

(Provisional Translation)

Introduction

The global population is predicted to reach around 9.7 billion by the year 2050 and there is concern about serious water shortages and the rapid environmental destruction caused by economic activities. At the same time, as many national and international agencies are alerted, due to the further progress of climate change, there is also concern that the rise of grain prices threatens food security and increases the risk of hunger while biodiversity will be seriously threatened.

In Japan, we are facing serious problems of an population aging and decline of the rural population make rural areas difficult for further development, resulting in a shrinking market of agricultural, forestry and fishery products and food. In this situation, the increase of natural disasters related to climate change and negative impacts on agriculture, forestry, fishery and food industries have appeared.

On the other hand, the actions to achieve the United Nations' Sustainable Development Goals (SDGs) have accelerated across the world and it makes people aware of sustainability. This has increased the number of companies which take initiatives to make environmental efforts one of their main strategies by increasing ESG investment. Also, initiatives to create and share new value such as renewable energy and highly functional new materials generated from adequate natural capital like water, farm land, forests and seas have been promoted.

In addition, as for climate change, actions have been taken to achieve the Paris Agreement (aiming to hold the increase in the global average temperature well below 2°C above the pre-industrial levels and pursuing initiatives to limit the temperature increase to 1.5 above the pre-industrial levels) and improve the ability to adopt to climate change, such as introducing tropical fruit trees that take advantage of global warming and fostering resilience to extreme weather.

It is essential to build a sustainable society toward 2050 (to cope with the problems noted above). To hand down "food" as the foundation of human life and a secure "environment" to future generations, and how to develop the agricultural industry, are basic principles of environmental policy and provide a guideline for the future of agriculture, forestry, fishery and food industries and what should be done by the

Ministry of Agriculture, Forestry and Fisheries (MAFF).

I Guiding Principle

○Japan is a country with great natural capital, therefore its agriculture and food industry should pass on its accumulated advantages to the next generation.

○Nowadays, evaluation of each company's environmental policy and activities are directly linked to its corporate value, as its contribution to building a sustainable society is essential to gain the credibility of investors and consumers.

○Agriculture, forestry and fisheries of the next generation have to contribute to both the environment and economy. To achieve this, it is essential to enhance liaisons of each supply chain and consumers' understanding

○Consequently, we aim to make remarkable progress in agriculture, forestry and fisheries in Japan, making them industries with shared value in the environment, promoting both the environment and the economy through the three main concepts along with SDGs.

1) Achievement of holistic improvement in agriculture, forestry and fisheries and food industries so that they can create shared value both in the environment and economy along with reduction of the environmental impact.

2) Promote circular economic activities by a supply chain through a value chain, policy greening and research and development to support them.

3) We review MAFF Japan's policies and activities from the perspective of reducing environmental impact.

【Agriculture, Forestry, Fisheries, Food Industries, Environment and Natural Capital】
Japan is a country with great natural capital as it has abundant water, land, forest and sea.

Agriculture, forestry and fisheries contribute to mitigate climate change as well as produce food, foster nature and recharge groundwater.

Moreover, villages have fostered their locality acting as supply bases for affluent natural energy, homes to a variety of wildlife, roots of local food culture and traditional art.

Recently, the idea of 'Nature-based Solutions', which solve actual environmental and social issues by taking advantage of natural capital, is becoming common internationally.

Agriculture, forestry and fisheries and food industries of Japan should highlight such great natural capital, enhance its strength and pass it on to the next generation.

【Living in the age of the environment: enhancing the business value by tackling environmental issues】

The importance of tackling environmental issues such as climate change have been talked about, mainly at the United Nations, since the latter half of the twentieth century, But many companies consider global warming countermeasures as part of their costs.

However, as seen in recent marine plastic issues, companies which do not respond to environmental issues tend to not be able to gain the credibility of investors and consumers. This means it is now important to value the company by its actions in tackling environmental issues. In addition, with the development of SNS, this movement is accelerating.

Consequently, companies have started shifting their business methods to incorporate environmental initiatives in their management philosophies and their business principles instead of dealing with the initiatives as peripheral business and showcase their contributions to SDGs in various ways to attract ESG investment.

Economic activities including agriculture, forestry, fisheries, and the food industry sector will never be sustainable if they do not follow this environment conscious trend.

