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Republic of Uzbekistan

JICA Country Analysis Paper

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JICA Country Analysis Papers are a document that analyzes various countries from the perspective of development by JICA, intended to be utilized for the consideration and implementation of effective cooperation with the country concerned as a development assistance agency. This document also provides information from a development side perspective for when the Japanese government is formulating aid policies such as "Country Assistance Policy." In addition, the actual cooperation details and implementation projects for each country are considered and determined based on Japanese government policy and the scale of budget each fiscal year and the circumstances surrounding projects.

Executive Summary

1. Current State of the Country

- Since gaining its independence from the Soviet Union in 1991, Uzbekistan has promoted gradual market economic reforms under the Karimov administration, while maintaining some vestiges of socialism and a planned economy and has implemented economic management led by the government and centered around state-owned enterprises.
- Since President Mirziyoyev took office in December 2016 with the sudden death of President Karimov, his administration has promoted economic growth led by the private sector, rapidly promoting reforms towards a market economy, abolishing government controls on foreign currency and price controls in 2017, privatizing state-owned enterprises, improving the business environment (including anti-corruption measures), and promoting foreign investment etc.
- The competitiveness of major industries (cotton and fiber, natural gas, metals (gold and copper), and agricultural products, etc.) remains weak as raw materials are traded as is, without processing for high added value. For modernization to take place there is a need to overcome the low profitability of foreign investment due to differences between domestic and international prices, and to promote investment it is essential to strengthen access to international markets (exports) for products and services. Efforts to overcome the logistical handicap of being a doubly landlocked country are also essential.
- While more than 600,000 new people participate in the labor market every year, the unemployment rate is still around 10%. With a population of 34 million people, about 2.5 million are engaged in migrant labor in Russia and other countries, producing worker remittances which account for about 10% of GDP, but with concerns over economic stagnation in Russia as a result of the war in Ukraine, there is now a need to diversify migrant destinations and create jobs within the country.
- There is also a need to expand social services such as healthcare and education etc. Public health spending as a percentage of GDP has fallen to 2.0% (6.5% in OECD countries), and while government expenditure as a share of total health care expenditure up to 2018 had fallen to less than 40%, the burden on households had increased to 60%, indicating the challenge of inclusion in health services. Another challenge is improving the quality of medical care through enhanced efficiency in referral systems and improved medical equipment, etc. In terms of education, while the literacy and primary and

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secondary education enrollment rates are high, the higher education enrollment rate is low at 19% and the construction of schools, training of teachers, and preparation of teaching materials, etc. have not kept pace with population growth. There is a black box issue with academic ability which is not objectively measured until university entrance examinations, and this is an obstacle to promoting improvements in the quality of school education (improving teacher skills, improving curriculum, effective continuity between preschool-elementary and secondary education-higher education, etc.). From the perspective of educational inclusion, there is a need to make use of expertise from developed countries concerning special needs education for preschool children with disabilities and continuing in primary education (inclusive education).

- Energy intensity is double the global average, at 246 toe/GDP, and greenhouse gas emissions per GDP is 9th in the world at 1.23 kg, so there is a need to make efforts against climate change (mitigation measures). The country aims to “reduce greenhouse gas emissions per unit GDP by 35% over 2010 levels by 2030” as announced in the “Nationally Determined Contribution (NDC),” and there are targets to save 20% of energy by curbing the impact of inefficient heating and heating demand, and by raising the share of renewable energy in the power sector that is more than 80% dependent on fossil fuels to 25% by 2026.
- In addition to the shrinking of the Aral Sea, which has been said to be the “greatest environmental destruction of the 20th century,” along with ecosystem destruction, health damage, industrial collapse, and worsening desertification and salinization, temperatures are rising by double the global average due to climate change, which will lead to further desertification, soil salinization, and the depletion of water resources, etc.
- Top-down reforms are being promoted to deal with the various issues outlined above, centered around the president, but administrative officials lack sufficient capability to formulate policies with a view towards the implementation and realization of those policies. There are also issues of inefficient administrative management due to vertical divisions, the inefficient management of state-owned enterprises, and overlaps between administrative agencies, and while there is an orientation towards the implementation of small government measures, the development of capable administrative officials has not kept up with these needs, and the capacity of those administrative officials needs to be enhanced even further.
- Under the “New Uzbekistan Development Strategy 2022-2026,” Uzbekistan is working to

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resolve issues around seven priority areas (development of civil society, strengthening the rule of law, realization of economic growth, equitable social policy, and human capital development, etc.).

2. Significance of Cooperation with Uzbekistan

- Given the geopolitical proximity and influence of major powers (Russia and China) and the vulnerability to the security conditions of neighboring countries, there is a need for balanced security in the form of omnidirectional diplomacy, and Japan plays an essential role as a “third friend” for regional stability. There is a high degree of pro-Japanese feeling, including the beautiful story of Japanese internees after the war constructing the Navoi Theater.
- The country also acts as a breakwater against the drugs and Islamic extremist groups that flow from the south, and the domestic situation is certainly not stable. Delayed development in rural areas and a lack of response to poverty issues, etc. have been destabilizing factors, and there are great expectations and a significant role for Japan to act as a balancing factor for the stability of the country (and the region), as a recognized “nation of technology.”
- The country is the only country in Central Asia in which all types of JICA aid schemes, including ODA loans, have been implemented, and thus has been a base for demonstrating Japan’s presence throughout Central Asia. There are many common development issues in the Central Asian region, particularly with regard to energy conservation, local product development, medical care, and education, etc., and there are many areas in which there is room for Japanese technologies to be utilized, so the country and JICA have major roles to play in developing these activities throughout Central Asia.

3. Key Development Issues and Sectors to be Addressed by JICA

- Japan and JICA are considering promoting support with the following fields and approaches based on discussions on the “Country Assistance Policy for Uzbekistan” which is currently under review,.

Basic Policy: Promotion of Sustainable Economic Growth and the Elimination of Disparities (Overall Goals)		
Priority Areas (Medium Goals)	Cooperation Programs	Approach

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Sustainable economic growth and industrial diversification and advancement	Enhancement of Industrial Competitiveness and Job Creation	Promotion of foreign investment, industrial human resource development (business, R&D, support for accepting foreign workers, etc.), tourism promotion, state-owned enterprise reforms (development of a fair competitive environment), employment creation (horticulture, livestock, tourism, etc.), improved financial access, and improved logistics
Building a fair and sustainable society	Social Service Improvement and Expansion	Healthcare: Enhanced measures against NCDs, including prevention and the promotion of health, improved quality and sustainability of medical services, enhanced referral system, strengthening the connections between preventive medicine and health promotion, and treatment and rehabilitation; Education: Evaluation of academic performance, improvement of teacher skills, enhanced school management
	Energy Efficiency and Low Carbon Program	Spread of energy-saving equipment (including the introduction of energy management and diagnosis systems), power sector efficiency (increased power generation efficiency, reduced power transmission loss), improved heat supply and system stabilization
	Environmental Management	Industrial development and reduced health hazards in affected areas by the technologies of Japanese companies and academic exchanges
Strengthening governance	Capacity Building of the Civil Service and Law Enforcement	Improved policy-making capabilities with an eye to implementation and execution, improved management of state-owned enterprises, and improved practical law enforcement capabilities (including study abroad programs and training)

* Within the three-tiered structure (overall goals, medium goals, small goals), the small goals (development issues) overlap with the “Cooperation Programs” which are the cooperative approaches, so these have been omitted.

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1. Uzbekistan Development Strategy

- In January 2022, President Mirziyoyev announced the “New Uzbekistan Development Strategy 2022-2026” (Presidential Decree UP-60) for the second phase of 100 development goals under the seven priority areas.** This was formulated based on the basic policy and results from the “Uzbekistan Development Strategy 2017-2021” from the first term of the President (2017-2021) after he took office in December 2016, and further advanced the process of reforms that had commenced with the inauguration of the president at the end of 2016.

Table 1 Development Strategy’s Seven Priority Areas

Priority Area	Outline
1	<p><u>Build a people’s state by elevating human dignity and the furtherance of a civil society.</u> Strengthen the public role of the country’s unique local community (Mahalla), strengthen central and local governments as institutions for citizens, strengthen the functions of the National Assembly (Oliy Majilis), promote digitization and the simplification of administrative procedures, enhance administrative services, prevent fraud and corruption, and strengthen processes for dialog with the public, etc.</p>
2	<p><u>Establish the principles of justice and the rule of law as the fundamental and critical conditions for development in the country.</u> Protect private property rights, eliminate illegal government intervention, strengthen the rule of law and law enforcement institutions, reimagine law enforcement institutions, cultivate a law-abiding awareness among citizens, strengthen judicial oversight over the administration, improve access to justice, strengthen and streamline police functions to deter crime, and digitize procedures.</p>
3	<p><u>Develop a robust national economy that ensures rapid growth.</u> Manage the economy (control inflation to 5% or lower (by 2023), contain the budget deficit (within 3% of GDP from 2023), control external public debt (US\$4.5 billion/year)), promote industrial policy through economic liberalization, promote foreign investment and develop the investment environment (US\$120 billion by 2026, of which US\$70 billion will be foreign investment), improve energy efficiency (by 20%), promote privatization, develop the stock and securities markets, promote exports (US\$3 billion by 2026), improve the</p>

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	business environment and revitalize the private sector (achieve an 80% share of GDP for the private sector), promote the digital economy, have an agricultural growth rate of 5%, double farmer incomes, manage and conserve water resources, develop regional areas, promote tourism (12 million domestic tourists and 9 million foreign tourists), and develop transportation networks, etc.
4	<u>Pursue just and fair public policies & human capital development.</u> Expand vocational training opportunities, promote the establishment of private educational institutions, spread early childhood education (preschool enrollment rate of 100% by the end of the 2024 school year), improve teacher levels and salaries, provide free school meals in poverty-stricken areas, increase the higher education enrollment rate (from 38% to 50%), revise and implement curriculum and teaching materials based on knowledge from overseas (by 2026), improve the level of higher education, build student dormitories, increase the number of private higher education institutions, provide opportunities to study abroad, promote innovation through industry-government-academia collaboration, support the socially vulnerable, improve the pension system, improve access to medical care and medical services (including medical insurance, advanced medical care, electronic medical records, etc.), improve the maintenance and management of medical equipment, enrich primary health care and make use of Mahalla, expand the share of private medical institutions, substitute imported pharmaceuticals, increase doctor's salaries, improve support systems for people with disabilities, promote sports, promote the active participation of women, and protect and support young people, etc.
5	<u>Ensure the elevation of spiritual values through developing those institutions tasked with their stewardship.</u> Enhance education related to history, culture, religion, family, and community, etc., provide reading opportunities (development of libraries), and promote religious tolerance and the arts (including cinema), etc.
6	<u>Approach global challenges through the lens of national interests.</u> Consider environmental impact, Green Land concept (Aral Sea measures, waste disposal, afforestation, etc.), counterterrorism, foster the dignity of administrative officials (anti-corruption, asset disclosures), promote poverty reduction and employment, strengthen protections for migrant workers (realize safe travel and employment), pandemic measures, etc.
7	<u>Strengthen the security and defense potential of the country, pursuing an open, pragmatic and active foreign policy.</u> Guarantee free speech,

	protect personal information and strengthen cyber security, strengthen defense capabilities, respond to emergencies and disasters, international cooperation, develop diplomatic relations with various countries (balanced diplomacy), coordinate with UN agencies, deepen the process of joining the WTO and Eurasian Economic Union (EEU), strengthen protections for overseas citizens, etc.
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- **In contrast to the Karimov administration which advocated a gradual transition to a market economy post-independence in 1991, since 2016, the Mirziyoyev administration has promoted rapid reforms which are beginning to produce results.** Prominent among these reforms have been the unification of the dual exchange rate market and the start of the disclosure of previously confidential macroeconomic indicators (balance of payments, gold reserves, etc.), banking sector reforms, the removal of a lot of administrative red tape on corporate activities, and significant improvements to the foreign trade and investment environments. Improvements have also been made to relations with neighboring countries, the elimination of restrictions on domestic movement, and the eradication of forced and child labor in the cultivation of cotton, as well as certain improvements in freedom of speech, public participation in decision-making, and anti-corruption measures. On the other hand, state-owned enterprises still naturally have a presence in the economy, and there are many issues such as the preferential allocation of government budget to certain of these state-owned enterprises.

