Sustainable Sourcing Code of Food and other Products at Olympic Games

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Introduction of Sustainable sourcing at Olympic Games

The 2020 Olympic and Paralympic Games will be held in Tokyo, JAPAN. These will be the second Olympic Games hosted by Tokyo, the first time Tokyo hosted the Olympic Games having been in the year 1964. During the 56 years that have passed since then the Olympic Games themselves have undergone a lot of changes in a lot of areas. Thus, even though this will be the second time the Olympic Games are held in Tokyo, the contents could be completely different in 2020, compared to 1964. Sustainability is one of the things that have gotten serious attention only recently. Or to put it differently, sustainability was not a major thing of concern of in the 1964 Olympic Game s, but will certainly be one in the year 2020.

This report attempts to summarize the discussion and the recommendations our group came up with considering the policy of sustainable sourcing for food and other products in the 2020 Olympic Games.

Firstly, we introduce the background where sustainable sourcing takes up as in the major concern of the Olympic Game from two aspects.

- 1. Growing interest in Environmental Issues.
- 2. Significance of the Olympic Games for each of the host countries.

Secondly, in the main part of this report, we divide topics into the following four;

- 1. Agricultural products
- 2. Stock farm products
- 3. Fishery products
- 4. Timber

In each topic, we introduce the cases of the London and Rio Olympic Games and also present the drafts policy of Tokyo from the aspect of benchmark standards. We mainly discuss the issues of "Preparation", "International standards" and "Sustainability after the Olympic Games"

Combining the role of the Olympic Games in the reconstruction following the great earthquake, with the three issues introduced abode, we present recommendations

for the 2020 Olympic Games in each topic.

Background

In this chapter, we introduce the background where sustainable sourcing takes up as the major concern of the Olympic Games from two aspects.

- 1. Growing interest in the Environmental Issues.
- 2. Significance of the Olympics Games for each of the host countries.

1. Growing interest in Environmental Issues.

The Olympic Games are worldwide mega events and have a huge influence. According to "London 2012 Olympics Games Global Broadcast Repot", a projected 3.6 billion viewers saw at least one minutes of London 2012 coverage on television (76% of the potential global audience) $\frac{*1}{2}$.

Formerly, the Olympic Games were not asked to concern environmental issues nor sustainability sourcing because these were not major social problems. However, the more people getting interested in these, the more Olympic Games are asked to take responsibility in these due to potential influences of the Games.

Looking back to the 20th century, it was the period of "growth" and 21st century could be that of "mature". In 1900, world population was estimated 1.95 billion. After the century, it has risen as high as 6.07 billion and is still increasing. This obviously shows how our life gets rich. However, we had not been taking care for our planet. Our major concern was immediate growth of economics, and environmental issues were secondary matter for a long time. Pollution problems are clearly showing the fact.

On 1962, "Silent Spring" by Rachel Louise Carson was published and it raises environmental consciousness among society. This is a true story using a composite of examples drawn from many real communities where the use of DDT had caused

damage to wildlife, birds, bees, agricultural animals, domestic pets, and even humans. Carson used it as an introduction to a very scientifically complicated and already controversial subject (*2).

A decade after that, "The Limits to Growth" was published. It emphasizes that the earth's interlocking resources – the global system of nature in which we all live – probably cannot support present rates of economic and population growth much beyond the year 2100, if that long, even with advanced technology (*3).

Agenda 21, adopted in 1992 (Rio), is notable. This is an action plan for overall sustainable development and trigger for establishment of The United Nations Commission on Sustainable Development (CSD). Ever since that time, our economic growth model has been changing. We are getting interested in environmental issues not only from individual level but also from social levels. In other words, roughly speaking, our society had been indifferent with environmental issues.

"Environment" was added to the Olympic Charter in 1994. It did reflect the increasing awareness of society and people for environment.

In 2004, a decade after, the Charter finally asked "Action for environment". It says as following.

13.To encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require that the Olympic Games are held accordingly(*2)

Therefore, this can be said that until 2004, the charter didn't require the real action.

London 2012 Olympic Games are well known as the most sustainable Olympic Games ever. The invitation plan would take about 10 years from the first plan to actual game. This cannot be helped considering the worldwide competitiveness of race. At the same time, however, it makes things difficult to take social issues as major concern immediately. It's easily imagined that social awareness could be changed during the decade. In the case of London game, their invitation race started on January 2004. This means they were able to take "sustainable" in to the plan since the very first phase of planning.

The London 2012 bid team began by working with BioRegional and WWF to create a shared vision called "Towards a One Planet Olympics" (*3).

Furthermore, they established the Commission for a Sustainable London 2012 (CSL). Independent assurance was delivered by CSL and it provided credible commentary, constructive challenge, and assurance of the sustainability of London 2012 through a bespoke assurance framework, recommendations and reviews (*3). This brought huge advance for successful sustainable sourcing. Details of London's case will be mentioned later in each topic. For now, it should be kept in mind that the currency for sustainability was never as wide as this before London 2012 and London took "sustainable" in to the plan since the very first phase of planning while invitation race took about 10 years.

2. Significance of Olympic Games for each of the host countries.

Significance of Olympic Games is different depending the countries and the era. As mentioned in the previous chapter, 20th century was the period of growth. The aim of the Olympic Games reflects this also.

For example, Tokyo 1964 Olympic Games triggered an improvement of the infrastructure such as the Shinkansen and expressways. The games promoted high growth of the economy along with doubling national income plan established by the Ikeda Cabinet as well.

However this would not be expected for 2020 Olympic Game, because Tokyo is mature in terms of infrastructure. As like London 2012, Tokyo might be asked to create clear vision for environment and sustainability as a mature city.

When it comes to developing countries, it is a different story. For these countries, hosting the big events such as Olympic Game and FIFA world cup could in itself could be a goal. Good example is the 2010 South Africa FIFA world cup. South Africa is a country with a shady history and the world cup played a role of showing the country could arrange it properly and answer to the expectations. It was the first world cup games in African continent. The main anxiety of the game was the public peace and safety. Even the commissioner of FIFA worried about the feasibility of the game after

the decision. Under the situation, it might be difficult to take care about sustainability, since sustainability rarely affects the quality of the event itself. This also is clear evidence that significance of Olympic Games for each host countries are different.

In any case, when considering the 2020 Tokyo Olympic Games, the city is more than matured and Tokyo has a responsibility to be a model in several terms including sustainable sourcing.

Introduction of sustainable souring code of agriculture products Zhu Hui /Hiro Ogawa

Why is food an Olympic issue? The move emerged at the London Olympics in 2012, where organizers introduced strict food safety standards with the aim of offering delicious, healthy and eco-friendly food for athletes. It adopted internationally recognized food safety initiatives, such as Good Agricultural Practices (GAP) and certification by the Marine Stewardship Council. The Rio de Janeiro Olympics this summer have set similar criteria for food served there. And Tokyo has committed to continue the effort.

Proposal of Agricultural Products for Tokyo Olympics 2020

Tokyo 2020Sustainable Sourcing Code is created to ensure the sustainable sourcing of products and services deemed vital to the successful delivery of Tokyo 2020 Games and in consideration of economic rationality, fairness and equity. The Sourcing Code covers all products and services as well as licensed products that Tokyo 2020 procures. To achieve sustainable Games, Tokyo 2020 takes measures to minimize the environmental impact of its procurement of raw materials, and all subsequent production, distribution, usage and disposal processes.

Tokyo 2020 places the utmost importance on four principles:

- 1. How products, services, etc. are supplied.
- 2. The origins of products, services, etc. and the resources they are made of.
- 3. Compliance to the Sourcing Code throughout the supply chains.
- 4. The effective use of resources.

Additionally, Sustainable Sourcing Code for Agricultural Products (draft) is made under Tokyo 2020 Sustainable Sourcing Code.

There are mainly two parts fresh foods and processed food related to agricultural products.

Agricultural products as fresh foods include rice; barley, wheat, oats, and rye;

miscellaneous cereals; beans; vegetables; fruits; and other agricultural products for food use (including products prepared, sorted, or washed in water after harvest, and products cut or frozen), as well as mushrooms, edible wild plants, and bamboo shoots.

Preparation of Certification (agricultural products to be certificated)

- **A.** For the purpose of sustainability, suppliers shall procure agricultural products that satisfy the following conditions:
 - 1. Agricultural products produced by taking appropriate measures to ensure the safety of the products with reference to relevant Japanese laws, ordinances, etc.
 - 2. Agricultural products produced by taking appropriate measures to ensure a harmonious balance between the agricultural production activity and the surrounding environment and ecosystem, with reference to relevant Japanese laws, ordinances, etc.
 - 3. Agricultural products produced by taking appropriate measures to ensure the safety of workers with reference to relevant Japanese laws, ordinances, etc.
- **B.** As we already know that agricultural products certified under the JGAP Advance or GLOBALG.A.P. scheme are accepted as ones that satisfy above conditions. In addition, agricultural products certified under other certification schemes that Tokyo 2020 recognizes as ones that satisfy above conditions are accepted as well.
- C. However, in the event that suppliers need agricultural products without any certification specified by those institutions, they shall prove that the agricultural products are produced as ones that satisfy that 3 conditions; based on GAP that follow the Guidelines on the Common Standard of GAP formulated by the Ministry of Agriculture, Forestry and Fisheries of Japan, and that third-party verification has been made by a public organization, such as a prefectural government.
- **D.** Concerning overseas agricultural products whose status of satisfaction of 3 conditions is difficult to confirm, suppliers should preferentially procure traceable ones produced through sustainable measures recognized by Tokyo 2020.

According to the drafted standards, domestically produced agricultural products are to be given priority in procurements of food ingredients at the Olympic Athlete's Village and other related facilities. Those products will need to meet certification standards required by the Good Agricultural Practice (GAP).

Good agricultural practices are "practices that address environmental, economic and social sustainability for on-farm processes, and result in safe and quality food and non-

food agricultural products" (FAO 2003).

In 2006, Japan established the Japanese version of GAP which is called JGAP. However, municipalities and other organizations have also established their own GAP standards and regulations. To increase recognition and a common understanding of food safety practices, Japan's Agriculture Ministry in 2010 issued a guideline regarding GAP.

The Global Food Safety Initiative is an international food safety promoter made up of leading retailers, manufacturers and food service operators. One of its objectives is to award certification to food safety promotion schemes, such as GAP standards, that meet its criteria. The Global GAP has been awarded a certificate from the GFSI, but JGAP has not. Now, Japanese promoters will have to work on gaining recognition from overseas businesses that JGAP is a reliable gauge of food safety practices.

JGAP uses GLOBALG.A. P as its core and is designed to make GAP more comprehensible and easy to adopt for Japanese growers. As recently more distributors have begun to join JGAP, the standards, the standard aims to cover both grower and buyer standardization. London used its own certification standard called Red Tractor, and Tokyo is able to use JGAP as the standard I believe.

The fees of certification of GAP are different between GLOBALG.A. P and JGAP. The standard of GLOBALG.A. P contains Integrated Farm Assurance (IFA), Produce Safety Standard (PSS) and Harmonized Produce Safety Standard (HPSS). Agricultural products such as as fruits & vegetables; flowers & Ornamentals; Combinable Crops; Green Coffee; Tea.

The fees of GLOBALG.A. P are divided into several parts:

This fee statement applies to all countries except USA and Canada.

Producer Registration Fees.

Producer Registration Fees apply to each individual producer (also to each producer group member) per scope or sub-scope of the scheme for each certification cycle. These fees are invoiced to the company registering the producer in the GLOBALG.A. P Database (data trustee). If a producer works with multiple Certification Bodies, only one company can act as the producer's data trustee and will therefore be involved all Producer Registration.

Certificate License Fees + Certification Body License Fees + Farm Assurer Fees + Bookmarking Fees + GRASP Assessment Fees + Localg.a.p. Fees + Benchmarking Fees + Workshop Fees.

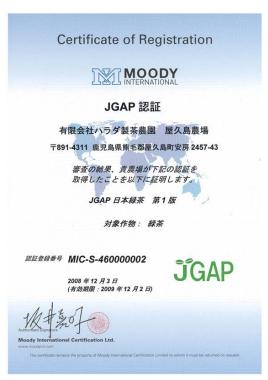
While certification fees of JGAP is highly depend on different local institutions. There are some companies which can be referred on, AAID, Assistant Center of Certification and Inspection for Sustainability, MIC, etc.

