SUSTAINABILITY

PyeongChang 2018™

PyeongChang 2018™
PARALYMPIC GAMES

PyeongChang 2018 Olympic and Paralympic Winter Games

Sustainability Interim Report

February 2017

Passion.Connected.
하나된 열정

Report Overview
This report includes POCOG's efforts and achievements on the sustainability of the PyeongChang 2018 Winter Games.
This report prioritises key issues derived by materiality assessment to provide practical information to the stakeholders.

Reporting Standard
The 2015/2016 sustainability report was written in accordance with Event Organizer Sector Supplements principle of GRI(Global Reporting Initiative) G4 Guideline. Reporting standard and definition of financial information comply with International Financial Reporting Standards (IFRS).

Reporting Period
This report covers annual achievements from 1 July 2015 to 30 June 2016, but also includes activities before July 1, 2015 and in the second half of 2016, if material. No significant changes occurred while developing the 2015/2016 sustainability report.

Report Scope
This report is limited to POCOG's achievements on sustainable management.

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I. Overview

1.1 Message from President

"PyeongChang!"

I still become thrilled by the overwhelming joy that I felt when "PyeongChang" was named as the host city of the 2018 Olympic Winter Games in Durban, South Africa in July 2011, and it has already been as long as five years since POCOG was founded.

The PyeongChang 2018 Olympic Winter Games is the result of persistent endeavour and nationwide wishes that were finally realised after two precedent failures. Therefore, POCOG recognises the 2018 Winter Games as an honorable mission delegated by the citizens of Korea and is putting every effort to ensure a successful event. POCOG has extensively prepared in all areas, including immigration, accommodation, transportation, security, and venue construction in a timely manner, and it aspires to host an Olympic Games in which economy, culture, environment, peace, and ICT come to create a synergy.

The international community has set forth sustainable development as a new paradigm for humanity to face unseen challenges due to climate change and resource depletion, and the Olympic Games is expected to take a leading role in realising sustainability.

To this end, POCOG set forth its sustainability vision "New Horizons for Sustainability – Furthering benefits to People and Nature" extending from its Games vision "New Horizons," and has strived to stay committed to it.

The PyeongChang 2018 Winter Games Sustainability Report, hereby published, is the first report that describes the efforts and achievement by POCOG before the end of 2016 to successfully host the PyeongChang 2018 Olympic Winter Games.

In July 2015, POCOG established a Sustainable Framework Plan to further develop its sustainability vision, and provided the *CSR Guideline for sustainable Olympic Games Management* to help participating organisations take greater environmental and social responsibility.

With such framework and guideline in place, POCOG has put into action the five themes (Low Carbon Green Olympics, Stewardship of the Nature, Good Life, Proud People with Tradition and Culture, Globalizing PyeongChang: Opening to the World) in environmental, economic and so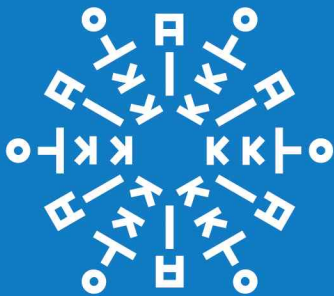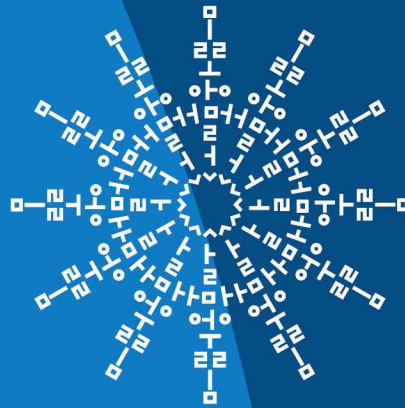cietal spheres and 17 tasks in preparing and managing the 2018 Winter Games. Moreover, POCOG established a sustainable management system that plans and monitors these initiatives. POCOG's effort for sustainability was ISO20121-certified for the first time in the history of Olympic Winter Games in July 2016.

Now that the PyeongChang 2018 Winter Olympic Games is only a year away, POCOG will continue to fulfil its sustainability vision and associated tasks in order to set an epitome of a successful Games that leaves a sustainable legacy, not only in PyeongChang, but also in Korea.

Just as the Seoul 1988 Olympic Summer Games eased ideological confrontations among the countries and bound them together, every single staff member in POCOG will spare no efforts to enhance the status of Korea in every aspect, and provide a global venue where global citizens stay connected with passion through the PyeongChang 2018 Winter Games.

Thank you.

February 2017

Hee Beom Lee

President of PyeongChang Organizing Committee for the 2018 Olympic and Paralympic Winter Games

1.2 POCOG Overview

A. Governance structure

❍ The PyeongChang Organizing Committee for the 2018 Olympic and Paralympic Winter Games (POCOG) was founded on 19 October 2011 in accordance with the *Special Act on Support for the 2018 PyeongChang Olympic and Paralympic Winter Games*, and is composed of 134 members (Committee: 100, Elected: 34), two auditors, and six advisors as of December 2016. The National Assembly of Korea, the Government of the Republic of Korea, and Gangwon Province have organised and currently operate the following systems in order to host a successful Olympic Games:

- National Assembly: A Special Committee for Games Support
- Government: Games Support Committee and the Executive Committee for Games Support
- Gangwon Province: Olympic Winter Games Headquarter, Special Committee to support Games at provincial congress level, Venue Cities, and Associated Organisations

❍ POCOG President/CEO confirms and approves sustainable management policy. The Vice President of Planning and Administration supervises sustainability and sustainable management system. Sustainability team under Planning Department establishes the principle of sustainability based on which POCOG can operate, and integrate and mediate opinions to realise sustainable management by cooperating with other departments within POCOG and external stakeholders.

B. Administration structure

❍ Organisation : One (1) Secretary General, One (1) Executive Vice President of International Relations, Three (3) Vice Presidents, 14 Bureaus, One (1) Secretary's Office, One (1) Spokesperson, Six (6) Deputy Director Generals, 52 Departments

❍ Workforce : Quota: 876, Current: 851 *(As of 31 Dec 2016)
  * Public official: 345, Civil expert: 424, Public·Civil secondeees: 82

POCOG Organisation Chart

[Figure 1.1] POCOG Organisation Chart
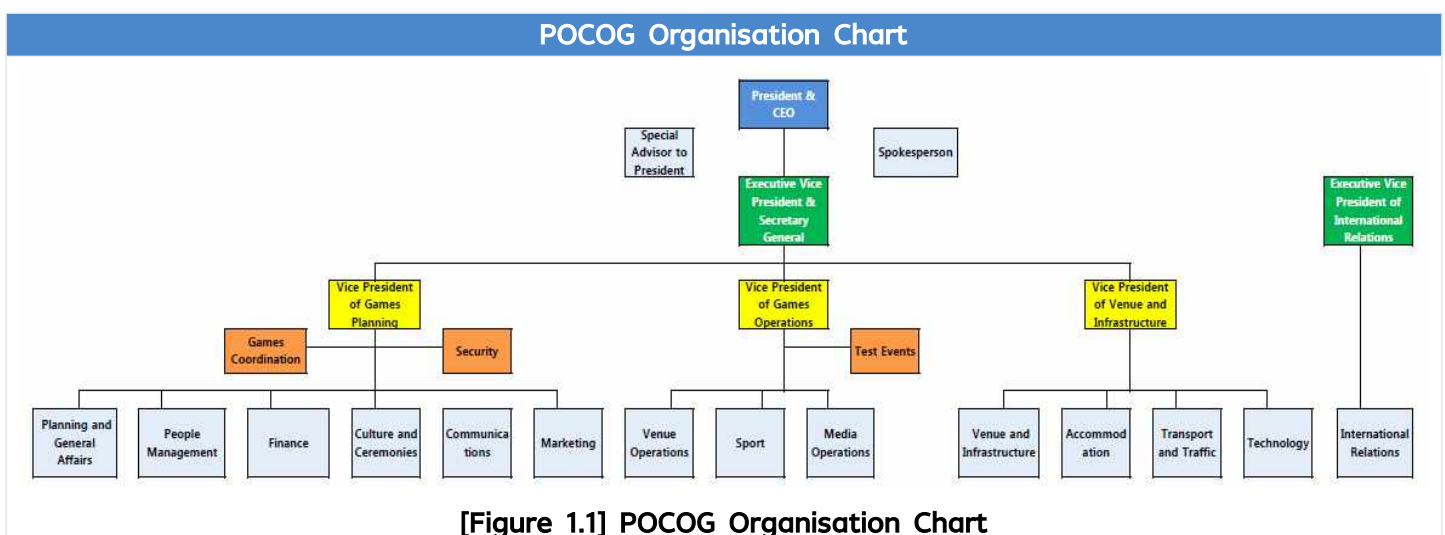
C. Financial Structure

❍ Based on the 4th Games Life-time Budget established in 2016 (tentative, under negotiation with Ministry of Culture, Sports and Tourism), POCOG's independent revenue is estimated to be KRW 2,465.5 billion while its expenditure is estimated to be KRW 2,844.2 billion, resulting in a budget deficit of KRW 378.7 billion.

❍ Main sources of estimated income are IOC contribution, TOP sponsors, local sponsors, ticket sales, and incremental revenues from issuing additional sports promotion lottery.

❍ Major estimated expenditures are venue and overlay construction, information & communication and network building, compensations for volunteer workers and staff members, Opening and Closing Ceremonies and Torch Relay, and transport.

❍ In order to achieve a balanced budget, POCOG is reinforcing its efforts to obtain additional financial sources while attempting to increase budget allocation from the government and secure sponsorships from public institutions.

D. Phased Planning for PyeongChang 2018 Winter Games

❍ The 2018 Winter Games will be hosted in Korea for the first time after three decades since the Seoul 1988 Olympic Summer Games Seoul. The 2018 Winter Games will present how Korea has developed and transformed to become one of the leading nations over one generation. Also, the 2018 Winter Games pursues to achieve "the best quality Games oriented toward athletes and events" and "Economy, Culture, Environment, and Peace Olympics + ICT Olympics" with the nationwide interests and the government support. To accomplish this, the planning is divided into three phases. The first phase (2012–2013) is to establish the foundation for the Games; the second phase (2014–2016) is where the operational planning takes place; and we will see the Games hosted in the third phase (2017–2018). In year 2015 and 2016, major efforts for planning began, and all human resources and capacity are dedicated to establishing operation plans for each aspect and venues and infrastructure construction. During this period, full-scale efforts will be invested into preparing for the Test Events starting from February 2016 as well as the Olympic Games.

[Figure 1.2] PyeongChang 2018 Winter Games Organizing - by Phase
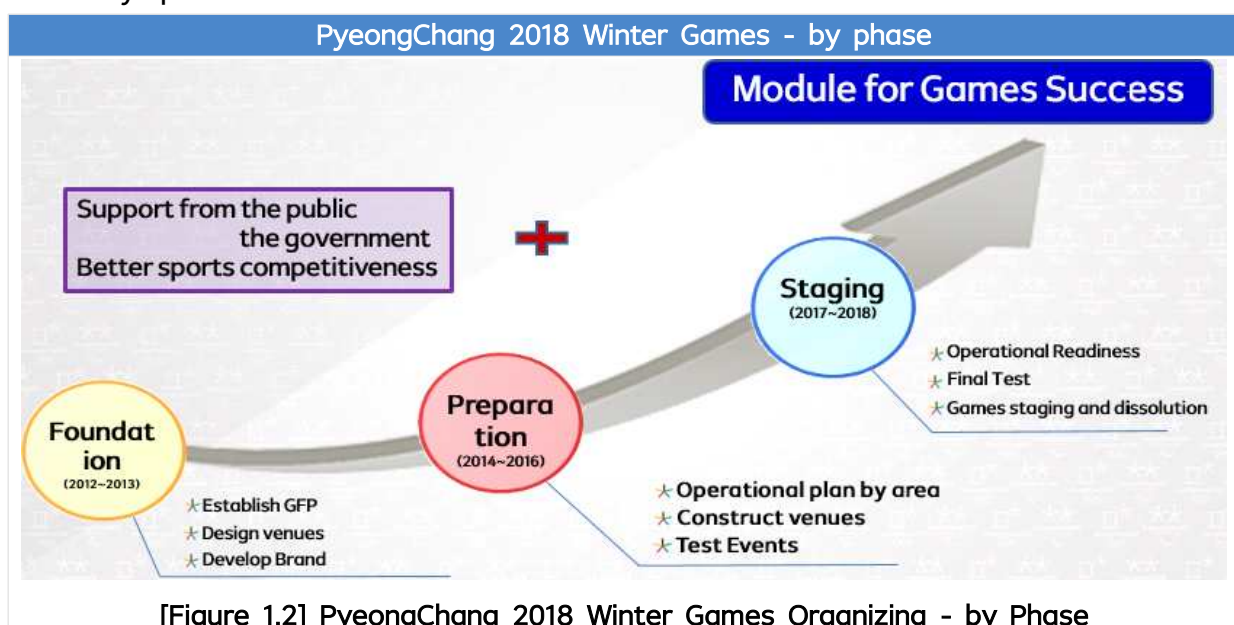
1.3 PyeongChang 2018 Winter Games

A. Overview

❍ Name: PyeongChang 2018 Olympic and Paralympic Winter Games

❍ Period: 9 to 25 February 2018 (17 days) *Paralympic Games: 9 to 18 March 2018 (10 days)

❍ Size: approx. 50,000 Olympic participants from more than 100 countries; approx. 25,000 Paralympic participants from more than 50 countries (including athletes, officials, IOC, media, etc.)

❍ Venue Cities and Sports Events

Venue Cities (Within 30 minutes from Olympic Plaza)		Sports Events	
		Olympic Games (7 events 15 sports 102 sub-sports)	Paralympic (6 events 6 sports 80 sub-sports)
Mountain Cluster (PyeongChang)	Alpensia	① Skiing(Ski jumping, Cross-country skiing, Nordic combined) *Big Air (sub-sports of snowboard) ② Bobsleigh (Bobsleigh, Skeleton) ③ Luge ④ Biathlon	① Para Cross-country skiing ② Para Biathlon
	Yongpyong	① Skiing (Alpine Skiing) *Slalom, Giant Slalom	
	Bokwang	① Skiing (Freestyle skiing, Snowboard)	
	Jeongseon	① Skiing (Alpine Skiing) *Downhill, Super-G, Alpine Combined	③ Para Alpine Skiing ④ Para Snowboard
Coastal Cluster (Gangneung)	Olympic Park	⑤ Skating (Speed skating, Figure skating, Short track speed skating) ⑥ Curling ⑦ Ice hockey *Male finals	⑤ Para Ice hockey ⑥ Wheelchair curling
	Kwandong Univ	⑦ Ice hockey *Female all rounds, male preliminaries	

[Table 1.1] Venue Cities and Sports Events

❍ Pictogram

[Figure 1.3] Pictogram

B. Vision and Goal

❍ Vision : **new horizons**

　　　　To open up a new horizon in Korea and Asia by connecting the great passion of athletes and spectators.