2. Major Issues in Uzbekistan

(1) Enhancing International Industrial Competitiveness

- **In general, creating added value through economic activity is vital for improving incomes and reducing poverty, but with the continued low competitiveness of domestic industries, the adding of high value is an issue.** The remnant economic management of the planned economy of the Soviet era is the cause of the weak state of industrial competitiveness. A lot of the economic activity is centered around state-owned enterprises and banks, obstructing the dynamism of the private sector and delaying a shift to industries with comparative advantages. While this is gradually improving, state price controls and the foreign currency allocation system (abolished in 2017) have been

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obstacles to the growth and transition to a market economy. Indeed, the share of GDP from state-owned enterprises in 2016 was about 60%. Also, under government control, major industries (cotton and fibers, natural gas, metals such as gold and copper etc.¹, agricultural product etc.) often trade raw materials as is, so that the country doesn't benefit domestically from the adding of value through processing. Since the inauguration of President Mirziyoyev at the end of 2016, a series of economic reforms have been taken to promote growth through the dynamism of the private sector such as the promotion of foreign investment (including the establishment of special economic zones), the promotion of public-private partnerships (PPP), the privatization and enhanced governance of state-owned enterprises, the building of industrial clusters and value chains, the creation of innovation through industry-government-academia collaboration, the improvement of the business environment (reducing the number of permits and licenses, amending the competition and bankruptcy laws, and the development of a business ombudsman system, etc.), and the creation of anti-corruption measures. However, the country is still only half way along the path of strengthening its industrial competitiveness.

- **Investment is being promoted for the active introduction of foreign capital and foreign technologies to strengthen industrial competitiveness, but due to the economic structure and resulting low investment profitability in the domestic market, progress has been slow.** There are remnants of a planned economy with economic management and controlled low domestic prices, resulting in the problem of a large disparity between domestic and international prices (per capita GDP at current prices is US\$2,071, while purchasing power parity (PPP) is about 4.5 times higher, at US\$9,243). Therefore, there are smaller incentives for foreign investments due to the low level of earnings, which is caused by a structure of high investment costs at international prices (e.g. when purchasing materials and equipment from foreign countries) along with low earnings at domestic prices, in spite of the presence of low labor costs, typically a driving factor for profitability. Also, in addition to a lack of information for foreign investors

¹ The country's gold mine production was 7th in the world in 2021, at 100 tons (US Geological Survey, 2022). There are two state-owned mining companies (Almalyk Mining and Metallurgical Co. and Navoi Mining and Metallurgical Co.), and the corporate taxes and dividends of these mining companies accounted for 31% of the state's revenue in 2022. Government-controlled gold exports account for 30-40% of export value and about 2/3 of the country's high foreign exchange reserves (12.4 months import value, as of end 2022) is held in gold, making this also a significant industry in terms of the stability of the international balance of payments.

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to determine the profitability of their investments (local business profit structures, reliability of local partners, specific project candidates in fields with potential), the frequent occurrence of sudden policy changes brought about by the current top-down government structure also makes investment decisions difficult. Besides, the lack of a level playing field, with the market dominated by state-owned enterprises, and the fact that the country is not yet a member of the WTO (membership is being negotiated) are also said to negatively affect investment decisions by foreign investors.

- **Given the domestic/overseas price differences, there is a need to ensure a high return on investment in order to promote investment, and the strengthening of access to international markets for goods and services (export) is essential.** To overcome the above problem of domestic/overseas price differences, if goods and services produced by foreign investment can be exported, high profitability can be expected on the basis of international prices. On the other hand, the current trade imbalance (trade deficit), typical of transition economies, is an issue which has been caused by improved access to foreign currency as a part of the economic reforms since the end of 2016, and the fact that the import of goods and services backed by this access to foreign currency exceeds sluggish exports. Thus, the key will be in how to raise exports (including tourism income which corresponds to the export of services) in the future, from the perspective of promoting foreign investment and stabilizing the international balance of payments. Because of the financial strength of the government, it is important to use fiscal stimulus and external borrowing effectively to build a strategic investment environment with strengthened international industrial competitiveness.
- **To secure international industrial competitiveness for such a doubly landlocked country, it will be necessary to overcome constraints such as the high logistics costs. The development of a business-friendly environment, anti-corruption, and the development of industrial and business human resources are also issues for foreign investors.** According to the World Bank's Logistics Performance Indicator, logistics costs were 99th out of 160 countries in 2018. This represents a rise from 118th place in 2016, but there are also issues with customs controls related to cross-border transport (140th) and international transportation costs (120th). The northwest/northeast route to Russia represents about 60% on a monetary basis, so there are also concerns

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about the stability of the logistics network. In recent years the business environment has made a leap which can be seen in indicators such as Doing Business (74th to 69th from 2018 to 2020) and The Heritage Foundation's "Index of Economic Freedom" (152nd to 117th from 2018 to 2022), but the image of the old system has still not been removed for foreign investors. The position in the "Corruption Perceptions Index" announced by Transparency International is also low at 140th (2021), and many Japanese companies looking to invest in the country cite embarrassment over corruption and frequently changing policies as obstacles. Thus, while there is a consciousness of the sustainability of debt, there is an urgent need to overcome structural constraints to develop economic infrastructure using external public debt and public-private partnerships (PPP). In addition, given that the move to a fully-fledged market economy has just begun, the importance of developing the business environment on a non-structural basis is greater than ever before, such as by training and strengthening the discipline of industrial and business human resources to a level required by foreign companies.

(2) Job Creation and Migrant Workers

- **While there is expected to be an increase in the rapidly growing population of young people in the future, there are not enough job opportunities domestically and the unemployment rate remains high at 9-10%, with about 2.5 million people looking for work and forced to migrate abroad, making job creation an urgent issue.**
Unemployment is particularly high among the youth and in rural areas and given that 75% of people in poverty live in rural areas the government is focused on creating job opportunities in rural areas. In response to the pandemic, the government collected information on people requiring support and provided human resource development to create employment opportunities (provision of educational opportunities and incubation), concessional financing needed to create businesses, and provided land for business, etc. The government has also developed foreign investment promotion activities and start-up support programs etc. in rural areas to realize the creation of job opportunities through industrial development in rural areas.
- **Overseas remittances due to migrant labor are equivalent to about 10% of GDP, and this forms an important safety net, especially for the young and poor segments of**

society. In the short term they benefit from high wage levels, but as they tend to be consumed by simple labor force work, this is not necessarily connected to any medium or long-term industrial development or the development of essential human resources. Russia, which is a major destination for migrants (about 1.4 million)

usually sees workers employed in unskilled positions such as construction workers and cleaners, mostly in informal employment situations in which worker rights tend to be inadequately protected. This migrant labor experience is also not said to result in the investment of accumulated funds to start a business or for production materials after returning home. It is essential to create a system that promotes decent work, the accumulation of work experience, and contributes to career and industry development upon returning home.

- **Russia and Ukraine are the destinations for 70% of migrant workers, but there is a need to diversify the destinations for migrant workers because of concerns over the impact of war after the Russian invasion of Ukraine.** People in Uzbekistan are pro-Japanese and are highly interested in working in Japan because of their admiration for the “hard working nature” and “technologies” of the Japanese people, and efforts to find employment in Japan have gained momentum through the 2019 intergovernmental memorandum of understanding on the Technical Intern Training and Specified Skilled Worker Programs. On the other hand, there are cost and time issues surrounding the learning of a new language, and given that there is typically a lack of information for applicants who wish to work in non-traditional countries, including Japan, they are at risk of not being able to work under their desired conditions and instead being exploited by employers. Thus, there is a need to construct an appropriate mechanism for sending workers overseas and for resolving this asymmetry of information, etc.

(3) Sustainable Expansion of Social Services

- **Since independence, a number of presidential decrees have been issued, aimed at implementing health care reform, but there are still many issues related to health financing and the healthcare system towards the building of a sustainable medical system.** Regarding health financing, the total expenditure on health care as a proportion of total government expenditure has been falling in recent years, and public health

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spending as a percentage of GDP has also fallen to 2.0% (6.5% in OECD countries (WHO 2017/2018)). Government expenditure as a percentage of overall health care expenditure has also fallen from 52.2% (2014) to 38.2% (2018). On the other hand, the household burden has increased to 61%, meaning that an increasing segment is unable to access needed health care services, making inclusiveness once again an issue in the health care system. Also prominent in tertiary health care facilities (top referral hospitals at regional level) is the fact that the whole health care system is vertically divided and subdivided, leading to a complex referral system² and inefficient budget allocation. This is making it particularly difficult to secure budgets for local medical facilities and equipment, and for maintenance costs. The government is working to improve health service provision by introducing comprehensive health care in regional level tertiary care facilities, as well as introducing preventive health care and strengthening referral systems from primary and secondary medical facilities; yet, work continues to be in progress to achieve a sustainable medical system with improved quality of medical services, and inclusiveness in access to health care.

- **In particular, non-communicable diseases (NCDs) account for 84% of all deaths (WHO, 2018); hence it is necessary to improve health care services for NCDs and to improve the referral system for prevention to treatment and rehabilitation, in order to build a sustainable medical system.** The mortality rate from NCDs of people under the age 70 is 25%, which is high in comparison to that of Japan which is at 9% (WHO, 2016). This raises concerns on the economic and social impact of premature death in Uzbekistan. The country's Ministry of Health is focused on implementing measures for the prevention and early detection of NCDs in primary health care facilities. However, there are many challenges in promoting efficient and sustainable measures against NCDs, such as the lack of skilled health care workers, as well as their lack of ability to communicate with and manage patients. Also, while local tertiary health care facilities (top referral hospitals at regional level) are crucial from the perspective of inclusiveness for people to be able to access advanced medical care in rural areas without travelling to the capital, patients referred to local tertiary health care facilities are unable to receive

² Within the country, this consists of local general clinics and midwifery clinics (primary), city/district level general hospitals and emergency medical centers (secondary), region level general hospitals, specialty hospitals, and emergency medical centers (tertiary), and national level specialty hospitals and emergency medical centers (quaternary).

appropriate treatment as these facilities lack medical equipment or are in need of renovation. There is an urgent need for the provision of new medical equipment for quality medical services to be implemented in regional hospitals.

- **Education continues to be a priority due to the legacy of the Soviet era and the primary and secondary education enrollment rate is high at 97% (2021). However, the development of the educational environment (development of teaching materials in the local language, securing teachers and educational facilities, and maintaining facilities, etc.) has not kept pace with the rapid population growth of young people, and education quality is said to have “gone back 30 years.”** The government’s education system reforms have raised the enrollment rate of children aged 3-7 from about 29% (2017) to about 72% (2021). In higher education, 82 schools have been established over 5 years, and the enrollment rate has reached 19% (2021). However, there is continuous need to improve the enrollment rates of pre-school and higher education. Furthermore, along with the extension of the compulsory education period in 2017 (from 9 to 11 years), improvements are required in the educational environment, as well as for development of curriculum for smooth transition between pre-school and elementary school, and middle school to high school. As for school infrastructure, the existing equipment in schools is aging, and there is need to construct new schools.. It is also known that 46% of the kindergartens and 33% of the primary and secondary schools in the country require extensive repairs (WB, 2016).
- **Improvements continue to be made to the quality of education, with the aim of being 30th in the world with PISA by 2030, but there are still issues with the training of skilled teachers in the field and strengthening school management, writing questions and evaluation analysis for the evaluation of academic ability, national standardized testing, and the development of quality teaching materials (including the development of content for distance learning), etc.** Factors contributing to the decline in the quality of education include the lack of an ability assessment and qualification system for teachers, including school administrators, the enhancement of retraining (in-service teacher training) and regional disparities, and the lack of cooperation with local communities (fostering trusting relationships between teachers and parents) etc. In addition, there is a black box issue of there being no objective measures of the

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academic ability of students, which is an obstacle in examining the appropriateness of teacher training curriculum and the improvement of teachers through mutual assistance and competition, as well as in the review of curriculum and development of teaching materials. In a trial academic ability examination (mathematics), it was clear that even basic understanding was lacking, given the high degree of difficulty of the textbooks, limited supplementary teaching materials, and a lack of understanding by teachers.

