

2020

Voluntary Local Review Dangjin Sustainable Development Report



Preface



Honorable and beloved Dangjin citizens!

I am very pleased to see 2020 Dangjin Sustainable Development Report, the first Voluntary Local Review of Dangjin, being published this year thanks to year-long involvement and hard work of citizens.

As many as 170,000 Dangjin citizens have walked down on a long and tough path to restore sustainability. I'd like to call this process as "Great Journey of Dangjin Citizens toward Sustainability." During this journey, we have experienced fear of uncharted territories, untasted novelty and uncertainties about our collective future.

Three years ago, our city devised "Dangjin Basic Plan on Sustainable Development" in tandem with 17 Sustainable Development Goals (SDGs) adopted by the UN and declared its vision, taking the first step toward the journey. Back then, however, there were not enough certainties and directions. Faced with voices of disapproval, negativities and criticism that it's too early, we have courageously navigated through the journey .

Three years into this journey, we have encountered an unprecedented challenge "COVID-19" that we may have to re-write the modern human history, shedding a new light on directions and methodologies of this journey. The crisis of sustainability has come a lot closer to us than expected, and its potent and intensity are far daunting than our expectation, regrettably brining us to our senses that our start to this journey is already belated and slow. It is not a surprise that citizens are clamoring for readjustment of the pace and directions.

This issue of "2020 Dangjin Sustainable Development Report" addresses the journey's pace and directions adjusted for sustainability through analysis of 88 sustainable development indicators to measure the degree of sustainable development implemented over the past three years and to identify issues and improvements. This report will serve as a beacon that brightens the future of Dangjin that we make together with citizens. Moreover, this publication is all the more meaningful as it is the first records of our great journey that will be handed over to future generations.

Members of the 3rd Dangjin Sustainable Development Council has played a key role in the publication. They joined their forces together to learn indicators, engaged in discussions with public servants and turned the publication process into the "Great Journey of Dangjin Citizens toward Sustainable Development", becoming the best companions. I deeply appreciate their passion and efforts.

Taking this report created together with citizens to heart as a municipal direction and guideline, I will exert more efforts to make Dangjin sustainable.

Thank you.

김 흥장

Hongjang Kim

Future We Make Together,
Sustainable Dangjin

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2020 Dangjin Sustainable Development Report

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Sustainable City, Dangjin

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Sustainable City, Dangjin

Dangjin's **Challenges** for Sustainable Development

Junghwan Lee, an author of *Taengriji*, the old geography book, described Dangjin as a "place with a lot to eat and abundant fish." The city is home to Yeonho Lake, one of three main reservoirs during the Joseon Dynasty, and has well-developed agriculture and fishery industries since the ancient times.

Based on the developed agriculture and fishery, at the end of 1990s, the city attracted more than 1,000 companies on the back of the launch of Seohaean Expressway and development of Dangjin Port. With an increase in the GRDP by seven folds, the economy has grown in size, with various economic and employment indicators reaching the highest level nationwide. However, socio-environmental issues neglected during the development process are also posing a big threat to sustainability for future generations to come.

We have faced with social issues such as inequality, negligence and regional imbalance while there are also environmental problems including air pollution, depletion of ecological resources, water pollution, wastes and foul smell that have to be urgently resolved. As socio-environmental issues have worked as a conflict factor between regions and classes, the administrative power and cost of financial investments needed to solve them are on a steady rise. The city's fixed image as "City Emitting Environmental Pollutants" and compromised identity and spatiality also have an impact on settlement conditions, pushing Dangjin's sustainability crisis into a critical point.

"How should we solve these issues?" Concerns of Dangjin run deep. Now, we have come to a conclusion that the only solution to all these is the pursuit for "sustainable development" by regarding "development meeting the needs of the present without compromising the ability of future generations to meet their own needs" and "leaving no one behind during the development process" as a core value.





Year 2015
UN SDGs for
Commitment to Coprosperity
of Mankind

17 Goals
169 Targets
231 Indicators

In September 2015, the UN adopted sustainable development goals (SDGs) with unanimous consent of 193 members.

Embodying the concept of sustainable development "meeting the needs of the present without compromising the ability of future generations to meet their own needs" under the global commitment to "development of sustainable earth" in 2015, UN member nations reached an agreement on 17 goals that the mankind have to achieve in priority starting from 2016 to 2030.



Year 2017
2035 Dangjin Basic/
Implementation Plan
on Sustainability

17 Goals
57 Strategies
88 Indicators

In September 2017, Dangjin devised its Basic Plan on Sustainable Development by applying the 17 goals and the same system adopted by the UN.

Together with citizens and public servants from responsible departments, Dangjin Sustainable Development Council came up with 17 goals, 57 strategies and 88 indicators under the vision "Future We Make Together, Sustainable Dangjin" through governance and collective deliberation processes.

The city's plan and indicators have been regarded as the most suitable for the local government system in Korea and has been praised as meaningful municipal philosophy beyond a mere declaration.

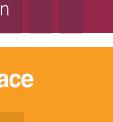
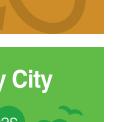
Dangjin's
Challenges for
Sustainable
Development

Dangjin's Challenges for Sustainable Development

2035 Dangjin Basic Plan on Sustainable Development

The basic plan suggests its fundamental directions for the city's sustainable development with 17 goals, 57 strategies and 88 sustainable development indicators under the vision "Future We Make Together, Sustainable Dangjin."

1. Vision, Goals and Strategies for Sustainable Development

| | | |
|---|---|---|
| 1 No Absolute Poverty | 2 Strong Agricultural Foundation as Strategic Industry | 3 Healthy Life |
| Strat. <ul style="list-style-type: none"> 1. Alleviate income gaps btw. urban and rural areas 2. Lay foundation for economic independence of the vulnerable 3. Ease poverty of the elderly  | Strat. <ul style="list-style-type: none"> 1. Specialize in agriculture 2. Build foundation to produce eco-friendly agricultural products 3. Achieve agricultural revolution  | Strat. <ul style="list-style-type: none"> 1. Create conditions for sports for all 2. Reduce traffic accident rate below the national average 3. Halve prevalence of respiratory diseases 4. Provide safe foods  |
| 4 Tailor-made Education City | 5 Real Gender Equality | 6 City without Water Scarcity |
| Strat. <ul style="list-style-type: none"> 1. Expand education programs tailored to each stage of lifecycle 2. Enhance education satisfaction by 10% 3. Ease cultural inequality 4. Build participatory cultural community  | Strat. <ul style="list-style-type: none"> 1. Expand women participation in decision-making process 2. Reinforce equality and support of caring and rearing 3. Create social foundation to ensure safety of children and women  | Strat. <ul style="list-style-type: none"> 1. Improve water circulation 2. Enhance management system of waterworks 3. Protect water resources  |
| 7 Energy Justice | 8 Economic Climate where Anyone can Work | 9 Foundation-building for Growth of Future Strategic Industries |
| Strat. <ul style="list-style-type: none"> 1. Turn energy into eco-friendly 2. Manage energy demands 3. Put alternative power transmission system in place  | Strat. <ul style="list-style-type: none"> 1. Nurture eco-friendly industries 2. Ease polarization of jobs 3. Create circular economy in the region  | Strat. <ul style="list-style-type: none"> 1. Lay foundation for 4thIndustry 2. Boost 6thindustry 3. Build foundation for eco-friendly industries  |
| 10 Local Community w/o Inequality | 11 People-oriented Urban Space | 12 Sustainable Local Consumption System |
| Strat. <ul style="list-style-type: none"> 1. Achieve balanced development btw. regions 2. Alleviate labor inequality 3. Strengthen system for the socially vulnerable  | Strat. <ul style="list-style-type: none"> 1. Expand urban parks 2. Invigorate urban renewal in line with local cultural resources 3. Buildgreen transportation system 4. Reinforce housing welfare  | Strat. <ul style="list-style-type: none"> 1. Establish distribution system for local foods 2. Promote circulation of resources 3. Expand sharing economy  |
| 13 Reduction of GHGs to NDC | 14 Healthy Marine Ecosystem | 15 Biodiversity for Eco-friendly City |
| Strat. <ul style="list-style-type: none"> 1. Drastically reduce CO2emissions 2. Expand renewable energy 3. Enhance resilience from climate disasters 4. Adapt to climate change for agriculture /fishery industries  | Strat. <ul style="list-style-type: none"> 1. Protect marine biological resources 2. Improve marine environments 3. Expand marine reserves  | Strat. <ul style="list-style-type: none"> 1. Secure ecological space in urban areas 2. Restore aquatic ecosystem 3. Secure soundness of soil  |
| 16 City where All Citizens are Respected | 17 Network-building for Sustainable Development | Common Goals for Dangjin& Humankind for Sustainable Development of All |
| Strat. <ul style="list-style-type: none"> 1. Create a human rights city 2. Reinforce transparency of local society 3. Establish safe urban foundations  | Strat. <ul style="list-style-type: none"> 1. Build mutual cooperation for local industries and their co-growth 2. Expand participatory decision-making 3. Manage conflicts 4. Participate in global networks 5. Expand citizen education of global agenda  |  |



2. Sustainable Development Indicators

In Dangjin, there are 88 sustainable development indicators to suggest directions and make a diagnosis. With an analysis of their changing trend, indicators serve as a tool to diagnose whether Dangjin has effectively achieved the sustainable development goals and has accordingly coped with them.

Indicators contain the definition, purpose, calculation methods and sources of statistical data for continuous evaluation and modification down the road. The indicator-specific targets are to be achieved at an interval of five years like 2020, 2025 and 2035.

Dangjin Implementation Plan on Sustainable Development

Each indicator has a responsible department assigned, and the implementation plan has been devised and managed to ensure that each department puts indicators into action. The implementation plan consists of 108 main tasks, 112 unit projects and 124 KPIs. In 2019, sustainability of the implementation plan was complemented via an advancement process of indicators, and indicators have been systematically managed in connection with performance evaluation of departments.

