

Central Asian 'watersheds', "Path Diversity" policy recommendations in Kyrgyz.

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Abstract:

This paper examines Kyrgyz's development strategy by applying watershed thinking<sup>1</sup> and recommends the implementation of a social system that can combine diverse projects and collect funds directly from the whole world in the watershed, including Kyrgyz, i.e. throughout Central Asia, in order to build a sustainable social system over the future.

A 'watershed' is defined as 'a landform that collects rainwater in a system', etc. Even before the era of global warming and heavy rainfall, the public and private sectors have been working together to promote watershed-wide flood control and protection of the natural environment in Japan. In this context, some regions have started to use the outcome-linked SIB (Social Impact Bond) approach to create watersheds.<sup>2</sup> In addition, in the UK, the Environment Act 2021 requires almost all development projects in England to increase biodiversity by 10% compared to pre-development levels.<sup>3</sup> 'Watershed' is an important basic concept, both in the area of global warming adaptation measures and in the area of biodiversity conservation, and is an idea that could serve as a foundation for building a development model that will last for thousands of years to come, instead of a development model with risks to sustainability, such as a mass-production, mass-consumption and mass-wasting industrial society.

When considering development policy based on such watershed thinking, it is necessary to identify the watershed from the topography surrounding Kyrgyz, but due to the nature of water, which flows from high to low and the region being surrounded by high mountain ranges such as the Tien Shan Mountains, it is necessary to recognise a vast area as a watershed, including the five Central Asian countries (Uzbekistan, Kazakhstan, Kyrgyz, Tajikistan and Turkmenistan) and northern Afghanistan (and even the Tejen River watershed in Iran) need to be identified as a watershed.

This paper (1) proposes a development strategy for Central Asia as a whole from a capital perspective based on watershed thinking, with reference to biodiversity credits already started in the UK, and (2) presents ideas that could be planned and implemented in Kyrgyz as projects to be included in that development strategy, from the aspects of electricity distribution, forest utilisation, desertification prevention and other aspects.

Keywords:

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<sup>1</sup> Kishi, Yuji. What is Watershed Thinking? A Collection of Discussions. Yasaka Shobo, 2024.

<sup>2</sup> Nakamura, Keigo; Ikeda, Yuichi. Case Studies and Possibilities of Environmental Conservation in the River Watershed in Cooperation with Private Sector. Report of Riverfront Research Institute, 2023, 34: 85-92.

<sup>3</sup> Nakamura, Keigo. The Biodiversity Net Gain (BNG) Policy and its Impacts in England. Riverfront Institute Report, 2022, 33: 83-90.

watershed, Central Asia, Kyrgyz, Lake Issyk-Kul, project bonds, biodiversity creditsuy

## 1. Introduction.

The Kyrgyz Republic ('Kyrgyz') has pursued a market reform path following the IMF's austerity recommendations, including price liberalisation in 1992, after declaring independence as a national republic on 31 August 1991, but the economy is heavily dependent on remittances from migrant workers to Russia, GDP: \$13.99 billion (2023). (IMF),<sup>4</sup> GDP per capita: USD 2,410<sup>5</sup>. In this paper, we would like to make recommendations concerning the development of the Kyrgyz economy by implementing a social system in the watershed region, including Kyrgyz, i.e. Central Asia as a whole, which can attract funds directly from the whole world through a combination of diverse projects.

Here, the 'watershed' we are trying to examine in this paper will be the vast area that includes the five Central Asian countries, as mentioned above, but this area is also a watershed that overlaps with the Aral Sea Watershed (more on 'watersheds' in the next chapter).