Hence, for Tokyo Olympic Games 2020 the producers will benefit for certified by JGAP that the advantages are:

GAP is not a traditional, crop inspection or results management system, instead it seeks to provide a framework for growers to document, manage, and improve upon each production process towards ensuring the safety of agricultural products. In providing thorough record keeping, it can help producers interface with consumers and buyers (B-to-C) to answer enquiries, explain processes, investigate any problems, and reduce general operating costs.

Below is the sample of certification of GLOBALG.A. P and JGAP:





International Criterion (Domestically)

In selecting from agricultural products that satisfy that 3 conditions, suppliers should preferentially select domestic agricultural products in order to promote domestic agriculture and, through this, encourage agricultural communities to demonstrate their multi-functionality, and to reduce greenhouse gas emissions through shorter food mileage.

According to the draft saying above, locally produced agricultural products will be selected as priority ingredients of foods to be served for athletes and other persons concerned of the Olympic Games, taking into consideration development of

domestic agriculture, multiple functions played by rural communities, and reduction of greenhouse gas emission by shortening the distance of "food miles". It is a good opportunity for Japanese farmers to attract visitors from all over the world with high qualities of their products.

However, the worried things are, if domestic agricultural products produced by firmly are difficult to be certificated by GLOBALG.A. P, international agricultural product will take up more percentage of supply. Japanese agriculture and farmers will be effected a lot.

Domestic agricultural products are widely adopted; international products will lose opportunity to compete with domestic products. If a large amount of agricultural products is domestically, food diversity may have affected?

Without consideration about quality of agricultural products, quantity and price are another factors will influence the decision of agricultural products as well.

To support the domestic agricultural products has no problem, but we even could give more opportunities to other international supplier to bid in order to get the authority. Good competition always brings more benefits.

Rely on the certification of Japanese suppliers, domestic products will be adopted primarily if they are certificated by GAP. Otherwise, the left parts of products and without certificated products will open a 'bid' for international suppliers. Not only bring cooperation between locals and internationals, but also making the supply chain more fairly. Another point of view is domestic agricultural products are not able to get certification by GAP that can cooperate with others for example other countries' producers and suppliers. That will be better for both win.

Sustainability Development (after Tokyo Olympic Games)

Based on the bid slogan "Discover Tomorrow", the vision considers what exactly should be 'discovered' through the Tokyo 2020 Games.

Three core concepts are transferring;

"Striving for your personal best (Achieving Personal Best)"

"Accepting one another (Unity in Diversity)"

"Passing on Legacy for the future (Connecting to Tomorrow)".

Tokyo 2020 Organizing Committee is making Sustainable Sourcing Code for Agricultural Products, and now the draft is implemented. Hence we consider that the future development of sustainability of Agricultural Products after Tokyo Olympics

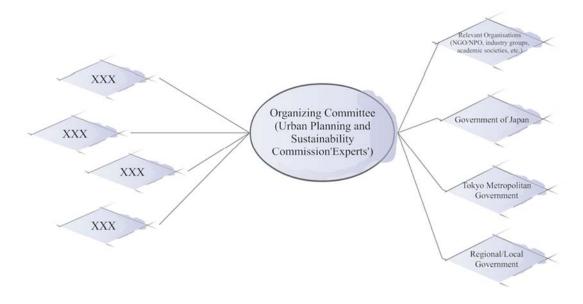
2020.

To further promote practices for a higher level of sustainability by agricultural producers, the following agricultural products are recommended: ones that, in addition to satisfying the 3 conditions, are produced through organic agriculture, under the initiative of persons with disabilities, or in sites where people inherit traditional agricultural systems designated as important system by international organizations or national governments, including the Globally Important Agricultural Heritage Systems and Japanese Nationally Important Agricultural Heritage Systems.

Based on above declared draft of sustainable sourcing code of Agricultural Products, Tokyo will focus on three main categories above. If possible, we would like to continue to develop some other appropriate ways for sustainability on agricultural products. After the big event of Olympic Games, no matter producers, business man, or even government perhaps held less motivation to fight on sustainability development because of no more reasons.

At that time, good government policy and guidelines, entrepreneurs, NPOs, and other organization groups' support, public awareness, etc. There are lots of factors need to be considered and inspired.

Especially in Japan, the sustainable development on agricultural products has relationship with FUKUSHIMA's recovery plan after the nuclear disaster. On the other hand, it is also the support for recovery of Tohoku area.



Some other ideas: Arbeit: 和食-> 和セット & 洋セット......

GLOBAL G.A.P Good Agricultural Process (http://www.globalgap.org/) General

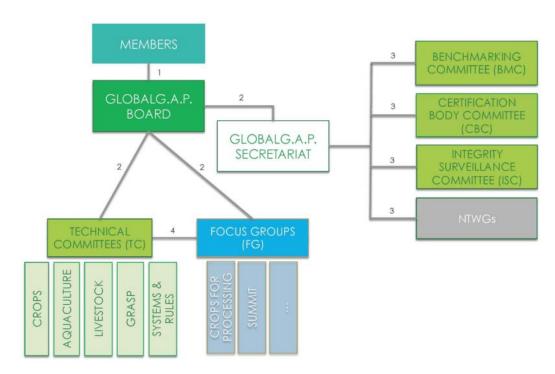
GLOBALG.A.P.'s roots as EUREPGA began in 1997. Harmonize their own standards and procedures and develop an independent certification system for Good Agricultural Practice (G.A.P.). To reflect both its global reach and its goal of becoming the leading international G.A.P. standard,

EUREPGAP changed its name to GLOBALG.A.P. in 2007.

Committee

GLOBALG.A.P. has five main Technical Committees:

Crops, Aquaculture, Livestock, GRASP and Systems & Rules.



(http://www.globalgap.org/uk_en/who-we-are/governance/committees/)

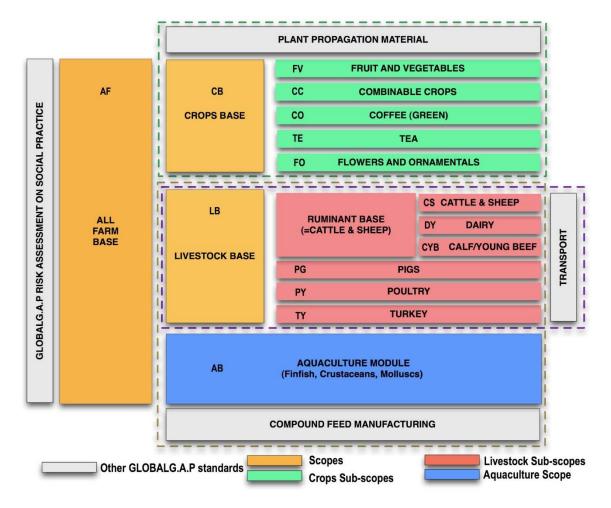
GLOBALG.A.P. Certification

Certification covers

- Food safety and traceability
- Environment (including biodiversity)
- Workers' health, safety and welfare
- Animal welfare
- Includes Integrated Crop Management (ICM), Integrated Pest Control (IPC),
- Quality Management System (QMS), and Hazard Analysis and Critical Control Points (HACCP)

Certification Process

The hierarchy of requirements flows from left to right in the Integrated Farm Assurance (IFA)



(reference: http://www1.globalgap.org/north-america/front content.php?idart=2669)

The GLOBALG.A.P. System.

The GLOBALG.A.P. Certification System is made up of interlinking mechanisms that ensure the proper development, implementation, improvement, integrity, transparency and harmonization of their certificates.

Development:

GLOBALG.A.P. standards are the product of a transparent and independent standard setting system based on the intensive collaboration, consultation and communication between our Technical Committees, Stakeholder Committees, Certification Body Committee, Board and Secretariat. .

Implementation:

Extensive network of more than 140 GLOBALG.A.P. approved certification bodies operating all around the world ensures that our standards are adapted and applied consistently on every GLOBALG.A.P. certified farm.

Improvement:

GLOBALG.A.P. provide extensive training opportunities through our GLOBALG.A.P. Academy for producers, buyers, auditors and consultants, keeping everyone involved always up-to-date. The GLOBALG.A.P. Farm Assurers provide producers with extensive consulting services to help them get certified.

Integrity:

GLOBALG.A.P.'s Integrity Program provides a unique framework of checks and controls to monitor CB performance and guideline implementation. The GLOBALG.A.P. Database provides tools for validating certificates and checking producers.

Harmonization:

Benchmark schemes and standards around the world to facilitate certification and upgrade G.A.P. standards.

(http://www.globalgap.org/uk_en/what-we-do/the-gg-system/index.html)

2. JGAP (http://jgap.jp/JGAP-trust-mark-of-excellent-farm-2016Feb.pdf) General

In 2002, retailers and food service providers started their own GAP standard to manage their supplier and farmers for their store brand products. There were more than 100 different GAP standards in Japan.

In 2006, JGAP office was founded by retailers and supplier-farmers to harmonize GAP scheme in Japan. Most of main retailer in Japan joined JGAP.

Committee

"Japan GAP foundation" governs

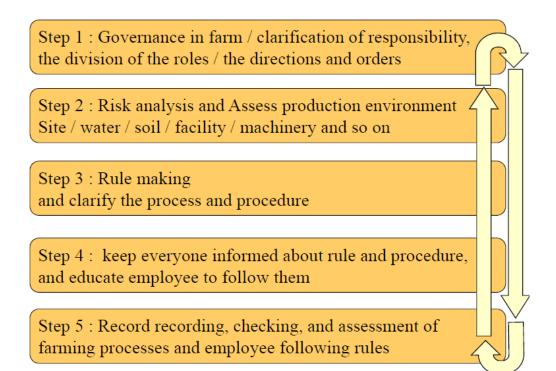
314 member of Farmer, food retailer and all stakeholders of agriculture and food industry

They have two major activities.

- 1. Develop voluntary standards, JGAP, for the certification of farm and farm group in Japan
 - 2. Train the-JGAP-trainer.

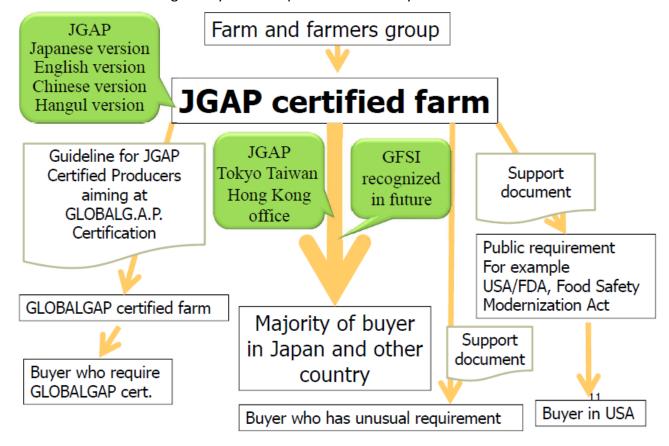
JGAP Certificate

Structure of farm management required by JGAP



(Ref: http://jgap.jp/JGAP-trust-mark-of-excellent-farm-2016Feb.pdf)

JGAP certification is the gateway for all requirement from buyer-side



JGAP is the strict and excellent standard of farm management for food safety and sustainable agriculture.

JGAP is the up-to-date quality management technology for food safety on farm level in Japan, and keeps communication with GLOBALGAP in EU.

JGAP is focusing on safety from chemical residue, food poisoning caused by bacteria, contamination of foreign material and radioactive material.

JGAP focus on not only food safety but also eco-friendly and work safety on farm. Most of major retailer in Japan supports JGAP, and use it for supplier management to keep food safety thorough farm to store.

More than 130 control point for food safety and sustainability and work safety in farm.

3. Others

1) Foreign country GAP



The Global Food Safety Initiative (GFSI) (http://www.mygfsi.com/)

The Global Food Safety Initiative (GFSI) is an industry-driven initiative providing thought leadership and guidance on food safety management systems necessary for safety along the supply chain.

Sustainable souring code of Livestock products

Kito /Zhang Yingnan

Introduction

In 1994, the International Olympic Committee (IOC) declared that the protection of the environment was an essential component of Olympic Game in the Centennial Olympic Congress in Paris. After that, the IOC gradually recognized the importance of protecting the environment and sustainable development, and added a paragraph on the protection of the environment to the Olympic Charter in 1996. The paragraph was written in Chapter 1, Rule 2, Paragraph 13 of the 2011 Olympic Charter, "The mission of the IOC is to promote Olympism throughout the world and to lead the Olympic Movement. The IOC's role is: to encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require that the Olympic Games are held accordingly;". The IOC works to ensure that the Olympic Games are held in conditions which demonstrate a responsible concern for the environmental issues and encourages the Olympic Movement to respect for the environment and to concern for the sustainable development.