- **75% of poor households live in rural areas where unemployment is high and given these circumstances many rural youth become migrant workers, so education has important implications for eliminating urban-rural disparities.** Regional disparities are particularly noticeable in pre-school education, where the enrollment rate in urban areas is about 46% compared to just 23% in rural areas. There are significant regional disparities in public health at primary and secondary schools, where virtually 100% of schools in Tashkent City have access to sewage, while in the Region of Surxondaryo, only about 11% of schools have access to sewage treatment and less than 5% of schools have indoor toilets (The State Committee of the Republic of Uzbekistan on Statistics, 2017). Distance learning was developed during the COVID-19 pandemic, such as with the Online Maktab, online school utilizing the broadcast network, but there are still issues with the communications environment and terminals, and the opportunity has not been maximized to reduce these disparities. With the low educational standards in rural areas and the risk of unskilled workers being exploited as migrant workers at migrant destinations, there is a risk of losing the opportunity to develop the human resources needed for future industrial development to migrant labor.
- **Challenge exists in the transition from primary and secondary education (compulsory education) to higher education, but smooth transition from pre-school to primary education, particularly for children with disabilities, remains a major issue.** With one year of pre-school education now part of compulsory education, as mentioned above, the enrollment rate is improving. However, in 2020, only about 5,500 children (as of March 2021) out of approximately 40,000 children with disabilities nationwide (ages 2 to 7, 2018), attended school at a multi-functional special needs education facility, which is one of the 71 schools nationwide. Also, while the Education Act approved in September 2020 and the October 2020 Presidential Decree No. 4860

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introduced inclusive education from primary school to promote the inclusion of the socially vulnerable, the system to provide the care and education in line with pre-school special needs education remains inadequate.

(4) Responding to Global Issues I (Decarbonization and climate change mitigation)

- **Energy consumption intensity (energy consumption per GDP) is 246 ktoe/GDP, which is higher than the global average of 137 ktoe/GDP (JICA 2022), and carbon dioxide (CO2) emissions per GDP are 9th in the world at 1.23 kg/USD (IEA 2017). The government is actively promoting energy conservation and climate change measures.** In addition to aiming to improve energy efficiency by 20% by 2026 (Presidential Decree PD-60), the government has announced the goal of reducing greenhouse gas emissions by 35% per unit GDP over 2010 levels by 2030, under its Nationally Determined Contribution (NDC). The government also aims to increase the share of renewable energy in total power generation to 25% by 2026. Natural gas production is 11th largest in the world (about 61 billion m³, 2019), and it is one of the pillars of energy policy to use this as a means of earning foreign currency rather than applying to domestic consumption, as well as using it to meet domestic and foreign demand after processing to add value (currently 85% is consumed domestically).
- **The proportions of natural gas use (about 85%) and heat utilization (about 60% or more) contribute greatly to primary energy, and these are particularly important in promoting energy conservation in homes and commercial buildings, accounting for about 50% of consumption.** Factors of poor energy efficiency include: 1) high efficiency equipment is not widely adopted (inverter air conditioners, refrigerators, heat pump water heaters, IE3 or higher electric motors, eco-pumps for irrigation, energy management systems, etc.), 2) energy management systems (including diagnostics and audits) have not been sufficiently established for high consumption businesses, 3) electricity and gas prices are set low, so businesses and households have no incentive to introduce energy-saving equipment, 4) heating in winter is partly covered by inefficient local heat supplies which have significant loss, and 5) citizens have a low awareness of energy conservation. For example, high-efficiency inverters make up about 30% of air conditioner sales. Inefficient local heating or combi-boilers are popular, and if state-of-the-

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art equipment such as irrigation eco-pumps were to be introduced to the agricultural sector, which accounts for 20% of electricity consumption, an energy saving of 30% would be possible. Citizens don't have a habit of local heating in the winter.

- **While electrification, including the use of heat pump technology, is essential to promote energy saving (and greenhouse gas reductions), the power source mix for power generation is dependent on fossil fuels (over 80% thermal power, and over 10% hydro power), so it is important to improve efficiency and introduce renewable energy.** The energy sector (electricity, manufacturing and construction, transportation, commercial buildings, housing, agricultural irrigation) accounts for about 80% of greenhouse gas emissions and given the high heat supply ratios of gas heating and hot water supplies, etc., the electrification of heat pump technology is the most effective means of reducing greenhouse gas emissions. On the other hand, in terms of power supply and demand, supply remains at about 6.41 billion kWh in relation to demand of about 6.74 billion kWh as of 2021, and demand is expected to continue to steadily rise. Most of the 10 natural gas-fired thermal power plants nationwide, which account for about 90% of thermal power generation capacity, are aging and have been operating since the former Soviet era, and overall thermal efficiency remains at the low level of about 30% (thermal power generation efficiency within the TEPCO system is 49.7%), so there is a need to improve the efficiency of power generation facilities. In addition, there are plans to develop 7.2 GW solar and wind power generation projects taking advantage of the long hours of sunshine and high renewable energy potential to achieve decarbonization with renewable energy. Under the PPP Act enacted by the government in 2019, foreign capital has been used to promote infrastructure development, and steady results are beginning to be seen.
- **The improvement of energy loss is not only an issue on the consumption and supply side but is also an important issue to be addressed in power transmission and distribution and local heating networks.** With the aging of power transmission and distribution facilities, the transmission and distribution loss is about 20% (losses within the TEPCO system were 4.8% in 2021), and there are issues with pipe insulation and heat exchange in the local heating network. There is said to be about 40-50% loss during heat transfer (about 7 times the measured heat transfer loss in Japan). The government is

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promoting a switch to individual heating with a policy of not connecting new buildings to local heating supply, and there is a need to review the entire heat utilization system including electrification using heat pump technology.

- **With the promotion of climate change measures such as the spread of renewable energy, there is also a need to deal with new issues in the medium to long-term such as the stabilization of the power system, etc.** In addition to the aim of spreading renewable energy (to 25% of total power generation by 2030), sharing in the Central Asia Power System (CAPS)³ and mutually exchanging electricity with Russia and Afghanistan are also being promoted, in addition to the liberalization of the electricity market. In terms of renewable energy power supply, there is a need for comprehensive energy management in the medium to long-term to stabilize the power system, given its nature of large fluctuations in the amount of power generated. It will also be necessary in the future to consider the potential of battery and hydrogen energy storage.

(5) Responding to Global Issues II (Environment and climate change adaptation)

- **About 80% of the country is semi-arid desert, and the amount of water available per citizen is forecast to decrease by 18% by 2030 (compared to 2019), so there is a chronic water shortage which is expected to become even more serious due to the impact of climate change.** The temperature has risen at a rate of 0.29 degrees centigrade per decade since the 1950s, which is twice the global average. The efficient utilization of water resources is a common issue in the Central Asian region (see Column 1), where about 20% of water supply comes from international rivers (Amu Darya, Syr Darya, Zeravshan Rivers) sourced in the mountains of neighboring countries, about 90% of which is used for agriculture. The dissolution of the Soviet Union has thus led to potential conflict between upstream countries with a high dependence on hydropower for their energy and downstream countries including Uzbekistan that need water for irrigation. Under this context, inefficient water use continues due to the aging of infrastructure built

³ In Central Asia, electricity is supplied within the region with a mutual mix of hydro power using the abundant water resources of the upstream mountainous countries (Tajikistan and Kyrgyzstan), and thermal power generation by downstream countries (Uzbekistan, Turkmenistan, Kazakhstan) with abundant underground thermal resources. The power system is also connected to Russia and Afghanistan, and frequent adjustment is important.

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in the former Soviet era such as dams, reservoirs, and irrigation facilities, and this aging infrastructure has proven unable to withstand the sudden inflow downstream of water from local heavy rains as a result of short-term climate change impacts in mountainous areas and the melting of glaciers due to rising temperatures. There has also been human and economic damage from an increase in dam bursts and natural disasters such as floods, turbidity, and landslides, etc. In addition, going forward, there is a concern that there will be a tightening of water supply and demand across the region as a result of long-term climate change, due to rising average temperatures and more frequent droughts and as the amount of water flowing into international rivers decreases due to the large amount of short-term glacier melting. As the semi-arid agricultural land is further limited by the salination of the soil and groundwater, food security due to population growth will also be important, and there is an urgent need for the prompt rehabilitation of water management facilities for more efficient water use, the conversion to water-saving agriculture, and the introduction of technologies for the improved profitability of agriculture.

- **The impact of climate change is expected to worsen through the 21st century, but the continued response to the shrinking of the Aral Sea, which is called “the most staggering disaster of the twentieth century” is also an important policy issue (see Column 2).** The shrinking of the Aral Sea has not only destroyed the ecosystem but has also had a negative impact on the livelihoods of residents in the surrounding area and poses a wide range of health hazards. While the poverty rate in the Autonomous Republic of Karakalpakstan, which includes the Aral Sea, has fallen from a peak of 44.7% in 2004 (when the national average was 26.1%), to 14.8% in 2019, this is still higher than the national average of 11.0%, there is demand to support the improvement of income for residents by fostering local industries and through public service and sustainable industrial development. There is also a high prevalence and morbidity from respiratory disease and renal dysfunction, and the infant and maternal mortality and general mortality rate from infectious disease are still high. There are issues with inadequate medical equipment, poor access to medical facilities, and insufficient numbers of doctors and experience, so improving the quality of medical services is also an issue. In response to these issues surrounding the Aral Sea, the United Nations launched the “Multi-Partner Human Security Trust Fund for the Aral Sea Region” in November 2018 from the perspective of human security. In September of the same year President Mirziyoyev

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spoke to the United Nations General Assembly and stressed the need for international efforts. In his year-end speech in December of this same year, he also raised “improvements to the living environment in Karakalpakstan along with the planting of 500,000 ha of trees.” In addition, with respect to improving the living standards of local residents, the Presidential Decree positioned the development of Karakalpakstan as a priority issue for the country, and as part of the “Concept for the Development of the Healthcare System 2019-2025” the government set out a policy for improving health systems and training and strengthening the expertise of health personnel to broadly provide high-quality medical services for the realization of medical services such as world-class preventive medicine, diagnosis and treatment.

- **In parallel with measures against climate change and the response to Aral Sea issues, considering the environmental impact of human activities, such as responding to the environmental impact of industrial development, responding to air, soil, and water pollution due to population growth, and waste disposal efficiency, etc., are also urgent issues.** There is a need to promote sustainable industrial development while preserving the environment of animals and plants, by promoting comprehensive environmental measures through public-private partnerships based on the United Nations Framework Convention on Climate Change and environmentally-conscious standards.