❍ Mission

 - To provide a new stage for winter sports in Asia

 - To see the possibility of new growth

 - To host the Games that engage young generations

❍ Goal : Economy, Culture, Environment, and Peace Olympics + ICT Olympics

❍ Key Messages(Our Promises)

 1. We will make Korea a leader for winter sports growth in Asia.

 2. We will transform Gangwon Province from a small region in Korea into a hub of winter sports and sports tourism in Asia, with easy access to Seoul, ond of the world's most dynamic cities.

 3. Through the united passion of the Korean people, athletes participating in the Games and spectators, we will conncect the Olympic and Paralympic values to the world..

C. Slogan

[Figure 1.4] PyeongChang 2018 Winter Games Slogan

D. Emblem and Mascot

Emblem		Mascot	
Olympic Games	Paralympic Games	Olympic Games	Paralympic Games
PyeongChang 2018	PyeongChang 2018 PARALYMPIC GAMES	<Soohorang>	<Bandabi>

[Figure 1.5] Emblem and Mascot

E. Venues

❍ The PyeongChang 2018 Winter Games boasts its compact layout in which every venue is reachable within 30 minutes from the Olympic Plaza. In order to operate an athlete-and-competition-centered Games, this layout enables 90% of the athletes to arrive at venues within 10 minutes from their accommodations to help them prepare and perform at their best conditions.

❍ All events are hosted in PyeongChang Mountain Cluster (Mountain Cluster) and Gangneung Coastal Cluster (Coastal Cluster). PyeongChang hosts skiing and sled events while Gangneung hosts ice events. There are 12 venues in total, seven of which are located in PyeongChang and the rest in Gangneung. Six of the venues are newly constructed. Two of them are planned to be built in PyeongChang (Alpensia Sliding Centre and Jeongseon Alpine Centre) and four are in Gangneung (Gangneung Hockey Centre, Gangneung Ice Arena, Gangneung Oval, Kwandong Hockey Centre).

[Figure 1.6] PyeongChang 2018 Winter Games Venues

PyeongChang 2018 in Numbers

*This data is estimate as of December

Olympic Winter Games PyeongChang 2018

PyeongChang 2018™

Paralympic Winter Games PyeongChang 2018

9 February - 25 February
17 DAYS

9 March - 18 March
10 DAYS

12 Venues

Gangneung

4 Venues for Paralympic Winter Games PyeongChang 2018

PyeongChang

102 Gold Medals

80 Gold Medals

Jeongseon

15 Events

6 Events

2,900 Athletes

Venues
16,000
6,400 Venues for Paralympic Winter Games PyeongChang 2018

670 Athletes

Longest Venue **8.33** km
Alpensia Cross-Country Skiing Centre

Opening/ Closing Ceremony
38 m

Highest Venue
93 m

Total Area **58,790** ㎡
Capacity **35,000** people

Alpensia Ski Jumping Centre Jump Tower

Olympics Village **17** buildings
Paralympic Games Village **8** buildings

30,605 Room
Paralympic Games **6,760**

Client Group Olympic Games
21,254
3,690

Number of Staff Olympic Games
9,351
3,070

New Highway
130.8 km

East Hongcheon - YangYang **73.9** km
Gwangju - Wonju **56.9** km

New High Speed Train
120.8 km Wonju - Gangneung

[Figure 1.7] PyeongChang 2018 in Numbers

SUSTAINABILITY

1.4 Sustainable Management System

A. PyeongChang Sustainability Vision

○ The Vision of the PyeongChang 2018 Winter Games is for human and nature to co-exist and develop together via sports as an extension of the "New Horizon," and to leave a creative legacy that is sustainable in Korea and Gangwon Province. In this context, PyeongChang's sustainability vision was determined to be "New Horizons for Sustainability – Furthering benefits to People and Nature."

[Figure 1.8] PyeongChang Sustainability Vision

B. PyeongChang Sustainability Process
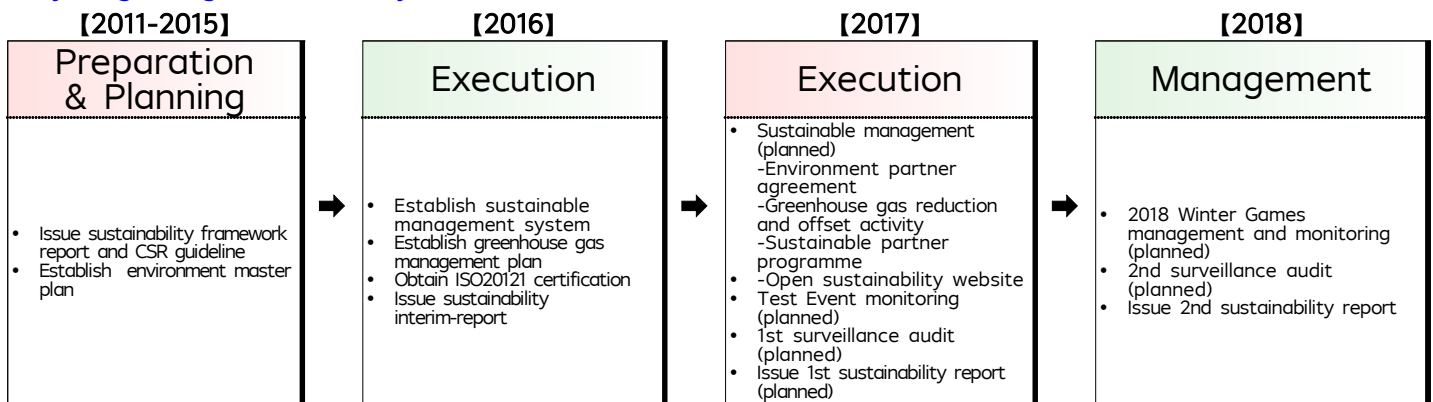
[Figure 1.9] PyeongChang Sustainability Process

C. Issue Sustainability Framework Report and CSR Guideline

	Publishing the First Sustainability Report on International Mega Sport Events such as the Olympic Games in Korea *PyeongChang 2018: New Horizons for Sustainability - Furthering benefits to People and Nature* presents a preparatory system to execute sustainability plans in addition to the blueprint of the fundamental plan. It contains the Sustainability Vision of the PyeongChang 2018 Winter Games and five key issues (low-carbon green Olympic Games, preserving nature for descendents, healthy and enriched life, pride of mature civil society, PyeongChang advancing to the world), and push strategies for each. This report applies GRI G4 Event Organizer Sector Supplement (EOSS) guideline over economic, environmental, and social aspects (labour practice, human rights, social and product responsibility) of the Olympic Games.
	In addition to the fundamental report, POCOG has published the *CSR (Corporate Social Responsibility) Guideline for sustainable Olympic Games Management*, based on ISO26000 standards and the UN Global Compact (UNGC). This is to build foundation for the spread and reinforcement of social responsibility as a culture, by hosting sustainable Olympic Games and attracting socially responsible management from participating parties. The guideline is composed of six key principles to manage the PyeongChang 2018 Winter Games, guideline application standard and the appendix. The appendix is divided into green product purchase and procurement instruction, guide for selecting and managing environment-friendly sponsor, pledge to comply with the ethics charter, memorandum of fair contract, and self-assessment on fulfilling social responsibility.

[Table 1.2] Sustainability Framework Report and CSR Guideline

D. Establishing Sustainable Management System

Establishing Sustainable Management System for PyeongChang

After taking into consideration environmental, economic, and social issues of the Venue Cities, POCOG has defined sustainability goals, policies, and a business process system (sustainable management system) in preparing and managing 2018 Winter Games. The pursuit system is segmented into key issues and execution plan of five main sectors stated in *Sustainability Framework Report* along with detailed assignments and achievement monitoring system derived from performance indicators.

[Table 1.3] Establishing Sustainable Management System

E. ISO20121 Certification and Post-Management

Obtaining International Certificate on Sustainability for the first time in the history of Winter Games

ISO20121(Event Sustainability Management System) is an international standard for the establishment of work system that minimises the burdens to local communities in terms of material, energy consumption, and economic, social, and environmental aspects, while maximising positive impacts. It is applicable to sustainable management of massive events like the Olympic Games. In July 2016, POCOG became the first Olympic Winter Games to obtain ISO20121, and the third Olympic Games, following Olympic Summer Games London 2012 and Rio 2016. POCOG plans to conduct two surveillance audits to assess key performance indicators for respective aspects and improve the process, all of which will contribute to developing the PyeongChang 2018 Winter Games as a role model of a sustainable Olympic Games.

POCOG ISO20121 Certificate Presentation	POCOG ISO20121 Certificate

[Table 1.4] ISO20121 Certification and Post-Management

F. PyeongChang Sustainability Symbol

[Figure 1.10] PyeongChang Sustainability Mark

PyeongChang sustainability mark uses a Korean consonant 'ㅈ', the first consonant used in a Korean word for "sustainability," to represent sustainable circulation and expansion

G. 2015 Highlights

Date	Highlights	Major Activity	Major Stakeholder
02/23/2015	Greenhouse gas assurance statement presentation	Delievery of an assurance statement verifying greenhouse gas inventory	Korea Standard Association, Climate Change Research Institute of Korea
03/06/2015	POCOG-Korea Environment Corporation: Business agreement in environment area	Business agreement in environment sector (3 sectors and 9 assignments) to host green Olympic Games	Korea Environment Corporation
03/06/2015	Issue greenhouse gas inventory report	Publication of an inventory report that catalogues the sources of greenhouse gas emissions throughout the entire period of the PyeongChang 2018 Winter Games (2012~2018)	Venue Cities
03/13/2015	1st Legacy Committee meeting	Each institution sets legacy plan	POCOG, Gangwon Province and Venue Cities
03/23/2015	Certified Emission Reduction (CER) Donation Event	CER donations from private sector	Citizens, students, private organisations and entrepreneurs, etc.
04/17/2015	Working level meeting for Games legacy	Discussion of venue development status and legacy use	POCOG, Province HQ, Venue Cities and National Assembly
08/20/2015	Issue PyeongChang sustainability fundamental report and CSR guideline	Publication of *PyeongChang 2018: New Horizon for Sustainability – Furthering Benefits to People and Nature*, and CSR guideline	Participating organisations
09/03/2015	A workshop to further supply green vehicles during 2018 Winter Games	Green vehicle supply plan	Gangwon Province, Ministry of Environment, Ministry of Culture, Sports and Tourism, Korea Environment Corporation, KIA Motors and Zyle Daewoo Bus
09/07/2015	Special lecture to enhance the management's awareness on sustainability	Sustainability and global standard Olympic Games and sustainability	POCOG
11/18/2015	POCOG-Korea Environment Corporation donation of revenues from 'Resource Circulation Bazaar'	Endowment to Daegwallyeong Prospect Scholarship Committee to develop potential winter sports athletes	Daegwallyeong Prospect Scholarship Committee
12/07/2015	6th environment expert committee	Discussion on the current status of green Olympic Games, creating materials to enhance environmental awareness, GHG reduction research project, comprehensive plan on waste materials	POCOG, environment expert, NGO, public institution official, and local citizen
12/18/2015	Korea South-East Power Corporation donates CERs	Donation of 60,000 t of CERs to offset greenhouse gas emission during the PyeongChang 2018 Winter Games	Korea South-East Power Corporation
12/25/2015	Pagoda Dream Donation Campaign	For every photo posted in social media posing a sport event of the PyeongChang 2018 Winter Games, KRW 2,000 will be donated to future national athletes	Public

[Table 1.5] Highlights from 2015

H. 2016 Highlights

Date	Highlights	Major Activity	Major Stakeholder
01/17/2016	2016 Winter Dream Programme	Winter sport training, special lecture, and experiencing history and culture	179 youths from 44 participating countries
02/19/2016	Final report: Medium/long-term plan on greenhouse gas	GHG management plan and inventory update plan	Consultant, Climate Change Research Institute of Korea
04/06/2016	Publish environmental education material for the PyeongChang 2018 Winter Games	Publication of *Environment Trip to PyeongChang 2018 Winter Games*	Ministry of Education, Gangwon Municipal Institute for Study of Nature, Korea Climate Change Response Research centre
05/25/2016	POCOG-Korea Environmental Industry Technology Institute: Business agreement	Five agendas in three sectors, including greenhouse gas reduction	Korea Environmental Industry & Technology Institute
07/18/2016	POCOG-Solvay Energy Services Korea: Business agreement	POCOG cooperates with Solvay Energy Services Korea, a Korean subsidiary of global chemical company 'Solvay', to offset greenhouse gas reduction and advertisement	Solvay Energy
08/19/2016	Opening ceremony of Daegwallyeong Healing Forest	Opening ceremony of the Healing Forest, located in one of the Venue Cities Daegwallyeong	Korea Forest Service, Gangwon Province, 170 staff members from POCOG
09/06/2016	Resource circulation bazaar for the PyeongChang 2018 Winter Games	Revenue from the bazaar donated to youth winter sports club located in Gangwon Province	Youth winter sports clubs in Gangwon Province
09/19/2016	the PyeongChang 2018 Winter Games ISO20121 certificate presentation	Obtained ISO 20121, an international sustainability certification for massive events like Olympic Games, for the first time in the history of the Olympic Winter Games	POCOG, SGS Korea
10/12/2016	Gangwon Wind Power Generation – CERs donation	Donated 20,000 t of CERs for zero GHG emission during 2018 Winter Games	Gangwon Wind Power Generation
10/25/2016	POCOG-KORA: Environment agreement	Seven assignments over two sectors such as Waste-free green Olympic Games, Waste collection and recycle, Cooperation on waste disposal and information exchange, etc.	KORA
11/22/2016	Korea District Heating Corporation - donates 360,000 tonnes of CERs for the PyeongChang 2018 Winter Games	POCOG-Korea District Heating Corporation: business agreement over carbon cooperation and donation ceremony	Korea District Heating Corporation

[Table 1.6] Highlights from 2016

1.5 Sustainable Management Strategy

A. Sustainable Management Strategy

❍ POCOG has been systematically executing sustainable management strategies to become socially responsible in every aspect of preparing and executing the 2018 Winter Games. This is to open a new horizon of winter sports in Asia, a big stage with high potentials, with people from all around the world and leave a sustainable legacy in Korea and Gangwon Province.