Two host cities, which playing pioneering roles in the field of environmental protection with holding the Olympic Games, were Lillehammer (Norway) and Sydney (Australia). The first, Lillehammer set out to make a showcase for environmental policies pursued in the 1994 Olympic Winter Games in Norway. The second, Sydney set some new environmental benchmarks in the fields of energy, waste minimization, water conservation, pollution avoidance and the protection of the natural environment. After these Olympic Games, the environmental element of the Olympic Games bidding and delivery processes has been evolved rapidly.

The London 2012 Olympic Games

The London 2012 Olympic Games are the first summer Olympic Games to embed the sustainability with incorporating the environment and other fields. The main concept of the London 2012 Olympic Games was "Towards a One Planet Olympics" and the London 2012 Sustainability Plan was structured around five sustainability themes as climate change, waste, biodiversity, inclusion and healthy living.

The concept of the One Planet Olympics

The concept of One Planet Olympics is based on the idea of "One Planet Living"

which involves ten principles for sustainable living. The sixth of these is related to food, and specifically to "transform food supply to the point where it has a net positive impact on the environment, local economy and people's well-being". In 2007, the Official Development Assistance (ODA) published a sustainable development policy and strategy for the Olympics, and food was specifically referred to in the following section: "The Games provide a platform for demonstrating long-term solutions in terms of energy and water resource management, infrastructure development, transport, local food production and carbon offsetting. We aim to minimize the environmental footprint and carbon emissions of the Games and legacy development, notably by optimizing energy efficiency, energy demand and use of low carbon and renewable energy sources.". In that paper, there are some other statements are related to food, especially to "Heathy Living".

The food vision of the London 2012 Olympic Games

In food and drink services, The Organizing Committee for the London 2012 Olympic Games (LOCOG) worked under five main themes as food safety and hygiene, choice and balance, food sourcing and supply chain, environmental management, skills and education. Based on these five main themes, there are two objectives in the food vision:

- to enhance everyone's experience of the Games by celebrating the great diversity and quality of British food, and delivering it at affordable prices.
- to leave a strong, sustainable legacy for London and the UK by nurturing commercial and educational partnerships.

According to the food vision of London 2012 Olympic Games, it aims to take this opportunity to promote the variety and quality of British regional food by using the transformational power:

- To inspire the sustainable change in catering and hospitality sectors
- To contribute to the growing public agenda on healthy living.

In order to underpin the food vision, the Food Advisory Group are formed. The group has been working with London 2012 and relevant commercial partners to develop the key commitments and worked across five main theme as the followings:

- Food safety and hygiene
- Choice and balance
- Food sourcing and supply chain
- Environmental management
- Skills and education

The Sustainable Sourcing Code in the London 2012 Olympic Games

A Sustainable Sourcing Code has been published by LOCOG to create a framework and benchmark standard for the procurement of products and services. Sustainable sourcing is a procurement of products and services with environmental, social and ethical issues. It is important for the London 2012 Olympic Games in making properly informed and balanced decisions. The United Kingdom set the benchmark standard for sustainability which other organizations around the world can seek to follow. In this Sustainable Sourcing Code, there are two principal audiences as the followings:

- 1. Internal buyers and specifiers
- 2. Prospective suppliers and licensees

The purpose of producing Sustainable Sourcing Code was to require suppliers and licensees that they should identify, adopt and develop practices which are environmentally sound and socially responsible and ethical though the application of the Sustainable Sourcing Code. In the Sustainable Sourcing Code, there are five key questions can be used in approach to sourcing sustainable products as the followings:

- 1. Where does it come from?
- 2. Who made it?
- 3. What is it made of?
- 4. What is it wrapped in?
- 5. What will happen to it after the Games?

The Sustainable Sourcing Code sets out the framework and standard to help LOCOG to consider the relevant issues and make informed choices by applying four core principles. These are:

- 1. Responsible sourcing to ensure that products and services are sourced and produced under a set of internationally acceptable environmental, social and ethical guidelines and standards.
- 2. Use of secondary materials to maximize the use of materials with reused and recycled content, minimizing packaging and designing products that can either be reused or recycled.
- 3. Minimizing embodied impacts to maximize resource and energy efficiency in the manufacturing and supply process in order to minimize environmental impacts.
- 4. Healthy materials to ensure that appropriate substances and materials are used in order to protect human health and the environment.

Animal welfare is also respected in the Sustainable Sourcing Code. The suppliers and licensees should ensure high standards of animal welfare not only for animals that are raised for meat and dairy products, but also for animals used for work and transport. Furthermore, suppliers and licensees should seek advice from LOCOG before supplying their products. On the other hand, suppliers and licensees should also seek to ensure that all hides used in the products are a by-product of the food industry, including packaging. Furthermore, suppliers and licensees must keep and provide the evidence to prove that and provide it to LOCOG on request. In the London 2012 Olympic Games, LOCOG did not procure or license any products that make use of any fur, skin, food or food ingredients of animal origin of any species specified in the International Union for Conservation of Nature (IUCN) Red List of Threatened Species.

The food safety of the London 2012 Olympic Games

LOCOG think the primary concern is food safety, so they should ensure all the food at the Olympic Games is safe to eat. In this part, LOCOG backed up not only by the expertise in this area of their commercial partners, but also the regulatory framework on health and food safety, and arranged with the effective assurance framework provided by the Health Protection Agency and local Environmental Health Officers.

All food must get the standard or a demonstrable equivalent and follow the LOCOG Sustainable Sourcing Code. The benchmark standard and the aspirational standards of the livestock products are as the following:

Benchmark standard All food must achieve this standard or a demonstrable equivalent and comply with the LOCOG Sustainable Sourcing Code	Aspirational standards As many of these standards should be achieved, or a demonstrable equivalent where food is available and affordable
Dairy produce (milk, cream, butter etc except cheese)	
British, Red Tractor Assured, of high quality, fit for purpose and free from damage or spoilage.	Organic (see McDonalds case study on British organic milk)
Chocolate products to be Fairtrade or ethically sourced.	Products that are ethically traded/sourced (see Selkey Vale Farmers case study)
Cheese	
For British cheese, must be made from British milk and Red Tractor Assured, ie traditional British cheeses such as Cheddar must be British.	Organic Products that are ethically traded/sourced
For non-British cheese, must be fully traceable.	
For both, of high quality, fit for purpose and free from damage or spoilage.	
Eggs	,
British Lion Mark free range (see McDonalds case study on UK free range eggs), of high quality, fit for purpose and free from damage or spoilage.	Organic Products that are ethically traded/sourced
Beef, lamb, veal, mutton*	
British Red Tractor Assured, (see McDonalds MAAP/ UK beef case study), of high quality, fit for purpose and free from damage or spoilage.	Organic Products that are ethically traded/sourced
Poultry (chicken, turkey, duck etc)	
British Red Tractor Assured, of high quality, fit for purpose and free from damage or spoilage. Across the Games a minimum of X%* RSPCA Freedom Food Certified chicken will be available.	Free range Organic RSPCA Freedom Foods certified Products that are ethically traded/sourced
Pork products (pork, ham, bacon, sausages)	
British Red Tractor Assured, of high quality, fit for purpose and free from damage or spoilage. Across the Games a minimum of X%* RSPCA Freedom Food Certified pork will be available.	RSPCA Freedom Foods certified Outdoor reared, straw based system Organic Products that are ethically traded/sourced

The Rio 2016 Olympic Games

In the Rio 2016 Olympic Games, their goal is to demonstrate the leadership via setting some new standards for sustainable management which can positively affect the country and the region. Social, environmental and economic responsibility criteria are integrated into the Rio 2016 Games planning.

The Sustainable Management Plan (SMP)

There were four important principles for managing sustainability in the Rio 2016 Olympic Games: responsibility, inclusion, integrity and transparency. The Sustainable Management Plan was developed by these four principles as the starting point. This new set of sustainability measures were agreed to support the greening of the Rio

2016 Olympic Games by the UN Environment Programme (UNEP) and the 2016 Olympics and Paralympics Organizing Committee. The UNEP supported the development and implementation of the Sustainability Management Plan (SMP) in partnership with the government of Brazil. The Organizing Committee built a Sustainability Management Plan on an inclusive foundation of principles, actions and projects related to three objectives for sustainability: Planet, People, Prosperity. The principle of these three principles are as the followings:

- -Planet: to reduce the environmental impact of the projects relating to the 2016 Games and leave a smaller as possible environmental footprint.
- -People: to plan and delivery of the 2016 Games in an inclusive manner and make it accessible to everyone.
- -Prosperity: to contribute to the economic development of the state and city of Rio de Janeiro and plan, generate and report on projects related to the 2016 Games responsibly and transparently.

These three strategic objectives can be separated as the following nine themes:

- Planet: Transport and Logistics, Sustainable Design and Construction, Conservation and Environmental Restoration, Waste Management
- -People: Engagement and Awareness, Universal Accessibility, Diversity and Inclusion
- -Prosperity: Sustainable Supply Chain, Management and Reporting

The Food and Beverage Functional Area of the Rio 2016 Olympic Games

The Food and Beverage (FAB) Functional Area (FA) played an important role in the Rio 2016 Olympic Games because of fulfilling the dietary needs. Furthermore, FAB can also show the cultural identity of the host country. In order to fulfill this important role, food services must be ensured that it is safe, nutritious, sustainable, and keeping with the principles of the Rio 2016 Olympic Games. The main eight principles of the food service in the Rio 2016 Olympic Games are as the followings:

- 1. Food safety must be of paramount concern throughout all aspects of food and beverage services.
- 2. Food offerings should be healthy, nutritious and balanced.
- 3. Beverage supply needs to satisfy thirst, preventing dehydration
- 4. Be sensitive to the food restrictions of specific populations and provide options that meet their unique needs.
- 5. Brazilian products and recipes should have a prominent position in all menus to enrich the overall experience for all client groups.
- 6. Be creative in the development of concessions menus, inventing products or reinterpreting dishes that can be prepared quickly, are easy to eat, and use Brazilian

ingredients in new, innovative ways.

- 7. Adhere to Rio 2016 sustainability commitments and strive to go above and beyond, achieving our aspirations for exemplary environmental consciousness.
- 8. Ensure that the overall food and beverage customer experience is delivered in a style which conveys the warmth and courtesy of Cariocas.

Food safety of the Rio 2016 Olympic Games

Food safety is the most important aspect in any food program, so there is some strict adherence to all food safety regulations from securing food supply, facility design, equipment and product specification and procurement, food transport, cold chain management, preparation methods, and responsible serving. In order to provide the safe food and follow the principles of the Rio 2016 Olympic Games, high potential for growth and the demand for healthy and sustainable products was gradually increasing with four commitments for the sustainable sourcing of food. These are as the followings:

- 1. Only source products from suppliers which comply with Brazilian legislation, including environmental and Brazilian labor laws and ILO core conventions.
- 2. Only source products from suppliers which comply with Rio 2016 labor practices within the supply chain, including elimination of child labor.
- 3. Provide traceability mechanisms that demonstrate product safety and origin, and that in the origin, there is no risk of negative environmental impacts.
- 4. Source from producers who include healthy and sustainable production processes within their day-to-day management, which promotes social well-being and animal welfare, includes land management processes which protect Brazilian forests and other ecosystems and generates economic development.

Some procedures and certificates regulation are built in the livestock products. The procedures and commitments for the Sustainable Sourcing for food categories as the followings:

CATEGORY	PROCEDURES AND CERTIFICATES AVAILABLE	COMMITMENTS
Beef	 Standard for Sustainable Cattle Production Systems Standard of the Sustainable Agriculture Network Certification of Sustainable Agriculture Network (SAN) Rainforest Alliance The certification seal "Organic Product", guaranteed through the mechanisms provided by Brazilian law 	Producers signed up to Zero deforestation Prioritise producers which either already have (or are willing to work together with Rio 2016 to implement) a management system which encompasses social, environmental and animal welfare practices, such as: Pasture management for high productive efficiency; Program for animal welfare; Phytosanitary management of the herd; Programme for soil conservation; Programme for conservation of water.
Milk and dairy products	 PAS Milk Rainforest Alliance The certification seal "Produto Orgânico", guaranteed through the mechanisms provided by Brazilian law 	 Producers (including dairy farmers) will be signed up to Zero deforestation Prioritise producers certified to the Rainforest Alliance seal
Chicken and Eggs	The certification seal "Produto Orgânico", guaranteed through the mechanisms provided by Brazilian law	 Producers which either already have (or are willing to work together with Rio 2016 to implement) a management system which encompasses social, environmental and animal welfare practices All fresh eggs will be Caipira sourced (Egg production without cages for high animal welfare, and are without chemicals and hormones and are fed on a natural vegetable diet)

In addition to the Sustainable Sourcing Code, Livestock products which are accepted to use for food and beverage services for Tokyo 2020, must be certified one of the below schemes at least.