Furthermore, agriculture, forestry, fisheries and food industries rely heavily on natural capital and the environment, and therefore, it is necessary to take the initiative to maintain and improve natural capital and the environment in order to

maintain business sustainability over the medium to long term.

Regarding climate change, there is a need to take the initiative for environmental risks, such as strategic crop selection and preparing for extreme weather since climate change may affect regional crops' climate suitability as well as increase the risk of the damage by pests.

Overall, especially in agriculture, forestry, fisheries and food industries, dealing with environmental problems is no longer a cost, but an essential element for their growth and development on a business basis.

In other words, the agriculture, forestry, fisheries and food industries sector should aim for the industries which are creating shared value where economic growth and development achieved simultaneously can fulfill management goals and realize growth of the environment and natural capital; in addition, the policies of MAFF Japan should also accelerate this trend.

【Need for collaboration through the supply chain and consumer understanding】
Such a future cannot be realized only in the primary production process by the efforts of farmers, forestry workers or fishermen to conserve the environment.

It is essential to work with companies such as those in the manufacturing, wholesale, retail, and restaurant industries throughout the supply chain.

When carrying out overseas business such as exporting, it is becoming essential for downstream management to understand the environmental impact of the entire supply chain and take appropriate measures.

For this reason, it is preferable to change the system as producer and supplier with various companies in these chains, and to create an updated system in which their efforts are communicated, understood, and favored by consumers.

Agricultural, forestry, fish, and food products with the idea of the environment in mind are also expected to be an opportunity to bring new partnerships and businesses to rural areas.

【MAFF Japan as a business entity must also aim to achieve the SDGs.】 MAFF Japan itself, along with daily activities, is having an effect on the environment.

For this reason, MAFF Japan itself must take the initiative to reduce the environmental impact and grow into an organization with environmental awareness and actions.

Since MAFF Japan's measures may have an impact on the environment of agriculture, forestry, fisheries and food industries, its policy should be "greened" by incorporating environmental perspectives in the businesses.

In order to ensure the rich natural capital is passed on to the next generation, we will continue to promote initiatives to manage and increase such natural capital.

In the implementation of measures based on basic principles, we will make steady progress by adopting a checkpoint method based on the EBPM to not block these initiatives.

【The philosophy of agriculture, forestry and fisheries and food industries suitable for the global SDGs era】

Regarding these situations, we present the basic principle with the following three concepts as the future-oriented environmental policy of MAFF Japan and aim to foster the agriculture, forestry, fisheries and food industries, which contribute to the SDGs.

1) Achievement of holistic improvement in agriculture, forestry and fisheries and food industries so that they can create shared value both in the environment and economy along with reducing environmental impact.

2) Promote circulative economic activities by the supply chain through a value chain, policy greening and research and development to support the activities.

3) We review MAFF Japan's policies and activities from the perspective of reducing environmental impact.

The government named the next 10 years as a "decade of action" to achieve the

SDGs target in 2030 and will accelerate the deployment of the "SDGs model in Japan."

MAFF Japan also promotes a holistic environmental policy based on the three concepts so that we can make remarkable progress in agriculture, forestry and fisheries in Japan, making them industries with created shared value in the environment, promoting both the environment and the economy.

In addition, in 2025, with the Osaka Kansai Expo, which aims to contribute to the achievement of SDGs, and the Yokohama International Horticultural Expo in 2027, we will make the most of these international event opportunities and showcase the efforts by the agriculture, forestry, fisheries and food industries to the international community.

II Viewpoint of supply chain

○ In order to fulfill the sustainability goals of the agriculture, forestry, fisheries and food industry, it is essential for all players to take initiatives to reduce the environmental impact at each point in the supply chain.

○ For this reason, we will promote initiatives such as reduction of greenhouse gas emissions and circulation of biomass resources at the production stage, and efforts such as the use of plastic alternative materials and food loss reduction at the distribution process stage. In addition, companies are enhancing implementation of information disclosure and action for environmental harmonization.

○ Japan has the traditional wisdom to circulate materials and resources, and will work to realize an environmental-based industry that combines these wisdoms and the latest technologies, and disseminate it to the world as a Japanese model.