❍ Sustainable Management Strategy that was adopted in February 2016 is centered around 5 major focuses and 17 initiatives that encompass environmental, economic, and social aspects to promote a variety of activities and programmes under the vision of "New Horizons for Sustainability – Furthering benefits to People and Nature." In order to realise sustainability, POCOG leads sustainable operation with principles of responsibility, comprehensiveness, morality, and transparency. Comprehensive works of sustainable management are performed by Sustainability Team. The team cooperates with other departments from POCOG and external stakeholders to consolidate and adjust sustainable activities within POCOG, while communicating with major stakeholders about sustainable management assessment, responses and sustainable achievements.
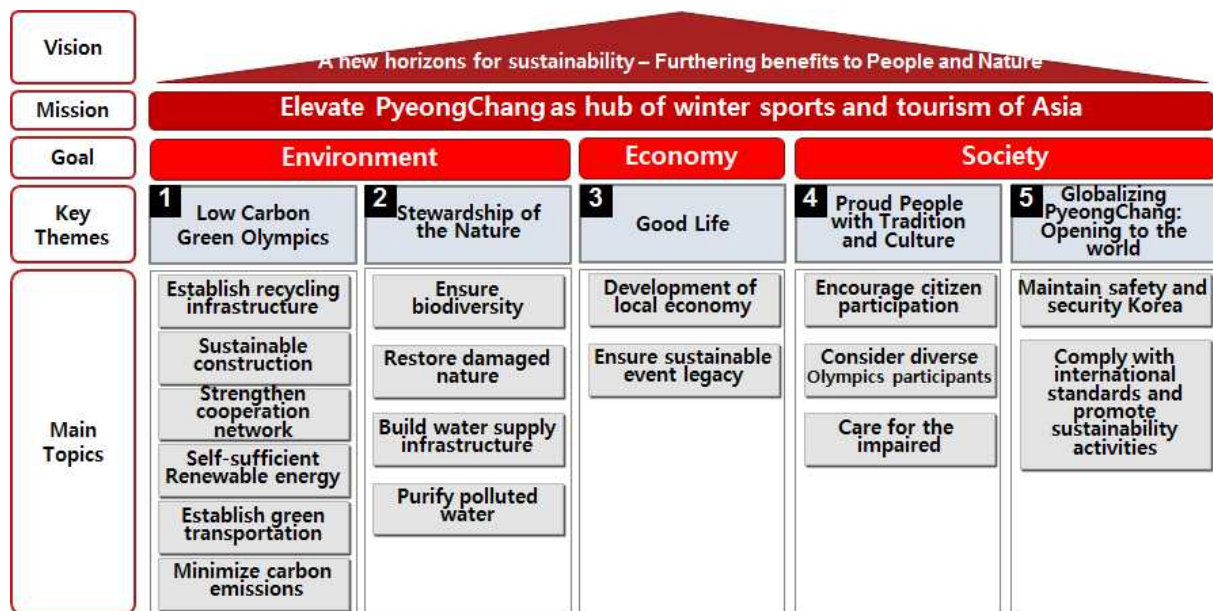
[Figure 1.11] Sustainable Management Strategy

B. Sustainable Management Business Process

❍ POCOG follows a Plan – Do – Check – Act cycle to execute sustainable management in a systematic manner. In 'Plan' stage, POCOG identifies requirements from different stakeholders, and establishes tasks and goals that pose material impacts on POCOG to define responsibility and authority by goal. In 'Do' stage, POCOG plans to execute detailed tasks to help the stakeholders be better aware of sustainability. In 'Check' stage, POCOG pursues, monitors, and evaluates sustainability and reports to the management. In 'Act' stage, revisions are complemented to sustainable management plan to reflect them into sustainable management strategy. A repetitive business process enables POCOG to re-examine overall direction of sustainability and improve it with continuous enhancements.

[Figure 1.12] Sustainable Management Business Process
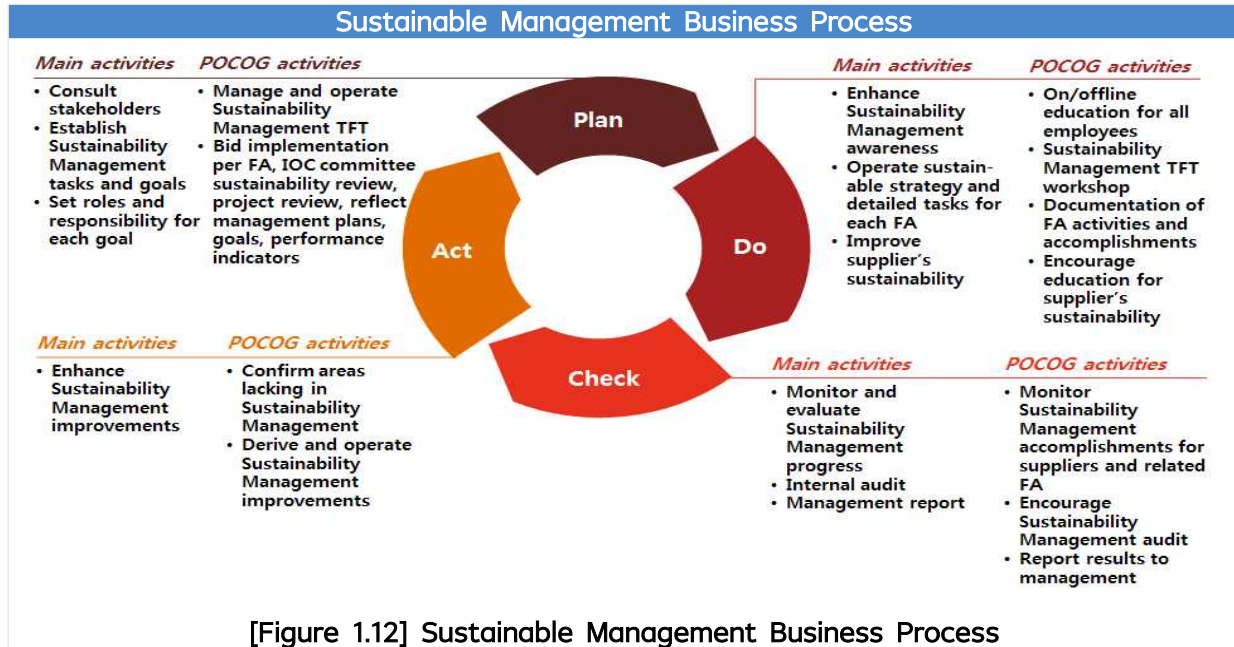
C. Sustainability Achievements and Future Plans

Sector	Topic	2015/2016 Action and Target	Future Plan
Low-carbon Green Olympic Games	▪ Establish recycling infrastructure	▪ Wonju-Gangneung express railroad - 87% completed ▪ Build a basis for use of green vehicles - Develop a guideline for selecting green vehicles - Select green vehicle supporting organisations	▪ To be open in 2017 ▪ Forecast the number of electric vehicles required and select locations for charging stations during the 2018 Winter Games
	▪ Self-sufficient Renewable energy	▪ Build renewable energy generation facility in new venues - Four new venues: Install solar and geothermal power plants ▪ Build wind power generation complex in Venue Cities - 32 MW wind power generation complex	▪ Pursue G-SEED certification ▪ Build additional 70.7 MW wind power generation complex
	▪ Sustainable Construction	▪ Six venues, including Alpensia Sliding Centre, obtained G-SEED ▪ Four new ice rinks and Alpensia Sliding Centre obtained preliminary certification in energy efficiency rating ▪ Olympic Village · Media Village obtained G-SEED and preliminary certification in energy efficiency rating	▪ Obtain G-SEED and energy efficiency rating certification
	▪ Minimise carbon emissions	▪ Publish greenhouse gas inventory report ▪ Publish Greenhouse management report ▪ Greenhouse gas offset status: 629,570 t (40% accomplished)	▪ Develop EGIS website
	▪ Green Procurement	▪ Green product purchase education ▪ Monitor green product purchase	▪ Green product purchase education ▪ Monitor green product purchase

Sector	Topic	2015/2016 Action and Target	Future Plan
Stewardship of the Nature	▪ Restore damaged nature	▪ Establish 34 ha of replacement forest in Baekdudaegan Protection Areas	▪ Establish 57 ha of alternative forest in Baekdudaegan Protection Areas
	▪ Build Sport Complex through eco-restoration	▪ Transform landfills in Gangneung Olympic Park into a culture and sports park	▪ Consistent management and monitoring to protect ecosystem and restore biodiversity
	▪ Promote Biodiversity	▪ Further Designation and Management of protection areas ▪ Eco-stream restoration project ▪ Increase and restore endangered species	▪ Early restoration of ecosystem and comprehensive and systematic management ▪ Expand protection area to ecologically diverse area
Good Life	▪ Ensure sustainable legacy of the event	▪ Post-utilisation plan for 10 venues	▪ Set post-utilisation plans for two venues
	▪ Development of local economy	▪ 3 cities, 5 special zones and 13 districts ▪ Investment on facilities	▪ Designating special zones and building facilities
Proud People with Tradition and Culture	▪ Accessibility for the impaired	▪ Issue and distribute accessibility manual ▪ Examine Games facilities and service accessibility ▪ Improve convenient facilities for the impaired at private business in Venue Cities ▪ Education on Paralympic Games and accessibility awareness	▪ Inspect facilities and service accessibility ▪ Monitor Test Event accessibility ▪ Enhance convenient facilities for impaired in Venue Cities ▪ Activate Wheelchair-friendly house system
	▪ Consider diverse Olympic participants	▪ Dream Programme ▪ Olympic·Paralympic Games Career Bus ▪ Open Olympic and Paralympic Games education web portal	▪ Expand Olympic and Paralympic Games education
Globalizing PyeongChang: Opening to the World	▪ Maintain safety and security Korea	▪ Organise counter-terrorism and disaster response system in preparation of Test Events ▪ Build disaster safety network	▪ Perform anti-terrorism and comprehensive emergent rescue training ▪ Establish comprehensive measures for anti-terrorism and safety activities
	▪ Comply with international standards and promote sustainability activities	▪ Establishment and Distribution of CSR guideline	▪ Monitor participating organisations

[Table 1.7] Sustainable Management Actions and Future Plans

D. Sustainability Report and Future Plan

❍ POCOG's Sustainability Framework published in July 2015 has proposed the preparatory system for implementation plans of Games sustainability, and strategies to engage in the five key themes: Low Carbon Olympic Games, Stewardship of the Nature, Good Life, Proud People with Tradition and Culture, and Globalizing PyeongChang: Opening to the World. Moreover, this Sustainability Report hereby presents POCOG's tangible accomplishments on these five key themes. POCOG will continue to report with transparency its sustainability management activities via Sustainability Reports.

1.6 Risk Management System

❍ POCOG has established a risk management system that identifies and manages potential risks to successful hosting of the 2018 Winter Games, to prevent any risk or systematically react and recover if it occurs.

❍ Risk management helps to minimize negative impacts on major operational factors and maintain the functions of the Games at a normal pace by preparing preemptive actions on risks that may occur before or during the Games time, and executing those actions when risks do arise, through filling out risk register and emergency plans according to the master schedule.
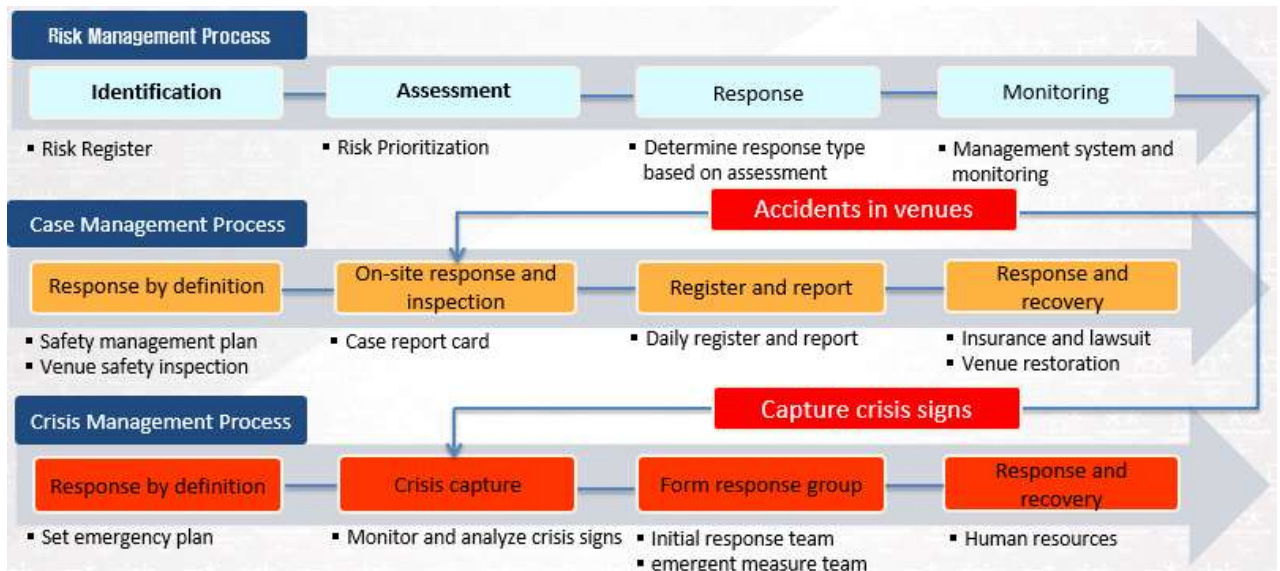
[Figure 1.13] Risk Management Process and Response System

❍ In 2015, POCOG created a risk register that lists out detailed information of overall risks for each function in the Olympic Games, the transition period, and the Paralympic Games, that may potentially occur during the pre-Games and Games-time periods. In order to concentrate resources and capacity on probable and material risks on the basis of analysis performed in previous Olympic Games, POCOG put priorities on risks and identified 48 key risks, and 256 general risks, totaling 304 risks.

❍ In addition, 2016/2017 emergency plans for Test Events were laid out as an action manual in order to prepare crisis scenarios that might cause material damages to key elements in preparing for and proceeding with the 2018 Winter Games. The plan specifies case studies with different emergency scenarios, chain of report in case of crisis, decision authority, procedure and command adjustment system in addition to instructing specific response measures for venue/FA.

❍ In future, compensating activities will be performed for each FA risk factor by 2018 Winter Games. A general risk level will be minimised with consistent monitoring. The same process is also planned to address risks for each venue, including identification, compensating activities, establishing a plan and target date, and monitoring. Additionally, an emergency plan of 2018 Winter Games will be established based on the result of Test Event emergency plan, to secure crisis-responding capacity for the Games.