(6) Development of Policy Makers and Implementing Officials

- **While social and economic reforms are progressing rapidly with the full-scale transition to a market economy since 2016, strengthening the policy-making capacity and improving the execution capacity of public servants are urgent issues.** The full-scale revitalization of the private sector and various economic reforms aimed at the transition to a market economy have been in full swing since the inauguration of President Mirziyoyev, and large-scale top-down socio-economic reforms are underway in areas which have rarely been on the agenda before, such as rural development, poverty reduction, and building civil society, etc. On the other hand, there are many issues related to the execution and realization of top-down policy decisions with such a sense of speed, including the frequent enactment of laws, presidential decrees and ministerial decrees,

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etc. or so-called regulatory inflation, as well as contradictions between laws and regulations, undeveloped implementation systems, and insufficient budget measures, etc. In terms of judicial law enforcement, etc., there are also issues of conflict between presidential decrees and laws (in some cases the former is prioritized). In addition, given the current circumstances in which large-scale reforms have been made, the country is entering a phase in which there is a need for the implementation and execution of painful and difficult policies, and for high-level policy-making abilities with a focus all the way through to execution, proper PDCA cycle implementation, data-based policy evaluation (EBPM), and the improvement of policy execution capacity at field level.

- **The public sector is very important in this period of transition towards a market economy from the public sector to the private sector, but there a number of issues such as a vertically divided administration, inefficient administrative management, the management of state-owned enterprises, the duplication of functions among administrative agencies, and the recruiting and retaining of quality public servants, etc. The government is moving forward on the large-scale reorganization of ministries and agencies, improving the management of state-owned enterprises (including their privatization) and reforming the public service system (including recruitment and human resource development).** In April 2021, significant staff reductions were implemented by presidential decree in central ministries and national institutions, with a 40% reduction in Deputy Minister level posts and a 15% reduction in the number of staff. In addition, a presidential decree in December 2022 made a large-scale reorganization of ministries and agencies (1) reduction in the number of central ministries and agencies from 25 to 21, and 2) reduction in the number of government-affiliated institutions from 61 to 28) and a 30% reduction in the number of employees. This has made policy makers and implementers even more elite and makes it essential to build capacity in public servants. It is also essential to improve the management of state-owned enterprises and to train market-oriented human resources for privatization (human resources with a familiarity with corporate management and business and an understanding of public affairs).
- **Securing the hiring of human resources and developing human resources that are already employed are issues for the reform of the public service system, and the**

human development of public servants and introduction of a transparent recruitment system are being promoted. In addition, the old closed system is being reformed with a focus on securing excellent human resources and acquiring knowledge from overseas such as by establishing a system to recruit staff at high salaries who have studied or worked abroad, and the acceptance of foreign advisors that were not previously accepted in central ministries and agencies and the active acceptance of Uzbeks that have worked overseas, etc. On the other hand, to the extent visible by JICA, there is still a lot of room for public service reform and the improvement of human resource development, with the high turnover of externally appointed groups, and recruitment and evaluation systems said to be opaque.

- **The eradication of corruption by public officials is an issue for the revitalization of the private sector and promotion of foreign investment, and there is a challenge with renewing the image of the country through the strengthening of anti-corruption agencies, law enforcement agencies such as police and public prosecutors, and the judicial system.** Since Mirziyoyev took office, certain international indicators such as the rule of law, etc. have risen significantly as described in 2. (1) due to the establishment of an anti-corruption agency and the promotion of anti-corruption measures in cooperation with law enforcement agencies. However, the “Corruption Perception Index” is still low and anti-corruption is still an urgent issue for socio-economic growth. In relation to Japan, a bribery was discovered in 2014 with a consultant on an ODA loan project, and this is still fresh in the memory and has had a significant impact on bilateral relations. There is also a need to break away from old habits and foster policymakers with integrity and improve their capacity to keep corruption out of the policy-making process.

3. Significance and Direction of Cooperation

(1) Significance of Cooperation by Japan and JICA

- **Geopolitically, the country is easily influenced by neighboring countries and Japan has an important role as a “third friend” amidst calls for balanced diplomacy which is essential for regional stability from a security perspective.** Being located in Central

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Asia, the country is heavily influenced by Russia and China politically, economically, and in terms of security, and with the shared border with unstable Afghanistan in the south, it is in a vulnerable position in which it is greatly influenced by the destabilization of neighboring countries. In addition, it is one of only two countries in the world that is doubly landlocked (a country that cannot go to sea without crossing two borders), and while stable logistics are central to the political and economic situation, about 60% of logistics routes (for exports) rely on northeast/northwest routes via Russia, and together with routes via China, 80% of logistics routes are forced to rely on neighboring powers. Supply chain disruptions from Russia's invasion of Ukraine have posed a risk to economic and food security. Also, while the country is developing routes through Afghanistan and Iran to the south and mountain routes connecting with Kyrgyzstan and China, current infrastructure development is still inadequate, unstable, or undeveloped, and only accounts for 10%. Aside from logistics, industry is underdeveloped in rural areas which are reliant on the many workers migrating to Russia, etc., and this dependence on a specific country has also become an economic vulnerability. Given such circumstances, the government needs to develop balanced diplomacy that is not reliant on specific countries, and there are high expectations for the role of geopolitically neutral Japan in this regard. For Japan as well, there is great significance from the perspective of international and national interests to support the country as an important partner country in sharing liberal and democratic values and "free and open international order" and "the arc of freedom and prosperity," as well as for the sake of regional stability.

- **The country serves as a breakwater for the destabilizing factors of drugs and Islamic extremist forces, etc. from the south, but the domestic situation itself is not stable, so a neutral Japan can play a significant role in assisting with issues such as delayed rural development and poverty.** The uprising in Karakalpakstan in July 2022 started with the stripping of the right to be an independent republic with a constitutional amendment, but there was apparent dissatisfaction with the delayed development of the region, deterioration of the environment, and poverty problems, etc. In addition, the Fergana Valley has a high population density with scattered enclaves of the Kyrgyz Republic and Tajikistan, and there are occasional skirmishes between residents in relation to water resources, road construction, and border control, etc. The economic hardship in rural areas has a high risk of being easily strained by Islamic extremism. Also, the complex

borders make it easy for drugs and extremism to flow into the country. In 1999 there was an incident in which a Japanese person was abducted by Islamic militants at the Uzbekistan-Kyrgyz Republic-Tajikistan border, and one reason for this was the delay in the development of this region. The destabilization of the country and region is important in terms of eradicating terrorism and crime around the world.

- **While Japan's presence in Central Asia is declining in a relative sense, the country is the only one in Central Asia in which all JICA assistance schemes have been implemented and can serve as a base for demonstrating Japan's presence in the region. There is also a lot of room for utilizing the technologies and knowhow of Japanese companies, and there is great potential because of it being a pro-Japanese country.** Japan launched the "Central Asia plus Japan" dialog in 2004 ahead of other countries and has worked hard for the development and stability of the region such as through building a framework for intra-regional collaboration among Central Asian countries. On the other hand, in recent years other countries have also established similar dialog frameworks and the relative presence of Japan has been declining. Among these efforts, Uzbekistan is the only country in the region that has been able to implement all types of loan assistance, grant aid, and technical cooperation schemes (including Japan Overseas Cooperation Volunteers), such as with the implementation of a Japanese ODA loan for the sustainability of external debt (less than 38% of GDP). In addition, as of October 2021, the number of Japanese companies in the market was limited to 29, but with many development issues for which the technologies and know-how of Japanese companies could be utilized (e.g., power generation efficiency improvements, energy saving measures, introduction of irrigation pumps, high-quality fiber manufacturing, measures to prevent salt damage, advanced medical equipment, the development of educational materials, and the introduction of academic ability assessments, etc.), support for problem solving from promoting the entry of Japanese companies may lead to a deepening of bilateral relations in the medium to long-term. The country's development challenges also have many similarities with neighboring Central Asian countries, so successes and examples of the utilization of Japanese technologies may serve as a base for expansion into neighboring countries. The country is also pro-Japanese, with stories having been handed down about Japanese war detainees constructing the Navoi Theater and about the discipline of the Japanese people, etc.

(2) Past Cooperation Achievements and Future Outlook

- **The expenditure for technical cooperation in the past 10 years (FY 2012-FY 2021) has been about 300 million yen/year. Private sector development and natural resources/energy are the most prominent areas.** In terms of scale, about one technical cooperation project (300-500 million yen scale) is adopted every 2 years. On a per sector basis, the greatest amounts have been applied to resources and energy (39%) and private sector development (35%) over the past ten years, and results of technical cooperation have also been rising in education and healthcare.
- **The approval of loan assistance over the past 10 years (FY 2012-FY 2021) has varied but has averaged about 35 billion yen/year. The electricity sector (construction of power plants) has stood out with 80%.** In recent years, cooperation in the form of financial support loans and two-step loans has also been increasing. In August 2022, the first overseas finance and investment project in Central Asia was approved (construction of a wind power plant). While the government has a policy of maintaining public debt below 60% of GDP, the current level of sustainability may make it possible to develop cooperation in the future on a similar or larger scale.
- **Grant aid in the past 10 years (FY 2012-FY 2021) has averaged about 400 million yen/year. The main purpose has been providing grant aid for scholarships for overseas study, mainly for the training of young administrative officer leaders, and medical equipment is also provided every few years.** From the perspective of national debt sustainability, there is a need to prioritize grant aid to countries to which loan assistance is difficult such as the neighboring Kyrgyz Republic and Tajikistan. Considering the division of roles in relation to loan assistance, there is a need to develop selective grant aid cooperation given the humanitarian need, urgency and political importance.

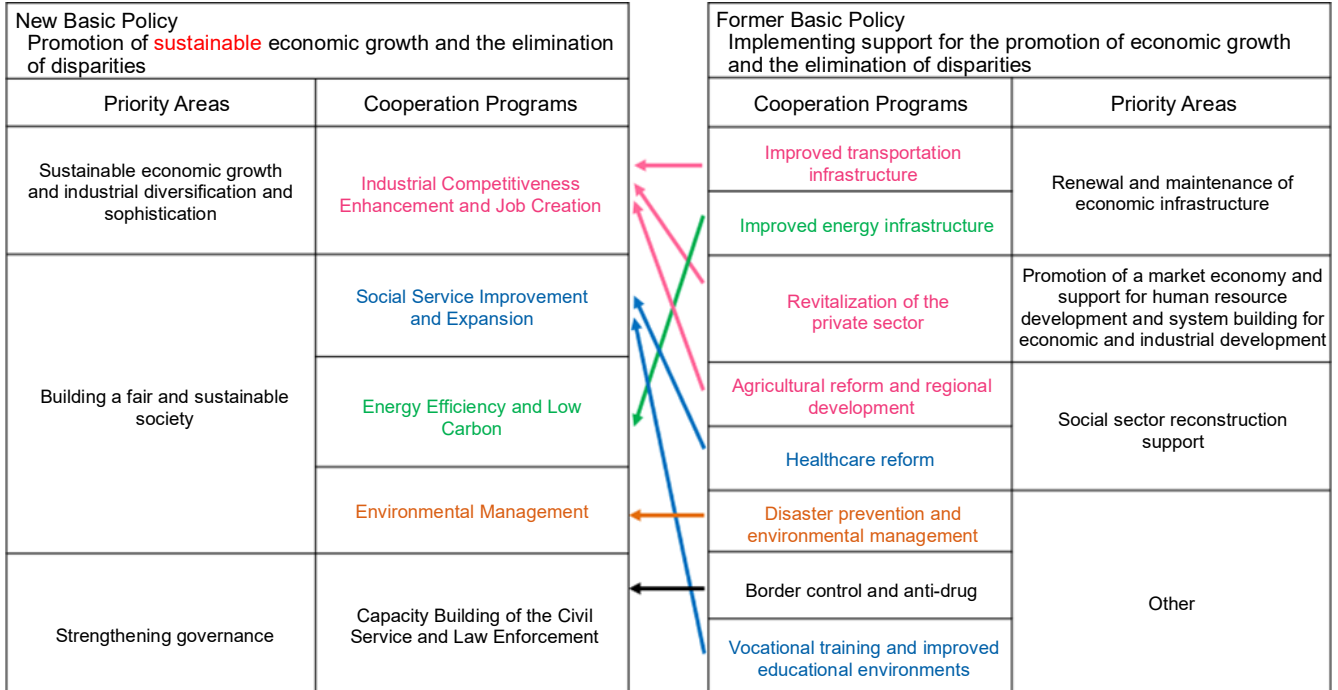
(3) Direction of Cooperation and Approach

- The direction of cooperation has been revised based on “2. Development Issues in Uzbekistan,” “3. (1) Significance of Cooperation by Japan and JICA,” and “3. (1) Past

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Cooperation Achievements and Future Outlook,” and based on the Country Assistance Policy (revised 2022).

