

# **Creation of a Circulatory Energy and Welfare Regional Network and Avoidance of Conflict: the Case of Russia's Sakhalin Oblast**

Ayaka MIYAKE<sup>\*</sup>, Masato KAMIKUBO<sup>†</sup>

## **Abstract**

The objective of this paper is to sets out a proposal for the direction of future Japan-Russia relations, based on an understanding of the current situation, acquired during our fieldwork in Sakhalin Oblast.

Sakhalin Oblast will have an enormous export advantage. This paper claims Japan, China and Korea should cooperate with the people of Sakhalin Oblast in the improvement of infrastructure, social security, medical care and welfare, so as to earn a share of energy revenues for the enhancement of the standard of living, rather than just importing energy from them. This would surely involve the construction of a circulatory energy and welfare regional network in the North East Asia region.

## **Introduction**

Japan's Prime Minister Shinzo Abe had a two-day summit meeting with Russian President Vladimir Putin on December 15 and 16, 2016. In their discussion of the Northern Territories, they agreed to commence negotiation towards the realisation of joint economic activities in a form which would not violate either Japan's or Russia's legal rights. They also agreed to pursue

---

<sup>\*</sup> Master Program, Graduate School of Policy Science, Ritsumeikan University

<sup>†</sup> Professor, Graduate School of Policy Science, Ritsumeikan University

the simplification of the current procedures for visits to the four islands by aging Japanese ex-landers, in the interest of expanding visa free visits for purposes such as visits to family graves. However, no progress was made regarding the Four Islands attribution issue.<sup>1</sup>

In addition to joint economic activities in the Four Islands, Mr. Abe and Mr. Putin agreed to embody 80 items, including private ones, in the eight-point plan for economic cooperation which the two governments have been negotiating for some time. It is expected that the total amount of economic support by Japan would amount to some 300 billion yen.<sup>2</sup> However, it seems that progress has only been made in economic cooperation aspect, and the Four Islands attribution issue has been set aside. Criticism has been voiced in Japan that the new approach proposed by Prime Minister Abe is a total failure.<sup>3</sup> However, it is argued here that in fact the approach has not been a failure; Russia has long been hoping to have Japan's cooperative support for its Far East development.

This paper sets out a proposal for the direction of future Japan-Russia relations, based on an understanding of the current situation, acquired during our fieldwork in Sakhalin Oblast.

The economic relationship between Japan and Russia tends to be focused on the acquisition of resources and on the manner in which Japan will provide aid for resources development. However, it is argued here that in order to strengthen Japan's mutual trust relationship with Russia, it is important to focus not only on resources development but also on means of ensuring that the revenue from the resources sector goes in part towards the improvement of the standard of living of the Russian people.

## **1. Theoretical Framework**

### **1.1. Past International Politics over Oil and Natural Gas, Which Have been Focused on Conflicts**

It is widely recognized that in the past international political negotiations about oil and natural gas have been centered on conflicts over those resources, as seen in the political maneuvering between supplying countries and consuming countries over natural gas and pipelines (Le Billon, 2005). Essentially, in the natural gas and pipeline business supplying countries have the upper hand over consuming countries. For example, in the Ukraine crisis in 2014, there was a rumor that Russia would shut down the pipeline to Europe and stop the supply of gas, as a countermeasure against Europe's economic sanctions on Russia. It was also said that the economic sanctions by Europe or the United States had no effect.<sup>4</sup> Some, however, pointed out that there is neither advantage nor disadvantage between supplying countries and consuming countries, since in practice it is not easy to change trading partners in the pipeline business. When a pipeline is closed, supplying countries lose revenue while consuming countries suffer

from energy shortages. However, natural gas can be replaced with oil, coal, nuclear power and new energy forms over the long term. In short, it is virtually impossible to use natural gas as a lever for negotiation in international politics, and if Russia attempted to do so, it would be signing its own death warrant (Ishii, 2008: 75-120). After the Ukraine crisis, the natural gas pipeline has become rather significant element of risk for Russia, rather than a strong basis for negotiation.