After the Second World War, the socialist Soviet Union tried to prove the superiority of the socialist planned economy over the capitalist economy in the economic development of the Aral Sea watershed, and practised large-scale irrigation development and power development for hydroelectric power generation through the philosophy of natural transformation, which is to enrich both the environment and society in a planned manner.1960 Although it was largely foreseen in the 1960s that the Aral Sea would shrink and the fishing industry would cease to exist, in order to demonstrate to the Third World the economic superiority of the socialist camp during the Cold War and the development model of the least developed regions, the Central Asian republics also followed the Soviet Five-Year Plan (a law, which they were required to achieve). ), they had to expand the developed area of irrigated land and steadily increase the amount of cotton cultivation. On the other hand, with regard to the problem of shrinking the Aral Sea, there have been plans since around the 1960s on how to develop water use and allocate water resources in the river watershed, under the name of 'integrated water resources management', and the 'Siberian river diversion concept' has been proposed, but it has not been realised. However, it was never realised. The Aral Sea, once the fourth largest surface area in the world at 68,900 square kilometres, has shrunk to 6,990 square metres in 2018.<sup>6</sup>

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<sup>4</sup> Ministry of Foreign Affairs of Japan. "Kyrgyz Basic Data". Ministry of Foreign Affairs of Japan. Wed, 29 Jan 2025 08:10:48 GMT. <https://www.mofa.go.jp/mofaj/area/kyrgyz/data.html>. (Accessed 2025-03-22)

<sup>5</sup> IMF. "GDP per capita, current prices U.S. dollars per capita". INTERNATIONAL MONETARY FUND. Sat, 22 Mar 2025 13:05:20 GMT.

<https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD>. (Accessed 2025-03-22)

<sup>6</sup> Jita, Tetsuro . Chapter 1: Boundary Transformations and the Politics of Scale in the Aral Sea, Central

In Japan, pollution caused by water and air pollution, water pollution in rivers and red tides in bays occurred in the 1960s, but the environment in urban areas has improved as wastewater regulations have been tightened, a system has been put in place to discharge sewage into rivers after purification, and nature conservation activities have been carried out by the public and private sectors under a comprehensive flood control plan. The environment in urban areas is improving. However, there are not many initiatives that contribute to the core business of private companies, which are mainly CSR (corporate social responsibility) activities.<sup>2</sup> Also, the integration of regional water metabolism systems aiming at comprehensive water quality and quantity management in the watershed, which could be the basis for a new civilisation that could develop in the 22nd century, has not become common, and the luxury of water quality is being used for non-potable purposes such as flushing latrines and sprinkling<sup>7</sup> (see Chapter 4 for more information on the integration of regional water metabolism systems).

In what follows, Chapter 2 discusses the scope of the 'Central Asia Watershed' and the situation within the watershed; Chapter 3 discusses mechanisms for attracting global capital, such as 'biodiversity credits'; Chapter 4 discusses various projects to be incorporated for issuing 'project bonds'; Chapter 5 discusses examples of NPO and NGO initiatives and companies as 'working with the private sector'. The project management applying the management system is discussed in Chapter 5.

## 2. central Asian watershed

'Watershed' is defined as 'landforms where rainwater collects in a river/water system' or 'landforms that convert rainwater into river water', etc. The concept is represented in Figure 1, where the 'watershed' is within the red dotted line area.

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Asia. CIRAS Discussion Paper No. 103: The Natural Environment of the Eurasian Borderlands and Livelihood Strategies of Bordering Societies, 2021, 103: 5-20.

<sup>7</sup> Tambo, Norihito. Japan and Hokkaido in the 21st century: Towards a sustainable society. Hokkaido Foundation for Regional Development. 2009.



Figure 1 Conceptual diagram of the watershed (prepared by the author).

Using this concept to identify the Kyrgyz 'watershed', it is possible to include the five Central Asian countries (Uzbekistan, Kazakhstan, Kyrgyz, Tajikistan and Turkmenistan), northern Afghanistan (and also the Tejen River watershed in Iran) due to the nature of water, which flows from high to low and is surrounded by high mountain ranges such as the Tien Shan Mountains. (The watershed covers a vast area (including the Tejen River watershed in Iran), as shown in Figure 2.



Figure 2 Aral Sea watershed (adapted from Tetsuro Jita,<sup>8</sup> , prepared by the author).