1.7 Materiality Assessment and Stakeholder Communication

A. Materiality Assessment

❍ In order to report the results of POCOG's sustainable activities by 2016, POCOG assessed the materiality and prioritised five key agenda and 27 achievements. They reflect social interests and assessment results of impact on POCOG. The entire issue list is categorised by economy, environment, and society while UNGC, GRI G4 guideline, Event organizer Sector Supplements, achievement indicator for previously hosted Olympic Games and stakeholder analysis are used to evaluate the degree of social concern. In addition, workforce survey, BID commitment analysis, and other economic, environmental, social management sectors have been analysed to assess the influence of POCOG.
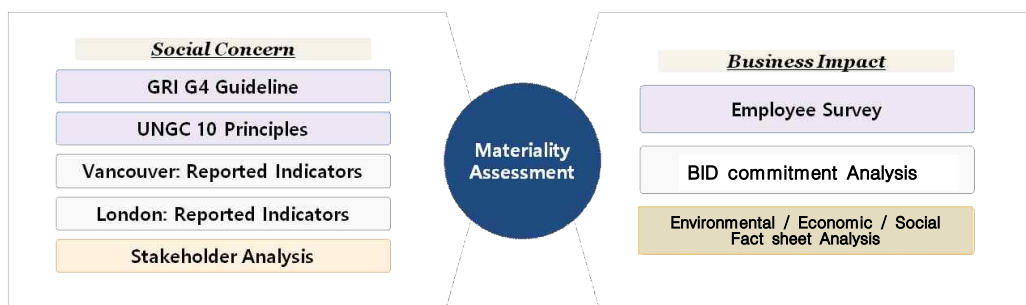
[Figure 1.14] Materiality Assessment Elements
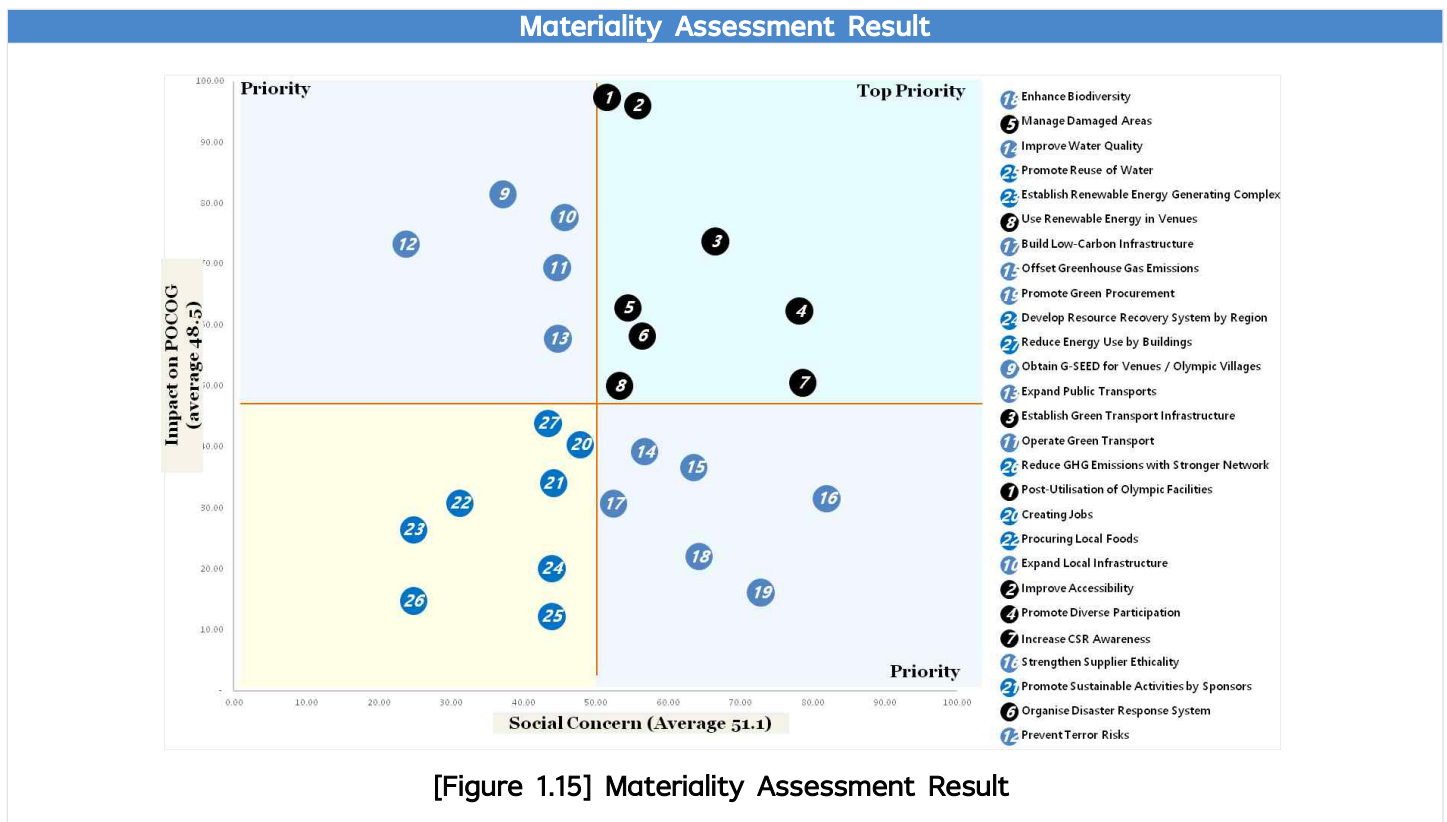
[Figure 1.15] Materiality Assessment Result

❍ The results of analysis on social concern and impact on POCOG were quantified, and reporting areas were divided into three levels – top priority, priority, and reporting issues. The following top priority areas were reported in depth. Details on top priority and priority issues can be found in respective pages of the report.

Material Issues		
	Category	Pages in report
Top Priority	1. Legacy use of Olympic venues	40-41
	2. Improve accessibility	44-45
	3. Build green transport infrastructure	26-27
	4. Promote diverse participation	45-47
	5. Manage damaged areas	37-38
	6. Organise disaster response system	48-49
	7. Increase CSR awareness	49
	8. Use renewable energy in venues	28-29
Priority	9. Obtain G-SEED for Venues / Olympic Villages	30-31
	10. Expand local infrastructure	42-43
	11. Operate green transports	26-27
	12. Prevent terror risks	48-49
	13. Expand public transports	27-28
	14, Improve water quality	33-34
	15. Offset greenhouse gas emissions	34-35
	16. Strengthen supplier ethicality	49
	17. Build low-carbon infrastructure	30-32
	18. Enhance biodiversity	38-39
	19. Promote green procurement	35-36

[Table 1.8] Material Issues

B. Communication with Stakeholders

❍ POCOG has established the procedure to determine its direction and participation in these issues by identifying relevant stakeholders and reflecting requirements from them to operate sustainable management system. POCOG actively communicates not only with internal staff members, but also with other external stakeholders, including IOC, Venue Cities, suppliers, and sponsors, to set common grounds and collect different opinions for POCOG sustainable management. POCOG utilises a variety of channels, including sustainability report, website, and media coverage, to continue to communicate with stakeholders.

[Figure 1.16] Stakeholder Structure and Cooperation

C. Achievement on Communication with Stakeholders

Sustainability education on POCOG management and staff members	FA quarterly monitoring	IOC SEL semi-annual review	Sustainability workshop with sponsors

*SEL: Sustainability, Environment and Legacy

[Table 1.9] Achievements on Communication with Stakeholders
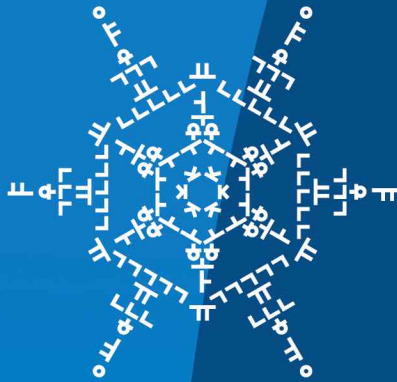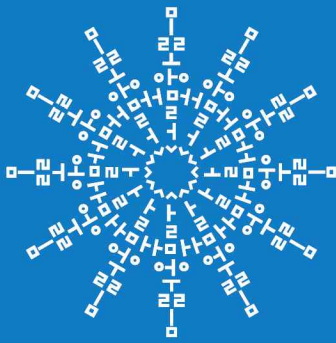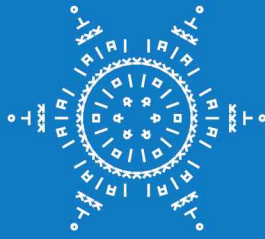
Ⅱ. PyeongChang
Sustainability

2.1 Low-Carbon Green Olympic Games

❍ Due to international consensus upon the post-2020 climate regime, and stakeholder's increasing attention on lower environmental impacts, environment-friendly preparation and execution of the Olympic Games is no longer a matter of choice and has become inevitable. POCOG aims to host "O2 Plus Winter Games with low-carbon and resource circulations" and pivots around a low-carbon green Olympic Games as the main pillar of environment-friendly Olympic Games. POCOG will also continue to stretch its efforts to lower impacts on the environments while preparing for PyeongChang 2018 Winter Games.

Topic	2015/2016 Action and Target	Future Plan
▪ Establish green transport infrastructure	▪ Wonju-Gangneung express railroad - 87% completed ▪ Build a basis for use of green vehicles - Develop a guideline for selecting green vehicles - Select green vehicle supporting organisations	▪ To be open in 2017 ▪ Forecast the number of electric vehicles required and select locations for chaging stations during the 2018 Winter Games
▪ Self-sufficient Renewable energy	▪ Build renewable energy generation facility in new venues - Four new venues: Install solar and geothermal power plants ▪ Build wind power generation complex in Venue Cities - 32 MW wind power generation complex	▪ Pursue G-SEED certification ▪ Build additional 70.7 MW wind power generation complex
▪ Sustainable Construction	▪ Six venues, including Alpensia Sliding Centre, obtained G-SEED ▪ Four new ice rinks and Alpensia Sliding Centre obtained preliminary certification in energy efficiency rating ▪ Olympic Village·Media Village obtained G-SEED and preliminary certification in energy efficiency rating	▪ Obtain G-SEED and energy efficiency rating certification
▪ Minimise carbon emissions	▪ Publish greenhouse gas inventory report ▪ Publish Greenhouse management report ▪ Greenhouse gas offset status: 629,570 t (40% accomplished)	▪ Develop EGIS website
▪ Green Procurement	▪ Green product purchase education ▪ Monitor green product purchase	▪ Green product purchase education ▪ Monitor green product purchase

[Table 2.1] Action Plan for Low-Carbon Green Olympic Games

A. Building Green Transport Infrastructure

❍ As 1,753,000 domestic and international travelers are expected to visit the Venue Cities (PyeongChang, Gangneung, and Jeongseon) from every region of Korea, including Incheon International Airport during the 2018 Winter Games, environment-friendly transport strategies are required, including lowering greenhouse gas emission level.

❍ In order to form such strategies, POCOG has established environment-friendly green transport infrastructure, which not only accomplishes its environmental vision "O2 Plus Winter Games" but also lays out convenient transport system.

❍ POCOG strives to save energy and reduce greenhouse gas emissions by constructing express railroad, which connects venues and associated facilities in the region, and establishing transfer centres and IT-based green transport system, including train stations and terminals, which would reduce energy consumption and resolve traffic congestion issues. POCOG also attempts to achieve the goal by utilising green transports (electric, hybrid and natural gas vehicle) to transport staff members, athletes, clients, and spectators during the Games time.

❍ **Wonju – Gangneung Express Railroad**
- Wonju – Gangneung express railroad, the key transportation network of the 2018 Winter Games, has been constructed since June 2012 and is expected to open in 2017. A carbon footprint of a high-speed train is 8 times lesser than that of gasoline-based vehicles, which means that 6,654 tonnes of greenhouse gas emissions can be reduced if 420,000 visitors choose to use Wonju – Gangneung express railroad instead of personal vehicles. In addition, Wonju – Gangneung express railroad will connect Seoul and Gangneung in 1 hour and 12 minutes, compared to the previous travel time of 5 hours and 47 minutes, and make Gangwon province significantly more accessible to Seoul metropolitan area. Thus, Gangwon province is expected to share functions of Seoul metropolitan area and achieve balanced growth by developing sightseeing and leisure.

❍ **Supplying Green Vehicles (e.g. electric vehicle)**
- POCOG plans to reduce 245 tonnes of CO_2eq by supplying green vehicles in order to successfully host sustainable green Olympic Games. To this end, POCOG established a guideline to select environment-friendly vehicles in 2015, and approved test driving of electric vehicles among the venues in winter 2016. In July 2016, POCOG executed the Business Agreement on Building Electric Vehicles and Charging Infrastructure with KOPEC, the largest state-owned utility company in Korea. KOPEC and its subsidiary KDN will rent 240 and 60 electric vehicles to POCOG free of charge right before the 2018 Winter Games, respectively, and install more than 20 quick-charging stations to facilitate the use of electric vehicles without inconvenience during the Games time. Electric vehicles will be used to transport staff members and athletes during the Games time.

- POCOG is going to finalise the number of electric vehicles to be used and locations to install charging stations by March 2017 to ensure a seamless operation of Games transport. In addition, POCOG anticipates that hydrogen vehicles will also become available as hydrogen charging stations are set to be installed by the end of 2017. POCOG will continue to discuss with the sponsors on operating hydrogen vehicles. POCOG will also build a system that allows close cooperation with the central and local governments and assisting organisations to suggest a variety of support plans to extend green vehicle operations during the Olympic Games. Charging stations that will be installed during the preparatory stage of the Games are not only for the Olympic Games, but can also be utilised in post-Olympic periods. This can be a great legacy of 2018 Winter Games to spread green vehicles in the Venue Cities.

Express Railroad	Electric Vehicle

[Figure 2.1] Green Transport

B. Using Renewable Energy in Venues

○ POCOG intends to utilise renewable and environmentally friendly energy, including wind power, solar power, and solar thermal power, to supply electricity to venues and to run the Games. New venues are designed to use renewable energy generated from geothermal and solar power plants to maximise energy efficiency while reducing greenhouse gas emissions. In order to achieve independent electricity generations from renewable sources, extra wind power generation facilities will be placed in addition to the existing ones to generate electricity required to host 2018 Winter Games.

○ **Placing Renewable Energy Generation Facilities in New Venues**
- POCOG intends to reduce greenhouse gas by installing additional facilities that further utilise renewable energy in new venues, which will lower the consumption level of energy and fossil fuel. Solar and geothermal energy generators will be installed in Gangneung Ice Arena, Kwandong Hockey Centre, Alpensia Sliding Centre, and Jeongseon Alpine Centre, currently under construction. These facilities will generate and supply a portion of energy to be used during the 2018 Winter Games.