【Initiative to reduce environmental impacts is essential throughout the supply chain to achieve sustainable agriculture, forestry, fisheries and food industry】

The supply chain of agricultural, forestry, fishery and food products has various processes such as raw material production, collection, transportation, processing, packaging, sales, and disposal. However, each process has an impact on the environment, such as biodiversity loss and greenhouse gas emissions.

The agriculture, forestry, fisheries and food industries cannot be established without natural capital, and in view of the need to harmonize with the environment ahead of other industries, efforts to reduce environmental impact in all its processes are essential.

【Production stage: Promoting mitigation of greenhouse gases and circulation of biomass resources】

At the production stage of agriculture, forestry and fisheries, it is important to increase efforts to implement conservation agriculture utilizing the natural circulation functions of agriculture, such as soil management utilizing compost based on soil diagnosis, environmentally friendly agriculture and organic agriculture.

On the other hand, reducing emissions is essential since large amounts of carbon dioxide are emitted from agricultural houses and fishing boats, methane from paddy fields and livestock production, nitrogen oxide derived from livestock waste and fertilizer in farmland as well as the increase of carbon in soil by application of compost, green fertilizer, and other organic matter.

Furthermore, from the viewpoint of the measures not only for climate change but also for biodiversity conservation and marine plastic waste, there are urgent needs for promoting collection and proper treatment of used plastics from agricultural and livestock industries such as the use of manifest documents, use of recycled plastics, medium- to long-lasting film for emission control and mulching with biodegradable material, prevention of outflow to rivers of shell coatings of coated fertilizers, prevention of outflow to the oceans, prevention of outflow of fishing gear to the oceans, and properly processing or recycling of fishery waste.

Regarding wood, livestock waste, and agricultural residues, the use of "biomass" products instead of plastics using fossil fuels is expected to be effective in reducing greenhouse gases and increasing carbon stocks.

【Processing and distribution stage: promoting use of plastic alternative materials and reducing food loss】For the processing and distribution stage, , effort is needed to reduce plastic such as that in marine waste and large amounts of food loss, which is also of growing international interest.

As countermeasures against the plastic problem, it is necessary to increase the efforts of '3R + Renewable': reducing, reusing, recycling plastics in packaging for food and adoption of renewable alternative materials. In addition, in order to reduce food loss, it will be important to rationalize and review old business customs including the strict supply deadlines by collaborating with the entire supply chain as well as encouraging provision of unused food to food banks.

Additionally, with regard to food waste, including food loss, devising ways to reduce emissions from our own business will be needed at first, then, networking with other food-related, recycling and agricultural companies for exchanging feed and fertilizer resources will be needed to enhance the effect.

For distributors, regarding the boom in the e-commerce market, it is also effective to build an efficient and environmentally friendly logistics system connecting producers and consumers.

Eco-friendly action will also open up business opportunities for rural regions. In order to accompany other possible organizations, good practices which create a sustainable society by turning unutilized resources in villages and waste emitted from the food industry into renewable bioenergy or bioplastics should be highlighted since they have the potential to create new business partnerships.

【Trend of information disclosure: information on environment-conscious actions and the amount of reduced greenhouse gases through such actions】 ESG investment is being introduced worldwide, and understanding and responding to the environmental impact of corporate activities is being incorporated into investment criteria.

In response to this, information disclosure and environmentally conscious actions are prevailing; therefore, companies are required to be open with information not only on the management of energy and the direct emissions of greenhouse gases from factories, but also on indirect emissions from transportation as well as quality management in business entities, and, in some cases, emissions during consumption of the products are disclosed.

Under these circumstances, from the viewpoint of converting the entire supply chain into a sustainable one, there are some essential elements to be facilitated: reducing greenhouse gases through the supply chain, information disclosure based on TCFD recommendations, "visualization" of a decarbonized food supply chain, formulation of business models using the traceability of sustainable information on procurement and improvement of communication between stakeholders including consumers.

With regard to TCFD, it should also be noted that there is a related word, TNFD^(*), to seek information disclosure on biodiversity.

For sustainable forestry management, implementation of legal measures such as the Clean Wood Act, including the registration system for timber businesses which use legally logged wood will facilitate environmentally conscious activities.

【Japan model: fusion of traditional circulation-related wisdom and information technology】

Japan traditionally has the wisdom to circulate materials without impairing natural capital.

It is a way of living in harmony with the natural material cycle such as agriculture which returns organic matter to the soil, the recycling use of forest resources by the cycle of planting and use, resource management to maintain and recover fishery resources, and Japanese local cuisine using seasonal food.