As shown in the diagram above, although the watershed is bounded by different borders, the upper reaches (Kyrgyz and Tajikistan) have provided agricultural water to the lower reaches (Kazakhstan, Uzbekistan and Turkmenistan) since Soviet times, and recently it was announced that a hydroelectric power plant in Tajikistan will be built in collaboration with Uzbekistan. Cooperation within the watershed is being promoted, for example.

However, in this watershed, after the countries' independence in 1991, in the upper reaches (Kyrgyz and Tajikistan), priority is given to winter hydropower generation (i.e. water is stored in summer for winter generation and discharge. No water is discharged in summer). On the other hand, in the middle and lower reaches (Uzbekistan, Kazakhstan, Turkmenistan, etc.), priority is given to irrigation in summer (i.e. water should be released in summer). which has led to conflicts between countries due to the seasonal nature of water resource use. For example, Uzbekistan has long opposed the construction and operation of the Rogun dam on the upper reaches of the Vakhsh River in Tajikistan on the grounds that it would 'cause dramatic changes in river flows'.<sup>9</sup> However, despite some concerns over the reimbursement of construction costs, which are estimated at a total of USD 4 billion, the dam began operating its first unit on 16 November 2018<sup>10</sup> and on 7 June 2022, Tajikistan's President Emomali Rahmon attended the international conference 'Water for Sustainable Development' in the country's capital, Dushanbe 2018-2028", where the Government of Tajikistan jointly with the Government of Uzbekistan launched a project to construct two hydropower plants (both to be built: the Yawan hydropower plant [power generation capacity of 140 megawatts (MW)] and the Fundariya hydropower plant [power generation capacity (135 MW)] on the Zarafshan River system in Tajikistan ) within the Aral Sea Watershed, including the announcement of the commencement of a project to build the <sup>11</sup>

The policy of using energy resources as a means of security policy will not be completely

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<sup>8</sup> Jita, Tetsuro . Chapter 1: Boundary Transformations and the Politics of Scale in the Aral Sea, Central Asia. CIRAS Discussion Paper No. 103: The Natural Environment of the Eurasian Borderlands and Livelihood Strategies of Bordering Societies, 2021, 103: 5-20.

<sup>9</sup> Saito, Ryuta; Saito, Ryuta. Empirical analysis of interstate conflict in Central Asia over water resource issues: using the ICWC Bulletin as a source. University of Tsukuba Area Studies, 2014, 35: 163-182.

<sup>10</sup> JETRO. "Largest Regional Rogun Hydroelectric Power Plant Starts Operation (Tajikistan, Central Asia)". JETRO. 19 Nov 2018. <https://www.jetro.go.jp/biznews/2018/11/85dca14a02917cfa.html>. (Accessed 2025-03-23).

<sup>11</sup> JETRO. "Two Central Asian countries cooperate in hydropower plant construction (Tajikistan and Uzbekistan)". JETRO. 17 Jun 2022. <https://www.jetro.go.jp/biznews/2022/06/ace287a71276843a.html>. (Accessed 2025-03-23)

abandoned<sup>12</sup>, but Aral Sea watershed cooperation will continue to accelerate the development of people's lives and economic and social development through the development of infrastructure and the securing and stable supply of electricity.

### 3. biodiversity credits.

The country is obliged to repay the debt for the construction of the hydropower plant and dam, but if electricity sales do not proceed as planned, it will not be able to generate cash as a source of repayment, which could lead to default. As mentioned in the previous chapter, the view that the reimbursement of construction costs is at stake in the construction of the Rogun dam is based on (i) the fact that the Government of Tajikistan has 10 years (until 2028) to redeem the USD 500 million debt issued in 2017 as part of the construction costs, and (ii) the fact that the debt repayment for the completion of the construction requires exporting electricity from the said hydropower plant and (itself) to earn foreign currency, but it has been pointed out that the power grid linking Afghanistan and Pakistan, which are the potential export destinations, has not been completed, and (iii) questions remain about security and the ability to pay for foreign currency in both countries for stable power transmission.<sup>10</sup>

Of course, even in the event of default, professional project finance groups will take security measures to avoid losing money by, for example, improving the project proponent. The use of a project/project such as a stable electricity supply as a material for trading in a market economy is likely to entail, for the project finance parties, a risk of project proponent substitution in the event of a default.