JGAP (JGAP for livestock products, to be introduced by the Japan GAP Foundation
in FY2017, is a comprehensive GAP programme for livestock products, which
covers farm management, food safety, animal health, conservation of the
environment, labour safety, respect for human rights, and animal welfare.)

The JGAP scheme is divided into four chapters. (Use the JGAP for agricultural products as a reference)

- (1) Food safety, including critical control points on fertilizers, seed, produce handling.
- (2) Environmental considerations including water, soil, energy, neighbouring

sites.

- (3) Worker's welfare and safety including minimum wage and training.
- (4) Sales management including record keeping and traceability.

How to get certified?

JGAP is managed by a steering committee which has ultimate authority to guide the policy of JGAP. The steering committee has a technical committee which develops the standards and general regulations and a council, which represents the wider stakeholder group of suppliers and retailers. Certification is carried out by qualified third-party private sector auditors.

It costs 48,000 yen minimum for one producer and 205,000 yen minimum for group of producers.

Main opportunities of JGAP

JGAP provides opportunities to Japanese farmers because it reflects the specific features of Japanese agriculture, in terms of the scale of farming, environmental and legal issues, institutions and language. The challenges of the JGAP lie in implementing the GAP among small farmers at lower cost, organizing the farmers and harmonization of all the individual retailer GAP schemes.

Main opportunities of JGAP

JGAP has been benchmarked to GLOBALGAP with a new Approved Modified Check List benchmarking procedure, where only the Critical Control Check Points are benchmarked. A JGAP logo exists, but will only be used for business-to-business transactions and not at final point of sale.

Japan has got complete JGAP certification for agricultural products such as vegetables, fruits, and tea. So whether can Japan finish the JGAP certification for livestock products completely before Tokyo 2020 or not, will be the challenge for the future.

2. GLOBALG.A.P.

The reasons for GLOBALG.A.P. Certification

- (1) It cuts exposure to food safety risks.
- (2) It improves the efficiency of farm management.
- (3) It helps to comply with legislation on food safety, environmental protection and animal and worker welfare.
- (4) It combines global recognition with adaptation to local conditions.
- (5) It tried, tested and trusted in more than 120 countries.
- (6) All documents are accessible online, free of charge.
- (7) Documents are available in several languages-Chinese, English, French, German, Portuguese and Spanish.
- (8) Its 'Critical Control Points and Compliance Criteria' system is easy to put into place.
- (9) It's designed for retailers and producers worked together to create it.
- (10) Its continuing development can be helped to shape.

It costs from 2,500,000 yen to 3,000,000 yen to get the GLOBALG.A.P. Certification for the first time, and from 1,000,000 yen to 1,500,000 yen per year since the second year.

Comparing with the JGAP Certification, the GLOBALG.A.P. Certification has already got a completely system both in agricultural products and livestock products, but the price of getting certified is too high to be accepted by the owners or producers of small farms.

- Additionally, for the purpose of sustainability, suppliers shall procure livestock products that are certified under other certification schemes that Tokyo 2020 recognizes as ones that satisfy conditions (1) to (4) below are also accepted.
 - (1) Livestock products produced by taking appropriate measures to ensure the

- safety of the products with reference to relevant Japanese laws, ordinances, etc.
- (2) Livestock products produced by taking appropriate measures to ensure eco-friendly livestock production activities with reference to relevant Japanese laws, ordinances, etc.
- (3) Livestock products produced by taking appropriate measures to ensure the safety of workers with reference to relevant Japanese laws, ordinances, etc.
- (4) Livestock products produced by taking appropriate measures to raise livestock animals in a comfortable environment with reference to the Animal Welfare-oriented Livestock Management Standards.
- 4. In the event that suppliers need livestock products produced without receiving any certification specified in Section 1 or 2, they shall prove that the livestock products are produced as ones that satisfy conditions (1) to (4) of Section 3 based on the GAP Acquisition Challenge System (The GAP Acquisition Challenge System is planned to be introduced as a programme subsidized by the Ministry of Agriculture, Forestry and Fisheries of Japan in FY2017. The system aims to encourage livestock producers in Japan to acquire a JGAP certificate, by providing a list of necessary efforts for livestock producers to acquire a JGAP certificate based on the checklists of the animal-raising hygiene management standards based on the Act on Domestic Animal Infectious Diseases Control; the hygiene practices for livestock products in primary production; the Animal Welfareoriented Livestock Management Standards; and the code for eco-friendly agricultural production activities. Furthermore, the system ensures that a third party (the organization that implement this programme) will verify the items checked by producers themselves using the list.), and that a third party verification has been made.

Quite same like the JGAP certification, the GAP Acquisition Challenge System has not been started yet. There is no point to the Tokyo 2020 if it can be finished completely as soon as possible.

5. To further promote practices for a higher level of sustainability by agricultural producers, the following livestock products are recommended: ones that, in addition to satisfying conditions (1) to (4) of Section 3, are produced through organic livestock production, based on the Farm HACCP, using the Ecofeed, in farms certified under the Pasturage Livestock Production Certification, or under the initiative of persons with disabilities.

Because of it is recommended to use the Ecofeed, I would like to encourage producers have a try on this new feed concept which is innovative and sustainable.

It helps feed companies and farmers to cope with considerable challenges which comes with increasing demand for animal source and consumer concerns regarding livestock production sustainability.

Another certification called HACCP (Hazard Analysis and Critical Control Points) Certification which can enhance food safety management and product quality is also recommended.

HACCP certification instantly demonstrates to customers your commitment to producing or trading in safe food. This evidence-based approach can be particularly beneficial when you are subject to inspection by regulatory authorities or stakeholders.

Demonstrating a real commitment to food safety through HACCP compliance can also transform your brand and act as an effective entry-to-market tool, opening up new business opportunities around the world.

HACCP certification is an international standard defining the requirements for

effective control of food safety. It is built around seven principles:

- (1) Conduct Hazard Analysis of biological, chemical or physical food hazards.
- (2) Determine critical control points.
- (3) Establish critical control limits, for example, minimum cooking temperature and time.
- (4) Establish a system to monitor control of Critical Control Points.
- (5) Establish corrective actions.
- (6) Establish procedure for verification to confirm that the HACCP system is working effectively.
- (7) Establish documentation and record keeping.
- 6. In selecting from livestock products that satisfy Section 3, suppliers should preferentially select domestic livestock products in order to promote the domestic livestock industry and, through this, encourage livestock-producing communities to demonstrate their multifunctionality, and to reduce greenhouse gas emissions through shorter food mileage.
- Concerning overseas livestock products whose status of satisfaction of (1) to (4)
 in Section 3 is difficult to confirm, suppliers should preferentially procure
 traceable ones produced through sustainable measures recognized by Tokyo
 2020.

Because of suppliers shall procure fresh foods that comply with this Sourcing

Code, and when procuring processed foods, select processed foods produced with

livestock products that comply with this Sourcing Code, as preferentially as

possible. Plenty of certifications must be gotten by suppliers ensure they can

procure their products. But it makes the small companies and farmers cannot have

opportunities to procure their own products by the reason of the high price. And in

order to promote the domestic livestock industry, it is obviously that domestic

livestock products have a clear advantage.

Sustainable Sourcing Code of fisheries products

Feng Wenyuan/Wang Ying

What is MSC

1 A brief introduction

The Marine Stewardship Council (MSC) is an international non-profit organization established to address the problem of unsustainable fishing and safeguard seafood supplies for the future.

The vision of MSC is for the world's oceans to be teeming with life – today, tomorrow and for generations to come. A sustainable seafood market is crucial to making this vision a reality.

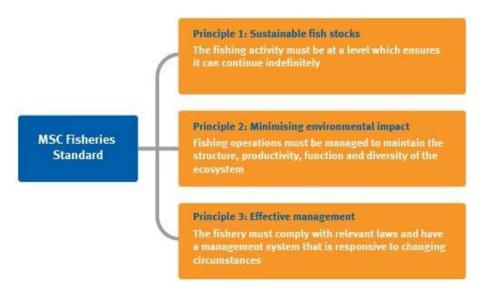
The council uses the blue MSC label and fishery certification program to contribute to the health of the world's oceans. It aims to transform the seafood market by recognizing and rewarding sustainable fishing practices and influencing the choices people make when buying seafood. MSC works with fisheries and businesses around the world to achieve this mission.



From: http://www.wwf.or.jp/activities/upfiles/msc03.jpg

2 The MSC Fishery Standards

The Fisheries Standard measures the sustainability of wild-capture fisheries. The Standard is open to all fisheries, including those from the developing world. From the graph below, we can have a brief and clear picture of MSC Fisheries Standard.



https://www.msc.org/multimedia/images/aboutus/Fisheriesstandardenglishweb.png/@@images/73a23445-ee90-482f-b342fa908f577d90.jpeg

3 MSC Chain of Custody Standard

The Chain of Custody Standard ensures the blue MSC label is only displayed on seafood that's traceable to an MSC certified sustainable fishery.





Pic.1 fishery product with MSC certified in Japan (Dec.2016)

What is MEL?

Marine Eco-Label Japan (MEL Japan) is a Japanese eco-labelling scheme established in 2007. MEL Japan scheme established by Japanese stakeholders that have been

closely engaged in Japanese fisheries management. The goal of MEL Japan is to promote its recognition in the Japanese market and gain wider acceptance. MEL Japan also aims to respond to the needs of foreign markets to promote the export of sustainable Japanese seafood.

1. The MEL Certification Standards

Certification of MEL consists of two types: certification in the production stage (Fishery Certification) and certification in the distribution and processing stage (Chain of Custody Certification).

In the production stage, producers apply for certification to an accredited certification body as classified by target species using the identical fishing method. The detail requirement as follows

(a) Certification standards in the production stage

- Fisheries should be conducted under an effective management scheme;
- The target resource should maintain the level of being used sustainably
- Appropriate measures should be taken for the conservation of the ecosystem.

(b)Certification standards in the distribution and processing stage

- A management system should be in place, such as the appointment of persons in charge and custody of related documents;
- Traceability should be secured through (1), etc., and the co-mingling of seafood other than the target seafood should not occur.

Merit Demerit MSC High application fees and renewal fees High International awareness and Difficult to apply from small scale Coverage ratio fishery producers Access to foreign market (Europe Long-term examination period and USA) MEL Relatively low application and Scheme structure is not recognized renewal cost internationally Possible for small scale fishery Low International awareness producers to apply Adaptable to a variety of fishery species in Japan

Table (2) Comparison between MSC and MEL

According to the Table(1), in order to meet the sustainable sourcing code for Tokyo 2020 and access to foreign market, especially export to Europe and USA, MEL's scheme is necessary to be better recognized internationally.

London 2012 Olympic Games' Experience

1 Food vision for the London 2012 Olympic Games and Paralympic Games

According to the Benchmark Standards, all food must achieve this standard or a demonstrable equivalent and comply with the LOCOG Sustainable Sourcing Code. With respect to fish and seafood, All fish demonstrably sustainable with all wild-caught fish meeting the FAO Code of Conduct for Responsible Fisheries (includes Marine Stewardship Council certification and Marine Conservation Society 'fish to eat'), of high quality, fit for purpose and free from damage or spoilage.

To be more specific, it was based on the following principles.

- 1 Exclude the worst: complete exclusion of those species and stocks identified by the Marine Conservation Society (MCS) as 'fish to avoid'.
- 2 Promote the best: inclusion of all Marine Stewardship Council (MSC) (or equivalent) and MCS 'fish to eat' list.
- Improve the rest: require systematic approach to traceability and demonstrable sustainability for the rest, with reference to FAO Code of Conduct for Responsible Fisheries; new IUU regulation; fishery sustainability status; seasonality to avoid spawning seasons; use of a diversity of species (including shellfish).

2 The London 2012Food Legacy

In addition to being home to the first green Olympics, London committed in 2011 to becoming the first "Sustainable Fish City", through an alliance of non-profits such as Marine Conservation Society, Marine Stewardship Council and Seafood Choices Alliance that are working on sustainable seafood issues. London has joined in and must accomplish a set of targets before they can be declared as such. In its original Games food vision, London's Organizing Committee pledged to buy, serve and promote only "sustainable fish". This is defined as fish from well-managed stocks, which is caught or farmed in a way that causes "minimal damage to the

marine environment and other wildlife".