* Advancement refers to bringing an event or object to a higher degree or to raising the degree.

tip) Dangjin Basic Plan & Implementation Plan on Sustainable Development

| Basic Plan (Devised in 2017/effective until 2035) | | | Implementation Plan (Advancement commenced in 2019) | | |
|---|--|---|---|--|---|
| Goals (17) | Strategies (57) | Sustainable Development Indicators(88) | Main Tasks (108) | Unit Projects (112) | KPI (124) |
| Re-interpret goals befitting circumstances of Dangjin in line with 17 UN SDGs | Consist 3 to 5 strategies per goal to achieve 17 goals | Suggest status and future directions for 17 goals (target values of 2020, 2025 & 2035 | Action plans for each depart. to achieve 17 goals | | Calculating formula to measure a unit project's annual target and performance |
| E.g. | G3. Healthy Life | Reduce a traffic accident rate below the national average | Create safe conditions for pedestrians & protect those vulnerable to transportation | Create safe environments for pedestrians | Walkway Establishment Rate |
| | | | | Push ahead with traffic safety policies to create sustainable traffic safety culture | Provide traffic safety training and operate the Traffic Culture Council |
| | | | | | Traffic safety training & traffic publicity activities |
| | | | | | Traffic Safety/Culture Council's discussion/operation of policies |

Progress for Sustainable Dangjin

- Announced an ordinance on establishment/operation of Dangjin Sustainable Development Council (Feb 13)

2015

Governance formed to propel sustainable development

Launched Dangjin Sustainable Development Council (Feb 27)

- Converted from Local Agenda 21 for Dangjin (Oct 2002 to Feb 2015) to the Council
- Founded with 50 citizen members in 5 divisions



2016

Analysis of local conditions for sustainable development

Basic research for sustainable development planning in Dangjin

(Environmental Policy Div.)



- Devised Dangjin Basic Plan Implementation Plan on Sustainable Development (Planning&Budget Official)

- 1st Citizen School for Sustainable Development (5 courses)

2017

Planning regarding sustainable development

- Founded Local Sustainability Alliance of Korea (LSAK) and joined it as a member city (Jun 16)

Declaration Ceremony for Vision of Dangjin's sustainable development (Sep 29)



- Appointed members of Dangjin Sustainable Development Council for the 2nd round (Jan 25)

- Dramatic increase to 110 members in 5 divisions





Progress for Sustainable Dangjin

"Dangjin's Major Projects for Sustainable Development"

based on private-public governance & citizens involvement

01

Establishment of Implementation System Until 2019

- Enforce 124 KPIs as per department in connection with performance management system
- Operate pilot programs with citizens involved

Key Agenda for Sustainable Development

It is a project that identifies citizen-involved solutions based on private-public cooperation by selecting agenda highly demanded by citizens and closely related to quality of life. Its purpose is to introduce communications with citizens from the planning stage; bring the value of sustainability into major municipal policies; and materialize and expand the structure of private-public discussions as per key agenda. The private-public cooperation is also expanding into co-planning, empowerment and practice beyond meetings.



Policy Coordination Meeting for Sustainable Development

Chaired by the Mayor, the meeting is joined by highranking officials in the position of director or higher to seek out timely implementation of "Dangjin-specific sustainable development", maximization of policy effects and pursuit of inter-department cooperation. Through a discussion forum with an invitation of experts, it serves as a venue to expand theoretical foundation of the city's key policies and expertise; discuss Dangjin's sustainability with citizens and social organizations; discover issues; and discuss solutions.



02

Pilot Practice 2020~2021

- Expand private-public cooperation
- Present outcome of citizen-involved projects

03

Spread & Development 2022~

- Create image of Dangjin as a city of sustainable development (5 axes and 6 hubs)
- Active private-public governance, spread of citizen participation

Dangjin Sustainable Development Roadmap

Evaluation of Sustainable Development Indicators, together with Civil Society

Development Report contains evaluation of Dangjin's 88 sustainable development indicators and the city's efforts to implement sustainable development. With the Citizen Participation Group playing a central role, it focuses on evaluation from the view of citizens and, through this process, both citizens and the administration diagnose issues, suggest measures for improvement, and create an organic communication structure.



Community Project for Sustainable Development "Dangjin Sustainable Development Station"

"Alji, Haji (meaning Sustainable with Knowledge, Sustainable with Action) is a project under which a club of teenagers looks back upon the meaning of sustainable development in our daily life and find their own way of engaging in action. "Citizen Sustainable Development Station" is a program that provides a civil group comprising five citizens or more with funds to enable them to make their own business plan and turn it into practice for sustainable development of our city.



Dangjin's Efforts for Sustainable Development

Dangjin's Green New Deal Policy born via Process of Citizens' Deliberation

After the announcement of Korean Green New Deal policy, Dangjin devised its own Green New Deal policy centering on governance joined by private, public, and corporate sectors. Under the vision "2050 Carbon Neutral City together with Citizens", it plans to proceed with Dangjin-style Green New Deal that will put into practice projects described in policy suggestions submitted by citizens.

The crisis of sustainability can be overcome through a shift to people-oriented policy, rather than economic logics or performance-driven policy. What matters the most is participation and practice of citizens.



First RE 100 Industrial Complex nationwide

Now that global firms like Apple and BMW have declared participation in RE100, Dangjin has embarked on creation of RE100 industrial complex for the first time in the nation. RE100 aims at only using renewable energy to fully cover corporate energy consumption (100%).



Citizens-led Special Energy Transition City, Dangjin

Dangjin has endeavored to enhance its energy self-sufficiency with establishment of energy centers and expansion of a residents-involved energy supply project. In addition, it was the first local government that declared climate change as a state of emergency and announced its mid/long-term 2050 Low-carbon Development Strategy, realizing energy transition from a city at the climate crisis into the No. 1 city in Green New Deal.





Dangjin, Child-friendly City where all are happy

In 2018, Dangjin was certified as a child-friendly city by UNICEF and has served as a chair city of Child- Friendly Cities Initiative joined by 86 local governments since 2020.

It strives to create a local society that fully ensures children's rights to life, protection, development and participation.



Dangjin, City of Humanities and Venue of Humanities Experience

In 2018, the Ministry of Education appointed Dangjin as a humanities city under its project to assist humanities cities. Starting from its ceremony to declare as a humanities city, it has actively engaged in projects using humanities assets of the city such as promotion of public welfare advocated by Jiwon Park, also known as Yeonam; reconciliation and cooperation seen in *Gijisi*/tug-of-war; and enlightenment and resistance of Hun Shim.



Safe City buoyed by Private-public Cooperation

International Safety City is a project to officially certify a self-governing body that has made scientific and continuous efforts for prevention and countermeasure against all sorts of accidents, violence and national disasters. Aiming at being certified in 2022, Dangjin is in preparation together with its Working-level Committee comprised of organizations, groups and citizens.

Dangjin's Efforts for Sustainable Development

Women-friendly City with Safety Net for Caring in Era of Transition

A women-friendly city refers to a region that ensures equal participation of men and women in local policies and operates policy that realizes growth, caring and safety of women. Re-designated in 2018, Dangjin is committed to creating a women-friendly city where all citizens can feel the difference.



Lifelong Learning City that Raises Happiness Index of Citizens

In order to turn lifelong learning simply offered to citizens into the one enjoyed by citizens and foster culture that makes learning is part of citizens' daily life, it has laid foundation for block-chain history management system for lifelong learning, non-face-to-face education system and civic university platforms.



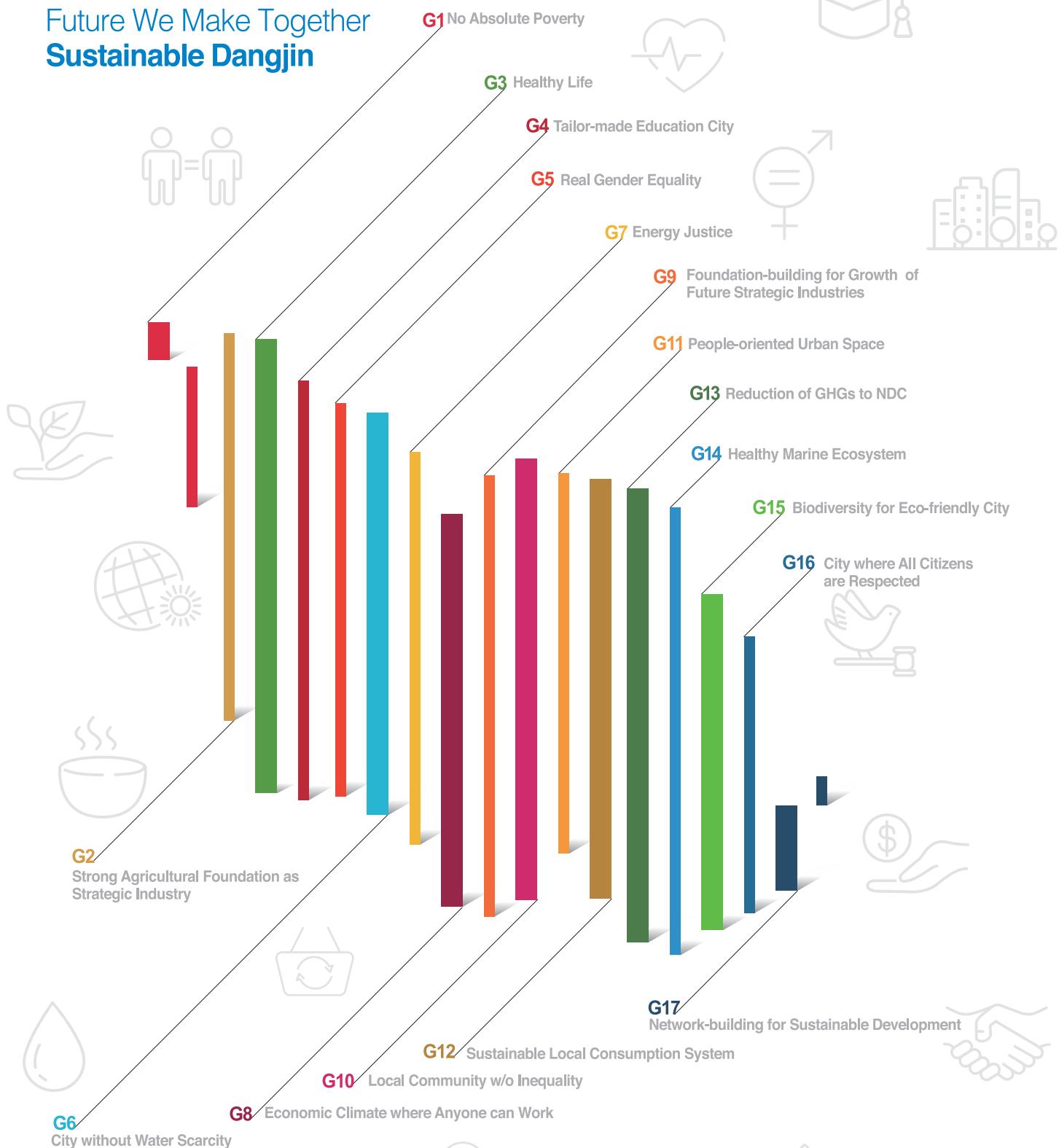
Leading city in civil autonomy, combined with participation of citizens & autonomy of towns