The following section examines the use of biodiversity credits as a means of raising capital from within the watershed (Aral Sea Watershed) or from outside the watershed (global markets) and enriching people's lives, while mitigating the potential risks of such large-scale projects as much as possible.

#### (1) Biodiversity net gain policy in England, UK.

In England, a target of a 10% net increase in biodiversity per project was enshrined in the Environment Act 2021, and the November 2023 Biodiversity net gain ('BNG') policy was initiated. BNG is a development policy, which requires developers to leave wildlife habitats in a significantly better condition than they were before development, in accordance with Annex 7A of the Town and Country Planning Act 1990 (inserted by Annex 14 of the Environment Act 2021). Under Annex 7A of the Planning Act 1990 (inserted by Annex 14 of the

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<sup>12</sup> Inagaki, Fumiaki. Changes in energy policy in the former Soviet space triggered by the collapse of the Cold War: The case of Central Asia, which turned from confrontation to cooperation. *International Security*, 2023, 50.4: 75-91.

Environment Act 2021), it requires developers to leave wildlife habitats in significantly better condition than they were before development. Developers must provide 10% BNG. This means that the development will result in a higher quality natural habitat than before the development.<sup>13</sup>

BNG is a method for calculating the biodiversity of a target area by multiplying the habitat area and quality of the project area, quantitatively comparing the changes before and after development, and evaluating the net gain. For example, even if the habitat area is reduced by development, if the quality improves by a factor of three, it is easier to obtain a net gain. Measures to improve quality could include planning, implementing and monitoring the realisation of plantation areas that have previously been planted with a single species, by planting trees in such a way that the original vegetation of the area can be restored. Net gains in biodiversity can be 'realised' in the following order of priority: (i) on-site, (ii) off-site and (iii) by purchasing biodiversity credits. If the developer assessed that it is difficult to improve quality (i) on-site and even (ii) off-site, the developer would purchase (iii) biodiversity credits that have been publicly pre-developed off-site.

(2) Potential of BNG linked to the development of the Aral Sea watershed.

Consideration should be given to establishing a state-of-the-art water resources utilisation system in the Aral Sea watershed, as shown in Figure 3, with reference to the UK's BNG policy.