Type	Name	Solar Energy(kW)	Geothermal Energy(kW)
Skating	Gangneung Ice Arena	156	1,099
	Kwandong Hockey Centre	130	716
Mountain	Alpensia Sliding Centre	15	475
	Jeongseon Alpine Centre	65	0
Total		366	2,290

[Table 2.2] Solar and Geothermal Power Plants

Gangneung Oval

Floor Area	37,485	m2
Energy Savings	5,074	MWh/competition period
GHG Reductions	2,333	tCO2eq/competition period

Kwangdong Hockey Center

Floor Area	23,523	m2
Energy Savings	5,818	MWh/competition period
GHG Reductions	2,675	tCO2eq/competition period

Gangneung Ice Arena

Floor Area	29,621	m2
Energy Savings	5,527	MWh/competition period
GHG Reductions	2,541	tCO2eq/competition period

Kwangdong Hockey Center

Floor Area	2,863	m2
Energy Savings	6,955	MWh/competition period
GHG Reductions	3,198	tCO2eq/competition period

Gangneung Hockey Centre

Floor Area	23,523	m2
Energy Savings	5,818	MWh/competition period
GHG Reductions	2,675	tCO2eq/competition period

Jeongseon Alpine Arena

Floor Area	4,636	m2
Energy Savings	9,930	MWh/competition period
GHG Reductions	4,566	tCO2eq/competition period

[Table 2.3] Energy and Greenhouse Gas Savings in Major Venues

○ **Building Olympic Wind Power Complex**

- The Host City PyeongChang already runs a 145-megawatt wind turbine generator, in accordance with Central Korea Renewable Energy Development Plan and Wind Energy Generation Cluster Project. Since the required electric capacity during the 2018 Winter Games is 190 megawatts, POCOG aims to entirely supply required energy and is pursuing additional projects to expand electric capacity by 100 megawatts. As a result, 32-megawatt wind power complexes were completely constructed between 2015 and 2016, and began commercial operations. This capacity, in addition to currently operating ones (177.04 megawatts), will account for 93% of the total capacity required during the 2018 Winter Games. Once the constructions launched in H2 2015 and H1 2016 are complete, our original goal of obtaining additional 100 megawatts will be over-achieved, and therefore, we expect that renewable sources will be able to supply electricity required during the 2018 Winter Games.

[Figure 2.2] Olympic Wind Power Complex

- In order to realise 2018 Winter Game's Vision "O2 Plus Winter Games," POCOG plans to complete the ongoing projects before the opening date to provide the entire amount of electricity required during the 2018 Winter Games with renewable energy as promised in its bid file. Also, POCOG will contribute to reducing greenhouse gas emissions by utilising renewable energy in generation and supply of electricity for which large carbon footprints are expected.

Wind Power Generation Currently Operating in Venue Cities				Olympic Wind Power Status (In process)			
Name	Location	Facility No.	Capacity (MW)	Project Name	Facility No.	Capacity (MW)	Remark
Daegwallyeong1	Daegwallyeong, PyeongChang	4	2.64	Gangneung/ Wangsan	2 MW 13ea	26 MW	Commenced in H2 2015
Gangwon Wind Power	Daegwallyeong, PyeongChang	49	98	Jeongseon/ Manhangjae	2.5 MW 16ea	40 MW	Commenced in H1 2016
Daegi Wind Power	Seongsan, Gangneung	2	2.75	Gangneung/ Wangsan	2.35 MW 2ea	4.7 MW	Commenced in H1 2016
Taegi Mounting Wind Power	PyeongChang -Hoengseong border	20	40	Gangdong, Gangneung	2.5 MW 24ea	60 MW	Commence in H2 2017
Daegwallyeong2	Daegwallyeong, PyeongChang	1	2	Jeongseon/ Imgye	2 MW 10ea	20 MW	Location under Review
Daegwallyeong3	Daegwallyeong, PyeongChang	1	1.65	PyeongChang/ Baekseok Mt	2 MW 45ea	90 MW	Location under Review
PyeongChang Wind Power	Cheongok Mt, PyeongChang	15	30	PyeongChang/ Daegwallyeong	3.3 MW 7ea	23.1 MW	Location under Review
Total		92	177.04	Total			

[Table 2.4] Status of Wind Power Generation in Regions around Olympic Venues

C. Green Building Certificate for Olympic Venues/Olympic Villages

❍ The PyeongChang 2018 Winter Games has designed venues and other facilities to create architectural and urban spaces that are sustainable and environmentally friendly in international standard. The green design approach reduces energy cost and minimises greenhouse gas emissions by utilising high energy-efficiency and passive design. In addition, green constructions and energy efficiency level have been certified to accomplish the vision of hosting an environment-friendly Olympic Games.

❍ While green Olympic Games venues were constructed to increase energy efficiency and to reduce environmental impacts, they are also expected to further contribute in continuous greenhouse gas reduction by inducing efficient energy usage even after 2018 Winter Games. Nine venues and Olympic Villages, whose energy efficiency level will be certified, are expected to cut down greenhouse gas emissions by 17,721 tonnes during 2018 Winter Games.

❍ Green Building Certificate for Olmpic Venues/Olympic Villages

- Alpensia Sliding Centre and Alpine Centres are representative eco-friendly facilities for snow and sliding events. In January 2015, Alpensia Sliding Centre obtained preliminary certification with the Top rating in G-SEED and 1+ rating in energy efficiency.

- In June 2014, Alpine Centres obtained preliminary certification with Normal rating in G-SEED. Both venues are planned to be certified upon completion of construction before the 2018 Winter Games take place.

- Designs of four new ice rinks (Gangneung Oval, Gangneung Ice Arena, Gangneung Hockey Centre, Kwandong Hockey Centre) were finalised in 2014 and construction did not begin until obtaining preliminary certification of excellent level in G-SEED. In 2015, there were institutional-level discussions on obtaining energy efficiency rating and preliminary certification process was complete in October 2016.

- For facilities such as Olympic Villages and Media Village, POCOG strived to build wind paths and blend them with eco-friendly elements while creating landscapes that emphasize ecology, nature and locality and finally to pursue obtaining green building certificate and energy efficiency rating. Gangneung Media Village and Olympic Villages were designed in April 2015 after a series of discussions on material, construction, maintenance to reflect various elements into the design to obtain certificate. They obtained 2nd level of energy efficiency certification July 2015, and preliminary green building certification of 'certified' level in March 2016.

- G-SEED: Green Standard for Energy and Environmental Design
  · Best : 1 (Alpensia Sliding Centre)
  · Excellent : 4 (Gangneung Oval, Gangneung Ice Arena, Gangneung Hockey Centre, Kwandong Hockey Centre)
  · Certified : 1 (Jeongseon Alpine Centre)
- Energy efficiency rating: 5 (Alpensia Sliding Centre, Gangneung Oval, Gangneung Ice Arena, Gangneung Hockey Centre, Kwandong Hockey Centre)

D. PyeongChang Sustainable Venues

Alpensia Sliding Centre

[Figure 2.3] Alpensia Sliding Centre

Alpensia Sliding Centre, host to bobsleigh, skeleton, and luge events, has a 1,857 metre-long track along with 161 metres of indoor push-start training track, which totals 2,018m to represent 2018 Winter Games. The venue has 7 buildings, including start house, finish house, indoor ice start practice building, with capacity of 7,000 people.

Alpensia Sliding Centre has world's second indoor ice start practice centre, enabling year-around training. This centre was built in consideration of the athlete's safety, eco-friendliness, and legacy use after 2018 Winter Games. The centre is designed with 16 curves and makes the track more dynamic than any other venue in history while multiple safety devices are installed in each curve to put athlete's safety first. These devices are implemented at every part of the track where it straightens passing each curve. Wooden bumpers are implemented on the top as the first layer, followed by side wooden bumper as the second layer, and the third layer of the device aims to prevent the athletes from derailing. In addition, a speed-reducing system is installed towards the end of the track to minimise collision damages. This system is composed of wooden floor as the first-level buffer, and foam rubber mat as the second and third.

In addition, the centre was designed eco-friendly for nature, people, and energy and equipped with cutting-edge green facilities such as natural sunlight, solar heat, geothermal heat, water resources saving, green rooftop, LED track light, hybrid security lighting, and permeable blocks. In January 2015, Alpensia Sliding Centre obtained preliminary certification with the Best level in G-SEED and 1st grade of energy efficiency simultaneously and is the most eco-friendly venue.

It also has a start point for tourists, where sliding experiencing programmes will take place for a greater utilisation of the Centre after the 2018 Winter Games, and an indoor push-start training facility enables year-around training.

Gangneung Ice Arena

Gangneung Ice Arena, the centre of venues and the landmark in Gangneung Olympic Coastal Cluster, is designed with three principles: 1) The arena and temporary facilities are designed in accordance with international standard, 2) the design reflects eco-friendliness and future-directed that symbolises the arena, and 3) for effective legacy use, recycled resources were used and appropriate size of arena was considered.

The design with concentrated eco-friendly technology, including passive design that preserves forests to the greatest extent and uses natural sunlight and ventilation, makes the area environment-friendly with low energy consumption. In October 2016, it obtained preliminary certification of excellent level in G-SEED in addition to energy efficiency certification.

[Figure 2.4] Gangneung Ice Arena

Gangneung Ice Arena, where both figure skating and speed skating take place, avoided straight lines in its design but rather used curves to represent Korea's own beauty. Its elegant curves creatively express the beauty of figure skating and dynamics of short track.

Inside of the arena are two floors underground and four floors overground to contain 12,020 viewers. Ice rinks are built in two separate floors, one of which will be used to host the events while the other is a practice rink for figure skaters. Since short track and figure skating will take place in the same rink and require different ice quality, the arena is designed to complete ice replacement process, including the quality and area of ice, signs, and attachments in three hours.

After 2018 Winter Games, Gangneug Ice Arena is planned to be utilised as a venue of exercise for citizens. One of the two ice rinks will be transformed into a swimming pool in international contest standard and culture and sports complex.

E.   Greenhouse Gas Reduction and Offset

❍ **Carbon Responsible Games**

- POCOG laid out greenhouse gas management plan and categorised them by four plans (measurement, reduction, offset, and legacy). It aims for zero greenhouse gas emission during the period from Olympic Games preparation before the Opening Ceremony and is systematically maintained. In February 2015, POCOG released *2014 POGIR (PyeongChang Olympic Greenhouse Gas Inventory Report)*. This report is the first step towards building a legacy for low-carbon Olympic Games and will be referenced as the basis for the first and second *Greenhouse Gas Management Reports* and *Greenhouse Gas Assessment Report* in the future. For reference, greenhouse gas emissions are annually measured by a third party whose qualification meets the international standard, and the result will be used to build and update greenhouse gas emissions inventory for the PyeongChang 2018 Winter Games.

- The most distinguishing characteristic of "Carbon Responsible Games" is its ultimate aim for zero emission from preparation to management stage of the 2018 Winter Games through reduction and offset. To achieve zero greenhouse gas emissions, the *PyeongChang 2018 Greenhouse Gas Management Report* was published in April 2016 to provide more details in greenhouse gas reduction and offset strategy and yearly reduction target.

[Figure 2.5] Carbon Responsible Games
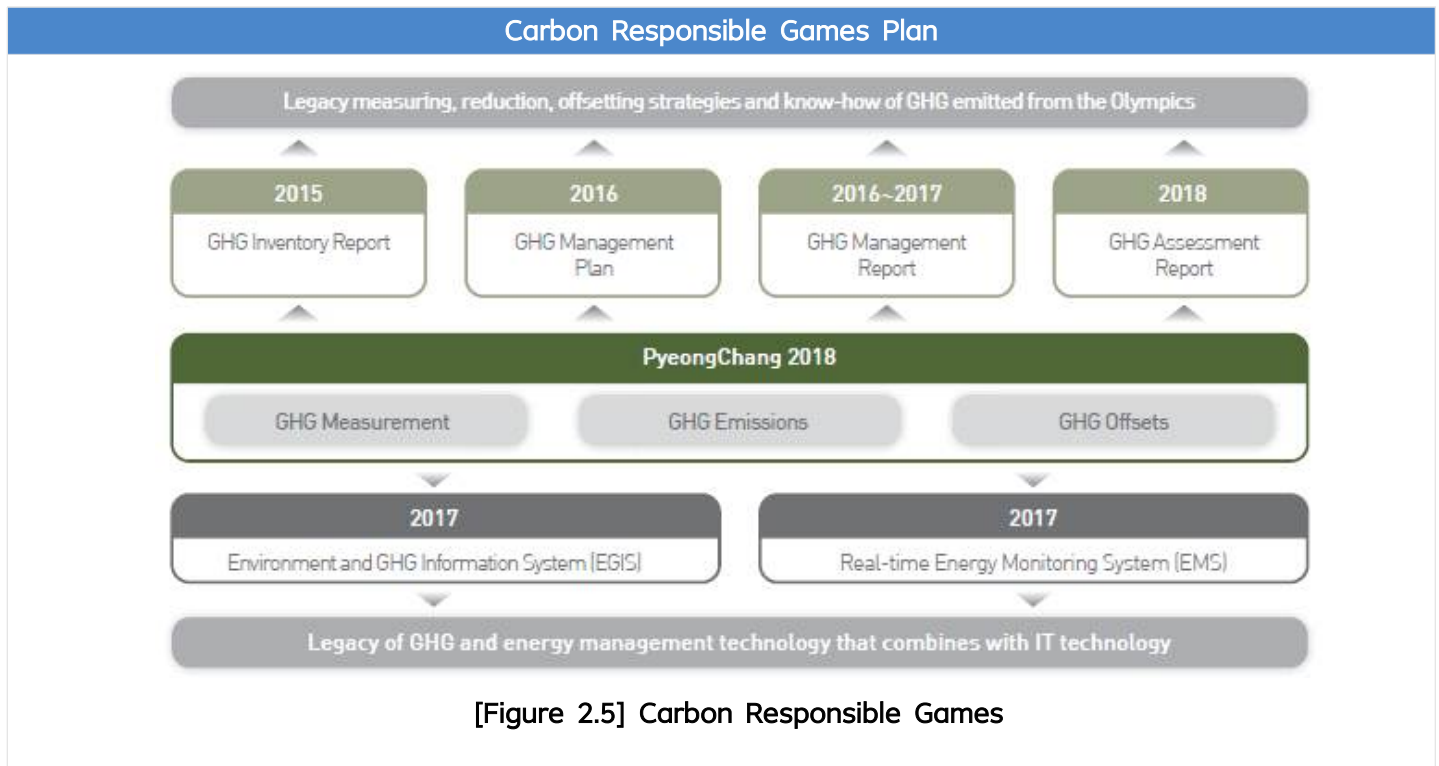
- In addition, POCOG will develop Environment and Greenhouse Gas Information System (EGIS), a web-based system to be launched in 2017 in order to manage greenhouse gas emissions, air quality, indoor air quality, and water quality information for each venue. This is the first attempt in the history of the Olympic Games, and it will help stakeholders, including the clients and spectators, have easier access to information on environment and greenhouse gas emissions.

Environment & Greenhouse Gas Information System (EGIS)
POCOG provides information on environment and greenhouse gas emissions to communicate with the public · It introduces policies / projects of POCOG and Venue Cities for reduction and offset of greenhouse gas emissions · It calculates greenhouse gas emissions and manages the inventory · It manages and monitors greenhouse gas reduction and offset goals · It monitors status of greenhouse gas reduction and offset projects and assesses the result · It monitors energy consumption level by major buildings and provides analysis on real-time basis

[Table 2.5] Environment&Greenhouse Gas Information System (EGIS)

❍ **Greenhouse Gas Inventory Report**

- The PyeongChang 2018 Winter Games manages greenhouse gas emissions with four initiatives (measurement, reduction, offset, and legacy) to achieve zero emission. greenhouse gas emissions are annually measured by a third party whose qualification meets the international standard, and the result will be used to build and update greenhouse gas emissions inventory for the PyeongChang 2018 Winter Games.