Civil autonomy of Dangjin that pushes forward real, decentralized autonomy based on involvement of citizens has laid the groundwork for participation and practice of citizens, the key to sustainable development. It plans to realize true grass-root democracy through town autonomy even in the smallest units like -ri or -tong.



Future We Make Together

Sustainable Dangjin



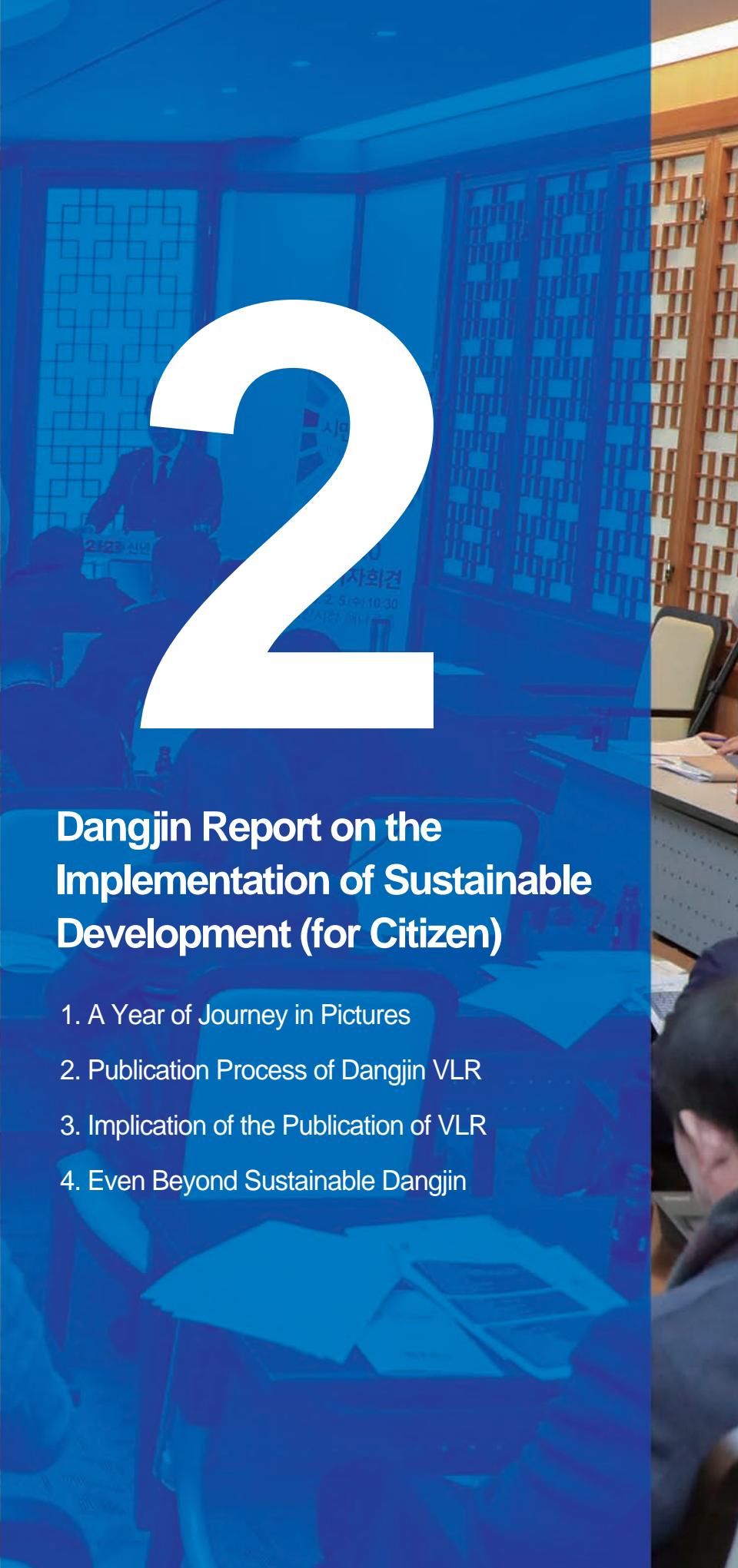
2020년 예산안

한자리 예산안
재정자립도 28.3%

- 일반회계 : 8,374억 원
- 특별회계 : 1,187억 원
- 기금 : 789억 원
- 장부예산 : 9,055억 원

2020
신년기자회견





Dangjin Report on the Implementation of Sustainable Development (for Citizen)

1. A Year of Journey in Pictures
2. Publication Process of Dangjin VLR
3. Implication of the Publication of VLR
4. Even Beyond Sustainable Dangjin

A Year Journey in Pictures

01

Compilation & Verification of Sustainable Development Indicators (Dangjin)

“ Collected statistics of 88 indicators and verified their sources and figures ”



02

Creation of Comparative Statistics of Sustainable Development Indicators (Dangjin)

“ Collected statistics of the nation, Chungnam and neighboring cities/counties, comparable to Dangjin’s ”



03

Organization of Advisory Committee and Consulting on Report Organization (Dangjin)

“ Formed the Advisory Committee comprising five members and advised on the report publication ”



Publication of Report

“ Issued the report which is the outcome of the first journey of Dangjin’s sustainability from the view of citizens ”



Editing of Report

(Coordinators of Citizen Participation Group, Advisory Committee)

“ Edited the report, together with official of Dangjin, coordinators of the Citizen Participation Group and the Advisory Committee ”



Drafting of Report (Dangjin)

“ Drafted the report by analyzing evaluation opinions of the Citizen Participation Group and Advisor Committee and statistics of 88 indicators ”

12

11

10



04

Recruitment & Organization of Citizen Participation Group

The Citizen Participation Group was comprised of 43 citizens who are to learn and evaluate sustainable development indicators out of members of Dangjin Sustainable Development Council and Citizen Sustainable Development Station ”



05

Determination of Evaluation Items & Report Organization

(Advisory Committee)

“ Came up with evaluation items together with the Advisory Committee to ensure easy evaluation from the view of citizens as it's the first attempt ”



06

Joint Workshop (twice) of Citizen Participation Group

(Citizen Participation Group, Advisory Committee)

“ Had an occasion to talk about meaning of publication of the Sustainable Development Report and roles of the Citizen Participation Group with 43 group members ”



Evaluation conducted by Citizen Participation Group

(Citizen Participation Group, Advisory Committee)

“ Coordinators of the Citizen Participation Group and the Advisory Committee gathered and shared opinions about evaluation results of the Citizen Group, and suggested evaluation opinions ”

Evaluation conducted by Citizen Participation Group

(Citizen Participation Group, Advisory Committee)

“ Opinions were shared and an evaluation report was created, using evaluation meetings, emails and social media ”

Evaluation conducted by Citizen Participation Group

(Citizen Participation Group, Advisory Committee)

“ The evaluation was carried out by sharing opinions in four sectors and conducting interviews with personnel responsible for respective indicator ”

09

08

07

Publication Process of Dangjin **VLR**

How We Started

This report is the first records of evaluation regarding efforts to implement Dangjin's sustainable development.

It began with the city's new attempt to prepare the report on its own by adding an objective evaluation of the Advisory Committee comprising experts, combined with citizens' participation, rather than relying on external services.

As it was the first records, the concept of pilot evaluation was introduced to enhance the understanding of the Citizen Participation Group about indicators, and the focus was on the process of diagnosing issues together and forming a consensus on how to make improvements. In particular, evaluation items were also organized in a way that can be easily understood from the perspective of citizens.

How We Proceeded

The purpose of this report is to review and interpret trends of Dangjin's sustainable development indicators going back to 2015 that had been reviewed when the Basic Plan was devised in 2017 as well as target values of 2020, 2025 and 2035 and to give an impetus once again to efforts to achieve sustainable development goals. In addition, it serves as a chance to see if indicators adequately contribute to achieving Dangjin's SDGs; make improvements; and to suggest ideas about policies and projects implemented by each department under the big purpose of accomplishing Dangjin's SDGs.



How We Evaluated

Operation of Citizen Participation Group

Like the process of establishing Dangjin's SDGs centering on voices of citizens from their participation, the publication of Dangjin Sustainable Development Report also went through a process of citizen involvement.

The fact that this report was prepared by members of Dangjin Sustainable Development Council and citizens participating in Citizen Sustainable Development Station, together with experts, is all the more meaningful.

Such an approach and attempt will be a process that enables citizens to learn sustainable development and directly and indirectly contributes to accomplishing the city's sustainable development goals.

Operation of Advisory Committee for Evaluation

The Advisory Committee offered objective and professional consulting and comments regarding evaluation done by the Citizen Participation Group from the view of citizens.