This year is the year that the post-2020 target of the Convention on Biological Diversity is decided. There are still concerns about impacts on biodiversity through the supply chain, therefore, efforts by Japanese companies for a recycle-based society are gathering more attention.

Now is the time to showcase the Japanese system which pursues the creation of shared value in the environment, taking advantage of a combination of traditional wisdom in Japan's primary industries and the latest technologies related to nature, to pursue an environmental-based industry suitable for a new era and to disseminate it to the world.

Ⅲ Deepening consumers' understanding

○In order to develop the agriculture, forestry, fisheries and food industries suitable for the SDGs era, a shift to a new social system must occur, in which consumer well-being and satisfaction shall be improved by consuming the products and food that were produced in an environmentally friendly way and the results and benefits are returned to (agriculture, forestry and fisheries) rural areas, and it leads to a positive cycle between environmental and economic growth.

○In order to share the value of sustainable agricultural products with consumers, we encourage consumers to find the products' value and to be aware of their role, which leads to a change of daily purchasing behavior. In addition, use of various certification systems and consumer education in cooperation with private companies can be effective.

【The choices of consumers create the future of sustainable agriculture, forestry, fisheries and food industries】

Because the expansion of the supply chain depends on imports along with globalization of the food market and the decrease in the number of people who can live in (agriculture, forestry and fisheries) rural areas, producers and agriculture have become unfamiliar to consumers and consumers don't have enough opportunities to think about the way daily products and food were produced. As a result, costs of sustainability efforts at the production stage are not internalized, and consumers often prefer products that are simply cheaper, especially in urban areas.

In order to break through the current situation and develop agriculture, forestry, fisheries and food industries suitable for the SDGs era, a shift to a new social system must occur, in which consumer well-being and satisfaction will be improved by consuming products and food that were produced in an environmentally friendly way and the results and benefits are returned to (agriculture, forestry and fisheries) rural areas, and it leads to a positive cycle between environmental and economic growth.

Therefore, based on the SDGs Goal "12. Responsible Consumption and Production", it's essential that both consumers and producers recognize that consumers' daily choices have an effect on the environment in various ways and both production and

consumption, both production and consumption should be sustainable.

【The certification system that shares the value of sustainable agriculture, forestry and fisheries with consumers】

Certifications are expanding: “living marks” for communication that utilizes agricultural production and its products considering biodiversity conservation, and third-party certification that certifies the efforts of producers and groups working on sustainable production measures and resource management, such as GAP (Good Agricultural Practice), FSC (Forest Stewardship Council), PEFC (Programme for the Endorsement of Forest Certification schemes), SGEC (Sustainable Green Ecosystem Council), MSC (Marine Stewardship Council) and MEL (Marine Eco-Label Japan Council). There are also other certifications: (i) those to certify the efforts of producing in a way that increases the facilitation of the natural cycle and reduces environmental load such as organic-JAS, (ii) those to certify the appropriate and safe working environment for small farmers in developing countries such as fair trade, and (iii) those to evaluate appropriate efforts to recycle food resources such as the certification of recycled food products and the certification of livestock products utilizing eco-feed.

In order to share the value of sustainable agriculture with consumers, it's beneficial to encourage consumers to be aware of their role and change of daily purchasing behaviours through these objective certification systems.

On the other hand, without relying on certification, it's also beneficial to encourage consumers to understand the effort of farmers and food operators. For example, it is possible to revise the way of communication involving various actors, such as companies and NPOs, utilizing IT technology, such as block chain technology, and the system for exchange of products such as roadside stations.

【Cooperation with private companies and consumers' education are effective for change of consumers' behaviour】

Consuming the products and food produced in the way that is sustainable and environmentally friendly leads to improved consumer well-being and satisfaction, and it can be a positive cycle. To achieve this, it is essential to make it common that people purchase environmentally friendly products in cooperation with private

companies. Also it will be needed to clarify the role of consumers in a recycling-based society so that plastic products will be used as effective resources rather than waste after the products are used and to promote recycling, reducing consumers' own use of plastics and enhance recognition of 3R.