Fig. 1 Revision of the Cooperation Approach (three-tiered structure)



- The basic policy emphasizes “sustainability,” given the need to ensure the sustainability of the various reforms of President Mirziyoyev since taking office in 2016, as well as the importance of responding to the sustainability of the earth in terms of climate change, etc.
- There is no change to the importance of supporting the transition to a market economy, but the previous “gradual” transition to a market economy has been updated with a clear policy laid out for industrial diversification and sophistication towards a market economy (revitalization of the private sector), emphasizing the final goal of “sustainable economic growth and industrial diversification and sophistication,” rather than simply supporting the processes of a “market economy” and “renewal and maintenance of economic infrastructure. In accordance with this, three programs have been combined into the one, that of “strengthening industrial competitiveness and job creation”.
- As the decline in the inclusiveness and quality of social services (health and education) since independence from the Soviet Union has gradually become more apparent and

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recognized, and with the need for society to be conscious of climate change and the sustainability of the earth, “building a fair and sustainable society” has been redefined and reorganized into 3 programs. In this respect, in addition to combining the shared issue of declining inclusiveness and quality, the health and education sectors have been combined into one program, and the “improved energy infrastructure” which has mainly supported infrastructure for the power generation sectors has been redefined as “energy efficiency and low carbon” to meet the demands of global sustainability. Given that there are currently a limited number of projects for “disaster prevention,” this has been deleted from the name, but it is an important area in the context of climate change and will be covered under “Environmental Management.”

- Given the major reforms that have been implemented since independence from the Soviet Union, it has become an urgent issue to strengthen administrative and judicial human resources with the necessary policy making and enforcement capabilities to build a sustainable economy and society. Given this, the aim of “strengthening governance,” has been established in the cooperative approach of “capacity building of the civil service and law enforcement.” Given the limited number of projects in “border control and anti-drug,” this has been removed from the name, but this is covered in the context of strengthening governance because of its essential nature for regional stability, etc.

(4) Points of Note in this Approach and Lessons Learned

- **Given that policy making and decision making in the country is implemented top-down, there is a need for attention and ingenuity with regard to consultations with government.** Given that the policy-making process is focused on the President and does not emphasize bottom-up consensus such as in Japan, there are many cases in which decisions have already been made at the point of consultation with JICA, but where the details have yet to be considered. Also, given the required short times between the implementation of policies and the manifestation of results, there are many cases in which the sense of speed does not match that of Japanese ODA projects. Therefore, it is important to routinely work with the government and consult to increase predictability and to gather information on the frequently issued presidential decrees and ministerial decrees, and speeches of the President, etc. Conversely, it is also important to hold meetings and

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high-level interviews to reflect presidential decrees, etc. in approaches that allow JICA to cooperate.

- **There are many sectors in which wide area cooperation with Central Asian countries can produce effective development approaches. On the other hand, sometimes public sentiment and interests conflict, so attention must be paid to implementation.** There are many common issues due to similarities in industrial structures and existing natural resources, etc. such as in tourism promotion, regional development, business promotion, local product development, investment promotion and energy saving, etc., and wide area collaboration (implementation of collaborative projects and sharing experience) is an effective development approach for this. On the other hand, there are also many areas in which interests within the region are in conflict, such as the interchange of power, water resources, and transportation and logistics, etc. Attention is also required because there are cases in which resistance is shown to the dissemination of best practice from neighboring countries due to public sentiment, etc.
- **While improvements have been made since 2016, the eradication of corruption such as bribery is still a challenge. When there were such suspicions surrounding past ODA projects it had a very large impact, so care is required.** Bribery allegations surfaced regarding a Japanese consulting firm involved in an ODA loan project in 2014. This is still fresh in the memory, and had a significant impact on ODA to the country with the suspension of new ODA project adoption, etc. A resolute response is required to avoid getting involved in cases of corruption.
- **Efforts are required to consider diverse opinions on gender and regional characteristics, etc.** The country has a male dominated society and most counterparts are men, so there have not necessarily been efforts made from the perspective of gender. When conducting projects, it is necessary to analyze gender issues and to consider initiatives that contribute to gender equality. Also, given the multi-ethnic nature of the country, languages, cultures, and customs often differ from region to region, so it is important to take measures that fully reflect the characteristics of each region when implementing regional development, etc.

- **There are few Japanese experts such as intellectuals, consultants, and other experts with experience in Central Asia, so consideration should be given to the discovery of new partners and the development of young human resources.**

Cooperation in Central Asia commenced in the early 1990s, so it has a relatively short history compared to other regions, and the amounts of ODA projects and private sector investments are not particularly large, and there is also a language barrier because of the dominance of the Russian language for many years over English, so the pool of human resources that can be used for international cooperation is quite shallow. In recent years, there has been an increasing number of English speakers even in Central Asia, making it somewhat easier to get involved, and it is important to be aware of fostering future experts and intellectuals when collaborating.

- **In demonstrating the presence of Japan in the country and to effectively implement projects, it is important to make use of networks of people that have studied in Japan and have returned home, etc.**

As of December 2022, more than 23,000 people have completed business courses at the Uzbekistan-Japan Center for Human Development (hereinafter “Japan Center”). There have also been 358 JDS fellows that have returned home from the “Project for Human Resource Development Scholarship (JDS)” (grant aid), and about 2,500 ex-participants that have returned home from country-specific and issue-specific training. There are many other international students who have received scholarships, etc., and many people with experience studying in Japan who hold important posts as senior administrative officials (Deputy Prime Minister, Ministers, Deputy Ministers, etc.). It is important to make use of these Japan-connected networks when carrying out project formation, project supervision, and public relations, etc., and to put in the effort to maintain and expand such networks.

- **In anticipation of changes in the international environment, it is necessary to further build the Japanese brand and to strengthen the dissemination of information on Japan through the Japan Center, etc.**

While there is a pro-Japanese atmosphere, influenced by stories such as the construction of the Navoi Theater by post-war internees, there are not particularly many people who know much about Japan. Given changes in the international environment such as the relative decline of Japan’s presence, the weakening of Russian influence, and the advance of China and Turkey, it is becoming

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more important to improve Japan's presence by cultivating knowledge of Japan. Also, as interpersonal exchange has become multi-layered with an increased acceptance of migrant workers from the country, properly conveying the charms and value of Japan can serve as a foundation for the development of bilateral relations in the future. The Japan Center has produced many graduates, functioning as a base for business exchange, etc., and is an important organization for disseminating the appeal and value of Japan. With few Japanese companies and few Japanese people living in the country, it is important for the Center to convey the appeal of Japan and the "Japan Brand" through its activities to diverse human resources that have interest in Japan (for example, conveying the appeal of Japan to human resources that want to engage in the technical intern training and specified skilled worker programs).

- **The following should also be taken into consideration when formulating projects.** Policy such as national development strategies and presidential decrees, the macroeconomic situation, the division of roles with other donors, Sustainable Development Goals (SDGs), climate change measures, gender equality, the utilization of digital technologies and data, and cooperation with the private sector, etc.

4. Cooperation Programs to be Implemented

(1) Industrial Competitiveness Enhancement and Job Creation Program

- **Industrial competitiveness should be enhanced by modernizing industry through attracting investment.** In doing so, it is important to give consideration to discovering projects with high investment profitability through the thorough appraisal of competitive advantage⁴, while also supporting businesses with high social significance (regional development, local product development, social entrepreneurship, ESG investment, etc.) on axes other than investment profitability. Examples of the former include support for fields where high productivity is expected such as horticulture/livestock, etc., support for

⁴ 8 promising sectors (agriculture, oil and gas, energy, manufacturing, textiles, information and communications technology, finance, education, and medicine) were extracted in 2022 with the cooperation of JICA in the "Investment Guide Uzbekistan" prepared by the Ministry of Investments and Foreign Trade. Of these, 5 subsectors were also extracted from the manufacturing industry (food processing, textile products, leather, and silk, chemicals, pharmaceuticals, and construction materials).

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fields where high added value can be targeted (cotton and silk textile industry, oil and copper product processing industry, food processing industry, etc.), support where there are no geographical restrictions and where high returns are possible with small investments (development of information and communications technology, local products using local resources), and sustainable tourism development taking advantage of appealing aspects of historical heritage (local product development, accommodation industry, etc.). An example of the latter is collaboration with a company developing business under the brand of contributing to the development of developing countries, such as MUJI (Ryohin Keikaku Co., Ltd.) under Kyrgyzstan's One Village One Product Project. This approach includes promoting the development of pilots essential for attracting investment (strengthening investment promotion agencies, training and networking with local entrepreneurs, developing industry-government-academia coordinators, and collaborating with people that have experience studying or working abroad, etc.), support leading to the discovery of local business potential (industrial cluster formation, discovery of innovative projects through industry-government-academia collaboration and the promotion of joint research, the discovery of projects by industry advisors, support for startups and social entrepreneurs, and the holding of business contests, etc.), and support for the planning of systematic and robust strategies for the tourism industry and the realization of these strategies (including tourism promotion). Not all of this work can be done with the budgets of businesses, so consider strengthening the activities of the Japan Center and the Uzbek-Japan Innovation Center of Youth (hereinafter "Innovation Center") which serve as hubs for business exchange and industry-government-academia collaboration.

- **To strengthen industrial competitiveness by attracting investment, be aware of approaches that builds win-win relationships between the two countries, leading to interest in the country from the Japanese business community given the high expectations of Japanese technology and know-how in the country, and improving Japan's economic presence to contribute to the enhancement of the country's security and stability.** Uzbekistan currently has a low profile and low interest from the Japanese business community, and it is difficult for Japan to meet the expectations of the country (funds, technology, human resources). Therefore, to build a sustainable relationship between the two countries moving forward, it is necessary to find measures

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for building a win-win relationship, such as measures that are beneficial to the Japanese economy and solve domestic issues in Japan (labor shortages, etc.) while raising awareness of Uzbekistan. As a first step, it is important to establish multi-layered and good-quality exchange of human resources between the two countries by strengthening exchanges between the Japanese and Uzbekistan business communities through the Japan Center and returning international students, discovering specific individual projects (development of business human resources, formation of networks of local entrepreneurs, and industry-academia-government collaborations, etc.), and actively promoting the development of industrial human resources by expanding employment opportunities in Japan and supporting the improvement of work experience quality.

- **Need to provide assistance to improve essential financial access to realize profitable business and to develop a transportation infrastructure with reduced logistics costs driving return on investment.** Strengthening export capabilities is important to increasing the profitability of investments but given the need to overcome the constraints of being a doubly landlocked country, there is a need to consider support for transportation infrastructure and customs clearance in a way that leads to reduced logistics costs. Also, even if highly profitable projects are found, access to business funds is still an issue, so consider improving access to funds through the provision of concessional two-step loans and overseas investment loans, strengthening the appraisal capabilities of banks and introducing structured finance (e.g. small business management improvement fund), developing business human resources, and supporting the establishment of microfinancing systems, etc. Also consider improving the investment and business environment through anti-corruption measures and the development of a fair competitive environment (level playing field) with state-owned enterprises, which can otherwise be constraints and obstacles for the economic activity of private companies.
- **Aim to create innovation through the development of advanced industrial human resources in science and engineering and industry-government-academia collaboration and joint research to increase the added value of industry. At the same time, aim to improve the presence of Japan through the development of highly skilled human resources through study in Japanese universities, etc., and the development of human resources capable of acting as bridges to the future**

Japanese business community (pilots). In addition to creating high added value and innovation, the development of industrial human resources for science and engineering and industry-government-academia collaboration and joint research can lead to the discovery of issues in the industrial value chain (i.e. the discovery of investment possibilities), which can be easily linked to the utilization of Japanese technologies from the Japanese business community and universities and can be opportunities to build win-win relationships. From this perspective, work to form a foundation that will strengthen industrial competitiveness by attracting investment and creating innovation from a medium- to long-term perspective and by building a network of industry-government-academia collaboration through the Innovation Center, promoting joint research between universities through SATREPS, and developing highly skilled industrial human resources utilizing long-term training systems.