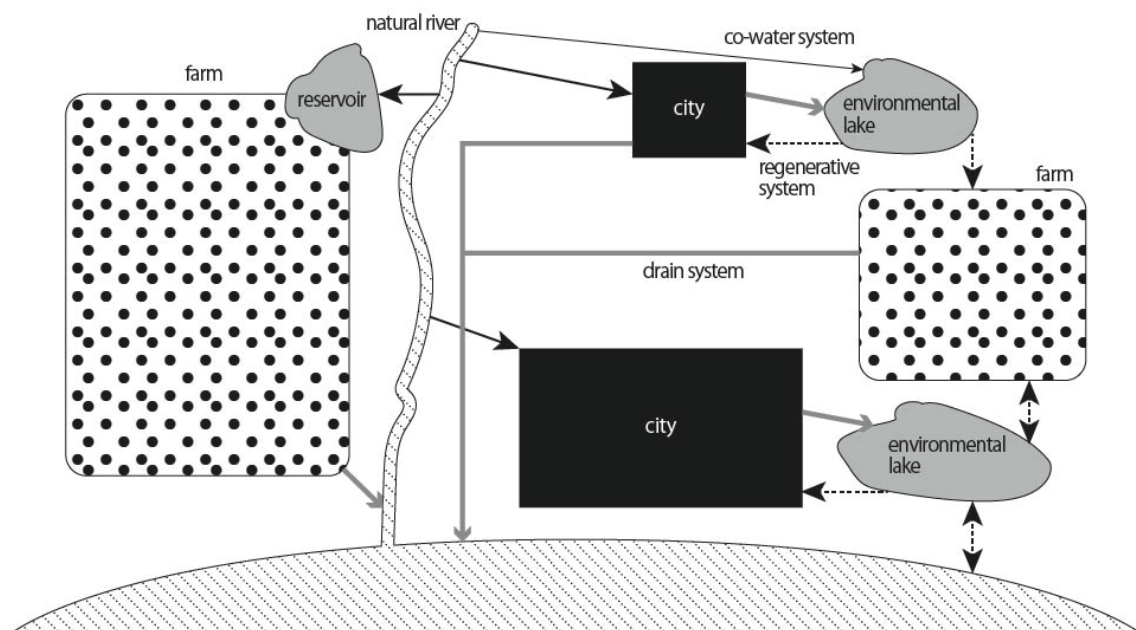


Fig. 3 "State-of-the-art" water resource use system using environmental lakes (adapted from

<sup>13</sup> GOV-UK. "Understanding biodiversity net gain". UK government. Tue, 03 Dec 2024 11:03:19 GMT. <https://www.gov.uk/guidance/understanding-biodiversity-net-gain>. (Accessed 2025-03-23)

Norihito Tambo,<sup>7</sup> , prepared by the author).

Water resource utilisation systems using environmental lakes and recycled water are not widespread in Japan and other countries. If this "state-of-the-art" system can first be disseminated in the Aral Sea watershed, where water resources are in serious short supply, it will provide a solution not only to the problem of water resources, but also to the problems of phosphorus depletion, the three major fertilisers for crops , and loss of biodiversity. The system is also a good solution to the problems of phosphorus depletion and biodiversity loss.

And not only to improve the biodiversity net gain within the Aral Sea Watershed, but also in developed countries such as the UK alone, which was included as one of the 2030 global targets in the Kunming-Montreal Biodiversity Framework adopted at the 15th Conference of the Parties (COP15) to the Convention on Biological Diversity in December 2022, the The "30 by 30" target (which aims to effectively conserve at least 30% of the land and sea as healthy ecosystems by 2030)<sup>14</sup> is one of the global targets of the Kunming Montreal Biodiversity Framework adopted at the 15th Conference of the Parties to the Convention on Biological Diversity (COP15) in 2022/12. In case it is difficult to achieve the target, a project portfolio bond incorporating projects in the Aral Sea Watershed has been established to purchase biodiversity credits. Portfolio Bonds incorporating each project in the Aral Sea Watershed should be authorised by the parties to the target, creating a mechanism for funds to flow from the global market to the Aral Sea Watershed, Central Asia and Kyrgyz.

#### 4. project bonds

The concept of finance relying on the cash flows and assets of a project has inevitably arisen and been utilised in the long history of human financial transactions. Although the first project finance used today was in resource development projects in the USA in the 1930s, there is no need to keep this approach as a financial technique limited to developed countries.<sup>15</sup>

The concept of project bonds that we would like to propose in this paper is shown in Figure 4.

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<sup>14</sup> 30by30. "What is 30 by 30". Ministry of Environment . Thu, 27 Feb 2025 08:37:20 GMT. <https://policies.env.go.jp/nature/biodiversity/30by30alliance/>. (accessed 2025-03-24)

<sup>15</sup> Kaga, Ryuichi. New Edition: Project Finance Practice - Project Financing and Risk Control. The Institute of Financial and Financial Affairs. 2020.