In addition, in order to reduce food loss voluntarily for consumers, it's important to encourage consumers in cooperation with food retailers and food business operators to be aware of the importance and learn the way to purchase and order that does not incur food loss. So, we will take action to provide information on the efforts of companies reducing food loss as well as enhance understanding of expiration dates and best-before dates.

It's also vital to share the importance of choosing environmentally friendly products and food, so the way of consuming leads to improved consumer well-being and satisfaction, which can be a positive cycle for everyone from children to corporate stakeholders through education about the environment, food and forestry.

IV Greening the Policy

○We will take into account environmental perspectives when we adopt the projects by setting requirements or additional factors that are related to conservation of the environment to promote environmentally friendly efforts in the same way that investors encourage environmentally friendly efforts in some companies through ESG investing.

○In public projects, we will develop facilities that utilize the functions of the natural environment and promote disaster prevention and reduction. We will also promote "greening" of rural areas, which means activating agriculture, forestry and fisheries and rural areas in coexistence with nature by using renewable energy and take action to expand the economy.

【Take into account an environmental perspective when we adopt the projects by setting requirements or additional factors that relate to conservation of the environment to promote environmentally friendly initiatives.】

In the same way that investors encourage environmentally friendly initiatives in some companies through ESG investing, as a general rule, we should take into

account the perspective of both the environment and sustainability when we adopt various projects such as directly controlled projects, subsidy projects and funds implemented by MAFF, by setting the efforts which achieve remarkable progress creating shared value in the environment as one of the requirements or additional factors.

In the case of projects through local governments, it needs to be considered to take action for initiatives that contribute to the environment or sustainability (to a certain extent) depending on the contents of the projects when we adopt projects.

Setting SDGs make various stakeholders aware of the environment and it can create the opportunity to effectively launch a new policy. It is desirable to find and support systems and businesses aimed at society with a low environmental load. At that time, it will be effective to introduce positively a new administrative approach such as crowdfunding related to environmental issues or collaboration with NPOs.

【Develop facilities that utilize the functions of the natural environment and promote disaster prevention and reduction of public projects.】

To increase the projects which achieve remarkable progress creating shared value in the environment, based on NBS (Nature-based Solutions), in the case of projects in rural area development, utilization of the various functions of nature or agricultural water facilities and promotion of tangible and intangible measures will be needed. For example, it will be needed to change drainage stations to energy-saving types, introduce renewable energy such as low head hydro power plants, and conserve paddy fields as water stores that temporarily store rainwater and help ensure stable river flows.

Also, when the projects are implemented, it should be taken into account to improve soil condition or water quality as well as prevent global warming. To achieve this, it can be considered to introduce ways that use local materials and utilize biochar in farmland to contribute to carbon sequestration and reduction of carry in/out energy and create energy that can be used in agriculture, forestry and fishery industries. In addition, it needs to be further promoted to allow forests to show their functional roles such as in disaster prevention and reduction and develop facilities that utilize natural capital so as to withstand natural disasters.

Similarly, other fields also need to change the trend of projects which contribute to conservation of the global environment. As for buildings, positive utilization of wood will be effective. And as for R&D, technologies which contribute to “greening” the policy, such as research into the potential of blue carbon, should be developed and diffused.

【“Greening” agriculture, forestry and fisheries and rural areas and economic expansion】

To realize sustainable agriculture utilizing the natural functions of agriculture, all farmers should recognize its importance, and take action to improve soil condition using manure based on soil testing, implement GAP (Good Agricultural Practices) and environmentally friendly agriculture. Especially, promoting organic agriculture can be essential to meet the growing demand in Japan and overseas, so initiatives at both the production stage and distribution stage should be accelerated.

It’s also important in rural areas to expand economic growth with projects’ profits and innovate energy-related measures, such as the commitment to RE100, by sufficient utilization of renewable energy generated from natural resources in rural areas.

V Research and development R&D

○To realize the industries which achieve remarkable progress creating shared value in the environment promoting both the environment and economy, we need to facilitate innovation that supports the improvement of agricultural productivity and the measures against environmental issues.

○Also, we will promote research against climate change such as measures for sequestration and storage of carbon in agricultural soil, forests and seas.

○New technologies should be put into use in our society. We will promote this through dissemination support, and make such technologies sustainable and effective by using LCA methods.