In addition, there are other tensions over energy, such as anxiety about a possible blockade of the Strait of Hormuz by oil producing countries in the Middle East (Fuji, 2008: 26-42); China's military and economic expansion in the interest of acquisition of oil and natural gas (Fuji, 2008: 63-102); and similar conflicts among other countries. In that light, one of the recent focuses of international relations has been severe competition among consuming countries for acquisition of scarce natural resources.

## **1.2. Concept of Circulatory Energy and Welfare Regional Network**

Reflecting on such international relations over energy acquisition which have tended to be sources of conflict, this paper pursues means of circulating revenue from energy sales to the enhancement of welfare policy and the construction of bidirectional relationships between oil producing countries and consuming countries, towards conflict avoidance and the establishment of a regional security system. This paper proposes a circulatory energy and welfare regional network for North East Asia.

The notion of a circulatory society has usually been discussed from the perspective of environmental economics (Ueda, 2000; Ueda, 2004; Sasao, 2012). In recent years, societal sustainability has been also pursued in the context of the integration of global environmental issues and domestic welfare issues. This project is developing an approach towards international regional cooperation by means of circulating energy and welfare in a framework of international politics. Examples of such an approach can be found in Europe.

This paper focuses on the enormous revenue that energy exports bring to the exporting countries. That revenue could be used for improving infrastructure and welfare and social security policy so as to enhance living standards. By adopting the concept of circulatory society from environmental economics, the potential of circulation from energy to welfare could be pursued. To realize that possibility, energy consuming countries will have to cooperate in the construction of infrastructure and the development of welfare and social security policy in the oil supplying countries. This would lead to the establishment of a regional cooperation system and to the avoidance of regional conflict.

## **2. Examples of an Energy based Welfare Society**

### **2.1. Norway**

A circulatory energy and welfare regional network has been developed in Norway. Norway was originally a poor country with forestry as its main industry. However, since the discovery of the North Sea oil fields, Norway's economy has grown remarkably due to the expansion of oil exports (Yergin, 1990). With the revenue from the export of oil and gas, the Norwegian government has constructed a welfare state: medical treatments at public hospitals are free, as is education from elementary school to university (Stenersen and Libæk, 2003; Matsumura, 2004). The Norwegian government pension fund was established so as to enhance not only current pensions but also those in the future, anticipating the eventual end of oil resources.<sup>5</sup> The balance of assets as of the end of 2013 was 820 billion US dollars (160,000 dollars per person). In addition, a government oil fund was established to support Norway's entire economy. The government has been saving and investing to create an economy which will not depend on oil and gas in the future (Sakamoto, 2014; Fukushima, 2004).

Another useful example is the mutual benefit system of energy and welfare policy in five countries in Northern Europe (Norway, Sweden, Finland, Denmark and Iceland). Focusing on the energy supply from the North Sea oil fields, the five countries have formed a coalition to share the electric power supply network and have established an interlocking social security system. This system is referred to as "the energy and society network of Northern Europe" (Kamiko translation, forthcoming).

### **2.2. Russia's Sakhalin Oblast**

In five research visits to Sakhalin Oblast the author has verified collected data and the potential of the creation of a circulatory network of energy and welfare in Sakhalin Oblast.

Sakhalin was chosen as a research focus because Sakhalin Oblast is a potential center of future international politics, given the worsening of the Ukraine situation and the resulting destabilization of the export of energy from Russia to the Eurasian continent. There is a possibility that Russia may shift the center of its natural gas and oil exports to the Far East in the future. Russia's historical agreement to supply natural gas to China for a total value of total of 400 billion US dollars (approximately 40 trillion yen) took 10 years to realize because of price negotiations. This agreement epitomizes Russia's shift to the Far East.<sup>6</sup>



Bit Tooth Energy “OGPSS - The oil and natural gas of Sakhalin Island”  
<http://1.bp.blogspot.com/-fWvVLFXGtfU/TzHagvFTX6I/AAAAAAAAEsg/-u9otF8tO04/s1600/6%2BThe%2Bphases%2Bof%2BSakhalin%2BIsland.png>

### 2.2.1. Development of Oil and Gas in Sakhalin Oblast

The author’s third visit to Sakhalin Oblast in 2015 research was made under a comprehensive collaboration agreement between Ritsumeikan University and Sakhalin State University, which was concluded in May 2014.