▪ **In addition to the above activities, consider the use of migrant labor opportunities in Japan as a response to job creation and industrial human resource development.**

Courses are important for the development of industrial human resources, but on-the-job training and in-house training are also highly effective in providing rewarding work (decent work). In 2019, the Japanese and Ukrainian governments signed a memorandum of understanding between the two countries for dispatch and acceptance to the technical intern training and specified skilled worker programs, utilizing these Japanese working systems for the development of industrial human resources. For this purpose, based on a memorandum of cooperation between JICA and the Agency of External Labour Migration in December 2022, consider industrial human resource development through working in Japan, such as through providing information and vocational training for job seekers, career development by visualizing the skills acquired during work, and specific cooperation in finding employment after returning home, making use of schemes such as technical cooperation, etc. In the future, also promote the matching of people with work experience in Japan with Japanese companies looking to expand into the country to strengthen industrial competitiveness and attract investment.

(2) Social Service Improvement and Expansion Program

▪ **In the area of healthcare, it is desirable to place a focus on non-communicable**

diseases (NCDs) and to improve the quality of healthcare services and build a sustainable medical care delivery system, with the aim of contributing to the achievement of universal health coverage (UHC). This will strengthen the ability to handle the process from prevention and early detection to diagnosis, treatment, and rehabilitation and to enhance mutual cooperation, and the referral system from primary to quaternary medical care.

For measures against NCDs to be effective and efficient, it is necessary to strengthen the response capabilities mainly in primary care facilities, promoting health for prevention purposes, early detection (screening), counseling, and the proper referral to higher level facilities. It is also important to take a comprehensive approach at each stage of diagnosis and treatment, rehabilitation, and subsequent management and recurrence prevention, etc. with appropriate interventions and mutual cooperation to efficiently utilize input resources, leading to the development of a sustainable system of medical care. To realize these things, focus on the training of healthcare workers, the creation of service models, the improvement of management capabilities at region/city health departments, and the development of facilities and equipment, etc. Furthermore, in addition to cultivating administrative officials responsible for the formulation of policies, including health financing, to financially support the efficiency and sustainability of the medical delivery system, work to strengthen the educational functions of medical universities, strengthen the capacity of healthcare facility managers and healthcare workers, and develop human resources in the field of physical therapy, etc., developing a wide range of human resources to support the health sector.

- **In education, it is desirable to aim to improve the quality of education and the objective assessment of academic ability to improve basic academic skills and strengthen the ability of teachers to guide students, in addition to strengthening school management (development of management personnel).** Assuming participation in the Programme for International Student Assessment (PISA), support the introduction of international standard academic assessments to improve teacher training and scholastic ability testing to improve the basic academic skills of students, mainly in science and mathematics, and for the correction of regional disparities. Also, as well as the abilities of individual teachers, consider strengthening school organizations themselves through the training of the managers who oversee them. In doing so, make active use of the knowledge accumulated by the private education industry in Japan by

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introducing learning management systems (LMS), utilizing digital teaching materials, and introducing academic ability testing models (mathematics), etc. in cooperation with Japanese companies that conduct surveys in private sector collaboration projects.

- **For the realization of social inclusion, strengthen efforts to provide practical support for inclusive education and to promote and expand the social participation of persons with disabilities.** In particular, support the improvement of quality care and education for pre-school children with disabilities in special needs education facilities and the strengthening of inclusive education through smoother connections to primary education (supporting the establishment of institutional in-service teacher training for children with disabilities, etc.), aiming for the realization of an inclusive education environment in pre-school and primary and secondary education. Also develop cooperation with physical therapy and occupational therapy in the field of rehabilitation, for the integration of medical and social support.

(3) Energy Efficiency and Low Carbon Program

- **It is desirable to promote energy conservation through electrification technologies such as the popularization of high-efficiency air conditioners and heat pump technology, etc. with a focus on the housing and commercial building sectors where final energy consumption is high, to reduce energy consumption intensity and reduce per GDP greenhouse gas emissions, contributing to the country's NDC.** For this purpose, based on the concept of Zero-Energy Buildings/Houses (ZEB/ZEH), understand the energy saving impact of introducing energy saving and renewable energy, and consider supporting the verification of policy cost effectiveness and the potential to recover investment necessary for the spread and renewal of energy-saving equipment, and reflect this in policy. Also support the development of an energy management system and the training of human resources such as energy managers and diagnosticians in the industrial sector to realize energy saving in high energy consumption business establishments. Also support awareness activities and work to improve the awareness of citizens of energy conservation. Based on the above considerations, push the popularization of energy saving equipment through the provision of two-step loans or sector program loans, etc. (using technologies from Japanese companies, if possible).

- **Given the likely shift from gas combustion to electrification with the spread of energy-saving equipment, it is desirable that high efficiency (improved efficiency of power plants, reduction of power transmission and distribution loss, renewal of irrigation pumps) be introduced into the electricity sector to meet increasing demand.** Provide support for the improvement of efficiency in the electricity sector and to reduce greenhouse gas emissions, for example by renewing old power plants used since the Soviet era to develop them into high-efficiency combined-cycle thermal power plants, supporting the streamlining of management for electric power companies, renewing agricultural irrigation pump equipment (conversion to environmentally friendly pumps), and supporting measures to address transmission and distribution losses. Regarding improving the efficiency of power plants, it is desirable to consider the introduction of overseas investment financing with the trend of public-private partnerships (PPP) in new construction and renovation.

- **Consider support for new issues arising with the move towards the introduction of renewable energy (system stabilization, etc.).** The government aims to increase its proportion of renewable energy to 25% by 2026. However, because this system stabilization will be a major issue in the future, in addition to the development of policy human resources for stabilization, so provide support for the introduction of pumped storage power generation, storage batteries, and fuel cells and for R&D into hydrogen generation etc. Also support the use of overseas investment and financing schemes for the introduction of renewable energy and implement training for the development of human resources in hydrogen (long-term training, issue-specific training, SATREPS, etc.). Regarding system stabilization, respond to the above demand for power generation and contribute to the promotion of stabilization through the development and introduction of pumped storage power generation, storage batteries, and hydrogen generation/fuel cells.

- **Given the large amount of heat transfer loss during heat supply from local heating systems, consider support focused on operational improvements (controlling combustion conditions, temperature/volume control, thermal insulation of pipes, etc.).** On the other hand, major updates to local heating systems themselves are not cost effective and so are not actively supported, so it is desirable to provide active support for

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the introduction of distributed heat supply systems using heat pump technologies, etc. as mentioned above. Therefore, also support short-term efforts to improve heat supply such as in the proposal of operational improvements for existing heat supply facilities and separation from local heat supply systems etc. for public facilities, commercial buildings, and newly built housing complexes.

(4) Environmental Management Program

- **Regarding climate change adaptation measures and the resolution of various issues caused by the shrinking of the Aral Sea, this involves diverse fields and complex issues, and areas requiring a large degree of support. Thus, to consider highly effective support measures from a scientific perspective, select from and focus on support to 1) utilize the technologies and scientific expertise of Japanese parties (universities, companies, etc.), and 2) collaborate with cooperation projects in other sectors or projects implemented by the government and/or other donors.**

From this perspective, first implement existing projects and then consider expanding the results, while being sure to analyze the impacts on climate change from a scientific perspective and clarify the needed support policy. For example, the SATREPS project for the “Project for Development of Innovative Climate Resilient Technologies for Monitoring and Controlling of Water Use Efficiency and Impact of Salinization on Crop Productivity and Livelihood in Aral Sea region” utilizes the knowledge of Japanese universities and supports the building of a circular agricultural model based on optimal water balance/land use and salt farming technologies for the arid regions around the Aral Sea, actively sharing and disseminating information with other donors, with the aim of improving the livelihoods of residents and salt damage, and the efficient use of water resources and land that is adapted to climate change. The public-private cooperation project for the “Survey for the Salt Affected Farmland Improvement Technology using High Concentrated Fulvic Acid” is an attempt at improving the soil and includes measures against salt damage using botanical activators from naturally derived products owned by Japanese companies. In cooperation with the above SATREPS project this in particular is expected to explore the possibility of agriculture in salt-damaged areas. Support is being provided such as to the “sustainable management of forest resources” by individual experts utilizing the experience of forest management and administration in Japan to

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prevent desertification in arid regions through environmental forests, taking into account sediment disaster countermeasures as well as the planning of forestry development with the planting of economic forests that contribute to farmer side incomes, the promotion of employment in eco-tourism by developing tourism in wet lands and forest reserves, etc., and the planning of policies that contribute to the effective use of limited forest resources. Work is also being undertaken to improve the quality of medical services and medical education by maintaining high-quality medical equipment in the Karakalpakstan Medical University Hospital under the grant aid “Project for Improvement of Medical Service at the Innovative Clinic under the Medical Institute of Karakalpakstan.”

- **For future new projects, using 1) and 2) above as the judgement criteria, give special consideration both for the country and the Central Asia region to environmental issues that pose security risks.** Be aware of potential disputes with neighboring countries as these neighboring countries are highly engaged and prone to disputes, so when forming cooperative projects for water resources from the international rivers (Amu Darya and Syr Darya Rivers) that flow through the area, consideration should be given to contents of projects for the prevention of floods and other natural disasters, or water use efficiency and dam rehabilitation. It is also necessary that soil and air pollution etc. do not affect neighboring countries. The human suffering and economic disparities caused by these environmental problems don not only occur in Uzbekistan, and projects should be aware of the likelihood of destabilizing the entire Central Asian region (e.g. expansion of drug routs, invasion of Islamic extremists, etc.).

(5) Capacity Building of the Civil Service and Law Enforcement Program

- **It is desirable to provide training (including degree programs in Japan) focused on administrative officials (including the officers and employees of state-owned enterprises) to improve policy-making capacity through to implementation and enforcement, and to implement training for leaders that will be responsible for Japan-Ukraine bilateral relations.** The public sector plays a significant role in the country, and since 2016 there has been a background of rapid policy formation with a series of rapid reforms that have incorporated foreign expertise, but the resulting policies have not necessarily been of high quality or feasible. There are also issues of inefficient