【Innovations which lead to the improvement of agricultural productivity and environmental policies】

In order to promote both the improvement of agricultural productivity and efforts which contribute to prevention of global warming and conservation of biodiversity, we need to increase natural capital and promote R&D which create a positive cycle between the environment and economy, and facilitate innovation which supports the improvement of agricultural productivity and measures to mitigate environmental issues.

As CSA, which is an approach for developing agricultural strategies to secure sustainable food security against the backdrop of climate change, is becoming more common overseas, “smart” agriculture is deeply involved in environmental issues like climate change.

For example, we can spread the idea of precision farming, which utilizes information and data, by promoting the practice of smart agriculture. Also, to achieve net zero emissions, we can develop electric agricultural machinery or fishing vessels that utilize local resources, such as renewable energy and heat, to supply energy including in-house power. In addition, to realize decarbonization, we aim to develop renewable energy technologies such as biomass utilization and solar sharing, and promote the reduction of total production costs through utilizing residual heat effectively.

Also, we will develop advanced technologies which make highly functional new materials from woody biomass, for example, technologies utilizing softwood lignin that is isolated from Japanese cedar and material utilizing cellulose nanofiber that is made from wood-derived fiber and is environmentally-friendly while being strong, durable and lightweight. It can create a new industry to add high value to unutilized wood resources in these ways. Thus, cities can be large carbon storage areas, and then, we will aim to build a “carbon recycling society” by utilizing biomass resource sufficiently.

【Promotion of research against adopting and mitigating climate change】

We need to promote R&D into ways to cope with climate change. It is desirable to develop various technologies or measures, for example, i) measures for

sequestration and storage of carbon in agricultural soil, forests and oceans, ii) GHG emissions reduction technology such as rice varieties that can reduce CH₄ and agricultural materials that can reduce N₂O, iii) the implementation of emission reduction visualization methods,, and iv) initiatives that demonstrate the ability of natural resources to support people's lives.

In the fisheries industry, we need to clarify the relationship between the decrease in fishery production and the marine environment. So, we will research management measures into salt nutrients to increase fishery production.

【New technology should be disseminated and utilized in society.】

We need to promote not only R&D but also initiatives that introduce new technologies in society. For example, in order to reduce the environmental load of waste plastics, we will promote the improvement of the usefulness of biodegradable plastics and replacement of plastics derived from fossil fuels in food containers/packaging in the food industry and promote the design of various tools made from biodegradable plastic or that can be easily recycled at the production stage. Also, improvement in the usefulness of bioplastics and replacement of plastics derived from fossil fuels can be a solution to the marine plastic problem.

To disseminate these technologies as above, we will promote them in cooperation with producers, companies, researchers and governments. Especially, researchers should give advice at the demonstration stage, review regulations based on scientific evidence, and monitor the process for accurate evaluation. Also, to make new technology sustainable and effective, we need to estimate the effect on the environment of this technology by LCA methods and explain it.

In addition, it is important to cooperate with different sectors and add high value to something by utilizing existing technologies such as significant improvements in biomass energy efficiency by using both food loss and waste and sewage.

VI Reform awareness of staff

<p>○ MAFF Japan, as a business entity, must take the initiative to reduce environmental impact by reducing GHG emissions through working activities and government buildings.</p>

○We also promote and share the initiatives that only MAFF can undertake, such as utilizing wood products in offices and greening walls.

○To make our staff aware of the environment and SDGs even during daily purchasing leads to practicing policies while considering the environment and SDGs.

【Reduce GHG emissions through working activities and government buildings.】

MAFF is a large organization that has more than 20,000 employees in its headquarters building, local branch offices and facilities across the country. This means that the amount of electricity, paper, plastic, etc., used is enormous.

In 2006, central government and ministries including MAFF, took the initiative in acquiring ISO14001 international certification on environmental management systems, and have promoted efforts which contribute to energy and resource saving and recycling. Since 2017, “The action plan to reduce GHG emissions through working activities at MAFF” was adopted as MAFF’s original measure and “green” purchasing and the introduction of next-generation vehicles, like HVs, EVs, FCVs, as official vehicles have also promoted efforts to reduce GHG emissions.

To accelerate these initiatives, we aim to ensure that our buildings will be smarter, such as through saving energy and improvement of work efficiency, by utilizing IoT and AI and turning them into ZEBs (Net Zero Energy Buildings) based on the BEMS (Building and Energy Management System) method so that we can reduce electricity and GHG emissions in buildings.