Taking the Olympic Games as a beginning, it was widely considered that fish, in particular, presented a huge opportunity for change. Could the London Olympic sustainable fish standards apply to the entire UK catering sector? This question led to the creation of a brand new programme, called *Sustainable Fish Cities*. The programme's aim was to create a large increase in demand from UK companies and organizations for verifiably sustainable fish. This in turn would create a growing and more reliable market for fisheries managed in an ecological and sustainable way, including certified sustainable wild-caught and farmed fish.

The Sustainable Fish Cities idea was borrowed from the 'Fairtrade towns' model – whereby a town pledges to meet a minimum set of ethical procurement requirements. For London, the aim was to inspire caterers to follow the London Games example and make long-term pledges specifically around seafood sustainability.

Actions and Achievement

It is Sustainable Fish City's goal to engage all of London's citizens and businesses in these efforts. The Programme started in 2011. The first step was to get all of the main marine conservation organizations together to agree on what a pledge should look like. One of the key conservation organizations involved was the Marine Stewardship Council (MSC), which monitors the health of fish stocks and manages the labeling system that tells consumers which species of fish they should buy. At the beginning of the Olympics many of these groups had already taken the pledge to serve and consume sustainable fish. Several champion schools and universities in each of London's boroughs are participating in different programs including MSC's Fish & Kids project, and Food for Life. Other public-sector institutions have committed to implementing the 2012 sustainable food standards, which includes a sustainable fish commitment. This Sustainable Fish City pledge requires participants: to state their commitment, gather information, source sustainably (by avoiding the "red" designated fish, promoting the best and improving on the rest), communicate clearly and influence wider progress. Caterers that serve well over 100 million meals a year have adopted these sustainable fish standards, inspiring a fish legacy for longterm sustainable fish policies.

Nowadays, 12 towns and cities in the UK – feeding over 13 million people – are

working towards becoming a Sustainable Fish City. Each will help local schools, universities, hospitals, restaurants, businesses and tourist attractions to sign up to a sustainable fish policy.

Rio 2016 Olympic Games' Experience

1. The certifications and regulations of Olympic fish

The Rio 2016 Organising Committee for the Olympic and Paralympic Games today announced a comprehensive agreement to serve Marine Stewardship Council (MSC) and Aquaculture Stewardship Council (ASC) certified seafood at the 2016 Rio Games. This landmark announcement means that all of the seafood served to the athletes, officials, media and at the on-site restaurants will be certified as sustainably wild caught (MSC) and responsibly farmed (ASC). With more than 14 million meals served during the Olympic and Paralympic Games, the catering service represents a huge challenge for every host city and is described as the largest peacetime catering operation in the world. More than 70 tones, equivalent to more than 350,000 portions, of seafood served to athletes and media at the Games came from fisheries or farms which meet the requirements of the MSC or ASC. This represented the most sustainable seafood offering to date of any Olympic or Paralympic Games. Seafood served with the green ASC or blue MSC label can be traced right back to fisheries and farmers that are independently certified as meeting globally recognized standards for sustainable wild fishing or responsible farming. The fishers and farmers who produce this seafood go to great lengths to reduce their impacts on the environment, preserve oceans and safeguard seafood supplies for the future. With the respect to aquaculture, Rio 2016 followed the regulations by Aquaculture Stewardship

Council (ASC).

- Prioritizing the purchase and consumption of certified ASC seafood from small-scale fish farms that use traditional fishing methods, use sustainable feed, manage animal welfare through stock density and include social and environmental management methods within their processes.
- 2 Providing full traceability, back to the individual farm, for all seafood procured.

- 3 Providing support to the ASC and FIPERJ/SEDRAP in their engagement of stakeholders and suppliers at all levels, to promote certified seafood.
- 4 Supporting collaboration on joint projects related to education and behavioral change that may be delivered before or during the Rio 2016 Games.

With the respect to wild-caught fisheries, Rio 2016 followed the regulations by Marine Stewardship Council (MSC).

- 1 Prioritizing the purchase and consumption of certified seafood from artisanal fisheries that use traditional fishing methods, use low-impact fishing equipment, control and implement good stock management and include social and environmental management methods within their processes.
- 2 Providing full traceability, back to the individual fishery, for all seafood procured.
- 3 Providing support to the MSC and FIPERJ/SEDRAP in their engagement of stakeholders and suppliers at all levels, to promote certified seafood.
- 4 Supporting a collaboration on joint projects related to education and behavioural change that may be delivered before or during the Rio 2016 Games

2. Experts' voices and expectations

Julie Duffus, Sustainability Manager for the Rio 2016 Organising Committee, said: "We are looking forward to working in partnership with MSC and ASC to support the respected work that they have done, and continue to do, with the fisheries and fish farms of Brazil. This will ensure that our catering not only improves the local food industry but improves it to a standard that will leave a lasting, positive legacy post Games for Rio de Janeiro and Brazil."

The Rio de Janeiro state department of Regional Development, Supply and Fisheries is joining in this effort and will sign a joint MOU with all three parties. The state is currently promoting the certification of its small scale aquaculture farms and artisanal fisheries in key regions throughout the state with the ASC and MSC labels. The Secretary of State, Felipe Peixoto, said the certification process is not well known among artisanal fishermen and small scale aquaculture farmers in the State of Rio de Janeiro. "We see the Olympics as an excellent opportunity to give visibility to the project, highlighting its importance and generating interest among fishermen and aquaculture farmers to seek more sustainable practices. It is our hope that this project in the State of Rio will serve as a pilot project showing how artisanal fisheries

and small scale producers can obtain these important certifications."

Rupert Howes, Chief Executive of the Marine Stewardship Council, expressed the MSC's gratitude and excitement about the agreement with Rio 2016. "The MSC is honored to be working with the Rio 2016 Olympic and Paralympic Games. This partnership provides a great opportunity to promote and reward sustainable fisheries in Brazil. We will be working closely over the coming years with the state of Rio to encourage local fisheries into the third party assessment process and hope that fish and seafood caught from these and other fisheries that have met MSC's standard for environmentally responsible and sustainable fishing will be available for the 14 million meals that will be served during the Games."

The announcement underscores the strength of the ASC in helping the aquaculture sector become environmentally sustainable and socially responsible. Chris Ninnes, Chief Executive of the Aquaculture Stewardship Council, said: "I look forward to seeing many small scale farms across the state of Rio recognised for their good management. The collective action of the farms that enter the ASC programme will undoubtedly have a positive effect for the future of aquaculture in the region as it moves towards environmental sustainability – this is an important legacy and I hope other states follow the example of Rio."

The Memorandums of Understanding (MOU) reflect the Rio 2016 Organising Committee's commitment to plan and stage the Games in such a way as to minimise adverse effects and maximise benefits to the environment, promote sustainable development and raise public awareness and action regarding environmental protection.

[London Olympic Games]

Benchmark Standard: Fish and seafood

All fish demonstrably sustainable with all wild-caught fish meeting the FAO Code of Conduct for Responsible Fisheries (includes Marine Stewardship Council certification and Marine Conservation Society 'fish to eat'), of high quality, fit for purpose and free from damage or spoilage.

【Rio Olympic Games】

Recommendations for fish: Wild Caught Fish

Purchase of certified products, or under certification by the Marine Stewardship Council (MSC).

In the Rio Olympics, about 75% of MSC certified marine products that have been provided in the Athletes' Village

Pic.2 Comparison of seafood provision between London and Rio Olympics.

Tokyo 2020 Sustainable Sourcing Code

Tokyo 2020 implements sustainable sourcing practices indicated below.

- How products, services, etc. are supplied.
- The origins of products, services, etc. and the resources they are made of.
- Compliance to the Sourcing Code throughout the supply chains.
- The effective use of resources.

Major requirements of each principle are as follows:

- (1) Place the utmost importance on how products, services, etc. are supplied.
- Tokyo 2020 places the utmost importance on respect for human rights. Therefore, Tokyo 2020 requires its suppliers and licensees to supply products, services, etc. that satisfy the following requirements throughout all stages of production through to final distribution: free from discrimination and harassment based on race, nationality, religion, gender, sexual orientation, physical impairment, as well as free from illegal forced eviction and other rights violations.
- Tokyo 2020 places the utmost importance on consideration for appropriate labour management practices and working conditions. Therefore, Tokyo 2020 requires its suppliers and licensees to supply products, services, etc. that satisfy the following requirements throughout all stages of production through to final distribution: free from forced and/or child labour, with assured occupational safety and health, and protection of workers' rights according to all relevant laws and regulations.
- Tokyo 2020 places the utmost importance on fair business practices. Therefore,
 Tokyo 2020 requires its suppliers and licensees to supply products, services, etc.
 that satisfy the following requirements throughout all stages of authorization,
 production, and distribution: free from bribery and other corrupt practices, as well
 as free from unfair business practices including dumping and excessively hard
 bargaining.
- Tokyo 2020 places the utmost importance on environmental conservation.
 Therefore, Tokyo 2020 requires its suppliers and licensees to strive to supply products, services, etc. that satisfy the following requirements throughout all stages of production through to final distribution: use of low-carbon energy sources, promotion of energy-saving measures and the 3Rs (reduce, reuse,

- recycle), and mitigation of air, water, soil pollution and other environmental impacts.
- (2) Place the utmost importance on the origins of products, services, etc. and the resources they are made of.
- With a view to contributing to environmental conservation, Tokyo 2020 requires its suppliers and licensees to strive to use raw materials that satisfy the following requirements: produced and/or harvested with full consideration for conservation of forest and marine resources as well as sustainable use of biodiversity; utilization of low-carbon energy sources and promotion of energy saving measures during all preparation processes; and full consideration given to mitigating air, water, soil pollution and other environmental impacts.
- Tokyo 2020 requires its suppliers and licensees to avoid using raw materials that have an adverse impact on human rights, local residents' lives, and social stability (for example, raw materials collected through forced labour, conflict minerals and illegally logged timber).
- Tokyo 2020 requires its suppliers and licensees to strive to reuse products, use raw materials containing recycled resources, and minimize the size of containers and packaging.
- (3) Place the utmost importance on compliance to the Sourcing Code throughout supply chains.
 - Tokyo 2020 requires its suppliers and licensees to strive to ensure compliance throughout their supply chains with this Sourcing Code, and ensure the traceability and transparency of products and services that Tokyo 2020 procures.
- (4) Place the utmost importance on the effective use of resources.
- Tokyo 2020 exerts the utmost efforts to keep sourcing of resources to a minimum, and endeavour to utilize reused, leased or rented items to the maximum extent.
- Tokyo 2020 requires its suppliers and licensees to conduct the following: to supply materials and products that can easily be reused or recycled in accordance with the Japanese concept of mottainai (sense of avoiding waste), and to supply products, services, etc. prepared with full consideration to energy saving during use.

 Tokyo 2020 promotes reuse and recycling of procured products. When reuse or recycling is deemed impossible, Tokyo 2020 makes effective use of resources to the greatest extent practicable through energy recovery or other means.

The Sourcing Code covers all products and services that Tokyo 2020 procures. And Tokyo 2020 requires all suppliers and licensees to supply products, services, etc. in full compliance with the Sourcing Code.

Overview of Sourcing Code of fisheries products at the Tokyo 2020

The 12th Sustainable Working Group meeting was held in Tokyo on 5th December, 2016. On this meeting, the souring code about fisheries products were further discussed. In addition to the eco-label certified fisheries products, including MSC, ASC, other fisheries products meeting some criterions are included in the sourcing Code of fisheries products.

The details of the Sourcing Code of fisheries products as follow.