Sakhalin Oblast is famous for the development of oil and natural gas under the Sakhalin Oil and Gas Project, started in the late 1990s. The reserves of oil and gas in Sakhalin Oblast and on the continental shelf have been estimated to be 45 billion barrels in oil equivalent, which is equal to the amount of undeveloped reserves in the North Sea continental shelf. Sakhalin Projects I to IX are planned; currently Sakhalin I and Sakhalin II are in operation, operated by a multinational corporate body including Japan.<sup>7</sup>

### **2.2.2. Sakhalin I and Sakhalin II**

Sakhalin I and Sakhalin II are described briefly below (please see the map of the oil and natural gas development project and the Sakhalin continental shelf). The operator of Sakhalin I is Exxon Mobile Corporation (investment ratio: 30%); project partners are RN-Astra (8.5%), Sakhalin morneftegas-Shelf (11.5%) SODECO, a Japanese alliance of companies (30% by Japanese companies including JOGMEC, ITOCHU and Marubeni), and ONGC Videsh Ltd, an Indian national oil company (20%). As of 2012 the fields at Chayvo, Odoptu and Arkutun-Dagi had produced 54 million tons of oil and 5.2 billion cubic meters of gas since the commencement of production.<sup>8</sup>

The operator of Sakhalin II is Sakhalin Energy Investment Company, Ltd. The investors and the investment ratios are Gazprom (50% and one share), Royal Dutch Shell (27.5%), Mitsui (12.5%), and Mitsubishi (10%). The fields at Piltun-Astokhskoye and Luns koye have produced and shipped 37 million tons of oil and condensate and 60 billion cubic meters of LNG.<sup>9</sup>

### **2.2.3. Changes in Sakhalin Oblast**

Sakhalin Oblast is about to undergo drastic changes as a result of these oil and natural gas projects. The population was 750,000 at the end of the Soviet era but at present it is only 480,000 (for comparison, Sakhalin Oblast is almost the same size as Hokkaido, whose population is 5.5 million). After the disintegration of the Soviet Union, Sakhalin Oblast was temporarily ignored and abandoned. Recently, however, the population decrease is slowing.<sup>10</sup>

One noteworthy point is the rapid increase in the budget of the Oblast government. In 2014, the annual government revenue of 108.4 billion rubles (292.6 billion yen) was corrected to 131.8 billion rubles (355.9 billion yen); the annual expenditure of 115.9 billion rubles (312.9 billion yen) was corrected to 133.5 billion rubles (360.4 billion yen); and a substantial supplementary budget was provided. In comparison, in 2008 the annual revenue was 29.1 billion rubles (78.6 billion yen) and the annual expenditure was 30.7 billion rubles (82.9 billion yen); the average monthly wage in Oblast, only 2,000 rubles (5,400 yen) in 2007, increased to 44,208 rubles (119,391 yen) in 2012.<sup>11</sup>

However, in the current situation, the benefit from oil and natural gas development has not led to an improvement of the standard of living. Even in Yuzhno-Sakhakinsk, the capital of Oblast, most roads are old and rough, and people live in dilapidated collective housing built in the Soviet era. It was reported that most water pipes in use were installed during the period of Japanese rule some 100 years ago. It seems that the local people appreciate that quality and durability of Japanese infrastructure.<sup>12</sup>

#### **2.2.4. Sakhalin Oblast *Development Strategy 2025***

Russia has a strong centralized administrative system (Yokote, 2015). The governor of Sakhalin Oblast is appointed by the central government and the state's policies are basically manifestations of the intentions of the central government. 60% of tax revenue goes to the central government; the state government has only 40% at its disposal.<sup>13</sup> In the town, the impression is that the state government has no intention of developing its own policies. However, interviews and examination of documents during the most recent visit suggested that the actual situation is quite different.

For example, it was reported that President Putin directly instructed the governor to enhance education and medical treatment. When a case of minor corruption in the state government was revealed this winter, the president called the governor and scolded him, saying, "If there is money for such things, you must spend it on the creation of nursery schools!"<sup>14</sup> It is interesting that Putin, who is isolated from the world due to the Ukraine issue, gave specific instruction to build nursery schools.