A review of large-scale renovations of our buildings will be necessary to achieve the above. For instance, various environmental measures such as the introduction of EVs for our official vehicles and “visualization” of energy consumption need to be promoted. Also, paperless initiatives using electronic documents for meetings and explanations instead of paper need to be further promoted.

As for daily beverages that are purchased by staff or provided at meetings, it is important to reduce the use of plastic products, sort trash properly to collect and

recycle and prioritize the purchase and use of sustainable products while paying attention to the additional load on staff.

Also, improvement of workstyles by introducing telework at home will be needed because it can contribute to reducing indirect energy consumption caused by commuting and business trips, etc.

【Share innovative ideas that originated from MAFF such as utilizing wood products in offices and greening walls.】

Nowadays, there are some IT companies that utilize a lot of wood and greening at offices to improve the work environment. Similarly, we promote inhouse efforts, such as “greening” the walls and introducing wooden structures, wooden interior decorations and wooden products in offices and take the initiative in expanding the market for sustainable agriculture, forestry and fishery products through purchasing. We will share these efforts with local governments and companies.

【Make our staff aware of the environment and SDGs, which leads to policy-making while considering the environment and SDGs.】

The staff working at MAFF are required to have a level of awareness of the environment and SDGs when making policies and undertaking daily purchases. So, we continue to improve the awareness of staff, so that they can practice not only policy making, but also undertaking daily purchases while considering the environment and SDGs by providing an e-learning system and so forth. Also, to save energy and resources in buildings as well as make the policy effective, it will also be necessary to improve workstyles and work efficiency.

VII For practice

○To put measures centered on this principle into practice, we promote awareness raising of environmental issues throughout the ministry, to join in wide-scale public relations activities on environmental policies, and to increase the presence of MAFF in regional areas.

○Policy issues MAFF has cannot be solved without the field of agriculture, forestry and fisheries. We strengthen our capabilities in planning and designing of the

environmental policy from this field, through communication with regional communities and private companies.

○Environmental issues are a global-scale problem. In order to appropriately highlight Japan's agriculture, forestry and fisheries and food industries, it is important to develop human resources in the area of international environmental negotiations and to participate in ongoing international negotiations.

【Raising environmental awareness throughout the organization in MAFF and wide-reaching public relations in regional areas】

To put measures related to this principle into practice, first, we need to clarify how to make policies, so it is necessary that this should be shared as a common understanding throughout the whole organization.

So, we usually make a system to share issues and principles of environmental policies, and raise environmental awareness throughout the organization for example, allowing places that are sharing information to take specific actions in the organization.

We take advantage of agricultural regional offices throughout the country, aiming to implement flexible environmental policies in rural areas.

Based on this, we strengthen our collaboration with local governments and private companies, and develop our public relations abilities in regional areas to solve regional issues through agriculture, forestry and fisheries, and the food industry.

Recently, many private companies have provided “pro bono” activities for social contribution, for example SDGs and environmental issues.

We will join in such widespread public relations activities on environmental policies, and increase the presence of MAFF in regional areas, through collaborating with these activities and regional events.

【Planning and designing of environmental policy from the field】

Policy issues that MAFF have cannot be solved without the field of agriculture,

forestry and fisheries. We promote activities which are regionally oriented and utilize regional characteristics.

Working styles should be considered, joining in planning and designing of environmental policy from the field, and working on environmental issues, for example, impairing biodiversity and landscapes caused by the decrease of “satoyama” because of aging and depopulated areas in agriculture, forestry and fishery, through those activities.

These working styles are expected to play roles in maintaining business continuity in the time of emergencies, and strengthening local responses.

Through these activities, through private companies and communities, we are going to strengthen planning and designing of environmental policy from the field, and strengthen connections between the supply chains and agriculture, forestry and fisheries areas, sharing issues and solutions in the organization.

When we put the policies into practice, to prevent them from reversing, we will make policy evaluations based on the way of thinking of EBPM ensuring transparency.

【Human resource developments in international environmental negotiation areas】

Environmental issues are global issues, and domestic policies that include implementing this basic principle need to be put into practice, while taking into account international treaty negotiations and trends in other countries.

There are many international environmental treaties and rules, for example, the United Nations Framework Convention on Climate Change, Paris Agreement, Convention on Biological Diversity and the Washington Convention.