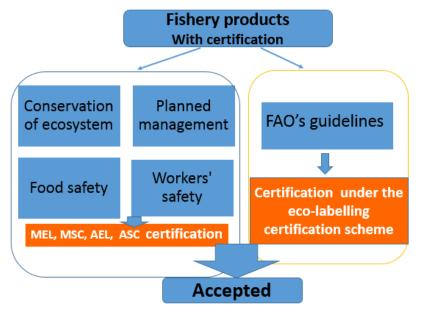
- 1. According to the Tokyo 2020 Organising Committee, the Sourcing Code applies to fishery products as fresh foods and processed foods produced mainly with fishery products. Suppliers procure fresh foods that comply with this Sourcing Code. Besides, the raw material for processing, should comply with this Sourcing Code, as preferentially as possible.
- 2. For the purpose of sustainability, suppliers procure fishery products that satisfy the following conditions(i)to(iv), summarized as (Table 1)
- (i) Fishery products caught or raised in an appropriate manner with reference to law ordinances, etc. relevant to the fishery industry
- (ii) Wild caught fishery products caught by fisheries for which target fishery resources are managed in a planned manner, and conservation of the ecosystem is taken into consideration, based on scientific data.
- (iii) Farmed fishery products raised by aquaculture which takes into consideration conservation of the ecosystem through planned maintenance and improvement of the farm environment, and is conducted with appropriate measures to ensure food safety, based on scientific data.
- (iv) Fishery products caught or raised by taking appropriate measures to ensure the

safety of workers with reference to relevant law ordinances, etc.

Wild caught fishery products	Farmed fishery products	Fishery products caught or raised
Target resources management with a planned manner	Conduction of appropriate measures to ensure food safety	An appropriate manner with reference to laws, ordinances, ect.
Conservation of the ecosystem based on scientific data	Conservation of the ecosystem through improvement of farm environment.	Appropriate measures to ensure the safety of workers

Table1: Specify conditions for fishery products' suppliers in Tokyo 2020

3. Fishery products with MEL, MSC, AEL, or ASC certification are accepted as ones that satisfy conditions (i) to(iv) of Section 2. Additionally, fishery products certified under the eco-labelling certification scheme for fishery products that Tokyo 2020 recognizes follows FAO's guidelines are also accepted. (Flow chart 1)



Flow chart 1 Fishery products with Certification will be accepted in Tokyo 2020

4, In the event that suppliers need fishery products without any certification specified in section 3, any of the following methods shall apply to procured fishery products.

- (1) Fishery products that are caught based on a national/local governmentrecognized plan for resource management, and whose satisfaction of condition.
- (2) Fishery products that are raised in farms managed based on a national/local government-recognized plan for maintenance and improvement of the fishery environment.
- (3) Fishery products whose satisfaction of (i) to (iv) in Section 2 has been confirmed through the procedure designated as follows.

Concerning each of (i) to (iv) in Section 2 in the Sourcing Code, the fisher concerned or the fisheries cooperative to which the fisher concerned belongs in the case of domestic fishery products, or an importer in the case of imported fishery products, shall confirm the following matters by rational methods in terms of accountability, and record the results in a written format.

- (i) Confirm that the catch or raising of the fishery product in question conforms to all the following items.
- Compliance with the FAO Code of Conduct for Responsible Fisheries
- Licence or permission to engage in fishing by any relevant authority (a national or regional government) based on national laws and ordinances, and compliance with regulations on fishing areas, fishing periods, fishing tools and methods, the amount of catches, the types of catches, etc.
- Compliance with resource management measures adopted by the Regional Fisheries Management Organizations (RFMOs), if the fishery is under international management.
- (ii) Confirm that the catch of the wild caught fishery product in question meets all the following requirements.
- Implementing measures in a planned manner to achieve a resource management goal (suspension of fishing, restriction on the catch of minimum-sized fish, restriction on fishing gears, etc. according to the conditions of target resources) based on scientific data.
- Taking measures to avoid by-catch of non-target species and small-sized fish
 (iii) Confirm that the raising of the farmed fishery product in question meets all the following requirements.
- Implementing measures in a planned manner to achieve a goal set for water and bottom material quality to improve the aquaculture area environment (monitoring of

the aquaculture area environment, maintenance of records on aquacultural production, appropriate feeding, restriction on the rearing density, limitation of the number of fry stocked, etc)

- Avoiding use of medicines other than fishery medicines, and using fishery
 medicines complying with laws, ordinances, etc., including the periods of ban on use.
 (iv) Confirm that the fishery product in question is caught or raised through taking
 the following measures appropriately with reference to relevant laws, ordinances,
 etc.
- Workers wear work clothes and protectors designed for safety, which are appropriately stored after use
- Working environment has been improved by placing signboards and/or allowing workers to have regular breaks
- Use of machines and equipment with safety devices, which are properly checked, inspected before use, used properly, and maintained and stored properly after use
- Chemicals and fuels use dare properly stored, and properly disposed.
- 5. In selecting from fishery products that satisfy Section2, suppliers should preferentially select domestic fishery products in order to promote the domestic fishery industry and, through this, encourage fishery and fishing communities to demonstrate their multifunctionality.
- 6. Concerning overseas fishery products whose status of satisfaction of conditions (i) to (iv) in Section 2 is difficult to confirm, supplies should preferentially procure traceable ones produced through any sustainable measures recognized by Tokyo 2020.
- 7. Suppliers shall keep documents that prove that procured fishery products suitSections3 to 6, until one year after the Tokyo 2020 Games, and submit such documents when Tokyo 2020 requires them to do so.

In the draft of the Sustainable Sourcing Code for Fishery Products, not only the ecolabel certified fisheries products including MEL(Marine Eco-Label Japan), MSC(Marine Stewardship Council), but also other fisheries products meeting some criterions, for instance, fisheries products with a certification scheme following FAO guideline, could be used for food and beverage services provided by the Tokyo 2020 Organising Committee. Comparing to food vision in London and Rio Olympic games

which mainly adopted the eco-label certified fisheries products, the sourcing code addition in Tokyo2020 could benefit to many small-scale fisheries producers who failed to obtain such identification for their products, due to relatively high cost for eco-label certification. Therefore, the adoption of other fisheries products meeting some criterions is a consideration for small-scale producers.

Consideration of draft of Sustainable Sourcing Code for Fishery Products

Suppliers shall procure fishery products that satisfy the following items (i) to (iv) from the viewpoint of sustainability.

- (i) Fishery products caught or raised in an appropriate manner with reference to law ordinances, etc. relevant to the fishery industry
- (ii) Wild caught fishery products caught by fisheries for which target fishery resources are managed in a planned manner, and conservation of the ecosystem is taken into consideration, based on scientific data.
- (iii) Farmed fishery products raised by aquaculture which takes into consideration conservation of the ecosystem through planned maintenance and improvement of the farm environment, and is conducted with appropriate measures to ensure food safety, based on scientific data.
- (iv) Fishery products caught or raised by taking appropriate measures to ensure the safety of workers with reference to relevant law ordinances, etc.

 Since (i) and (iv) are obviously, it may be simplified as "complying with relevant laws and regulations". However, (ii) and (iii) are uncertain, because the meaning of "Scientific" or "Planned" depends on the interpretation of the judgment by people. Tokyo 2020 if the parties or stakeholders judge it with lax standards.

Improvement Proposal

As the Olympic Games are an international event, we need to procure marine products which shall be complied with international standards such as FAO's Code of Conduct on Responsible Fishery and Guidelines on Ecolabelling of Natural Fisheries. There is an international organization called GSSI (The Global Sustainable Seafood Initiative) which checked under the FAO guidelines. Therefore, in order to improve the reliability of a seafood certification internationally, a scheme of the seafood certification should be publicly recognized by GSSI.

The GSSI Global Benchmark Tool for seafood certification schemes represents the first collective and non-competitive approach, which provides clarity on seafood certification worldwide. And GSSI will publicly recognize seafood certification schemes that meet GSSI Components grounded in the CCRF and the FAO Guidelines for seafood certification and eco-labelling. Therefore, reliability of certifications could be improved if obtained the recognition from GSSI.

Moreover, GSSI will then publish a statement and a Benchmark Report on GSSI's website. Then seafood sectors could use the information on the website to help in decision-making. For producers, the information could give them more options to choose the scheme that is right for them and reduce the need for multiple audits. For seafood buyers, the information could give them more consistent data to guide their purchasing decisions.

- 2, To establish a traceability system that can be traced back to individual fishing vessels, fishery producers etc. This system is essential, because it could demonstrate an individuals company has an effective operation and proves that it works. And a traceability system has the following components.(S Derrick, FAO, 2004)
 - Supplier traceability, ensures that the source of all raw materials/ ingredients can be identified from the records and documentation.
 - Process traceability, ensures the ability to identify all ingredients and process records for each individual product produced by the factory.
 - Customer traceability, ensures that the customers for all products can be identified.

Discussion

The sustainable sourcing code in the Tokyo 2020, encourage fishermen committed to sustainability through the Olympics by promoting diverse seafood certifications rather than a single standard global certification, particularly the ones recognized by GSSI as an objective benchmarking tool, and sustainable domestic seafood particularly from the perspective of food mileage as an environmental consideration. (Local food was also recommended in the London Food Vision). However, a construction of a traceability system to develop fishery industry while scientifically

managing the available resources is essential, because enables the trace-forward of product for the purpose of food safety and sustainable production. Hence, the availability of all processing records during the period of Tokyo 2020 could be considered in the sourcing code of fishery products.

Sustainable sourcing code of timber

Qiao Yanyan / Dilbar

Introduction:

Sport presents broad opportunities to promote environmental awareness, capacity building and far-reaching actions for environmental, social and economic development across society. Sustainable sourcing is the procurement of products and services with environmental, social and ethical issues in mind. The aim of the Sustainable Sourcing Code is to ensure the sustainable sourcing of products and services deemed vital to the successful delivery of the Olympic Games and in consideration of economic rationality, fairness and equity.

Tokyo 2020 places the utmost importance on how products, services, etc. are supplied, the origins of products, services, etc., the resources they are made of. - compliance to the Sourcing Code throughout the supply chains, and the effective use of resources.

1. London Olympic:

For London Olympic, sustainable sourcing is the procurement of products and services with environmental, social and ethical issues in mind.

a. The way of the Code to be applied:

The Code will, for the most part, be applied via the tendering process. Prospective suppliers and licensees are advised to review the requirements of the Code and ensure that relevant areas of their business and supply chain are in compliance with its provisions.

b. Key issues the Code seek to address:

The Code sets out our requirements in detail. It is not intended to be prescriptive: it sets a framework to enable us to consider the relevant issues and make informed choices by applying a set of core principles throughout.

These are:

- responsible sourcing
- use of secondary materials
- minimizing embodied impacts healthy materials

c. The core principles of the Code:

- Responsible sourcing ensuring that products and services are sourced and produced under a set of internationally acceptable environmental, social and ethical guidelines and standards.
- Use of secondary materials maximizing the use of materials with reused and recycled content, minimizing packaging and designing products that can either be reused or recycled.
- Minimizing embodied impacts maximizing resource and energy efficiency in the manufacturing and supply process in order to minimize environmental impacts.
- 4. **Healthy materials** ensuring that appropriate substances and materials are used in order to protect human health and the environment.

d. The way suppliers and licensees respond to the Code:

Suppliers and licensees are required to manage the environmental and social impacts of their business operations. Suppliers and licensees should, where appropriate, amend their business practices to ensure that they meet with the requirements of the Code.

1. Responsible sourcing —— Timber and timber products

The Forest Stewardship Council (FSC) certification scheme is approved for the purposes of both 'Legal Timber' and 'Sustainable Timber'. Where it can be justifiably demonstrated that it is not possible to supply items from FSC certified sources then

timber and timber products which are able to be verified with appropriate documentation in respect to their origin and legality are acceptable.

2. Use of secondary materials

LOCOG encourages the use of materials with reused and recycled content, also support the use of products that are designed with minimal packaging and which can either be reused or recycled.

3. Minimizing embodied impacts

Throughout the manufacturing and supply process, suppliers and licensees will maximize resource and energy efficiency in order to reduce environmental impacts.

4. Healthy materials

LOCOG encourages the use of substances and materials that represent a low risk to human health and the environment. Where practicable, suppliers and licensees will seek to use such substances and materials in the products and services they supply.

e. The role of FSC during Olympic:

The London 2012 Olympic Park was the first project jointly certified to FSC and PEFC standards, using more than two thirds FSC certified timber. The Athlete's Village was fully FSC Project Certified. The Olympic Delivery Authority (ODA) achieved a "world first" in 2012 by securing FSC and PEFC project certification for the London 2012 Olympic Park, with 100% of wood products supplied certified as "legal and sustainable". FSC certified material made up 67% of the 12,500m³ timber products procured, while PEFC accounted for 33%.