Category	Report	Total Emission	Remark
1st (Feb 2015)	PyeongChang 2018 Winter Games Greenhouse Gas Inventory Report	1,560,825 tCO2eq	
2nd (May 2016)	PyeongChang 2018 Winter Games Greenhouse Gas Management Report	1,593,621 tCO2eq	Changes in emission source
3rd (May 2017)	PyeongChang 2018 Winter Games Greenhouse Gas Management Report (tentative)	1,593,621 tCO2eq	
4th (May 2018)	PyeongChang 2018 Winter Games Greenhouse Gas Result Report (tentative)	1,593,621 tCO2eq	

[Table 2.6] Greenhouse Gas Inventory Report

❍ **Greenhouse Gas Reduction and Offset**

- The initial greenhouse gas reduction and offset goal was divided into two phases – first phase(2012-2018) and second phase(2019-2025). However, POCOG plans to adjust its plan to reduce and offset the entire greenhouse gas emission from preparatory stage to 2018 Winter Games based on circumstantial changes. In order to diversify offset strategies, there are on-going discussions with venue cities to adopt forest carbon offset system, while planning to form carbon offset fund and to obtain CERs in cooperation with relevant organisations. The PyeongChang 2018 Winter Games Greenhouse Gas Management Report (tentative) will evaluate greenhouse gas reduction activities against the goals by updating the actual emissions until 2016 and reviewing reduction performance.

Greenhouse Gas Reduction Strategy	Greenhouse Gas Reduction Means
Low-Carbon venues	·Install facilities for generation and use of new and renewable energy (solar and geothermal power plants) ·Energy saving facility ·Water saving facility (reuse rainfalls, water saving equipment)
Low-Carbon Transport System	·Wonju-Gangneung express railroad ·Intelligent Transport System (ITS) ·Transfer centres at major points ·Supply low-carbon vehicles (electric, hybrid) ·Apply low-carbon engineering to build railways
Purchase Low-Carbon Certified Product	·Purchase low-carbon office supplies
Minimum waste	·Promote recycle with established system ·Recycle food waste ·Reuse overlay materials
Wind Power Energy	·Use wind power energy

[Table 2.7] Greenhouse Gas Reduction and Offset Plan

- Greenhouse offset result: 629,570 tonnes (40% achieved)

Category	1st Donation	2nd Donation	3rd Donation	4th Donation	5th Donation	6th Donation
Date	03/23/2015	12/16/2015	12/28/2015	07/18/2016	10/12/2016	11/22/2016
Donator	Youn-sun Kim and 8 people, Ecomom Korea, Eco-eye	Korea Investment and Securities, POSCO, SK Energy	Korea South-East Power	Solvay Energy Services Korea	Gangwon Wind Power Generation	Korea District Heating Corporation
CER	CDM-CER	CDM-CER	CDM-CER	CDM-CER	CDM-CER	CDM-CER
Amount	15,936 tCO2eq	75,321 tCO2eq	60,000 tCO2eq	400,000 tCO2eq	20,000 tCO2eq	58,313 tCO2eq

[Table 2.8] Greenhouse Gas Offset Result

F.　Green Procurement Plan

❍ Purchasing and procuring green products in the first place is highly encouraged to host environment-friendly Olympic Games. Departments of Gangwon Province engaged in setting up Olympic venues, such as the Snow venue and Ice venue Departments, are now purchasing green products for 30-40% of the portfolio. The supervising group of green products in Gangwon Province educates and monitors on a regular basis, especially to members of POCOG who lack understanding in the definition of green products as well as the need and process for their purchase, to increase purchase and procurement rate of green products.

❍ It plans to realise "O2 Plus Winter Games," the environmental vision of the PyeongChang 2018 Winter Games, by promoting green product purchases that reduce energy and resource inputs and minimise greenhouse gas and waste. Therefore, a pledge to use green products throughout the entire preparatory stage of 2018 Winter Games will be satisfied and greenhouse gas will stay at minimum level. In addition, using green products will save resources and energy and minimise environmental wastes. It will open up a new horizon of sustainability where sports and environment can co-exist with social and ethical responsibility in place.

Date	Details
January/March 2015	Educate purchasers at POCOG to define and list out green products and why prioritised purchase is necessary
June 2015	Revise CSR guideline to prioritise and mandate green product purchase
July 2015	Establish plans to encourage green procurement
August 2015	Invite experts (KEITI) to teach how to use green product purchase system
After 2016	Meet individual department to identify green product demand and encourage them to make purchases

[Table 2.9] Green Procurement Status and Plan

2.2 Stewardship of the Nature

❍ Gangwon Province, the Host Province, is where natural resources are well-preserved in Korea. With the new development and growth paradigm, Gangwon Province's plentiful natural and tourism resources are the basis of sustainable development and prosperity and the source of competitiveness; they should be preserved and maintained with great care. Therefore, POCOG set its core Vision as to minimise damages during preparatory stages and pursue ecological continuity with restoration, and proceeds different activities, including preserving biodiversity, eco-life restoration and building infrastructure to supply clean water.

Topic	2015/2016 Action and Target	Future Plan
▪ Restore damaged nature	▪ Establish 34 ha of replacement forest in Baekdudaegan Protection Areas	▪ Establish 57 ha of replacement forest in Baekdudaegan Protection Areas
▪ Build Sport Complex through eco-restoration	▪ Transform landfills in Gangneung Olympic Park into a culture and sports park	▪ Consistent management and monitoring to protect ecosystem and restore biodiversity
▪ Ensure Biodiversity	▪ Further Designation and Management of protection areas ▪ Eco-stream restoration project ▪ Increase and restore endangered species	▪ Early restoration of ecosystem and comprehensive and systematic management ▪ Expand protection area to ecologically diverse area

[Table 2.10] Action Plan for Stewardship of the Nature

A. **Management of Damaged Areas**

❍ **Establishing Alternative Forests in Damaged Areas and Creating Landscape Forests near Venues**

- As forests were damaged to build Jeongseon Alpine Centre, POCOG, in cooperation with Korea Forest Service, strives to restore damaged areas in Baekdudaegan Protection Area in order to keep forests healthy and to minimise damages in biodiversity. By 2016, POCOG has planted 34 hectares of replacing trees across damaged farms and greens within Baekdudaegan Protection Area. Furthermore, it plans to plant 57 hectares of replacing trees in between 2017 and 2018, and maintain the liveliness of natural surroundings and biodiversity by discovering more candidate areas.

- In its bid file to host the Winter Games, POCOG promised the international community that it would facilitate afforestation in areas twice as large as that of the damaged forests due to venue construction. It plans to execute forest restoration projects scheduled year by year while taking good post-care of other projects that have already taken place. In addition, POCOG plans to continuously discover recoverable damaged area to further restore than originally planned.

- Moreover, POCOG plans to build and improve the landscape of areas within visibility near Olympic Games venues and major routes so that athletes and visitors from all over the world can appreciate natural sceneries of Green Korea. POCOG has initiated projects to create valuable tour resources that will attract visitors even after the Games time.

Major Activity	2015 Result	2016 Result
Landscape	156 ha	122 ha
Street Trees	42 km	15 km
Landscape Forest	711 ha	583 ha

[Table 2.11] POCOG's Maintenance of Damaged Areas

B. Building Sports Complex with Eco-Restoration

○ Gangneung Olympic Park, which was completely constructed in December 2016 since its inception in 2014, was transformed from a landfill site to a cultural and sports park by stressing local features, including ecology, nature and rurality. It aims to fulfil the vision of environmental Olympic Games by new venue of cultural and environmental experiences to local citizens.

○ Among newly developed lands (406,472 square metres) of Gangneung Olympic Park, 60% of them are green areas such as routes, rest area, and landscape and 86,696 square metres used to be a landfill site until being transformed into the park. The park and green areas will expand on natural circulations, preserve the surrounding ecosystem and are expected to serve as a habitat for small lives to restore biodiversity. In addition, venues with facilities re-using rainfalls and utilising renewable energy such as solar and geothermal energy will become great legacy of sports complex that prevents and minimises environmental pollution.

○ We plan to manage and monitor consistently to help the park and the green area be stabilised, while continuing to observing potential changes or impacts in surrounding environments that might occur due to building new venues and strive to restore them to pre-construction condition. In addition, there are plans to help organisms blend with new environments and continue to inhabit in the area.

[Figure 2.6] Gangneung Olympic Park

C. Enhancing Biodiversity

○ POCOG performs eco-restoration projects near venues while further designating preservation areas where ecosystem is well maintained. This is to restore ecosystem damaged from hosting the 2018 Winter Games at an early stage and to pursue systematic and comprehensive preservation of biodiversity and its sustainable use.

○ As Gariwang Mt was released from green belt to build Jeongseon Alpine Centre, POCOG discovered 584 hectares of compensating areas with plentiful inherent resources, which is 25 times as large as the damaged area. These compensating areas are now designated as green belt. Yeongwol Hanbando Wetland (2.7 square kilometres), adjacent to the Venue Cities, is a

home to water birds and was registered as Ramsar Site in 22 May 2015 in appreciation of its environmental values. On 12 May 2016, Taebaek Provincial Park was upgraded to become a national park to preserve its landscape, historical sites and rare flora and fauna. Therefore, biodiversity is expected to be protected under more stable and systematic management.

❍ There have been efforts to increase and reproduce 4 spieces long-horned beetles (disappeared from South Korea), long-tailed gorals (1st class endangered species), Manchurian trouts(2nd class endangered species), and Korean rat snakes, to protect endangered species due to climate changes or damaged habitats and diversify the surrounding ecosystem.

❍ There also have been constant efforts to build a sustainable system to wisely use natural resources by establishing eco-network to reproduce ecosystem and promoting eco-tourism. In addition, management on protection zones is being materialised by designating new areas with elegant landscape or diverse ecosystem are as environmental protection zones, and expanding pre-existing protection zones. Moreover, POCOG plans to foster sustainable environment that is flexible to changes by managing threatening elements to human and other creatures such as climate changes, introduced non-native species, genetically modified organism, species harmful to the local ecosystem, and wildlife diseases. Finally, POCOG will transition from regulation-oriented environment policies to creating co-existable environment that allows us to enjoy benefits from nature while simultaneously generating incomes.

Manchurian Trout Preservation	Long-Tailed Goral Preservation	Korean rat snake Preservation
Over 1,000 Mountain trouts are released to Odae National Park and streams in Jeongseon closed mine areas while capturing to remove competitive species in released areas.	Since 2011 when long-tailed gorals were identified to naturally inhabit in Odae National Park, two male and two female goats have been released every year until now (2016) to help them sustain as a group. Patrols surveil the habitats to curb illegal poaching, helping the goats settle, while analyses on habitats, behavioral characteristics and local relations are performed.	For Korean rat snakes, prior research and efforts were made such as building release field, remote path tracking, habitat, adaptation to build the foundation where artificial reproduction and breed are feasible. In 2015, 11 serpents were released to Odae National Park. In 2016, outdoor release field was created to provide nature-like conditions to serpents to help them easily transition to nature. In addition, a Korean rat snake couple mated and resulted in spawning 12 serpents, all of which successfully hatched.

[Table 2.12] Biodiversity Project

2.3 Good Life

❍ Gangwon Province and the Venue Cities have not been developed in a fast pace due to geopolitical and other external factors. However, undeveloped natural environments will become the main sources of sustainable development and the prosperity. It has been our Vision since the bidding stage to promote winter sports in Asia while developing Gangwon Province to become the winter sports hub in Asia where culture and tourism are also available with its unique nature and excellent infrastructure. The PyeongChang 2018 Winter Games will become a stepping stone to make this all happen. The ultimate economic effects of the PyeongChang 2018 Winter Games are to have citizens in Gangwon Province and the Venue Cities enjoy healthy and enriched life. Building sports facilities and re-organising social and economic infrastructure will provide a first-level tangible legacy to the local communities.

❍ POCOG and Gangwon Province vision to host a "sustainable PyeongChang 2018 Winter Games" to vitalise local economy, improve welfare, and bring prosperity in a long term. They aim to utilise the facilities in a long run, rather than for a one-time event, to create steady jobs and provide opportunities to generate incomes to local communities. They also strive to leave tangible and intangible economic benefits and legacy to enable healthy and enriched life among the citizens in Gangwon Province and the Venue Cities, needless to mention hosting successful 2018 Winter Games.

Topic	2015/2016 Action and Target	Future Plan
▪ Ensure sustainable use of venues	▪ Legacy plan for 10 venues	▪ Establish legacy plans for two venues
▪ Development of local economy	▪ 3 cities, 5 special zones and 13 districts ▪ Investment on facilities	▪ Designating special zones and building facilities

[Table 2.13] Action Plan for Good Life

A. Utilising the Facilities after 2018 Winter Games

❍ Venues
  - Newly constructed facilities, including the Olympic Villages and Media Village, to host 2018 Winter Games with success will further contribute to the development of local economy. Twelve venues are going to be used during the Games time. Six of them are being constructed after winning the bid while the other six will be accommodated by improving and repairing the existing venues.
  - By 2016, 10 out of 12 venues had utilisation plans after the 2018 Winter Games while there are on-going discussions to set plans and responsible managing party for the other two. The Hosting City, Korean government, POCOG and other stakeholders plan to conclude the discussion in near future to further utilise these venues as legacy after the Games time.

Legacy plan defined (10)	Gangneung Hockey Centre, Alpensia Sliding Centre, Kwandong Hockey Centre, Gangneung Ice Arena, Bokwang Snow Park, Gangneung Curling Centre, Yongpyong Alpine Centre, Alpensia Ski Jumping Centre, Alpensia Cross-Country Skiing Centre, Alpensia Biathlon Centre
Legacy plan undefined (2)	Gangneung Oval, Jeongseon Alpine Centre

<Yongpyong Alpine Centre>
Yongpyong Alpine Centre where events such as Giant Slalom will take place will be renovated from its existing facility. This will be utilised along with the resort after 2018 Winter Games

<Bokwang Snow Park>
Facilities at Pheonix Park owned by Bokwang Corporation will be complemented to host skiing and snowboard events as Bokwang Snow Park. Once 2018 Winter Games is over, Difficulty level of the slopes will be adjusted to be blended with the existing facilities.

<Alpensia Ski Jumping Centre>
Alpensia Ski Jumping Centre, in which ski jumping events are going to be held will renovate a ski jumping venue owned by Gangwondo Development Corporation. It will host domestic and international contests, and provide a place for training to the national athletes and be utilised as tourism accommodations

<Gangneung Curling Centre>
Gangneung Indoor Sports Complex will be renovated to host curling events as Gangneung Curling Centre. After 2018 Winter Games, Gangneung Municipal Government will take responsibility of the centre and use it as a sports complex and ice rink for citizens.

<Alpensia Biathlon Centre>
A venue owned by Gangwondo Development Centre will be renovated to host biathlon events as Alpensia Biathlon Centre. After 2018 Winter Games, it will be utilised as training and leisure facility.