The report includes general review of respective sector and comprehensive evaluation opinions as per SDG.

Citizen Participation Group's Evaluation of 4 Respective Sectors

The 17 SDGs were divided into 4 sectors, and the Citizen Participation Group was formed for each sector to conduct evaluation.

In the report, it was marked as evaluation opinions of the Citizen Participation Group.

| Welfare & Education | Civil Community | Economic Inclusiveness | Energy & Environ |
|------------------------------------|--|---|--|
| 4 goals (21 indicators) | 4 goals (26 indicators) | 4 goals (19 indicators) | 5 goals (22 indicators) |
| 1. No Absolute Poverty(3) | 5. Real Gender Equality(7) | 2. Strong Agricultural Foundation as Strategic Industry(3) | 6. City w/o Water Scarcity(8) |
| 3. Healthy Life(6) | 10. Local Community w/o Inequality (4) | 8. Economic Climate where Anyone can Work | 7. Energy Justice(3) |
| 4. Tailor-made Education City(6) | 16. City where All Citizens are Respected(5) | 9. Foundation-building for Growth of Future Strategic Industries(5) | 13. Reduction of GHGs to NDC(4) |
| 11. People-oriented Urban Space(6) | 17. Network-building for Sustainable Development(10) | 12. Sustainable Local Consumption System(6) | 14. Healthy Marine Ecosystem(5) |
| | | | 15. Biodiversity for Ecofriendly City(2) |

Evaluation Items

It focused on evaluations from the perspective of citizens whether sustainable development indicators were well-established under the Basic Plan; whether the difficulty to achieve indicators was appropriate; whether target values of each indicator were adequate; and unit projects of each department were established in line with Dangjin Basic Plan on Sustainable Development.

How We Addressed

(Evaluation Opinions
of Citizen Participation
Group)

General Review

The 17 SDGs were divided into four sectors, namely welfare & education, civil community, economic inclusiveness and energy & environment.

- Written by: Advisory Committee (comprising experts in each sector)
- The report includes adequacy of sustainable development indicators in each sector, meaning of the Citizen Participation Group's evaluation and policy suggestion that needs a special emphasis

General Review

They were written as per the 17 SDGs.

- Written by: Citizen Participation Group (members of Dangjin Sustainable Development Council and citizens desired to participate)
- Pictures and stories concerned with each goal were added to empathize with the needs for the 17 SDGs

Comprehensive Evaluation Opinions

They were written as per the 17 SDGs.

- Written by : Advisory Committee
- Verification of adequacy of the Citizen Participation Group's evaluation opinions, suggestion of auxiliary indicators, and detail and analysis of indicators improved and worsened

Indicator Trends and Target Values

They were written as per indicators of the 17 SDGs.

- Written by : Dangjin City (Administration)
- Contents

| | |
|-------------------------------|--|
| (↗) | • Increase value: an indicator is in the positive direction |
| (↘) | • Decreased value : an indicator is in the positive direction |
| Unit-Source | • Unit and source of indicator values |
| Indicator Values & Targets | <ul style="list-style-type: none">• Indicator-specific Statistics:2015 ~ 2019 (until 2018 for some national statistic)• Target : at an interval of 2020, 2025 and 2035<ul style="list-style-type: none">- Target values set when the Basic Plan on Sustainable Development was established in 2017• Graph : Dangjin's trend of indicator values is on a line graph and is comparable with statistics of Chungman & other local governments to assess its standing on a national scale. |



Evaluation Opinions of Citizen Participation Group

They were written as per indicators of the 17 SDGs.

- Written by : Citizen Participation Group
- Contents : Evaluation of indicators from the perspective of citizens

| | |
|---------------------|--|
| Contribution | • How much contribution an indicator makes to SDGs |
| Difficulty | • Whether an indicator requires a lot of efforts & time to achieve |
| Adequacy | <ul style="list-style-type: none"> • Whether an indicator requires a lot of efforts & time to achieve • Whether an indicator needs improvement & supplementation |

Marking Method

Indicator's Contribution to SDGs



Indicator's Difficulty



Citizen Participation Group's Evaluation of Unit Projects

They were written as per 17 SDGs.

| | |
|----------------------------|--|
| Contribution | • Whether a unit project implemented by a dept. contributes to SDGs |
| Need for Governance | • How much collaboration with the civil society a unit project is needed |
| New Unit Project | • Suggestion of new unit projects as per SDGs |

Marking Method



Contribution to SDGs
(average)



Need for Governance with Citizens
(average)

Implication of the Publication of VLR

Dangjin's process of establishing and implementing SDGs is not only exemplary among the local governments in pushing ahead with sustainable development, but it also newly suggests the epitome of alternative regional development.

Despite leading progress, Dangjin was not satisfied with quick performance and accumulated the experience of cooperation based on private-public cooperation, taking its root from basic research in 2016 through the advancement in 2019, which is very significant as an precedent for the process of pursuing local sustainable development. Dangjin has exerted efforts so far to make a thorough implementation plan not to regard establishment of SDGs as a mere formality and has actively connected its implementation plan on the SDGs with the performance management system of the administration. This report is a record of such efforts and processes.

The evaluation of sustainability is not an evaluation for evaluation nor evaluation for criticism. It intends to turn a urgent desire for sustainable development that the city has accepted into practice. All targets and indicators of the city's SDGs are not simply goals for public servants of Dangjin city but targets and indicators for all the citizens and companies at Dangjin as well. Those with outstanding progress should be shared as an experience of success while each actor should make more contribution and concerted efforts for those that need improvements or have shortcomings.

The same message can be also found in evaluation opinions of the Citizen Participation Group and experts involved in the evaluation process. It is necessary to review whether SDGs and indicators well reflect the value of sustainable development and target values of an indicator are appropriately established. As for sustainable development indicators, objectivity should be ensured, but continuous discussions are also needed to determine how indicators enhance significance of communications between the administration and citizens and even among citizens befitting the expectations of citizens and what has to be done with the level of target values.

The Citizen Participation Group's evaluation to issue a sustainable development report is one of these processes, and its evaluation opinions will play an important role in policy-making and decision-making for sustainable development in Dangjin.

Dangjin Sustainable Development Report will be published in every two years after evaluating sustainability throughout Dangjin's municipal affairs based on evaluation of the Citizen Participation Group regarding Dangjin's sustainable development indications, department-specific unit projects and performance indicators.



Even Beyond Sustainable Dangjin

Through analysis of sustainable development indicators, the sustainability evaluation itself does not lead to better performance of the administration or the city's sustainability. It needs a process where the evaluation outcome is reflected back into the administration.

Dangjin city has to apply this evaluation results to the municipal policies, in order to focus on the achievement of 2025 target values and establishment of better implementation plan on sustainable development.

First of all, it plans to improve indicators which showed low contribution to the 17 SDGs during this evaluation process so that they can better serve as a beacon to the city's sustainable development.

In addition, although the concept of sustainable development could be regarded as wide and vague, it will give shape to the system that actively discovers and realizes department-specific action plans based on an annual evaluation of their implementation plan that specifies "sustainability" and contains policies of the department, rather than remaining status quo.

Such an improvement process should be also achieved through involvement of citizens and a private-public deliberation process, as seen during the process of establishing and evaluating Dangjin's SDGs.

The UN SDGs is based on a greater cause "Leaving No One Behind." This is also what the 17 SDGs aim at and the target points that Dangjin pursues. We should make more efforts as we come closer to the target points through the implementation system of sustainable development based on citizen involvement. Moving forward, one and every citizen in Dangjin should also set "my own SDGs" and exert efforts to turn them into

SDGs in daily life that can be put into practice at home and workplace.



2020 Dangjin Sustainable Development Report

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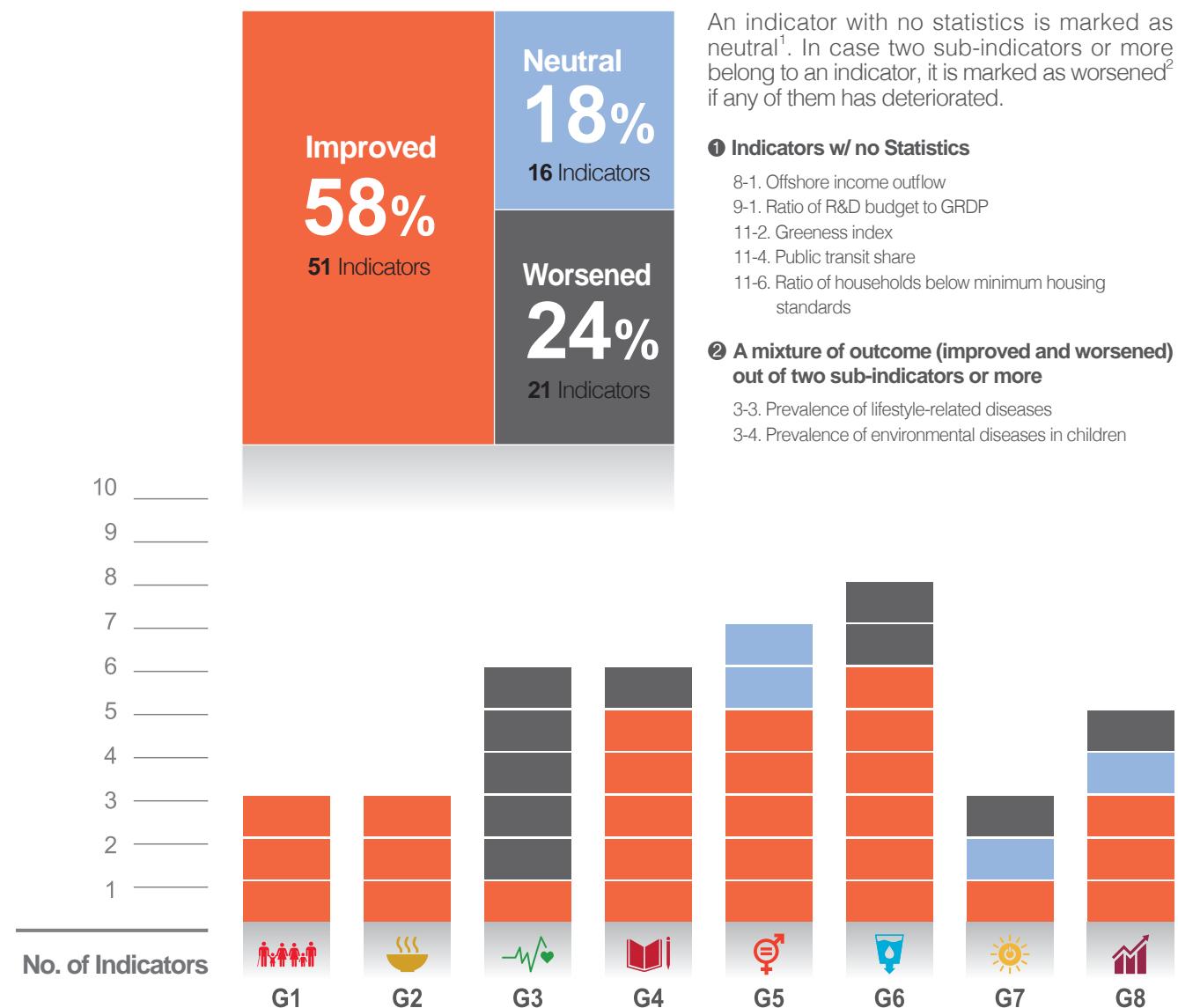
State of Dangjin Sustainable Development Indicators for 17 Goals