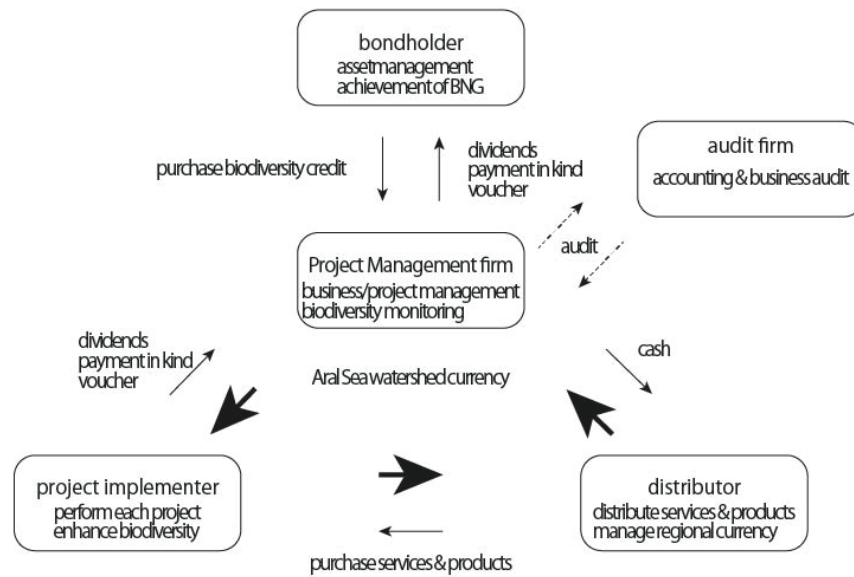


Figure 4 Biodiversity amplification bonds with Aral Sea Watershed Currency (prepared by the author with reference to Nakamura and Ikeda<sup>2</sup>).

The project bonds to be purchased from countries around the world through biodiversity credits and other means (hereinafter referred to as "a lar marine watershed bond (tentative name)") should have the following features.

- ✓ Goods and services can be purchased with local currency within the Aral Sea watershed.
- ✓ Project proponents in the watershed focus on generating results from their own projects with no need to prepare an international currency
- ✓ Centralisation and efficiency of administrative tasks through the management of multiple projects by a PM company.
- ✓ Auditors audit the accounting and business reality based on vouchers to ensure that the results of projects in the watershed are recorded accurately and without fraud.
- ✓ Distributors concurrently issue and manage local currency
- ✓ Issuance of a local currency requires backing of an international currency
- ✓ Linking the value measured in international currency to the increase or decrease in the local currency based on the results of project implementation.
- ✓ Dividends in local currency can be paid out to bondholders.
- ✓ Bond holders are free to acquire vouchers within the watershed backed by local currency, which can also be used within the watershed.
- ✓ Bond holders can resell project bonds to other investors, but are generally not allowed to request repurchase within the watershed.
- ✓ Financing instruments for long-term economic growth ensuring biodiversity in the

## Aral Sea Watershed.

The Aral Sea Watershed Bond (tentative name) is intended to be designed as described above, but the question is what should be considered a project in this context. Unlike electricity projects, for example, where a single project and user can be secured, we believe that project planning, persona setting and risk management need to be considered and implemented for multiple projects and projects, so we present multiple ideas for projects and projects in Table 1.

No.	Project.	income	expenditure	risk
(1)	Kyrgyz Forest <sup>16</sup>	Revenue from sales of almonds, timber, etc. Forest tourism income	Plantation growth status management agricultural, forestry and mountainous region labour cost	long-term management lack of successors
(2)	Kyrgyz sheep's milk <sup>17</sup>	Revenue from the sale of milk milked from sheep.	grazing expenses milking facility labour cost	poor distribution network
(3)	Uzbekistan Anti-Desertification, Chinese herbal medicine Nikudjou. <sup>18</sup>	Revenue from sales of herbal medicines	Seed and plantation costs land rent Fertiliser and water costs	(fuel) enrichment
(4)	Kyrgyz Tourism <sup>19</sup>	tourist income voucher exchange	food and drink expenses Facility maintenance costs	movement restrictions aging facilities
(5)	Musical instruments,	box-office revenue	Instrument	copyright

<sup>16</sup> Shimizu, Tadashi; Tokugawa, Koichi. Towards Sustainable Forest Management in Kyrgyz Based on the Case of JICA Technical Cooperation Project in Three Northern Provinces. *Forests and Forestry Abroad*, 2019, 106: 14.

<sup>17</sup> SHIMOHEIRA, Otto. Overview of the 'Market-oriented milk production project in Chui Oblast, Kyrgyz'. *Livestock Technology*, 2018, 2018.761-Oct.: 38-42.