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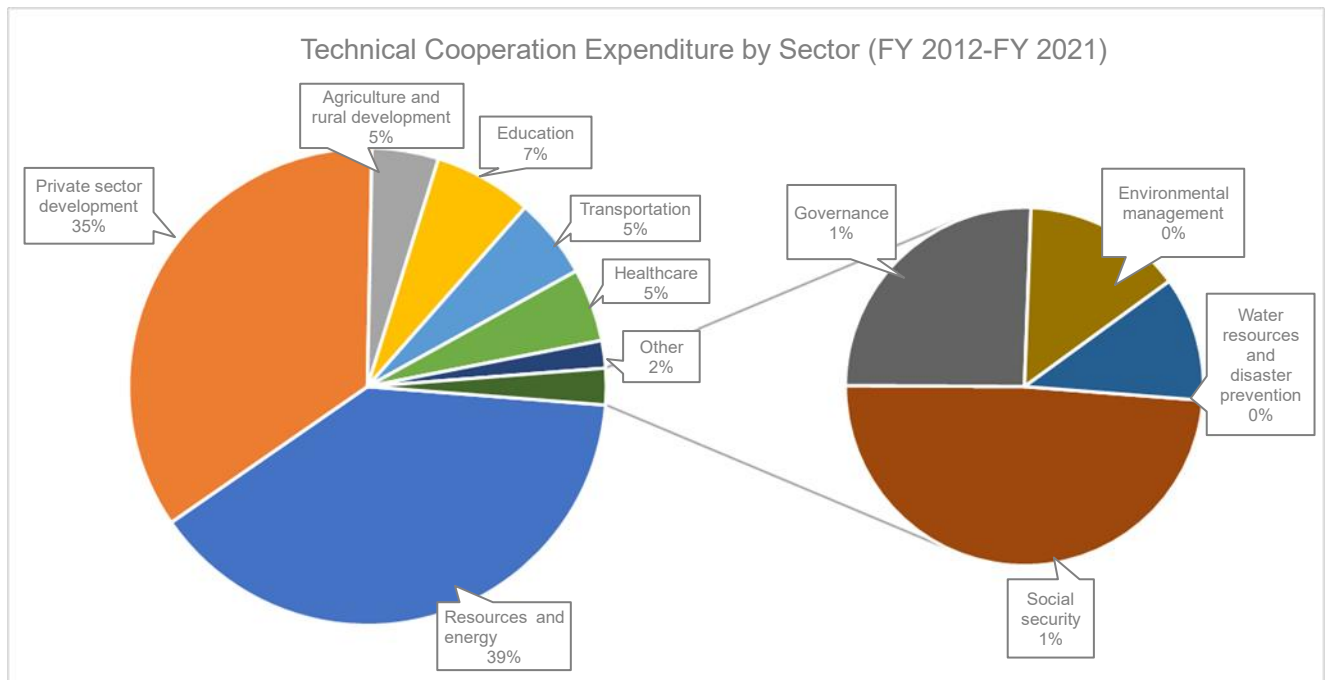
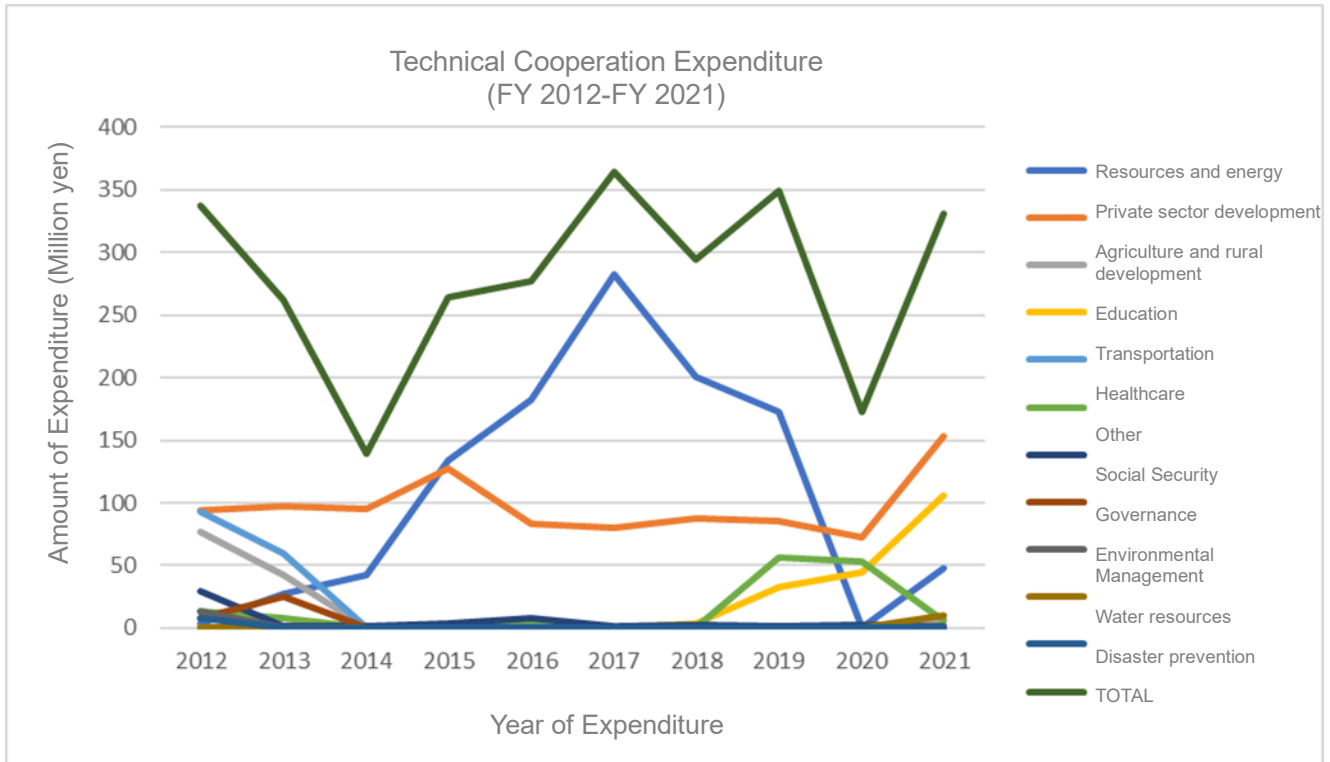
administrative management (including in state-owned enterprises). It is also important, given the results that have been produced in long-term human resource development, starting with the JDS project, and the important base that the country forms within the Central Asia region, to develop leaders who will recognize the importance of partnering with Japan and who will form the basis for bilateral relations.

- **The Japan Ministry of Justice (Research and Training Institute) and Nagoya University, etc. have a long track record of cooperation in the region in strengthening law enforcement and judicial institutions and have cooperated in the implementation of human resource development centered on legal professionals. Given that this is an area in which other collaborations are also being implemented with various donors, consider supporting the improvement of law enforcement capacity and judicial functions in cooperation with these various partners.** In addition to improving law enforcement capacity through enhanced policymaking, it is also important to improve law enforcement policy and judicial functions based on the laws enacted on the back of such policy, and the stability of level development and operation is particularly important for the formation of a free and open international order and for the promotion of foreign investment upon which the country places great importance. On the other hand, the training of legal professionals and strengthening the capacity of law enforcement and judicial institutions is essential to securing human resources for highly specialized cooperation and for long-term cooperation, so develop cooperation by strengthening relationships with local organizations with a proven track record.
- **It is also important to improve practical law enforcement capabilities (anti-corruption, anti-narcotics) so consider providing Japanese knowledge and cooperation with international organizations to implement more effective training.** Japan has a track record of conducting issue-specific training in the field of anti-corruption in cooperation with the United Nations Asia and Far East Institute for the Prevention of Crime and the Treatment of Offenders (UNAFEI). Also, given the continued use of Japanese funds through international organization grant aid for the implementation of narcotic control cases, consider the implementation of country-specific training with a view to collaborating with these international organizations.

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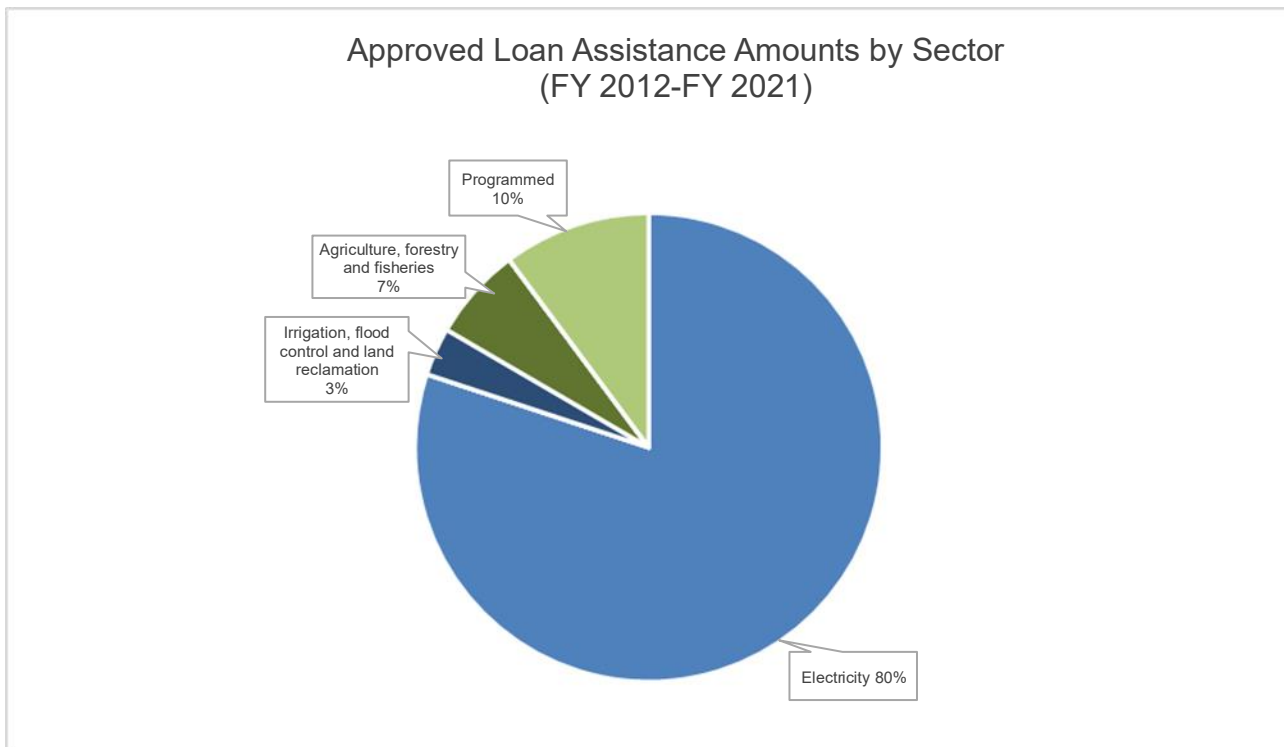
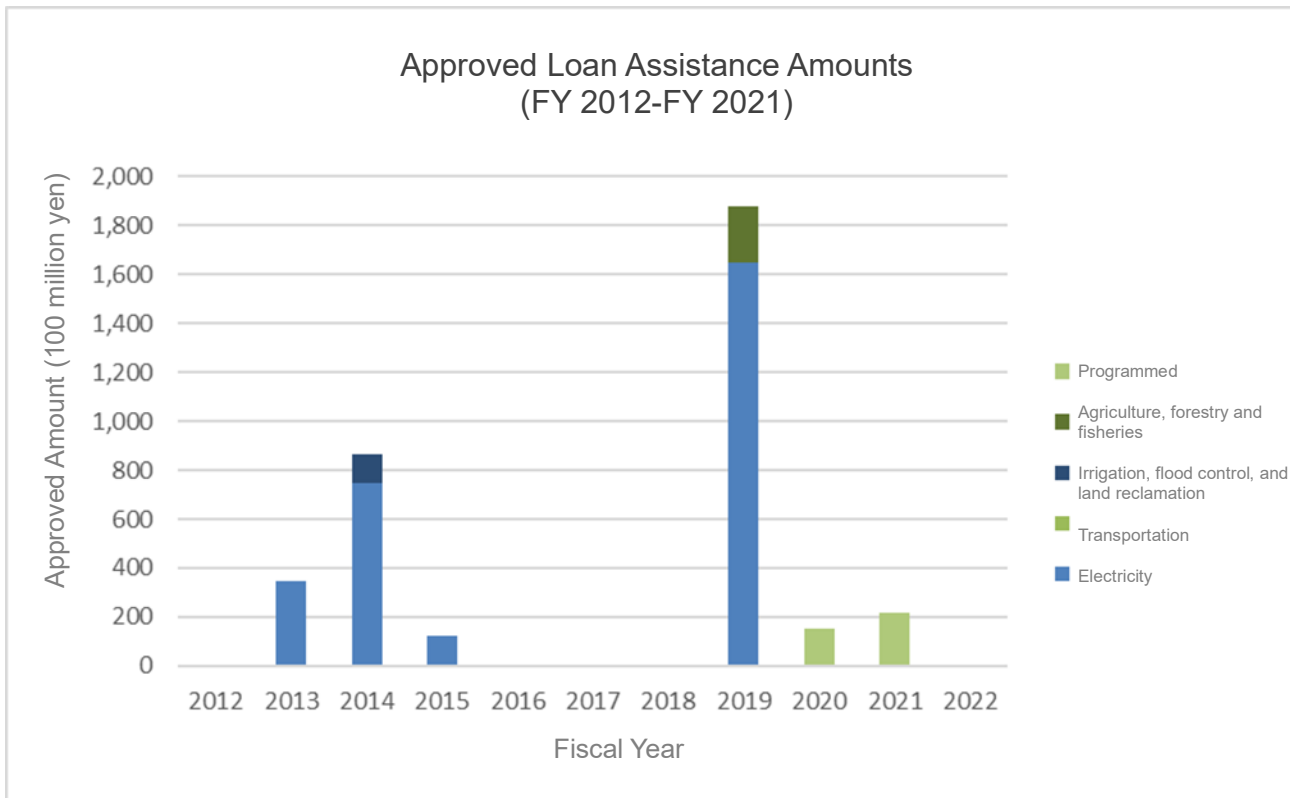
Attachment 1 – Past 10 years of Cooperation (FY 2012-FY 2021)