1. Improvement
2. Target Achievement Ratio

State of Dangjin Sustainable Development Indicators for 17 Goals

As it aims at evaluation of sustainability in Dangjin after the Basic Plan and Implementation Plan on Sustainable Development established in 2017, the analysis was done on statistics of 88 sustainable development indicators from 2015 to 2019, but the evaluation focused on the changing trends after 2017.

Improvement

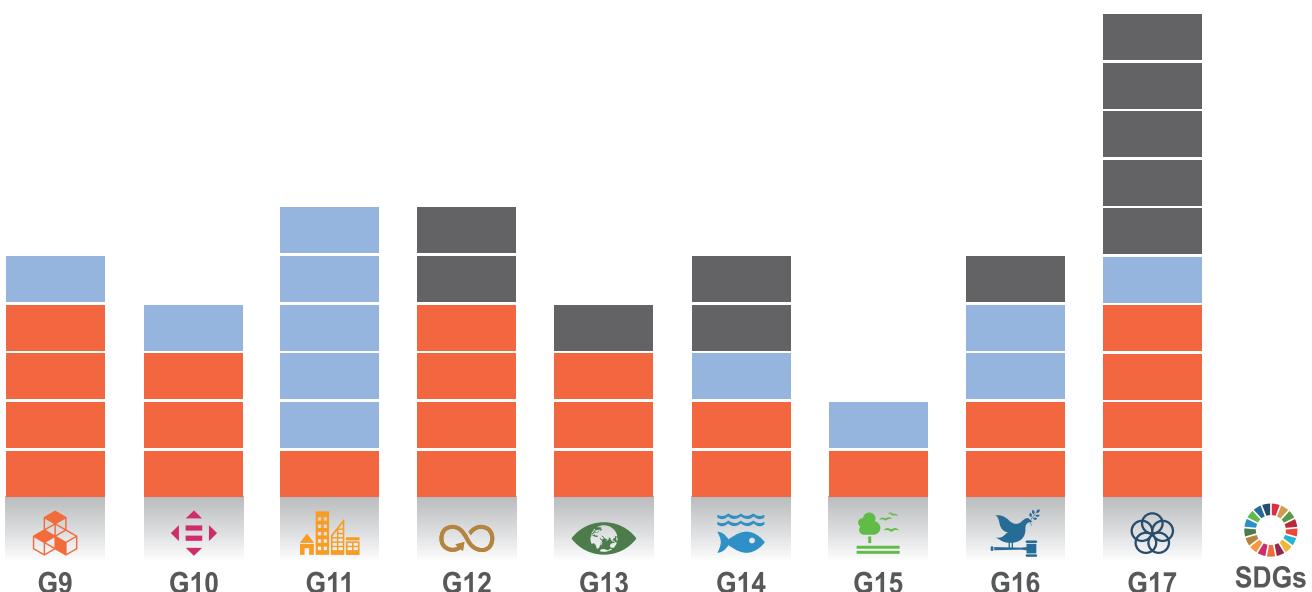


Out of 88 indicators, 51 (58%) of them made improvements and 21 (24%) got worsened. There were sixteen neutral indicators including five (incl. four future indicators) with no statistics and eleven indicators with little change.

In overall, given the trend of indicators, Dangjin achieved decent sustainability with a high ratio of improved and neutral indicators.

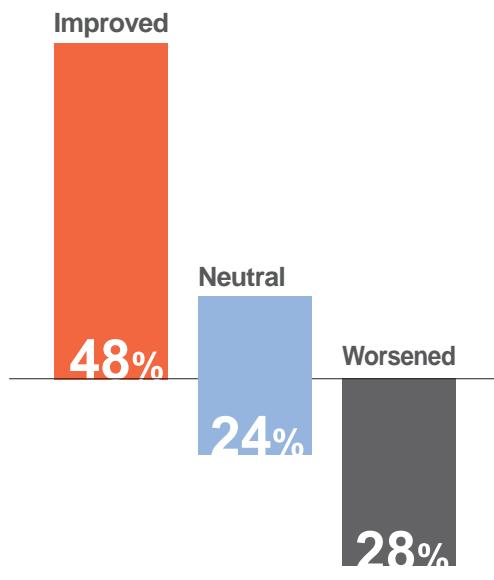
Among the indicators, the most vulnerable goals were G3. Healthy Life (worsened : five indicators out of six; 83%) and G17. Network-building for Sustainable Development (worsened: five indicators out of ten; 50%).

The indicator trend also showed many improvements in the following goals: G1. No Absolute Poverty (Improved: all three indicators), G2. Strong Agricultural Foundation as Strategic Industry (Improved : all three indicators), G4. Tailor-made Education City (Improved : five indicators out of six; 83%), G9. Foundation-building to Foster Future Strategic Industries (Improved : four indicators out of six; 80%), G.10 Local Community without Inequality (Improved : three indicators out of four; 75%) and G13. Reduction of GHGs to NDC (Improved : three indicators out of four; 75%).



Improvement

Welfare & Education



With ten improved (48%), six worsened (28%) and five neutral indicators (24%) out of 21, it has a lower rate of improved indicators than other sectors whereas the ratio of worsened indicators is higher than others. In particular, indicators of G3. Healthy Life got worse in overall. All of three indicators of G1, however, made improvements.

Among six indicators of G3, only one indicator improved. The prevalence of lifestyle-related diseases (hypertension, diabetes and stroke) excluding stroke was on an increase each year. Meanwhile, the prevalence of environmental diseases in children (asthma, atopy) was marked as worsened as the ratio of asthma had deteriorated despite an improvement in the atopy prevalence. In addition, the suicide ratio and ratio of using local agricultural products at school food support centers also deteriorated.

Out of six indicators of G4, five made an improvement with only one worsening, showing a decent result.

Among six indicators of G11, the pavement ratio turned for the better, but the green area and urban park area saw very little increase and were marked as neutral. The remaining indicators were also classified as neutral due to no statistics.

| Improved(10) | Neutral(5) | Worsened(6) |
|--|---|--|
| 1-1. Ratio of social welfare costs 1-2. Ratio of basic-pension recipients 1-3. Elderly employment rate 3-2. No. of public medical personnel per 1,000 people 4-1. No. of youth clubs in school 4-2. No. of visitors to and new registrants of public libraries 4-3. No. of cultural/arts performances and exhibitions and of spectators 4-5. Lifelong education participation rate 4-6. No. of clubs for citizen education and culture 11-5. Pavement ratio | 11-1. Per-capita green area 11-2. Greenness index 11-3. Per-capita urban park area 11-4. Public transit share 11-6. Ratio of households below minimum housing standards | 3-1. Traffic accident casualties per 1,000 people 3-3. Prevalence of lifestyle-related diseases 3-4. Prevalence of environmental diseases in children 3-5. Suicide rate per 100,000 people 3-6. Ratio of using local agricultural products at school food support centers 4-4. No. of cultural/arts organizations receiving subsidies |





Improvement

Civil Community

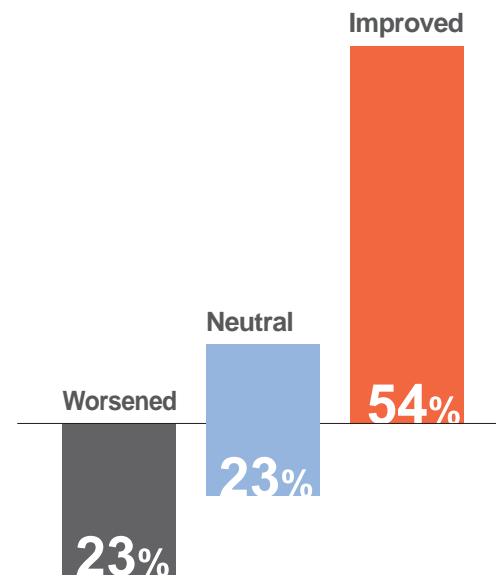
Out of 26 indicators, fourteen improved (54%), six deteriorated (23%) and six were marked as neutral (23%).

Among seven indicators of G5, five made improvements and two stayed neutral, showing a positive result.

Three indicators out of four in G10 saw improvement while the ratio of non-regular workers was marked as neutral due to little reduction.

Out of five indicators of G16, two improved and the education indicator related to human rights got worse. Integrity, information disclosure claims and disclosure rate were classified as neutral owing to little increase.

