problem

NGOs

Yuri Skochilov, NGO “Youth Ecological Centre”
Nodira Rakhmonberdieva, NGO Information Centre “Manizha”
Kurbonali Partoev, NGO “Khamkori baroi tarakiyot”

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Research for climate-resilient futures

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