● Technical Cooperation



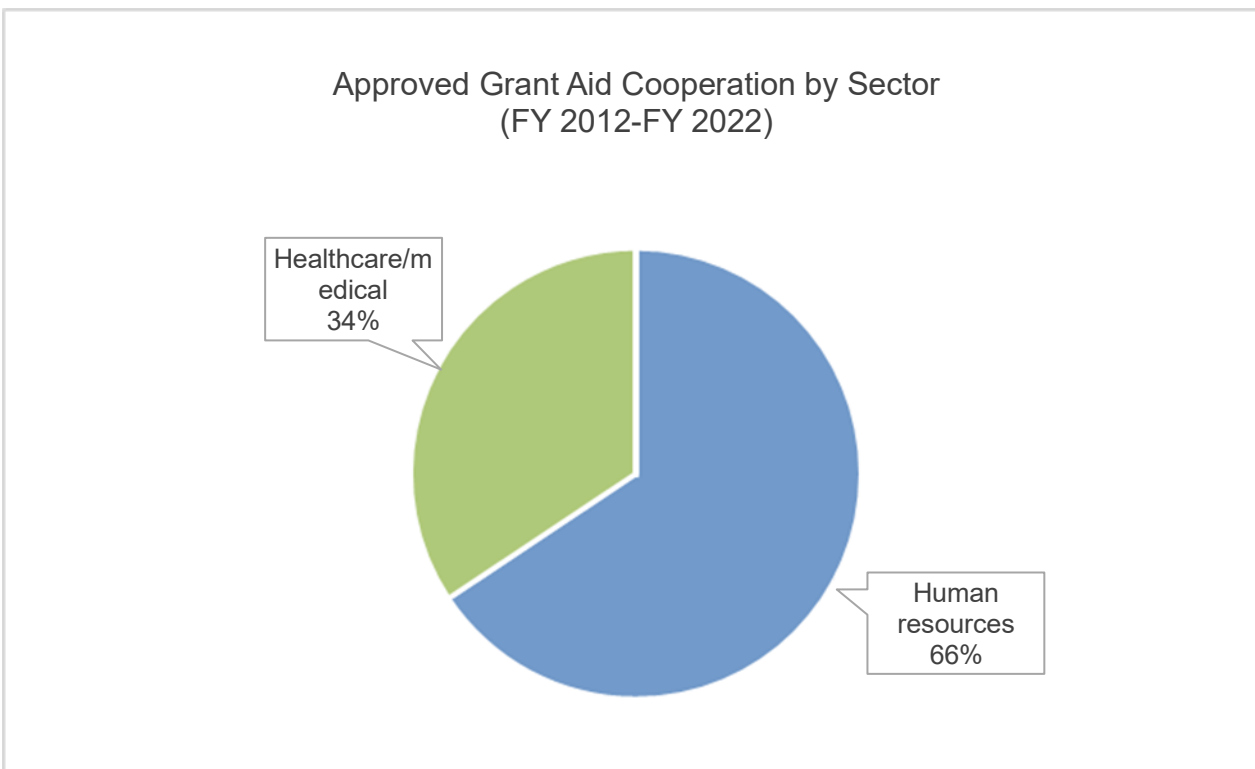
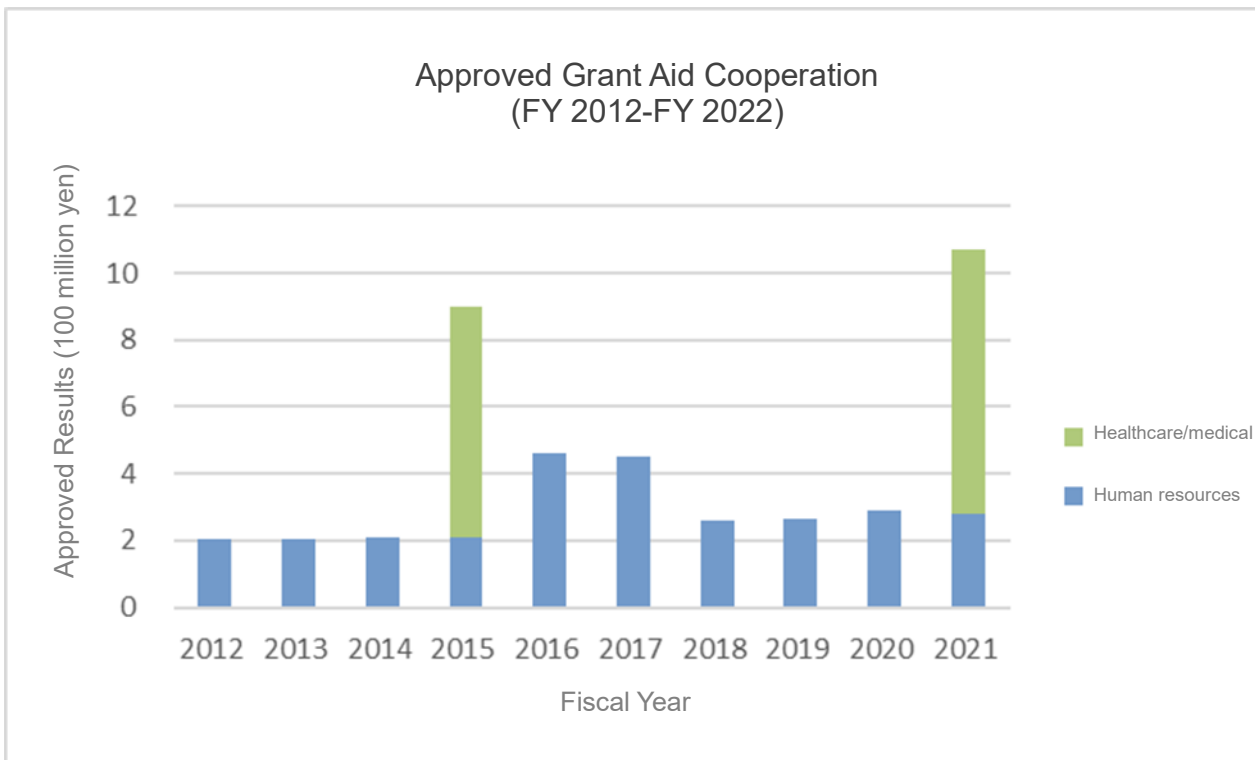
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● Loan Assistance



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● Grant Aid



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Attachment 2 – Columns on Water Resources in Central Asia

Column 1 – Regional disputes over water resources

- In the plains and basins of Central Asia, agriculture has been practiced since ancient times, supplied by snowmelt from the spring to the fall as the winter snow stored mainly in the mountainous areas melt.
- This region was incorporated into a centralized system during the Soviet era, so in the summer when demand for downstream water increased, Uzbekistan and other downstream regions had water released from upstream dams allowing the large-scale development of agricultural irrigation. In 1990, irrigated area in Uzbekistan expanded 1.8 times from 2.28 million ha to 4.17 million ha, and the annual production of cotton recorded about 1 million tons, equivalent to 4% of global production.
- With the collapse of the Soviet Union, the five Central Asian countries became independent, and the previously domestic Amu Darya, Syr Darya and Zeravshan Rivers became international rivers. This caused a conflict between upstream countries (Tajikistan and the Kyrgyz Republic) that have a high dependence on hydroelectric power generation and want the discharge of dams to increase power generation when demand for electricity is higher in the winter, against downstream countries (Uzbekistan, Kazakhstan, Turkmenistan) where water is in short supply in the summer when it is most needed for irrigation if dam releases occur during the winter. Given this, there is a need for coordination among these countries in terms of water resource allocation and management, and in 1992 and Interstate Commission for Water Coordination of Central Asia (ICWC) was established to discuss and decide on the annual water resource allocations for each country, but negotiations ran into difficulties given the tendency to underestimate mutual obligations in favor of national interest.
- Ultimately, the downstream countries agreed to pay upstream countries for the cost of maintaining water related facilities such as reservoirs and dams, etc., but going forward there are also concerns over the aging infrastructure of the former Soviet era, as well as the impact of climate change, etc.

Column 2 – The Shrinking of the Aral Sea: The Most Staggering Disaster of the Twentieth Century

- Due to the presence of the world's 4th largest lake (about 68,000 km in area) in the oasis-like Aral Sea, the Central Asian region maintained a comfortable environment and constant temperatures and humidity and was rich in diverse flora and fauna. By the early 1900s, commercial fisheries were established around the Aral Sea (catching about 40-50,000 tons per year), and the residents of Karakalpakstan on the southern borders of the Aral Sea were engaged in the fishing, fish

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processing, and fur industries. On the other hand, the Amu Darya basin was more suitable for the cultivation of cotton, and in the 19th century the Imperial Russian colonial rulers increased the cultivated area. In the 1940s the Soviet Union promoted a cotton monoculture with large-scale irrigation as part of its “Great Plan for the Transformation of Nature.”

- The large-scale irrigation of the Soviet Union turned the Amu Darya and Syr Darya Rivers that flow into the Aral Sea into desert basins and also brought about major changes to the vegetation and ecosystem. The water surface of the Aral Sea decreased rapidly by an annual average of 20 cm in the 1960s to 60cm in the 1970s, before drying up in 1989, dividing into the smaller and larger Aral Seas, before the lake eventually decreased to one-fifth to one-tenth of its original size. Due to the drying up of the water surface, in 1993 the salinity exceeded that of seawater (37 g/L) and in 2000 it reached twice that of seawater (70 g/L), making it impossible for fish to survive. Due to the rapid desertification from the expansion of annual temperature ranges in the estuary basin and the change from wetland vegetation to desert vegetation, many organisms around the Aral Sea died out.
- This desertification and ecosystem destruction in the Aral Sea has resulted in the deterioration of livelihoods and health hazards for surrounding residents. This has also resulted in the decline of thriving fishing and fish processing industries and the fur industry, and many villages have been abandoned, with 90% of fishermen having moved to other areas or having gone out of business. The deterioration of economic conditions due to industrial decline has reduced the consumption of meat and fruit/vegetables by surrounding residents, leading to insufficient intakes of iron and vitamin A, causing anemia and weakened immune systems. In addition, pesticides used in the Soviet era were persistent pollutants which have formed hundreds of tons of salty ground along with sandstorms generated from the bottom of lakes and farmlands which have carried this extensively throughout Karakalpakstan, causing malignant tumors and respiratory diseases such as tuberculosis among residents. In addition, domestic water contains high concentrations of sodium and minerals, with a total solubility of impurities well above the WHO permissible limit (200 mg/l), and well water contains chemicals and heavy metals derived from pesticides and chemical fertilizers from large-scale irrigated agriculture, resulting in residents having no choice but to ingest well water on a daily basis over the long term, causing renal dysfunction to be more prevalent than the national average and there to be many cases of congenital disease.

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