It is not true that the state governor had no intention of pursuing such projects. He has drawn up the state's long-term economic growth strategy, *Development Strategy 2025*, aimed at increasing state production more than threefold and Sakhalin Oblast trade volume more than sixfold by 2025.

The major elements of the development strategy are:

- 1) modernization of the social and industrial base through the dissolution of undeveloped infrastructure;
- 2) engineering innovation and modernization of manufacturing;
- 3) promotion of new industries by advanced processing of natural resources;
- 4) development of modern market economy services and expansion of services with an emphasis on quality;
- 5) protection of ownership rights, enforcement of market competition, reduction of investment risk and corporate risk, reduction of public administrative barriers, and improvement of the public administrative service;
- 6) improvement of social infrastructure such as education, healthcare, culture, sport and physical exercise and housing to create a comfortable living environment;
- 7) vocational training to meet the demand for skilled labor;
- 8) enhancement of social welfare services and establishment of advanced medical centers; and
- 9) creation of a guaranteed housing market and expansion of housing investment.<sup>15</sup>

### **2.2.5. Welfare Policy and Education Policy of Sakhalin Oblast**

The welfare policy of Sakhalin Oblast has offered only a minimum standard of living since the disintegration of the Soviet Union. However, the Sakhalin state government seems to have some plan to apply energy revenues to the enhancement of welfare, following the example of Norway, which uses the revenue from the North Sea oil fields for the construction of a welfare state. The improvement of medical care and education, as in the construction of nurseries and schools, has already begun.

For medical care, the budget allocation priority is on the improvement of medical technology for children. In Sakhalin Oblast, the average life expectancy for males is ten years less than that for females, largely because there are many cases of male deaths in infancy. It is said that this is the result of the low status of Russian medical doctors: the salaries of medical doctors is low, so highly capable human resources are not attracted to work as doctors. As a step towards resolution of this issue, the salaries of doctors have been raised substantially.<sup>16</sup>

Regarding education, liberalization of creation of nursery schools is noteworthy. There are 159 nursery schools in Sakhalin Oblast, but due to the recent economic growth, the birth rate increased and the number of nursery schools is no longer adequate. Currently 80% of children age 1 to 6 in the state go to nursery schools. The state government introduced a new program in 2012 under which the 20% of children who cannot go to nursery school can attend school once a week. In their classes, mathematics and literacy are taught so that children excluded from the nursery program can obtain the knowledge and scholastic skills needed for entry to elementary school, eliminating the difference between children who go to nursery school and those who cannot. In addition, due to the easing of regulations for registration of nursery schools, it is now permissible to establish a nursery privately for any group of 8 to 25 infants.<sup>17</sup>

Sakhalin Oblast's mid- to long-term strategy places top priority on fostering human resources. This is because at present the development of oil and natural gas is done mostly by human resources sent from Europe, the U.S., Japan and Moscow, with few local people involved.

The Russian Ministry of Education and the state government have established a new Petroleum Department at Sakhalin State University, aiming at the cultivation of experts in oil and gas extraction, geology, the construction of infrastructure such as roads, and automobile manufacture. Classes will offer both theoretical research and practical training in fields such as geology and surveying. Exxon Mobile Corporation has offered to provide facilities and equipment for such training.

Although the number of young people in Sakhalin Oblast is decreasing, the Petroleum Department is popular and enrolment from all over Russia is increasing. The state government hopes that the students coming from other parts of Russia will eventually settle in Sakhalin



Oblast. In fact, the number of graduates employed by Sakhalin Energy is gradually increasing.<sup>18</sup>

The Petroleum Department of Sakhalin State University has concluded cooperating relationships with various universities. The Chinese and Korean governments plan to grant scholarships to students for study in the Petroleum Department.<sup>19</sup> It appears that the number of Chinese and Korean students studying there will increase.

#### **2.2.6. Various construction projects in Sakhalin Oblast**

In addition to medical care and education, various other construction projects using the revenue from oil and natural gas have been planned, including 1) construction of advanced oil refineries for sophisticated development of energy and expansion of existing plants; 2) improvement of state arterial roads and the train network; 3) construction of ports and harbors; 4) improvement of Yuzhno-Sakhalinsk international airport; and 5) the construction of a bridge between the continent and Sakhalin, a Russian national mega-project.<sup>20</sup> Certainly Russia is serious about the development of Sakhalin Oblast. Given the expected dramatic rise in revenue resulting from energy resource development, it is clear that Sakhalin Oblast will undergo dramatic changes in the near future.