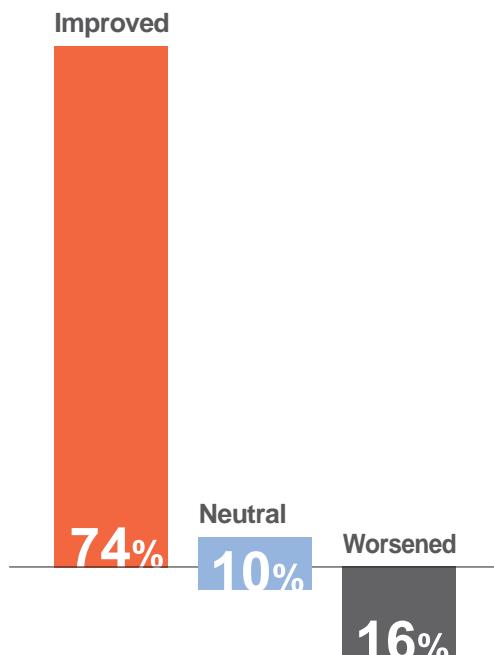
G17 is a goal with ten indicators, the largest number. Four were changed for the better, five indicators deteriorated, and the remaining one was in neutral.



| Improved(14) | Neutral(6) | Worsened(6) |
|--|---|--|
| 5-1. Ratio of children going to state-run /public pre-schools 5-2. Ratio of policies conducting gender impact analysis/assessment 5-3. Ratio of paternity leave payment 5-5. Ratio of women public officials at Grade 6 or higher 5-7. No. of children requiring protection per 1,000 people 10-1. Employment rate of the disabled 10-2. Ratio of budget supporting the disabled 10-3. Ratio of support for multicultural households 16-1. No. of crimes per 1,000 people 16-3. Ratio of original information disclosure 17-1. Complaint-handling satisfaction rate 17-2. No. of collective complaints 17-9. Ratio of hardware(facility) budget 17-10. Per-capita budget amount | 5-4. Women employment rate 5-6. No. of consulting on violent crimes against women and of follow-up actions 10-4. Ratio of non-regular workers 16-2. Integrity of public institutes 16-4. No. of information disclosure claims and disclosure rate 17-7. Financial independence ratio | 16-5. Ratio of education budgets and No. of training sessions related to human rights 17-3. Volunteer participation ratio 17-4. Ratio of budget to support civil groups 17-5. Ratio of participatory budget 17-6. Average No. of Committee meetings held 17-8. Ratio of administrative operating expenses |

Improvement

Economic Inclusiveness



With fourteen improved (74%), three worsened (16%) and two neutral indicators (10%) out of 19, it has a lot high rate of improved indicators than other sectors.

All three indicators of G2 improved.

Out of five indicators of G8, three made an improvement while the industrial accident rate deteriorated. Due to no statistics, offshore income outflow was marked as neutral.

Among five indicators of G9, four improved whereas the ratio of R&D budget to GRDP was classified as neutral with no statistical figures.

Four out of six indicators in G12 turned for the better, but two indicators, namely, recycling rate of domestic wastes and generation of industrial wastes, were exacerbated.

| Improved(14) | Neutral(2) | Worsened(3) |
|--|---|--|
| 2-1. Area growing eco-friendly crops 2-2. Ratio of farmers joining the Chamber of Agriculture 2-3. No. of farms signing monthly-pay contracts with farmers 8-2. Unemployment/employment rate 8-3. Ratio of budge expenditures for youth employment and youth employment rate 8-4. No. of social enterprises and their employees 9-2. No. of farms approving Haenaru Brand 9-3. Ratio of farmers participating in Local Food and increase rate of sales 9-4. No. of users of rural experience programs 9-5. Ratio of firms ISO 14000 certified 12-1. Ratio of sustainable public procurement 12-2. Per-capita daily generation of domestic wastes 12-4. Per-capita daily generation of food scrap 12-6. Recycling ratio of industrial wastes | 8-1. Offshore income outflow 9-1 Ratio of R&D budget to GRDP | 8-5. Industrial accident rate 12-3. Recycling ratio of domestic wastes 12-5. Generation of industrial wastes |





Energy & Environment

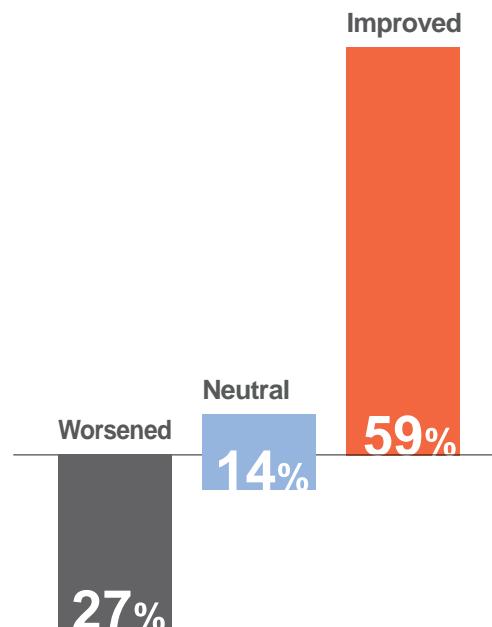
Out of 22 indicators in total, thirteen improved (59%), six worsened (27%) and three remained neutral (14%).

Among eight indicators of G6, six improved, but two indicators, per-capita daily water consumption and ratio of exceeding the threshold of underground water pollution, worsened.

Out of three indicators of G7, the production of renewable energy showed an improvement while per-capita energy consumption deteriorated, but there was no change in the ratio of underground power lines.

Out of four indicators of G13, three improved and the number of days exceeding the threshold of fine dust took a turn for the worse. Two out of five indicators in G14 made an improvement while two were exacerbated. The recycling rate of used Styrofoam for fishery was marked as neutral.

Among two indicators of G15, one improved and the other was in neutral

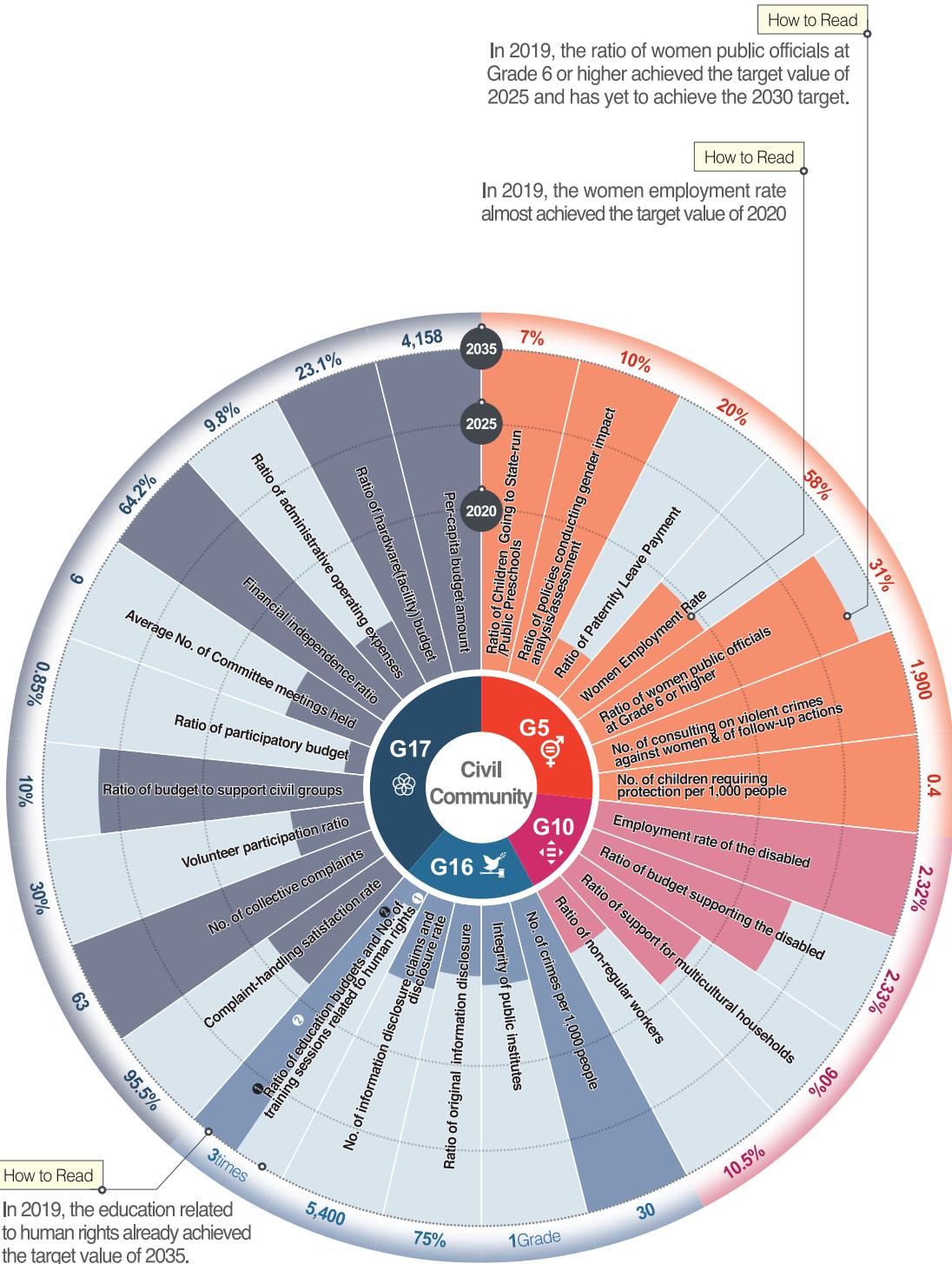


| Improved(13) | Neutral(3) | Worsened(6) |
|---|--|---|
| 6-2. Rainwater utilization 6-3. No. of abandoned tube well managed (restored) 6-4. Water supply ratio & local/regional waterworks rate 6-5. Sewer service ratio 6-6. Reutilization rate of treated waste water 6-7. River pollution (BOD) 7-2. Production of renewable energy 13-1. Per-capita GHG emissions and reductions 13-3. Damage by wind and flood 13-4. Ratio of areas covered by crop disaster insurance 14-3. Coastal marine pollution 14-4. Ratio of areas with environmental improvement in coastal fishing grounds 15-1. Ratio of exceeding the threshold of soil pollution | 7-3. Ratio of underground power lines 14-5. Recycling rate of used Styrofoam for fishery 15-2. Soundness of river ecosystems | 6-1. Per-capita daily water consumption 6-8. Ratio of exceeding the threshold of underground water pollution 7-1. Per-capita energy consumption 13-2. No. of days exceeding threshold of fine dust (PM 10) 14-1. Fry discharge 14-2. Coastal water pollution (COD) |