Sustainability was embedded into the ODA's construction project from the very beginning as one of its six priority themes. The ODA successfully used FSC systems to achieve FSC Project Certification for the Olympic Park and Athletes' Village. Village developers used the certification process to ensure that they achieved the desired Code for Sustainable Homes and BREEAM assessments, providing evidence that the timber comes from legally compliant, responsibly-managed forests. "FSC certified forest operations are environmentally appropriate and socially beneficial. It's fitting that an event which is committed to excellence like the Olympics choose FSC, which

sets a high bar for forest management towards a legacy of stewardship. FSC UK is delighted that the Olympic Park has achieved FSC Project Certification for such an extensive and complex site. A project of this scale proves that developers can always find sufficient certified timber for their needs.

The entire London 2012 Olympic Park development has achieved dual Project Certification from the Programme for the Endorsement of Forest Certification (PEFC) and the Forest Stewardship Council (FSC) schemes for its timber usage —the first dual Project Certification in the world. This groundbreaking achievement in sustainable timber procurement has played a prominent role in helping the Olympic Delivery Authority (ODA) achieve its commitment of making the London 2012 Olympic Games the greenest games ever with 100% of wood products supplied certified as legal and sustainable.

The Games' East London site comprises of seven major venues across the 246-hectare Olympic Park and needed to be managed on a daily basis for the thousands of timber products entering the site. The ambitious approach was driven forward by the establishment of the Timber Supplier Panel that embedded strict policy and procurement procedures and implemented a delivery management system that was forthright in policing and educating stakeholders and their supply chains about sustainable timber and unbroken chain of custody.

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Praising PEFC, FSC, the auditors, the timber industry, contractors and CLM (Olympic delivery partner) team managers for their efforts in achieving the target, Peter Bonfield, Head of Construction Products at the ODA added: "It is an outstanding outcome that really shows what can be achieved and it's a strong platform for the

industry to build on. Now the question is – what are the industry and certification bodies going to do to take that across the rest of the country."

2. RIO Olympic

a. Improvements towards sustainability

Rio 2016 has a special place in the history of sustainability because of its social and environmental commitments – but also its controversies. In 1996 the International Olympic Committee (IOC) amended the Olympic Charter introducing this concept among its values in order to "encourage and support a responsible concern for environmental issues, to promote sustainable development in sport". Twenty years later, the Rio Olympic and Paralympic Games have aimed to minimize social and environmental impacts by investing in a more sustainable management approach and developing a series of innovative initiatives. With its energy portfolio – one of the most diversified in the world – and its potentialities, Brazil could become a pioneer of sustainable growth.

After London 2012, Rio 2016 also obtained ISO 20121 Certification, a standard to improve the sustainability of events. Starting from the 2010 Vancouver Winter Olympics, the Olympic Committee has improved the Games' accountability and transparency through the publication of Sustainability Reports in accordance with Global Reporting Initiative Standards. Notable among the sustainability initiatives of the Olympic and Paralympic Games of Rio 2016 are:

- Certified sustainable food, with more than 350,000 portions of responsibly sourced seafood from fisheries and farms that met the requirements of the Marine Stewardship Council (MSC) or Aquaculture Stewardship Council (ASC).
- A carbon measurement and mitigation strategy.
- A sustainable procurement programme, including medals made by recycled materials and reduction in harmful chemicals.
- Improvements in infrastructure, including more efficient lighting in public spaces and revitalisation projects, such as converting venues into schools and public recreation facilities.
- Projects for Rio's peripheric areas focused on food waste, poverty and social inclusion.

• The participation of the Refugee Olympic Team.

b. FSC certified wood and pulp

All timber used in permanent or temporary constructions for Rio 2016TM must come from legal and responsible sources. Both forest management and chain of custody shall be certified by the Forest Stewardship Council (FSC) or the Brazilian Forest Certification Programme (INMETRO/CERFLOR) or the Programme for the Endorsement of Forest Certification (PEFC) system.

Upon request, timber suppliers shall send Rio 2016TM all information necessary to verify the legality of supplied timber, including operating authorization (AUTEX), invoices, the entire chain of documents of forest origin (DOF) issued to demonstrate, from beginning to end, complete chain of custody tracking.

Where possible, paper products should be composed solely of recycled fibres, with the highest possible percentage of post-consumer scrap – reaching minimum levels defined in the ABNT NBR 15755:2009 standard. Every product with non-recycled paper or wood in its composition must have FSC or PEFC/CERFLOR certification.

Brazil is a country of "florestas" (forest), so all timber products and derivatives are to be produced from raw materials 100% recycled, or they must be certified. The needs are also huge: only to cover the entire surface of the track of the Olympic velodrome, are 92 m³ wood required.

In preparation for the Rio Summer Olympic and Paralympic Games, the Forest Stewardship Council (FSC) has released a comprehensive list detailing all of the places where responsibly managed wood-based products have been used for the construction and promotion of the Games. This has been enabled by a partnership with the Rio 2016 Committee to increase environmental awareness around the games, and ensure the responsible use of forest products. All products acquired by the Organizing Committee of the Rio 2016 Olympic and Paralympic Games have been FSC certified, from structures to stationery.

Through FSC certification, companies are making a commitment to acquire and sell wood-based products that come from responsible sources. All products carrying the FSC label come from forests that are environmentally responsible, socially beneficial, and economically viable. Hundreds of organizations have obtained FSC certification to help with the creation of a more responsible Olympics, including the Brazilian Mint which, among other assets, will produce all athlete diplomas and certificates during the games.

Other FSC-certified suppliers have been chosen as Olympic torch bearers, in acknowledgement of their work to take care of forests in their region. The Olympic Games has a proud history of sustainable sourcing. FSC engagement with the Olympic Games began at the London Games in 2012, and FSC had maintained contact with the Olympic Committee and subsequent host countries to assist them in meeting their sustainability targets.

All products carrying the FSC label come from forests that are environmentally responsible, socially beneficial and economically viable. The FSC said, through certification, companies are making a commitment to acquire and sell wood-based products that come from responsible sources.

Coordination of these efforts, through biweekly monitoring of the implementation schedule, is carried out by the Office of Project Management in the Rio de Janeiro State Executive Office. Besides the principal objective of forest restoration in areas of the Atlantic Forest in Rio state, the programme is directly linked to sustainability activities of the Games, since these will be the main instrument for offsetting residual carbon emissions.

The first phase of the Clean Games initiative is already in place and includes preliminary steps for configuring and structuring the programme, among which are:

 Creating a consultation and deliberation council to monitor the project and promote an environment of cooperation and transparency between the different actors;

- Providing preliminary estimates of carbon emissions resulting from the Olympic and Paralympic Games;
- Creating a database of areas suitable for forest restoration;
- Conducting a survey of technical and financial partners;
- Standardization of restoration activities;
- Survey of forest nurseries.

c. Partnerships

- 214 organizations have become FSC certificate holders since the Olympics agreement was signed, many in order to provide responsibly-sourced products to Rio 2016.
- Partners come from the paper industry, graphic services, furniture, sawn wood,
 panels, planks, fiber board, plywood, flooring and tiles.
- Eight micro and small organizations have obtained FSC certification through the 'Sebrae no Pódio' programme, an initiative set up by the Brazilian government aiming to stimulate the growth of micro and small enterprises in Brazil.

3. Aim of Sustainable Sourcing Code for Tokyo Olympic

To ensure the sustainable sourcing of products and services deemed vital to the successful delivery of the Olympic Games and in consideration of economic rationality, fairness and equity.

Takes measures to minimize the environmental impact of its procurement of raw materials, and all subsequent production, distribution, usage and disposal processes. In addition, takes into consideration human rights, labor and other social issues during its procurement of products, services, etc.

The next Olympic Games will take place in Tokyo in 2020 and the attention towards sustainability issues will continue. The Olympic Committee published the first drafts of the Tokyo 2020 Sustainability Plan and Tokyo 2020 Sustainability

Sourcing Code in January 2016, asking all stakeholders to provide comments and feedback in order to improve the Games' commitment to sustainability.

1. Introduction about procurement standard at Tokyo 2020

Tokyo Organizing Committee of the Olympic and Paralympic Games announced the procurement standard in the use of timber and wooden products in Tokyo Olympic and Paralympic Games in 2020. The procurement standard specified that all timber and wooden products must follow sustainable principle or be certified by anyone among FSC, PEFC and SGEC. In addition, give the priority to the use of domestic timber and wooden productions.

The most of timber and wooden production will be used in the construction of new stadiums, infrastructures and the renovation of old stadium. According to the news of Tokyo Organizing Committee of the Olympic and Paralympic Games, a new stadium named New National Stadium Japan will be stared to construct in December. The most important character is that it will be built by wooden. In addition, Japan will use wood to decorate other 36 established stadiums and build more wooden infrastructures.



Fig.1. New National Stadium Japan



Fig. 2. New National Stadium Japan

2. Current station of forestry in Japan

According to the data published by Forestry Agency in 2012, Japan's forest area is about 25 million hectors. It means forest area accounts for two-third of country's land area (about 38 million hectares). The table 1 shows the changes in the number of natural forest and plantation over the period from 1957 to 2012. The forest store in Japan is about 4.9 billion cubic meters and 60% of which is occupied by plantation. In addition, the amount of forest store increases by about 100 million cubic meters each year due to the growth of plantation.

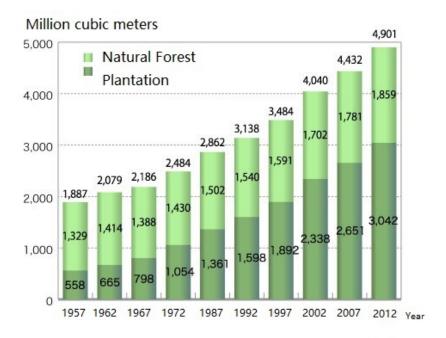


Fig.3. Number of natural forest and plantation in Japan (1957-2012)

Despite the fact that many of plantations are available as timber, due to the rapid growth in import of foreign timber, the self-sufficiency rate of timber is only 30% (Fig.4). On the other hand, it is necessary to do the intermediate cutting for plantation. If people don't log the plantation properly, the sunlight cannot insert trees and underground. As a result, it may cause landslides for the lack of protection by grass. In order to rejuvenate Japan's forest and protect the nature environment, it is important to realize the cycle of "afforestation" \(\rightarrow "cultivation" "cutting" \(\rightarrow "using domestic wood". Therefore, it is essential for Japan to manage domestic forest especially the plantations. Only under the proper management, domestic companies can product more wooden and Japan can realize the high self-sufficiency rate. So the Tokyo Olympic and Paralympic Games is a good chance for the development of Japan's forest industry.

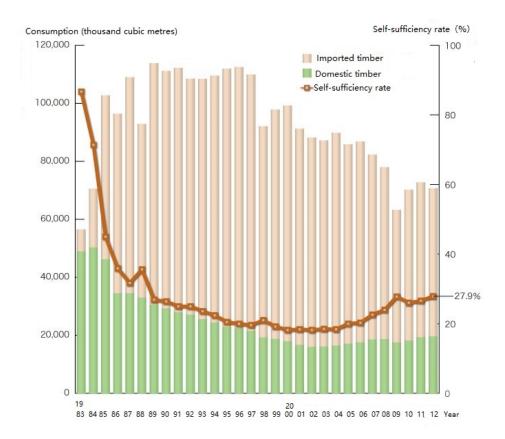


Fig. 4. Number of import timber, domestic timber and self-sufficiency rate in Japan (1983-2012)

3. Certification system

What's FSC

The FSC (Forest Stewardship Council) is an international non-profit, multi-stakeholder organization. It was established in 1993 to promote responsible management of the world's forests. The FSC does this by setting standards on forest products, along with certifying and labeling them as eco-friendly. FSC mission is to promote environmentally sound, socially beneficial and economically prosperous management of the world's forests.

Quick Facts

 More than 194 million hectares of forest area are managed in compliance with FCS's internationally accepted Sustainability Benchmarks Currently more than 31,622 companies and organizations have achieved FSC
 Chain of Custody certification.

What is PEFC

The PEFC (Programme for the Endorsement of Forest Certification) is also an international non-profit, non-governmental organization. And PEFC engaged to promote sustainable forest management through independent third-party certification. PEFC was founded in 1999 in response to the specific requirements of small and family forest owners as an organization providing independent assessment, endorsement and recognition of national forest certification system. It responded to the need for a mechanism enabling the independent development of national standards tailored to the political, economic, social, environmental and cultural realities of the respective countries, while at the same time ensuring compliance with internationally accepted requirements and global recognition.