<Alpensia Sliding Centre>
Alpensia Sliding Centre where bobsleigh, skeleton, and luge events will take place was built to host 2018 Winter Games and is the second sliding centre in Asia. On 18 May 2015, Gangwon Province, the owner of the centre, made an agreement with Korea National Sports University for post-Olympic Games era and will be utilised for training hosting contests and for the purpose of public education/experience.

<Alpensia Cross-Country Skiing Centre>
A venue owned by Gangwon Development Centre will be renovated to host cross-country events as Alpensia Cross-Country Centre. After 2018 Winter Games, it will be utilised as training and leisure facility.

<Gangneung Ice Arena>
Gangneung Ice Arena, in which figure skating and short track events will take place, is currently being constructed in Gangneung Olympic Park and will be utilised as sports facility for citizens after 2018 Winter Games

<Gangneung Hockey Centre>
Gangneung Hockey Centre where Men's ice hockey event will take place is currently being constructed in Gangneung Olympic Park. After 2018 Winter Games, Daemyeong Corporation will manage it to host competitions and utilise as a training facility.

<Kwandong Hockey Centre>
Kwandong Hockey Centre where Women's ice hockey games will take place is currently being constructed in Catholic Kwandong University. After 2018 Winter Games, Catholic Kwandong University will manage and utilise for educational multipurpose sports centre

[Table 2.14] Legacy Plan: Venues

B. Expanding Local Infrastructure

❍ Developing Local Economy by Designating Special Zone
- Economically active population in Gangwon Province is low due to fast-paced population aging. With its weak manufacturing and struggling tourism industry, Gangwon Province is in a need for growth drivers to vitalise its local economy. Therefore, Gangwon Province should develop unique tourism resources with its nature, improve infrastructure and further become the hub of Asian winter sports.

- It is expected that special zoning and investment in facilities will create new employment opportunities for approximately 143,000 people, and annual GDP of Gangwon Province is estimated to increase by KRW 342.2 billion by 2032 due to additional spending from tourists.

Special Zone	Three cities, five special zones, and 13 districts (total area: 26.36㎢) were designated to help the Venue Cities of the PyeongChang 2018 Winter Games become hubs of Asia winter sports and continue to prosper. The goal is to establish tourism districts where outdoor recreation, sports, leisure, and stay are packaged by using Olympic Games facilities and uniqueness of each Host City.
Olympic Aribaugil	Olympic Aribaugil (Aribau route) will connect Gangneung, PyeongChang, and Jeongseon to offer high-end tracking trails to visitors. Olympic Aribaugil is a combination of PyeongChang (Olympic Games), Jeongseon (Arirang), Gangneung (Bau road), and consist of 131.7 km with 9 courses, from Jeongseon Terminal to Gyeongpo beach. Splendid landscape of each trail in addition to abundant historical and cultural resources will create trails with unique story.
ICT-based Comprehensive Tourism Information System	It offers ICT (Information & Communication Technology) based tourism information system, in which up-to-date tour information is available to travelers visiting the PyeongChang 2018 Winter Games special zones. It will provide tour information of Gangwondo and the Venue Cities even after 2018 Winter Games via Olympic Mobile Tour System, Comprehensive Tour Information centre, and I-CUBE. This aims to give an impression of high-end tour city, provide convenience to foreign visitors, and vitalise tourism industry by connecting local communities.
Building Local Economy	We are building the Olympic Games with local economy by helping the venue cities participate to generate additional income and create more jobs. First of all, local products are advertised in massive events such as Olympic Festival and Ddukbang Market, excellent products are selected (2015: 36 & 2016: 12), while there have been supports to develop local food menus (4) and local brands. In addition, we support local business where local citizens take initiatives to generate stable incomes and jobs and social companies that take social responsibilities by providing service and job to vulnerable groups. In case of PyeongChang, KRW 210 million was subsidised to seven local businesses while seven socially responsible companies were selected that are entitled to receive a total of KRW 520 million for social insurance, business development and job creation.
Expand Life Sports Infrastructure	We strive to expand daily sports infrastructure to reduce the gap with other regions where sports equipment are easily accessible in daily life. There have been a variety of activities to promote healthy life and expand the base of winter sports by offering life sports classes and experience booth to local citizens and forming clubs and supporters. Gangneung has held curling competition since 2015 and offers free curling lessons on every Tuesday and Thursday, and skating lessons on Wednesday and Friday. In addition, there are nine ice event clubs (curling: 4; skating: 3; ice hockey: 2) while offering curling programmes to elementary and middle school PE teachers (56 teachers from 12 schools), weekend curling classes for youth with parents (April to June 2016), and ice sledge hockey to middle school students (7 November 2016). In addition, we plan to discover new talents and strengthen the competitiveness by supporting the athletes in existing events and providing equipment, venues and training costs for unpopular events.

City (3)	Special Zone (5)	District (13)
PyeongChang	PyeongChang Healthy Olympic Comprehensive Zone	Alpensia·Yongpyong District
		Jinbu Urban Regeneration District
		Olympic Gateway District
		Tourism Fundamental Facility District
		Natural Leisure·Experience District
	Bongpyong Leisure & Culture Creativity Zone	Sports Entertainment District
		Culture Creativity District
Gangneung	Gangneung Culture Olympic Comprehensive Zone	Culture & Sports Complex District
		Green Business·Maritime Leisure District
		Traditional History and Culture District
	Gangneung Lohas Leisure Zone	Geumjin Hot Springs Leisure District
		Jeongdongjin Tour & Leisure District
Jeongseon	Jeongseon Eco Zone	Jeongseong Eco District

[Table 2.15] Local Development Plan with Special Zone

Olympic Route (Aribaugil)		

Trail	Route	Distance (km)
Trail 1	Jeongseon Terminal ↔ Jeongseon Station ↔ Daraedduel ↔ Korean Peninsula Village ↔ Najeon Station	17.1
Trail 2	Najeon Station ↔ Gokbyeorujae ↔ Auraji Station ↔ Heungteo ↔ Gamuljae ↔ Gujeolri Station	20.5
Trail 3	Gujeolri Station ↔ Yiseongdae ↔ Nochu Mt ↔ Mojungtop Roa ↔ Baenadri Village	12.9
Trail 4	Baenadri Village ↔ Baramburi Village ↔ Anbandeok	14.0
Trail 5	Anbandeok ↔ Gorupogi Mt ↔ Neungheyongbong ↔ Daegwallyeong Rest Area	12.1
Trail 6	Daegwallyeong Rest Area ↔ Seonjaryeong ↔ Daegwallyeong Old Road ↔ Bokwangri Guest House	14.7
Trail 7	Bokwangri Guest House ↔ Myeongjugun Royal Tomb	11.7
Trail 8	Myeongjugun Royal Tomb ↔ Songyang Elementary School	11.0
Trail 9	Songyang Elementary School ↔ Ojukhun ↔ Gyeongpodae ↔ Gyeongpo Beach	17.7
Total		131.7

[Table 2.16] Olympic Trail (Aribaugil)

2.4 Proud People with Tradition and Culture

❍ Gangwon Province and its Venue Cities aspire to increase global awareness on their cultural and regional identity through the PyeongChang 2018 Winter Games. The Olympic Games will become a great opportunity to pursue universal values based on diversity, embracement and Olympism, building on the foundation of cultural tradition and identity of Gangwon Province and its Venue Cities. In this context, POCOG visions to "establish a mature and cultural civil society and social capital to activate local community and promote diversity and acceptance."

Topic	2015/2016 Action and Target	Future Plan
▪ Care for the impaired	▪ Publish and distribute accessibility manual ▪ Examine Games facilities and service accessibility ▪ Improve convenient facilities for impaired at private business in Venue Cities ▪ Education on Paralympic Games and accessibility awareness	▪ Inspect facilities and service accessibility ▪ Monitor Test Event accessibility ▪ Enhance convenient facilities for impaired in Venue Cities ▪ Activate Wheelchair-friendly house system
▪ Consider diverse Olympics participants	▪ Dream Programme ▪ Olympic·Paralympic Games Career Bus ▪ Open Olympic and Paralympic Games education web portal	▪ Expand Olympic and Paralympic Games education

[Table 2.17] Action Plan for Proud People with Tradition and Culture

A. Accessibility for the Impaired

❍ **Publish and Distribute Accessibility Manual**

- Accessibility is an inalienable right that should be available for those requiring special care, not only for Paralympic athletes, related parties, and spectators, but also for all the participants with an impairment, foreigners, the elderly, pregnant women and infants. Therefore, the *POCOG Accessibility Manual* was published to comprehensively explain IPC accessibility standard, relevant Korean legislation, and features of the Winter Paralympics for the success of the PyeongChang 2018 Winter Games. The manual was applied across the sectors of the 2018 Winter Games, including venues, Olympic Villages, accommodations, and transportation. POCOG also thoroughly examines how accessibility is prepared, not only in the facilities but also for their operation and service.

❍ **Support to improve and examine Olympic Games Facilities and Service**

- Since February 2015 during which a master plan for accessibility was set, POCOG has been supporting improvement in accessibility of the facilities by reviewing construction plan and examining the sites of 20 venues (competition: 12, Non-competition: 8). In case of ice rinks for the Paralympic Winter Games and the Olympic Villages, POCOG hired consultants recommended by IPC from November 2015 to January 2016 for advice and was able to reduce budget and close the case earlier than scheduled. In April 2016, a team of 16 people was formed for inspection of domestic accessibility, four of whom are former Paralympic athletes or field experts (architect, universal design professor, and Korea Paralympic Committee) to perform on-site inspection in different venues and increase awareness on accessibility.

❍ **Improving Facilities at Private Business for impaired in the Venue Cities**
- Gangwon Province conducted a survey on amenities in order to understand the current status and problems of restaurants, accommodations, and tourist attractions in special zones of the PyeongChang 2018 Winter Games. According to the *Act on Guarantee of Promotion of Convenience of Persons with Disabilities, the Aged, Pregnant Women, Etc.,* only 5.43% of the restaurants (25/460) and 9.23% of the accommodations (6/65) in PyeongChang and 0.57% of the restaurants (5/867) and 1.14% of the accommodations in Gangneung (5/867) fully comply with the requirement, showing that the number of places accessible to the impaired is extremely low. Thus, the Korean Government and Gangwon Province are partially funding private businesses to install accessible facilities as a part of environment improvement project while POCOG is encouraging the owners of local restaurants and accommodations in the Venue Cities to install accessible facilities by educational promotion and implementing *Wheelchair-Friendly House Designation System.

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* **Wheelchair-Friendly House Designation System**
POCOG implemented "Wheelchair-Friendly House Designation System" in order to significantly increase the number of restaurant and accommodation with accessible facility and to provide accurate information to visitors. This is to create an environment where the impaired, and the elderly and infants, and the pregnant can visit restaurants and accommodations in PyeongChang, Gangneung, and Jeongseon etc. without inconvenience during 2018 Winter Games. Restaurants should be equipped with stand-up tables, accessible restrooms and a ramp to allow the impaired with wheelchairs to enter and exit. Accommodations should provide wheelchair-friendly rooms and parking space for impaired. Once businesses apply for the designation, POCOG will perform on-site examination and determine whether to nominate or not. Designated business will receive the letter and sticker to be attached in the entrance and their information will be shared with visitors by websites of POCOG and the Venue Cities, Tour Gangwon Application, and 2018 Winter Games brochure that will be made (Apply at URL : https://goo.gl/TUimTS).

❍ **Paralympic Games and Education for Awareness on Accessibility**
- POCOG, in cooperation with the Venue Cities, has been educating public officials and owners of restaurants and accommodations since 2015 to enhance their awareness on Paralympic Games and Accessibility, to encourage them to improve their business facilities for the impaired.

- Who : Owners of restaurants and accommodations in PyeongChang, Gangneung, Jeongseon, and public officials, etc.
- When : Sep 2015 - Jun 2016
- Result : 14 sessions with 4,069 participants (2015: 4 sessions (403 participants), 2016: 10 events (3,666 participants)
- What : Understanding the impaired, Why convenience facilities are necessary, Case studies from developed countries etc
- Speaker : Accessibility enhancement team from POCOG and accessibility inspectors

[Table 2.18] Paralympic Games and **Better Awareness on Accessibility**

B. Enhance Diversity / Promote Participation

❍ Dream Programme
- In seeking to facilitate the 2018 Winter Games, the Dream Programme began in 2004 as a part of efforts to spread the Olympic movement. It is an annual youth programme with global participation, designed to provide an opportunity to experience winter sports for youth from countries where it is hard to see snow and ice. A total of 1,749 people (non-impaired: 1,612, impaired: 137) from 80 countries have participated in the Dream Programme by 2016.
- Impaired youth started to join since 2011 to experience and train with non-impaired youths. The programme adopted Winter Sports Academy in 2012 to go beyond experience-level and to pursue training future winter sports athletes. It provides training opportunities for youths from countries where winter sports are not well-established. By 2016, 166 people from 23 countries have participated in international competitions, including the Youth Olympic Games; the programme continues to contribute to promote global winter sports.
- The Dream Programme will be specialised as a winter sports academy to focus on expanding its base while making contributions to international peace, by building stronger bonds with international organisations and institutions and inviting youths from North Korea and other conflict-affected countries.

2016 Dream Programme Participants	2016 Dream Programme (Alpine Skiing)	2015 Country by Region and Participant

Europe: 9 countries, 230 people
Asia: 22 countries, 534 people
Latin America: 14 countries, 289 people
Africa: 30 countries, 521 people

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Country	22	26	30	32	29	29	29	33	30	39	39	42	44
Participant	108	109	111	135	115	114	114	141	136	163	159	169	175

[Table 2.19] Dream Programme Participation History (2004-2016)

❍ **Career Bus for the Olympic and Paralympic Games**
- This is a programme linked to Career Bus hosted by the Ministry of Education to attract attentions of teachers and students to the PyeongChang 2018 Winter Games. Mentors from different fields introduce their jobs to middle school students in rural areas where information and opportunity for experience on the Olympic Games are relatively rare. People Making Olympic and Paralympic Games Come True event has been hosted in series to provide students with opportunities to meet mentors performing various preparatory tasks for the 2018 Winter Games. As of December 2016, 950 students and 47 teachers from 21 schools have participated and it will continue to expand across the nation throughout 2017.

Sustainability Expert Mentoring	Olympic Plaza Architect Experience
Skeleton, Luge Manager Experience	Making my Own Olympic Medal

[Figure 2.8] Dream Programme for Olympic and Paralympic Games

❍ **Education Web Portal for Olympic and Paralympic Games**
- An education web portal that provides educational videos related to the Olympic and Paralympic Winter Games was launched for the first time (www.pyeongchang2018.com/education). It offers videos in Korean and English that explain origins, venues, equipment, and rules of every sport in the Winter Games in addition to general information of the Olympic Games so that every user from all around the world can study and experience Winter Games. Online educational materials for teachers and advanced programmes for students are offered only via log-in system.