In these international negotiations, interests among participating countries are complicated, some negotiations continue over decades. In many participating countries, the same person in charge keeps working on the international negotiations for many years.

Many of these negotiations have connections to agriculture, forestry and fisheries.

In order to properly reflect Japan's position in the agriculture, forestry and fisheries and food industry in international negotiations, it is necessary that MAFF trains personnel who have communication skills and who can lead negotiations with specialized skills, grasping the direction of the policies of the Ministry of Agriculture, Forestry and Fisheries. It is also necessary to keep the same personnel involved in the same negotiations.

A system for long-term human resources development is needed, for example, staff who studied abroad mainly work in projects needing long-term negotiations. It is necessary to consider this to help make his or her career path in international negotiations.

VIII Efforts for conserving and growing natural capital

○Natural capital is the foundation of the value of the agriculture, forestry and fisheries and food industries. We have introduced policy measures through agriculture, forestry and fisheries on appropriate management and use of regional resources for contributing to the realization of a sustainable society. And from now on, we will promote efforts on the conservation and growth of natural capital.

【Efforts of conserving and growing natural capital in rural areas】

○ We promote measures highly effective in global warming prevention and biodiversity conservation, while reducing the environmental load produced by agricultural activities, by direct payments for environmentally friendly agriculture.

○We promote the expansion of organic agriculture, forming a system for the stable supply of organic agricultural products, and regional development with organic agriculture by making networks in local areas, through organic agriculture bases and cultivating sales routes.

○For the promotion of ways to keep soil in good condition based on soil diagnosis using composts, we promote the utilization of soil specialists and sharing soil information with prefectural governments, which have the results of soil diagnosis, to grasp national soil conditions.

○As for GAP (Good Agricultural Practices), we promote establishing effective teaching systems in agricultural production areas and implementing GAP together in the area, so that by 2030, international-level GAP is implemented in almost all production sites in Japan.

○As for the energy-saving greenhouse horticulture, we promote the use of energy-saving facilities for carbon dioxide reduction, thus not relying on fuel oil.

○For the prevention of damage to farm products caused by wild birds and animals, we promote the improvement of technologies to prevent damage to farm products using ICT “smart animal traps” and so on.

○For rural area development projects, we continue to promote environmentally friendly projects, while reducing GHG emissions by introducing small hydroelectric power generation plants.

○We promote the visualization of reducing GHG emissions by efficient farming based on agricultural field improvement projects.

○We promote the preservation of bio-diversity and we support agricultural heritage and world nature heritage for future generations.

○We support those who want to take part in agriculture, forestry and fisheries, and we introduce the appeal of a lifestyle living and working in nature in rural satoyama areas.

○We support carbon sequestration and carbon storage in rural areas, by adding bio charcoal to agriculture soil, planting crops with high carbon dioxide fixation and using blue carbon.

【Initiatives in management and increase of natural capital in forestry】

○We promote “smart” forestry by managing conservation and production through the use of ICT, and wide use of fast growing trees that can quickly produce usable wood.

○We promote management through emphasis on public benefits in national forest management and appropriate forest management in “reserved forests” with wild forest ecosystems where important wild animals live.

○We support the restoration of forest ecosystems, supporting forest care joint activities by regional residents and forest management by joining citizens.

○We make efforts to prevent natural disasters, damage by pests and animals and forest fires. We also aim to prevent and reduce disasters by appropriate forest management and conservation, and by early recovery of damaged forests.

○We work towards making use of wood in high-rise buildings in urban areas, for which energy-intensive materials are expected to be used.

○We promote carbon capture and storage of Harvested Wood Products (HWP) through supply and use of forest products, which prevents global warming, creates the cyclical use of forest resources and helps exercise appropriate forest control.

○We support environmental enhancement for realizing a staple supply of low-cost biomass energy in order to widely introduce woody biomass power plants for the use of domestic wood.

【Management initiatives and increase of natural capital in oceans】

○In order to restore and maintain fishery resources, we promote assessment and management by scientific and efficient evaluations.

○While maintaining each aquaculture area in good condition or improving the aquaculture area, through sustainable activities, for example cleaning aquaculture areas in coastal waters, we promote conservation and protection of marine forests and tidal flats for a rich marine eco-system.