Target Achievement Ratio

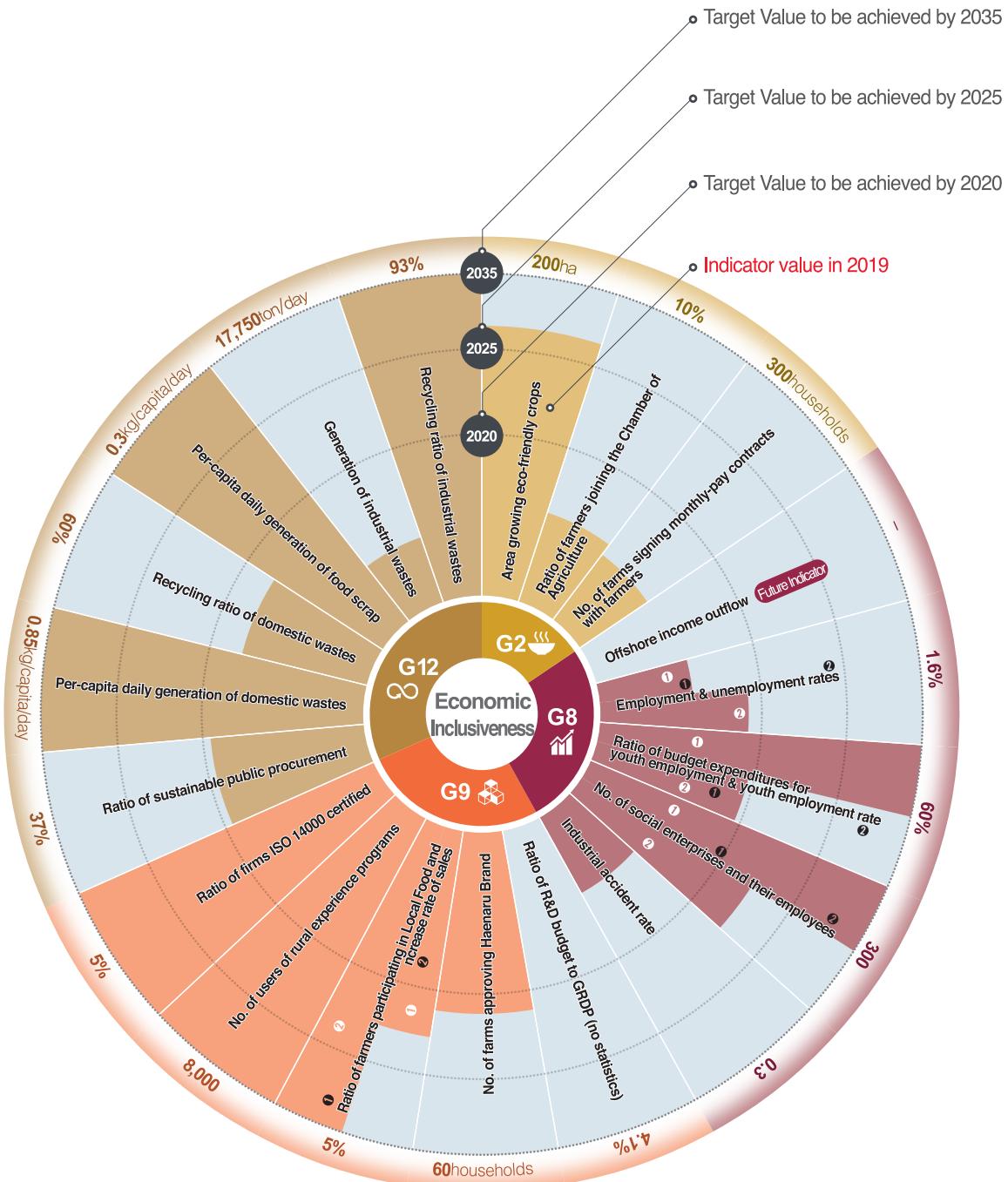
In 2017 when the Basic Plan on Sustainable Development was established, Dangjin set 88 indicators to measure the city's sustainability. The following year, it established the mid/long-term target values of years 2020, 2025 and 2035. It also evaluated whether it achieved the target value of 2020 based on indicator statistics as of 2019 and measured the proximity to the target values of 2025 and 2035.

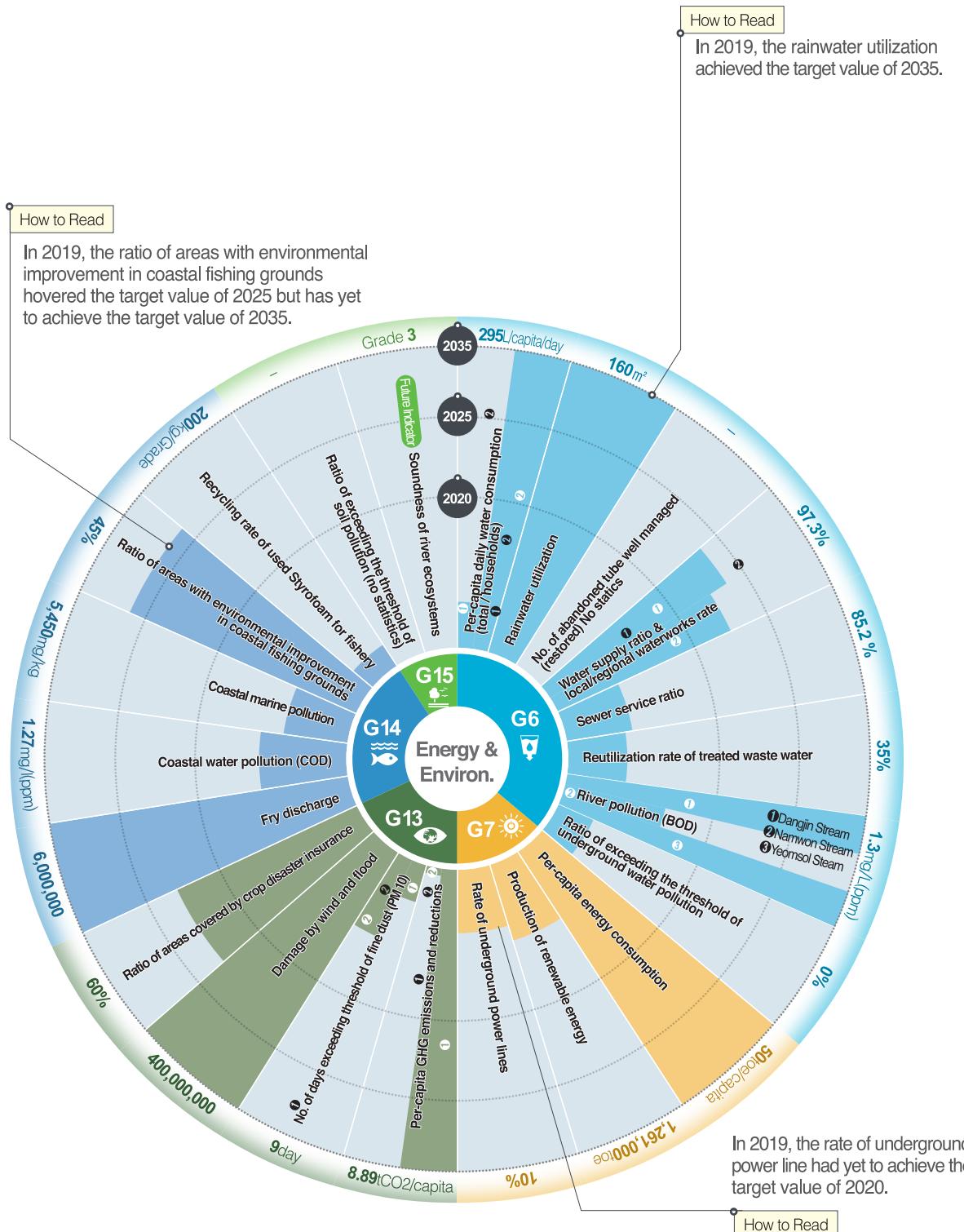




How to Read

In 2019, the education related to human rights already achieved the target value of 2035.