#### **2.2.7. Movements of Russia, China and Korea over Sakhalin Oblast**

In 2015, Putin appointed Oleg Nikolaevich Kozhemyako as acting governor of Sakhalin Oblast. Kozhemyako made significant achievements in agricultural reformation when he was governor of Amur Oblast. In addition to *Development Strategy 2025*, Kozhemyako recently announced the *Joint Project for Development of Kuril'skie Ostrova*. This project plans to improve infrastructure using a budget of 70 billion rubles (approximately 150 billion yen) between 2016 and 2025.<sup>21</sup> However, the project became a contested issue in Japan since the development of the Northern Territory was included in the plan. The acting governor stated, "We will proactively continue inviting Japan's participation. If Japan is not interested, we will examine participation via joint venture corporations from countries such as China and Korea."<sup>22</sup>

In light of that remark, this paper examines the movement of China and Korea as neighbors of Sakhalin Oblast. Korea is, like Japan, a country with few natural resources, and thus is prompted to secure energy resources. Korean corporations have already won a contract for the improvement of Yuzhno-Sakhalinsk airport. As well, Korea is proactively cooperating in medical services, e.g., sending medical doctors to Sakhalin Oblast at the urging of President Park Geun-hye. Furthermore, exchange programs between Sakhalin State University and universities in Korea have been enhanced.<sup>23</sup>

On the other hand, China and Russia have rapidly grown closer. After the economic

sanctions of Russia by Europe and the U.S. in response to the Ukraine Crisis, the natural gas pipeline to Europe became risky for Russia. Consequently, Russia has started to focus on the development of the Far East region and has made approaches to China. A history-making natural gas supply contract was concluded between Russia and China for a total of 400 billion US dollars (approximately 40 trillion yen), a price that was under negotiation for 10 years. This contract was for a pipeline called the “east route,” running from east Siberia to northeastern China. In addition, there is a new plan for a second pipeline network: two pipelines from west Siberia to China through the western part of Mongolia.<sup>24</sup> Moreover, China has been getting aggressively involved in the plans to improve the infrastructure in Yuzhno-Sakhalinsk.<sup>25</sup>

Nevertheless, the real intention of Russia is not complete collaboration with China in the Far East region. Cooperation with China in Siberia-edged sword. Siberia has abundant energy resources but its industry is not developed and its population is rather small. China sends large numbers of personnel, not just government officials, bureaucrats and industrial engineers but also unskilled labor such as cleaners, for a large-scale mobilization of labor. As a result, Siberia could become a Chinese town, i.e. practically under the control of China. Russia fears such a development. Russia’s real intention is to have a balance in the development of the Far East region, with participation by Japan as well.<sup>26</sup>

### **3. What Approach Should Japan Take?**

As mentioned above, at the summit meeting in December 2016, Russia and Japan have agreed to include 80 items, including private ones, in the eight-point plan for economic cooperation which the two governments have been negotiating for some time. However, regarding the Four Islands attribution issue, it was agreed to commence negotiation towards the realization of ‘joint economic activities’ in a form that would not violate either country’s legal rights. It seems it would take a long time for that kind of agreement to be realized.

Thus, Japan’s cooperation in the development of Sakhalin Oblast should precede the addressing of the attribution issue. The eight-point plan economic cooperation plan between Japan and Russia is similar in content to *Development Strategy 2025*, launched by the Sakhalin Oblast government.

Russia has strong expectations that a deepened relationship with Japanese corporations is a short cut for Russia to become a great manufacturing nation.<sup>27</sup> I think Japan should respond to such aspirations. The multilateralization of industry, free from resources dependence, is most important for Russia. Operations slow greatly in the winter in Russia due to the heavy snow. There is little manufacturing in Sakhalin Oblast; however, during the Japanese rule, manufacturing such as paper mills managed to operate year round. With Japanese technology for manufacturing and factory management know-how, Russia could run factories that did not lose

productivity in the winter.