Educational Video	Online Class Material for Teacher	Online Advanced Class for Students
Overall instructions on sports, about its origin, venue, rules, scoring, etc.	Teachers and students participate in both ends with watching the videos, followed by questions and review	Advanced self-study for desiring students

Category	No.	Class	Category	No.	Class
Olympic Sports	1	Curling	Olympic Sports	14	Snowboard
	2	Figure Skating		15	Speed Skating
	3	Bobsleigh	Paralympic Sports	16	Para Alpine Skiing
	4	Biathlon		17	Para Biathlon
	5	Cross-Country Skiing		18	Para Cross-Country Skiing
	6	Alpine Skiing		19	Ice Sledge Hockey
	7	Freestyle Skiing		20	Para Snowboard
	8	Ice Hockey		21	Wheelchair Curling
	9	Luge	Olympic Games General	22	Values of Olympic/Paralympic Games
	10	Nordic Combined		23	Torch Relay
	11	Short Track		24	Olympic Truce
	12	Skeleton		25	Organisation and Positions of the Olympic Games (Career Search)
	13	Ski Jumping		26	PyeongChang 2018 Winter Game Hosting Process

[Table 2.20] Educational Contents Table

2.5 Globalizing PyeongChang: Opening to the World

❍ For all aspects of preparation, infrastructure and operation of the Olympic Games, Gangwon Province and its Venue Cities will be capable of meeting global standards in providing advanced services and facilities. For this, POCOG and Gangwon Province recognize that safety and security are the key factors to successfully hosting the PyeongChang 2018 Winter Games. With safety and security plans prepared in advance, POCOG and Gangwon Province have accounted for all risk factors and have trained themselves to counteract in case of urgency. In addition, POCOG laid out CSR guideline and ethic protocols for every participating organisation's compliance.

Topic	2015/2016 Action and Target	Future Plan
▪ Maintain safety and security	▪ Organise counter-terrorism and disaster response system in preparation of Test Events ▪ Build disaster safety network	▪ Perform anti-terrorism and comprehensive emergent rescue training ▪ Establish comprehensive measures for anti-terrorism and safety activities
▪ Comply with international standards and promote sustainability activities	▪ Establishment and Distribution of CSR guideline	▪ Monitor participating organisations

[Table 2.21] Action plan for Globalizing PyeongChang: Opening to the World

A. Organisation of Disaster Response System

❍ Top-Tier Safety and Security
- In 2015, security elements were reflected since the planning stage (design and management planning) of 2018 Winter Games facilities in accordance with the *Special Act on Support for the 2018 PyeongChang Olympic and Paralympic Winter Games* where POCOG's Security Control Centre consisting of anti-terrorism · security-related organisations would play the central role. Anti-terrorism and disaster response system was re-organised and successfully executed during the Test Events. For instance, there was special inspection on Games facilities and accommodations to prepare for Test Events scheduled in February 2016, during which Gangwon Provincial Fire Services supervised 3-time comprehensive training for emergent rescue where 1,220 staff members from 50 organisations participated in preparation of contingencies.

- Disaster safety network completed its trial stage in June 2016 and was implemented in situation rooms of Gangwon Provincial Fire Services and Police Agency, enabling communications between Gangneung, PyeongChang, Jeongseon, the two Venue Cities of the Games. Once the network expands to five cities/provinces in 2017, participating parties are expected to communicate wireless to strengthen cooperative system.

- Basic principle for counter-terrorism and safety plan was branched out into ten fields in order to facilitate responsible parties to respond in case of terror and accidents (△safety plan for Opening and Closing Ceremonies △counter-terrorism plan △protection plan △traffic management plan △military support plan △security plan △fire safety plan △ immigration plan △ food and beverage safety plan △registration·access card security plan).

- In accordance with the *Act on Anti-Terrorism for the Protection of Citizens and Public Security*, and the *Special Act on Support for the 2018 PyeongChang Olympic and Paralympic Winter Games*, POCOG performs preliminary security activities against routine and predictable situations, including limiting access and security search for 2018 Winter Games facility, with helps from civil security forces.

National agencies have established security system that performs secondary security activities against specialised contingencies, supplementing POCOG's security measures, to protect the facilities.

- Second, physical security elements for each venue (VSA/PSA, CCTV, security fence, X-ray, MD etc., quantity per venue) and human security elements (number of civil security forces per venue) were calculated and reflected into the budget. Third, operation principles of PSA and VSA are concluded to enhance security search standard on human and vehicles entering into the venues. Fourth, forbidden and restricted item list was released to assure security and provide convenience to the spectators.

- In 2017, POCOG and the government manage on-site security control tower, beginning from 21 Test Events, and government agencies governing public safety and security will take security actions to take responsibility of safety during the Test Events. In addition, frequent on-site visits will be made during construction stage of the venues while POCOG and the government will cooperate to complement issues not considered in design. Furthermore, POCOG and the government will exercise joint anti-terror and comprehensive training drills for emergency relief to prevent terror or accidents towards the completion stage of venue constructions and strengthen cooperation system in case of emergency.

- In addition, security workshops are planned for NOC/NPC of each country where security plans of the PyeongChang 2018 Winter Games will be explained, while collecting requests NOC/NPCs to perfect the plans. In addition, each relevant department such as military, police and fire departments adjust modify duplicated areas or blind spots of the plans to establish a thorough anti-terror and comprehensive security plans, in which the Security Control Centre (presided by anti-terrorism centre with the Prime Minister) will play the central role.

Hazardous Chemical Analysis and Decontamination	Explosive Search and Removal	Human Rescue
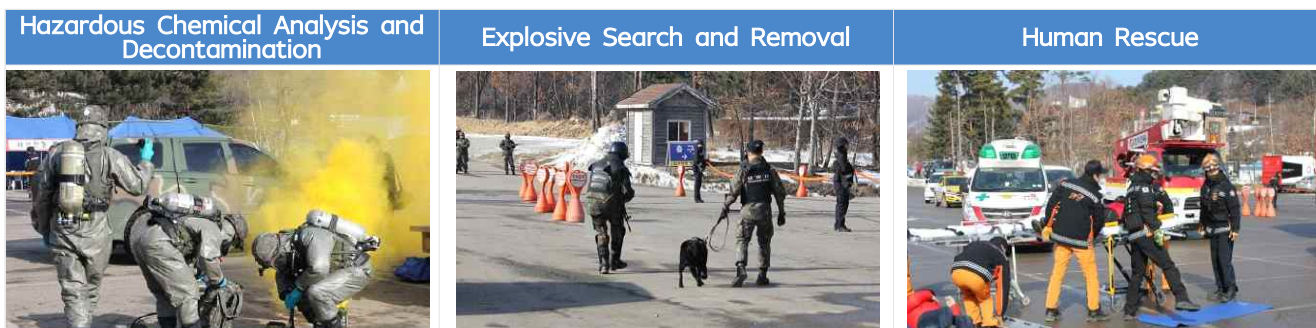
[Figure 2.8] Anti-Terrorism and Security Activity

B. Higher Ethicality of Suppliers

❍ CSR Guideline for Sustainable Olympic Games
- POCOG has published *CSR (Corporate Social Responsibility) Guideline for sustainable Olympic Games Management*, based on ISO26000 standards and UN Global Compact (UNGC) International Standards. This is to build foundation for the spread and reinforcement of social responsibility as a culture, by hosting sustainable Olympic Games and attracting socially responsible management from participating parties. The guideline is composed of six key principles to manage the PyeongChang 2018 Winter Games, guideline application standard and the appendix. The appendix is divided into green product purchase and procurement instruction, Guide for selecting and managing environment-friendly sponsor, pledge to comply with the ethics charter, memorandum of fair contract, and self-assessment on fulfilling social responsibility. POCOG distributes the Guideline to suppliers associated with the PyeongChang 2018 Games, and make them sign to observe the Charter of Ethics and conduct fair contracts.
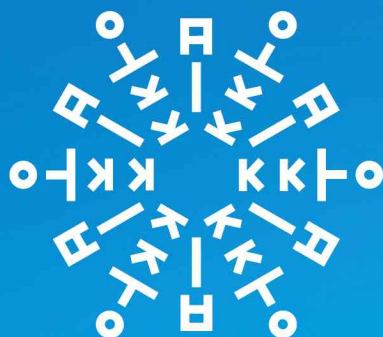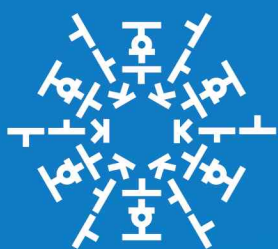
Ⅲ.Appendix

GRI G4 Index

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	G4-22	Explanation the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	N/A
	G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries	N/A
Stakeholder Engagement	G4-24	The list of stakeholder groups engaged by the organization	24
	G4-25	The basis for identification and selection of stakeholders with whom to engage	24
	G4-26	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	24
	G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting; Report the stakeholder groups that raised each of the key topics and concerns	24
Report Profile	G4-28	Reporting period (such as fiscal or calendar year) for information provided	1
	G4-29	Date of most recent previous report	This is the first report to be produced.
	G4-30	Reporting Cycle	1
	G4-31	Provide the contact point for questions regarding the report or its contents	1
	G4-32	Table identifying the location of the Standard Disclosures in the report	1
	G4-33	Policy and current practice with regard to seeking external assurance for the report	N/A
Governance	G4-34	The governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts	6-8, 14-17
Ethics and Integrity	G4-56	Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	49, https://goo.gl/8s1fHr

GRI G4 Index

GRI G4	No.	Description	Page
2. Specific Standard Disclosure			
Economic			
Economic Performance	G4-DMA	Disclosure on Management Approach	8
	G4-EC1	Direct economic value generated and distributed	8
	G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	16,17,26-36
	G4-EC3	Coverage of the organization's defined benefit plan obligations	N/A
	G4-EC4	Financial assistance received from government	8
Indirect Economic Impacts	G4-DMA	Disclosure on Management Approach	40
	G4-EC7	Development and impact of infrastructure investments and services supported	40-43
	G4-EC8	Significant indirect economic impacts, including the extent of impacts	
Procurement Practices	G4-DMA	Disclosure on Management Approach	35
	G4-EC9	Proportion of spending on local suppliers at significant locations of operation	35-36, 42
Environmental			
Energy	G4-DMA	Disclosure on Management Approach	26
	G4-EN3	Energy consumption within the organization	26-36
	G4-EN4	Energy consumption outside of the organization	
	G4-EN5	Energy intensity	
	G4-EN6	Reduction of energy consumption	
	G4-EN7	Reductions in energy requirements of products and services	
Water	G4-DMA	Disclosure on Management Approach	33
	G4-EN8	Total water withdrawal by source	33-34
	G4-EN9	Water sources significantly affected by withdrawal of water	
	G4-EN10	Percentage and total volume of water recycled and reused	
Biodiversity	G4-DMA	Disclosure on Management Approach	37
	G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protection areas and areas of high biodiversity value outside protection areas	37-39
	G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protection areas and areas of high biodiversity value outside protection areas	
	G4-EN13	Habitats protected or restored	
	G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	
Emissions	G4-DMA	Disclosure on Management Approach	26
	G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	26-36
	G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	
	G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	
	G4-EN18	Greenhouse gas (GHG) emissions intensity	
	G4-EN19	Reduction of greenhouse gas (GHG) emissions	
	G4-EN20	Emissions of ozone-depleting substances (ODS)	
	G4-EN21	NOX, SOX, and other significant air emissions	
Transport	G4-DMA	Disclosure on Management Approach	26
	G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	26-28
Overall	G4-DMA	Disclosure on Management Approach	37
	G4-EN31	Total environmental protection expenditures and investments by type	37-39
Supplier environmental assessment	G4-DMA	Disclosure on Management Approach	35-36
	G4-EN32	Percentage of new suppliers that were screened using environmental criteria	
	G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	
Environmental grievance mechanisms	G4-DMA	Disclosure on Management Approach	37
	G4-EN36	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	37-39

Social			
Labor practices and decent work			
Diversity and Equal Opportunity	G4-DMA	Disclosure on Management Approach	44
	G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	44-47
Equal Remuneration for Women and Men	G4-DMA	Disclosure on Management Approach	No male-female wage gap
	G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	
Supplier Assessment for Labor Practices	G4-DMA	Disclosure on Management Approach	48
	G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	48-49
	G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	
Human Rights			
Investment	G4-DMA	Disclosure on Management Approach	48
	G4-HR1	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	48-49
	G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	
Non-discrimination	G4-DMA	Disclosure on Management Approach	No such case has been reported.
	G4-HR3	Total number of incidents of discrimination and corrective actions taken	
Security Practices	G4-DMA	Disclosure on Management Approach	48
	G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	48-49
Indigenous Rights	G4-DMA	Disclosure on Management Approach	40
	G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	40-43
Supplier Human Rights Assessment	G4-DMA	Disclosure on Management Approach	48
	G4-HR10	Percentage of new suppliers that were screened using human rights criteria	49
	G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	
Society			
Local Communities	G4-DMA	Disclosure on Management Approach	40
	G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	40-43
	G4-SO2	Operations with significant actual or potential negative impacts on local communities	
Anti-corruption	G4-DMA	Disclosure on Management Approach	48
	G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	48-49
	G4-SO4	Communication and training on anti-corruption policies and procedures	
	G4-SO5	Confirmed incidents of corruption and actions taken	
Public Policy	G4-DMA	Disclosure on Management Approach	8
	G4-SO6	Total value of political contributions by country and recipient/beneficiary	
Supplier Assessment for Impacts on Society	G4-DMA	Disclosure on Management Approach	48
	G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	48-49
	G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	

GRI G4 Index (Event Organizers Sector Supplements)

GRI G4	No.	Description	Page
Event Organizers Sector Supplements	G4-EO1	Direct economic impacts and value creation as a result of sustainability initiatives	8
	G4-EO2	Modes of transport taken by attendees as a percentage of total transport, and initiatives to encourage the use of sustainable transport options	26-28
	G4-EO3	Significant environmental and socio-economic impacts of transporting attendees to and from the event, and initiatives taken to address the impacts	26-28
	G4-EO4	Expression of dissent by type, issue, scale and response	N/A
	G4-EO5	Type and impacts of initiatives to create a socially inclusive event	45-47
	G4-EO6	Type and impacts of initiatives to create an accessible environment	44-45
	G4-EO7	Number and type of injuries, fatalities and notifiable incidents for attendees, and other relevant stakeholders	N/A
	G4-EO8	Percentage of and access to food and beverage that meets the organizer's policies or local, national or international standards	42
	G4-EO9	Type and sustainability performance of sourcing initiatives	48-49
	G4-EO10	Type, amount and impact of benefits, financial and in kind, received by the event organizer from suppliers	8
	G4-EO11	Number, type and impact of sustainability initiatives designed to raise awareness, share knowledge and impact of behavior change, and results achieved	24
	G4-EO12	Nature and extent of knowledge transfer of best practice, and lessons learned	45-47
	G4-EO13	Number, type and impact of physical and technological legacies	40-43

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