<sup>18</sup> Togashi, Satoshi. Challenges in combating desertification in Uzbekistan from the feasibility study of the herbal medicine Nikudjou business. *Forests and Forestry Abroad*, 2018, 102: 9.

<sup>19</sup> Akomatbekova Grizat . Transformation of tourism in Kyrgyz in the context of social regime change: with a focus on the tourism practices of those who experienced the Soviet era. *Rikkyo Journal of Tourism*, 2020, 22: 31-42.

No.	Project.	income	expenditure	risk
	dances and festivals revival in the Central Asian watershed.	Goods revenue	production costs facility usage charge advertising expenses	resale of tickets
(6)	Contracted development	IT Contracted development revenue Product development and sales revenue	energy bill communication fee labour cost	default on a debt shortfall in human resources

Table 1: Draft Aral Sea Watershed Bond (tentative name) project portfolio

## 5. collaboration with the private sector

The cooperation of the private sector, including NPOs and NGOs, is essential when trying to promote not only a single project but also multiple projects using portfolios, such as the Aral Sea Watershed Bonds (tentative name). This is because management by the public sector alone would lack the manpower and resources, and the know-how of the private sector is also essential when trying to strengthen IT controls. This chapter discusses the Koajiro watershed as a case study of cooperation with the private sector in Kanagawa Prefecture, Japan, and the application of the company's management system to project management.

### (1) Securing biodiversity in the Koajiro catchment.

In 1970, after Koajiro Forest and the surrounding area were designated as an urbanisation area in the Miura Urban Plan, plans were made to develop a golf course there. In 1995, Kanagawa Prefecture presented the Miura City and the developer with a policy on the use of the forest, etc., and as a result of discussions, it was decided to preserve the Koajiro Forest. Kanagawa Prefecture then proceeded to hold discussions with the landowners and purchase the land, and through voluntary conservation and donations by the landowners, the necessary land for conservation was secured in 2010, and from 2011, walking paths and other facilities were developed, and the area was opened to the public in July 2014.<sup>20</sup>

1970.	Koajiro Forest becomes an urbanisation zone in the Miura Urban Plan. Plans for a golf course development then come up.
1990.	A citizens' group, the predecessor of the current NPO Koashiro Outdoor Activity Coordinating Council, was established, and since then, conservation activities such as red king crab observation events and extermination of invasive alien plants have been carried out up to the present day.

<sup>20</sup> Kanagawa . "About Koajiro Forest". Kanagawa Prefecture . Fri, 21 Feb 2025 06:00:22 GMT. <https://www.pref.kanagawa.jp/docs/d2t/kankyo/p820028.html#rekishi>. (Accessed 2025-03-24)

1995.	Prefectural government presents to Miura City and business operators a policy and other information on the conservation of the Koajiro Forest.
1997.	Prefectures start buying up green spaces using the Kanagawa Trust Green Fund.
2005.	Minister of Land, Infrastructure and Transport designates Koajiro Forest as a Suburban Green Space Conservation Area. Prefectures proceed with land purchase.
2010	Prefectures to complete the securing of the necessary land for conservation.
2011.	Prefectures promote the development of walking paths and other facilities. The prefectural governor designates Koajiro Forest as a special suburban green space conservation area and, accordingly, the Miura Urban Plan is changed and the area becomes an urbanisation control area.
2014.	The prefecture, Miura City, the Kanagawa Trust Green Foundation and the NPO Koashiro Outdoor Activity Coordinating Council conclude a memorandum of understanding on environmental conservation activities. Part of the walking paths, etc. are developed in cooperation with Keihin Electric Express Railway Co. and donated to the prefecture. Open to the public

Table 2: Conservation history of the Koajiro watershed (cited from Kanagawa Prefecture website<sup>20</sup>)

The conserved and maintained Koajiro Forest provides a vast biological habitat in urban areas, as shown in Figure 5.