This eight-point agreement includes cooperation in the medical and healthcare fields, which meets some of the needs of Sakhalin Oblast, as mentioned before. One of the most urgent issues of the Putin government is the improvement of social security, welfare and infrastructure in provincial regions. Japan should get proactively involved in that, in particular in cooperation with Sakhalin Oblast. It is extremely important that Japan's enter into economic cooperation with the Russian people, and construct a relationship of mutual trust at the grass roots level. The construction of a trust relationship must not be limited to the summit level.

#### **4. Conclusion**

Surely in the near future Sakhalin Oblast (including the Northern Territories) will blossom dramatically as a result of the development of oil and natural gas resources. Neighboring Japan, China and Korea will receive abundant energy supplies. Consequently Sakhalin Oblast will have an enormous export advantage. I think Japan, China and Korea should cooperate with the people of Sakhalin Oblast in the improvement of infrastructure, social security, medical care and welfare, so as to earn a share of energy revenues for the enhancement of the standard of living, rather than just importing energy from them. This would surely involve the construction of a circulatory energy and welfare regional network in the North East Asia region.

The notion of a circulatory energy and welfare regional network in the North East Asia region presents one international relations alternative to the simple acquisition of energy, which is generally seen as a one-way flow and a source of conflict. This circulatory concept aims at the movement of energy revenue so as to enhance welfare policy; the construction of an interactive relationship between the oil producing and oil consuming countries; the avoidance of conflict; and the establishment of a regional security system.

This proposal is not limited to the case of Russia, Japan, China and Korea in the Far East; the thinking could well apply to relationships between other oil producing countries their oil consuming counterparts, relationships which tend to be a source of destabilization for the international economy, with its fragile and unstable dependence on energy. I believe this is a research topic that must not be ignored.

## Notes

- <sup>1</sup> *Asahi Shimbun*, December 17, 2016.
- <sup>2</sup> *Nihon Keizai Shimbun*, December 17, 2016.
- <sup>3</sup> Toshihiro Sugiura (2016) “*Sakadachishitemo Kunashiri Etorofu ha Kaette Konai Rekishiteki Haikei: Nichiro Shunoukaidan Soukatsu ~ Shinwa no Houkai de Ryoukoku Kankei ha Atarashii Suteegi he* (Historical Background why Kunashiri and Etorofu islands could not be returned to Japan: Evaluation of Japan-Russia Summit Talk ~ Japan and Russia Relationship Would Progress New Stage by Collapsing Myth.)” <http://jbpres.ismedia.jp/articles/-/48799>, accessed on January 23, 2017.
- <sup>4</sup> Kazuhiko Fuji (2015) “Russia heno Keizaiseisai ga Motarasu EU no enerugii Kiki (Economic Sanction to Russia results in Energy Crisis in EU)” <http://jbpres.ismedia.jp/articles/-/43819>, accessed on January 15, 2017.
- <sup>5</sup> Folketrygdfondet webpage [http://www.folketrygdfondet.no/?lang=no\\_NO](http://www.folketrygdfondet.no/?lang=no_NO), accessed on January 23, 2017.
- <sup>6</sup> The Financial Times “Russian Politics: China and Russia sign \$400bn gas deal” <https://www.ft.com/content/d9a8b800-e09a-11e3-9534-00144feabdc0>, accessed on January 29, 2017.
- <sup>7</sup> Sakhalin Energy website “history” <http://www.sakhalinenergy.ru/en/company/history.wbp>, accessed on January 29, 2017.
- <sup>8</sup> Sakhalin-1 Project Website <http://www.sakhalin-1.com/Sakhalin/Russia-English/Upstream/default.aspx>, accessed on January 23, 2017.
- <sup>9</sup> Sakhalin Energy website <http://www.sakhalinenergy.com/en/index.wbp>, accessed on January 29, 2017.
- <sup>10</sup> Hokkaido Government Sakhalin Branch (2014) “Outline of Sakhalin Oblast Fiscal Year 2014”
- <sup>11</sup> Ibid.
- <sup>12</sup> Interview with Hokkaido Government Sakhalin Branch in September 2014.
- <sup>13</sup> Ibid.
- <sup>14</sup> Ibid.
- <sup>15</sup> Hokkaido Government Sakhalin Branch translation “*Development Strategy 2025*”
- <sup>16</sup> Interview with Hokkaido Government Sakhalin Branch in September 2014.
- <sup>17</sup> Interview with Ministry of Education in Sakhalin Oblast Government in September 2014.
- <sup>18</sup> From Q & A session in the special lecture of Department of Oil and Gas in Sakhalin State University in September 2014.
- <sup>19</sup> Ibid.
- <sup>20</sup> Hokkaido Government Sakhalin Branch translation “*Development Strategy 2025*”
- <sup>21</sup> Sputnik News (Japanese version) <https://jp.sputniknews.com/business/20150727646103/>, accessed on January 16, 2017.
- <sup>22</sup> *Nihon Keizai Shimbun*, July 25, 2015.
- <sup>23</sup> From Q & A session in the special lecture of Department of Oil and Gas in Sakhalin State University in September 2014.
- <sup>24</sup> The Financial Times “Putin snubs Europe with Siberian gas deal that bolsters China ties” <https://www.ft.com/content/79eeabb0-6888-11e4-acc0-00144feabdc0>, accessed on January 31, 2017.
- <sup>25</sup> Interview with Hokkaido Government Sakhalin Branch in September 2014.
- <sup>26</sup> The Guardian “Two-timing the Chinese” <https://www.theguardian.com/world/2005/nov/23/japan.tisdallbriefing>, accessed on January 31, 2017.
- <sup>27</sup> *Nihon Keizai Shimbun*, December 17, 2016.