Quick Facts

- More than 300 million hectares of forest area (or 740 million acres) are managed in compliance with PEFC's internationally accepted Sustainability Benchmarks - that's roughly the size of Egypt, South Africa and Turkey combined.
- Two-thirds of all certified forests globally are certified to PEFC.
- Currently more than 18,700 companies and organizations have achieved PEFC
 Chain of Custody certification.
- One-third of all Chains of Custody globally have been awarded by PEFC.
- 46 national members and 38 endorsed national certification systems have joined forces under the PEFC umbrella to collaboratively promote sustainable forest management.
- PEFC certification is a standard of choice for public timber procurement policies in e.g. the United Kingdom, Germany, and Japan, in addition to numerous private timber procurement policies.

SGEC (Sustainable Green Ecosystem Council) was established in 2003 in Japan. It was founded as a domestic forest certification system under the participation of various organizations, such as academic society, business circle and environment NPO. In 2011, SGEC was facing the new stage of its nation-wide expansion, seeking for further dissemination and development of sustainable forest management, after the initial stage of establishment of its basic institutional framework. On December14, amended its certification scheme in order to realize the mutual recognition with PEFC. And SGEC applied for PEFC member on May 20, 2014 for a long period of preparing. As a result, Japanese domestic forest certification SGEC formally joined the PEFC Council on July 27, 2014.

There are three reasons for SGEC to join the international forest certification PEFC. Firstly, Japan's forests are at maturity after the war. Japan is seeking to expand the demand for domestic timber, the promotion of forestry and forest industry. Secondly, with the increase of consumers' awareness in environment protection, the demand for certificated forest material is increasing. Meanwhile, in order to seek green products in overseas, forest certification system is developing in a rapid way in the world. Especially in Asia, a lot of countries have joined in the international forest certifications. It is a good time for Japan's domestic forest certification to join in PEFC. Finally, along with the declining population in the future, the demand of timber is expected to shrink. So Japan will engage to export timber to overseas and the international certification such as PEFC will be required. Especially, the fact that environment friendly forest materials are required in the use of facilities, printed materials, etc in Tokyo Olympic Games in 2010. SGEC should join the PEFC in advance.

Quick Facts

 According to the data published by SGEC (Fig.4. Fig.5.), more than 1.47 million hectares of forest area are managed in compliance with SGEC. Currently more than 364 companies and organizations have achieved SGEC Chain of Custody certification.

The different between FSC and PEFC

The FSC is a global certification system that enables specifies to identify and purchase wood from well-managed forests. It defines ten principles of responsible forest management for a manager or owner to follow. As a benchmark, any FSC standard has to be 'interpreted' at the national level in order for it to be implemented within local forests.

Similarly, PEFC describes itself as an international organization dedicated to promoting sustainable forest management (SFM) through independent third party certification. However, PEFC is not a standards agency but a mutual recognition scheme. It not only focuses on the ethical aspects of SFM but also the processing of timber, resulting in a larger emphasis on the supply chain than FSC.

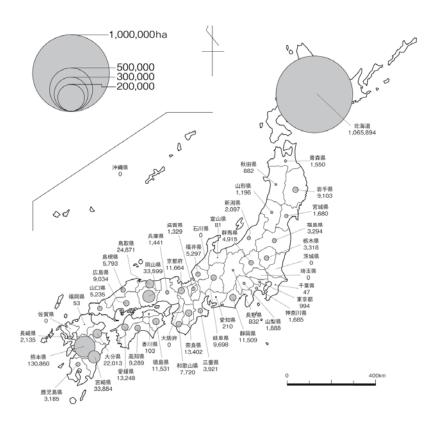


Fig. 5. The area certified by SGEC in Japan (2016.7)

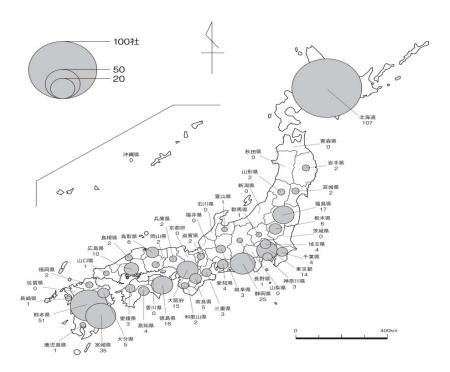


Fig. 6. Number companies and organizations achieved SGEC CoC certification

	FCS	PEFC
Year of establishment	1993	1999
Headquarters Location	Germany, Bonn	Switzerland, Geneva
History of	Established by international NGO	Established as an organization
establishment		to realize mutual recognition
		of forest certification systems in
		11 European countries.
Statistics(2015/12)		
Certified forest area	187million Ha(80 countries)	272million Ha(37 countries)
The number of CoC	29.76 thousand(116 countries)	17.44 thousand(67 countries)
Characteristics	FSC is a standard setter and sets	PEFC is not a standard setter but
	its own global standards. The	a mutual recognition scheme. It
	accreditation function is	was set up as an endorsement
	overseen by a company called	process, to assess independent
	Accreditation Services	national forestry management
	International (ASI),a subsidiary of	schemes against internationally
	FSC	recognized criteria for sustainable
		forest management. PEFC uses
		internationally recognized
		requirements for certification and
		accreditation defined by the ISO
		and the IAF.

4. Recommendations

1) Recommendations for disaster areas such as Iwate Ken, Miyagi Ken and Fukushima Ken. The hold of Tokyo Olympic Games is a very good chance for earth-north areas to revitalize, especially for the economic development of Fukushima. According to the data of Forestry Agency, 70% area (974,000 ha) is covered by forest in Fukushima. And forest area ranks fourth in Japan. In Iwate Ken, Miyagi ken and Fukushima Ken up to July 2016, there are 9103ha, 1680ha, 3294ha has been certified separately. And most of timbers are safety enough to be used to build structures. From the above we can come to the conclusion that it is a good chance to input more to develop disaster areas.

The government should introduce polices to encourage enterprises to build factories in disasters. Due to the earthquake, large scales of land were polluted by nuclear and a lot of buildings collapsed in 2011. A lot of people lost their job due to the earthquake. The establishment of enterprises is a good chance for disaster areas to development human resources, promote employment and realize economic growth. As we know, the table tennis table in 2016 Rio Olympic Game was make in Japan and the wooden is produced in Iwate province. The table tennis table received high evaluation for the superb technology of craftsman and the high quality wooden. So I think, we can use more timbers produced in disaster areas under government's support in the aspect of both fund and policies.

2) Recommendations for small-scale companies. Forest certification is not yet popular in Japan even though 16 years have passed since the first forest certification scheme (FSC) was introduced to Japan. The area of FSC-certified forest in Japan is 393,000ha or 1.6% of total forest areas, and that of the SGEC is about 1.26 million ha or 5%. Traditionally, wood has been one of the most important and popular natural resources for Japanese. Presently, most of the houses are made still by wood. Under such circumstance, why is forest certification not popular in the Japanese forest sector? The author Ikuo Ota and Masumi Kamakura conducted a survey i among forestry enterprises and customers. As a result, the major reason of such poor evaluation was a low recognition of the scheme for customers. In addition, enterprises cannot get economic return even though they input a lot of money in order to get certification. From the above facts we can conduct the following recommendations.

Firstly, government, research institutions and forest enterprises should advise more about the merits of forest certification because a low recognition of the certification system is the largest obstacle to the spread forest certification. In other words, if certification becomes more popular among the society, many people would purchase certificate wood products even though they would have to pay a price premium for them. Therefore, only in the circumstance that public knows more about forest certification system, forest enterprise can get more profits.

Secondly, government should provide more financial support to small-scale enterprises that get or be effort to get forest certification. On the one hand, the more enterprises got certified, the more domestic timber can be provided to Tokyo Olympic Games. On the other hand, those certified enterprises can export more timber to overseas and it will promote economic development for Japan.

Thirdly, we suggest forest certification institution to create some flexible certification standards. For example, for small-scale enterprises in the same area can get the forest certification by sharing the certificate cost. So small-scale enterprises can get certificated only spend less.

Conclusion:

As you all know the 2020 Olympic Games will be held at Tokyo, Japan. This will be the second Olympic Games hosted by Tokyo.

During the 56 years, Olympic Games themselves have undergone a lot of changes in plenty of areas. Thus, even though this will be the second time the Olympic Games is held at Tokyo, the contents could be completely different in 2020, comparing with 1964.

Sustainability is one of the things that have gotten serious attention only recently.

20th century was a period of growth for many countries. Tokyo grew up rapidly accompanied with the Olympic Games. But environmental issues were not the major concern at that time. After the decades, we now concern about environmental issues and sustainable growth more than ever.

London 2012 is well known as the most sustainable game ever. They set the sustainable sourcing code for the first time ever. They clearly showed the goal of this big event.

Now, as like London, Tokyo is matured in terms of economics and infrastructure.

Thus Tokyo is certainly expected to go beyond the ambitious vision and results of

London 2012.

We mentioned the code in 4 different topics. Agriculture, livestock, fisheries, and timber.

Additionally, Sustainable Sourcing Code for Agricultural Products (draft) is made under Tokyo 2020 Sustainable Sourcing Code.

There are mainly two parts fresh foods and processed food related to agricultural products.

Agricultural products as fresh foods include rice; barley, wheat, oats, and rye; miscellaneous cereals; beans; vegetables; fruits; and other agricultural products for food use (including products prepared, sorted, or washed in water after harvest, and products cut or frozen), as well as mushrooms, edible wild plants, and bamboo shoots.

For livestock products, food safety is the most important. Food safety will affect our health, so we should make sure that all of the livestock products are safe.

Furthermore, in order to obey the concept of Sustainable Olympic Games, the environment protection is also important. These two points are similar to that of Agricultural production. Nevertheless, there is one different thing in Livestock production that we should pay attention. It is animal welfare. Animals are similar to human beings that they have feeling and emotion, so we should also respect them and ensure that they can enjoy their life. Therefore, the functions of the certifications of Livestock production are little but different from the Agricultural production.

The fishery case is quite same as agricultural products and livestock products. The certifications for fishery in Tokyo 2020 are called MSC (which costs a lot) and MEL.

And in the part of timber products, considering the timber products certification for Tokyo 2020 Olympics, FSC certification might be more suitable, with the advantages

of internationally accepted which help companies reach foreign markets as well as being competitive which is beneficial to export.

As final conclusion, For both agricultural and livestock products supply of Tokyo Olympic Games 2020, we deem that domestic farmers who only concentrate on local products could apply the JGAP and global farmers (Japanese and other farmers from all over the world) are able to apply GOLBAL G.A.P in order to satisfy all demands of certification of agricultural products. And for future sustainability development, everyone include us and governments need to pay more attention and make contribution to the development even after the Olympic Games. For fishery, based on such experience, we humbly come to a draft of fishery products sourcing standards certification. Firstly, the certification needs to follow international standards like FAO guidelines. Secondly, it is necessary to establish a traceability system which enables the trace-forward of product for the purpose of food safety and sustainable position. Such system should cover three aspects of the producing and selling chain: suppliers, process and customer. And in the timber case, we made some proposals for disaster areas and small-scale companies. For disaster areas, the government should make policies to encourage enterprises to build factories in disaster areas because this is a good chance for disaster areas to realize the economic growth. For small-scale companies, forest certification is not yet popular even though 16 years have passed since the first forest certification scheme was introduced in Japan. So the government and research institution should introduce the merits of forest certifications to consumers and small-scale companies. On the other hand, provide more financial support to small-scale companies. Under the high recognition, the small-scale companies can receive the profit even though they input a lot of money in order to get forest certification.

Activity Record

Sustainable souring at Olympic Games

Date time	Contents	Note
Oct 21	Meeting	About case study schedule
Oct 24	Getting advice from the advisor	About assignments
Nov 2	Meeting	About interview
Nov 18	Interviewing a MSC staff,	Asking about MSC including cost
	Suzuki san	of application, the world
		awareness, and existing problem
Nov 25	Interviewing a MEL staff,	Asking about MSC including the
	Minohara san	current situation, cost of
		application, the world
		awareness, and existing problem
Nov 30	Meeting	Consideration of interviews
Dec 9	Meeting	How to write the report
Dec 16	Submission the report to group	
	leader	
Dec 20	Meeting	Getting some feedback from
		group leader, making a flow
		chart for the case study
Dec 28	Meeting	Discussion of the each proposal
		about the sustainable souring
		code of livestock, agriculture,
		fishery, timber.
Jan 5	Deadline of draft report to group	
	leader	
Jan 6	Getting some feedback for	Base on the feedback, doing
	advisor	additions to the report
Jan 13	Presentation and meeting	Getting feedbacks from other
		professors
		Discussion of how to summary
		the final report
Jan20	Deadline of submission of final	
	report	
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