Figure 5: Panoramic view of Koajiro Forest (cited by Maeda Mitsuhiro. the Watershed Ecosystem-Enhancing Urban Development<sup>21</sup> ).

The Koajiro Forest area is also an area surrounded by ridges and forms a watershed, as shown in Figure 6.

<sup>21</sup> Maeda, Mitsuhiro. "MIGA policy package "Path Diversity" for "No One Left Behind"". Global South Research Caucus. Thu, 14 Nov 2024 03:15:13 GMT. <https://www.globalsouth.musashino-u.jp/en/miga-pp-2024-nov/#toc55>. (Accessed 2025-03-. 24)

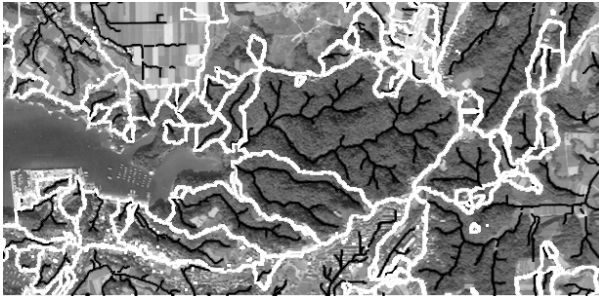


Figure 6 Koajiro Forest Watershed (cited in Maeda Mitsuhiro, the Watershed Ecosystem-Enhancing Urban Development<sup>21</sup> ).

Conserved and maintained forests provide habitats for living organisms and also provide places for people to relax.



Figure 7: Koajiro Forest walking path (photo by the author, 2025-03-14).

## (2) Solidarity between NGOs and NPOs and with public authorities

Until the Koajiro Forest was opened to the public, more than 40 years had passed since Miura City's urban planning decision in 1970. During this period, Miura City, business operators, NPOs such as the Tsurumi River Watershed Networking (TR Net)<sup>22</sup> and Kanagawa Prefecture have collaborated with each other and have been able to realise nature positivity without prioritising development over the protection of the natural environment.

<sup>22</sup> Tsurumi River Watershed is the "Shape of Baku" Tsurumi River Watershed Networking (TR Net). "Homepage to introduce the Tsurumi River Watershed".2025-03-18. <https://www.tr-net.gr.jp/>. (accessed 2025-03-24)

In order to avoid wasting time until finalisation, the public and private sectors should work together to promote a system such as the Aral Sea Watershed Bonds (provisional name), which can promote human development while enhancing BNG. The Aral Sea Watershed Bonds (tentative name) should incorporate multiple projects to steadily generate cash for each operator, and should be a system that satisfies all stakeholders while also improving the overall management of the project through the use of digital technology.

## 6. Conclusion.

The above discussion on Kyrgyz's development strategy, regarding the implementation of a social system in the watershed, including Kyrgyz, i.e. Central Asia as a whole, that can combine diverse projects and collect funds directly from the whole world, is based on the application of watershed thinking<sup>1</sup>.

Based on this discussion and recommendations, workshops were held with students, researchers and faculty at (1) Ala-Too International University and (2) Light Academy College of Engineering in Kyrgyzstan on April 1, 2025 and April 3, 2025, respectively. After the author's explanation, the participants had the following questions and answers, and it was possible to feel the high level of awareness of Kyrgyzstan's development.

Q	A	memo
Has the BNG policy started in Kyrgyzstan?	As far as I know, it hasn't started yet.	
Is there a way to expand biodiversity in Kyrgyzstan?	Afforestation and ecotourism may be suitable.	I was able to see the tree planting during my visit.
Can we use ore that could be used for sewage treatment in the proposed water treatment system?	I would like to explore the possibility of using it. Please contact me separately for details.	We received information about the ore and started to consider how to utilize it.
What is the use of water recycled from environmental lakes?	I think it is not suitable for drinking water, but I think it can be used for agricultural water, flush toilet, etc.	

We would like to bring together the wisdom of humanity to build a sustainable social system for the future and realise the development of the Aral Sea Watershed in a nature-positive manner.