## References

- Fuji, Kazuhiko (2008) *Sekiyu wo Yomu (Examining Oil)*. Nihon Keizai Shinbun.
- Fukushima, Yoshihiko (2004) “Sekiyu Tennengasu Seisaku (Policy of Oil and Natural Gas)” in Norio Okazawa and Takayasu Okushima eds., *Norwei no Keizai (Norwegian Economy)*. Waseda University Press.
- Ishii, Akira (2008) *Tennen Gas ga Nihon wo Sukuu (Natural Gas Can Rescue Japan)*. Nikkei BP.
- Kamiko, Akio translation, *Tagentekina Hokuou Fukushi Kokka (Plural Nordic Welfare States)*, Minerva Shobou.
- Le Billon, Philippe (2005) *The geopolitics of resource wars*. Routledge.
- Matsumura, Hajime (2004) “Enerugii Seisaku to Kankyou Seisaku (Energy Policy and Environmental Policy)” in Okazawa Norio and Okushima Takayasu eds., *Norwei no Seiji (Norwegian Politics)*. Waseda University Press.
- Sakamoto, Junichi (2014) “Noruwei no Nenkinseido (Norwegian Pension System)”, *Nenkin to Keizai (Pension and Economy)* (33): 151-154.
- Sasao, Toshiaki (2012) “Jyunkangata Shakai Keisei ni Muketa Kongo no Ronten (Points of Discussion to Forming Circulatory Society)”, *Kankyou Keizai Seisaku Kenkyuu (Environmental Economics, Policy Studies)* (5): 96-99.
- Stenersen, Øivind, and Ivar Libæk (2003) *History of Norway*. Snarøya.
- Ueda, Kazuhiro (2000) “Kankyou Keizaigaku kara Jichitai Kankyou Seisaku heno Approach (Approach from Environmental Economics to Local Environmental Policy)”, *Chihou Bunken (Local Public Administration)* (18): 43-47.
- Ueda, Kazuhiro (2004) “Jyunkangata Shakaizou wo Kangaeru – Kankyou Keizai Seisaku Shiten kara (Considering Circulatory Society from the Viewpoint of Environmental Economic Policy)”, *Haikibutugakkai Kenkyuu Touronkai Kouen Ronbunshuu in 2004 (Proceeding of Academic Association of Waste Products in 2004)*: 62-65.
- Yergin, Daniel (1990). *THE PRIZE*. Simon & Schuster Ltd.
- Yokote, Shinji (2015) *Russia no Seiji to Gaikou (Russian Politics and Diplomacy)*. Housou Daigaku Kyouiku Shinkoukai.