4

Overview of the Opinion of Citizen Evaluation

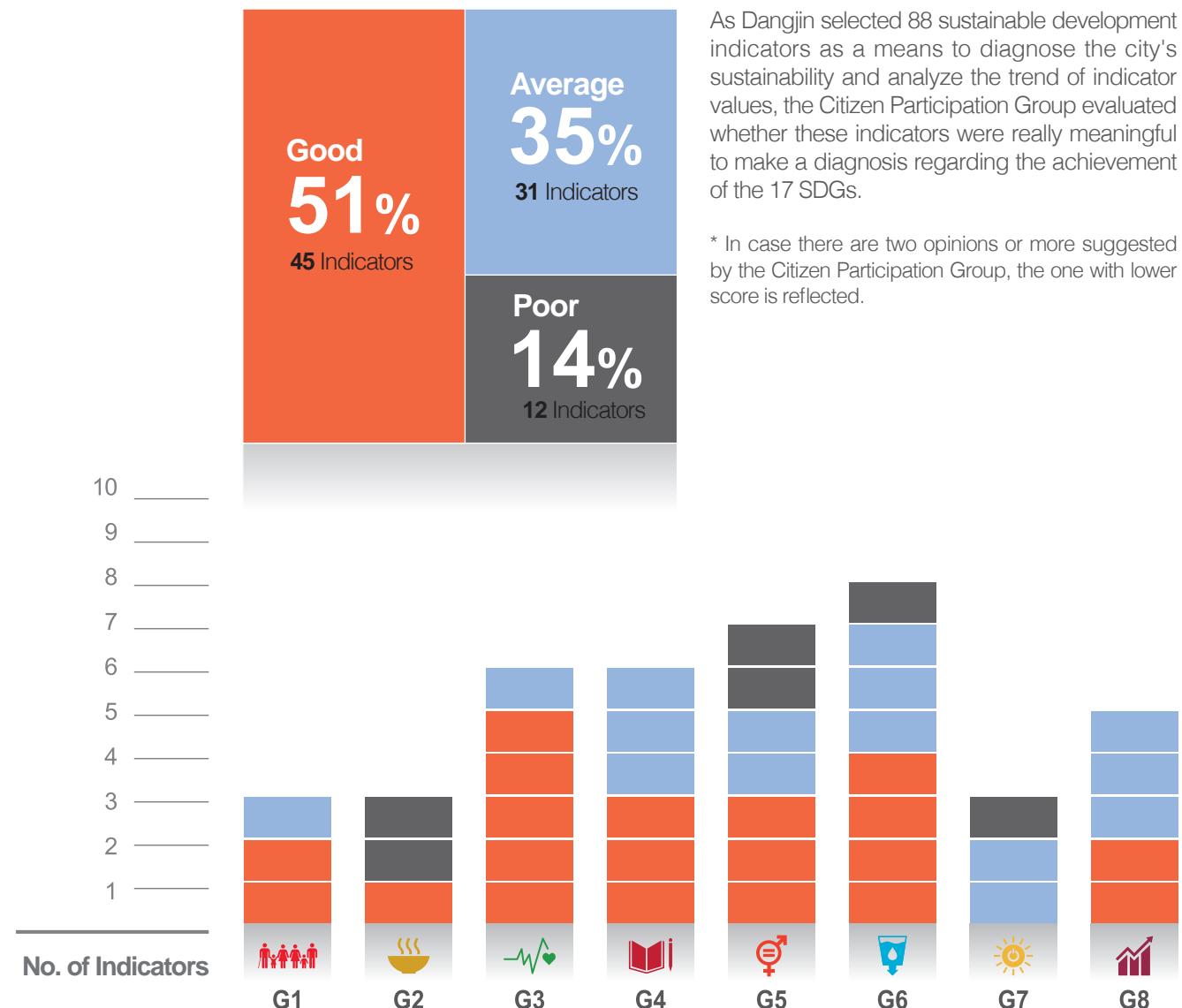
1. Contribution to SDGs
2. Level of Difficulty to Achieve
3. Adequacy of Indicators and Targets



Overview of the Opinion of Citizen Evaluation

The evaluation was carried out from the view of citizens regarding 88 sustainable indicators under the following four items: ① contribution to the 17 SDGs, ② difficulty, ③ a need to modify indicators and ④ a need to change target values. As indicators are a means to measure the achievement of the 17 SDGs, evaluation results should be reflected in the future sustainable development policies of Dangjin such as modification of indicators

Contribution to SDGs

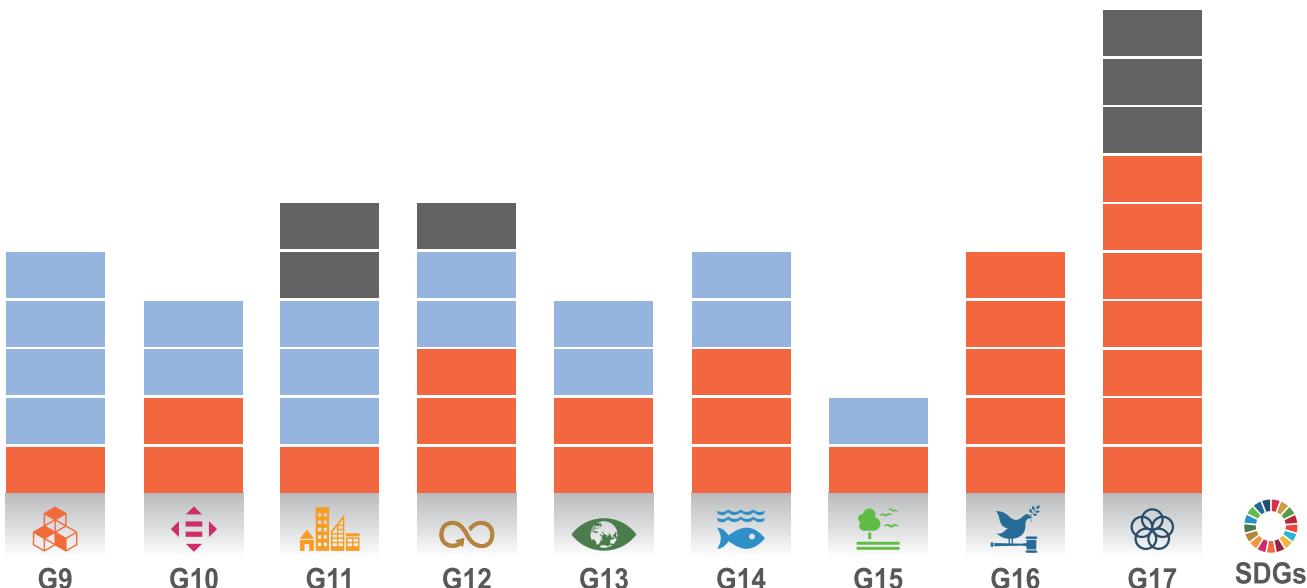


Out of 88 indicators, 45 (51%) were regarded to be highly conducive to achieving SDGs (Very Good : six, Good : 39), followed by 31 indicators regarded as average (35%) and twelve (14%) with little contribution (Poor : nine, Very poor: three).

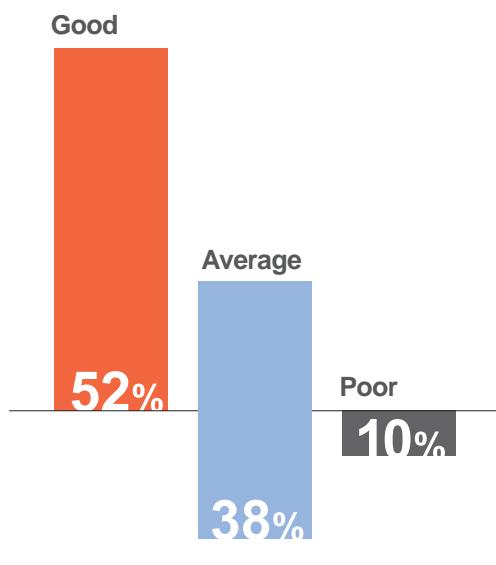
What is striking is that most indicators of G3 (Healthy Life) with the highest ratio of worsened indicators, were evaluated to have positive contribution to SDGs (Good : five out of six). Despite a high level of contribution to SDGs, as most of their indicator values deteriorated, they seem to need policy improvement such as discovery of projects to be implemented by a department concerned with the indicators.

In addition, it is noteworthy to point out that three indicators out of ten in G17 (Network-building for Sustainable Development), with poor improvement of indicator values, were perceived to have little contribution to SDGs. They need to be checked during modification of indicators in the future.

As for G2 (Strong Agricultural Foundation as Strategic Industry) with a decent trend of indicator values, meanwhile, two out of three indicators were evaluated as poor in terms of contribution to SDGs, which seems to require modification of the indicators.



Contribution to SDGs

Welfare & Education

With two (10%) poor indicators, eight (38%) average, and eleven (52%) good out of 21 indicators, it was evaluated to have positive contribution to SDGs, compared to other sectors.

As most of evaluation opinions show that G1, G3 and G4 indicators were evaluated to have good or average contribution to SDGs, they are perceived as appropriate indicators to diagnose sustainability.

On the contrary, five out of six indicators in G11 turned out to have average/poor level of contribution to SDGs. That said, review is required to determine whether the result has something to do with three indicators' absence of statistics as they are future indicators.

There are two indicators classified as good and one as average in G1; five indicators as good and one as average in G3; and three as good and three as average in G4. As for G11, the ratio of households below minimum housing standards was evaluated as a good indicator while the rest were marked as average (three) and poor (two).

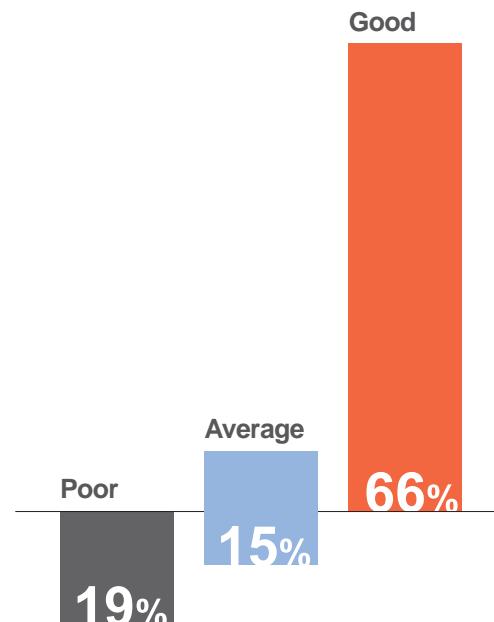
| Good/ Very Good(11) | Average (8) | Very Poor/Poor (2) |
|---|--|--|
| 1-1. Ratio of social welfare costs 1-3. Elderly employment rate 3-1. Traffic accident casualties per people 3-2. No. of public medical personnel per 1,000 people 3-4. Prevalence of environmental diseases in children 3-5. Suicide rate per 100,000 people 3-6. Ratio of using local agricultural products at school food support centers 4-2. No. of visitors to and new registrants of public libraries 4-5. Lifelong learning participation rate 4-6. No. of clubs for citizen education and culture 11-6. Ratio of households below minimum housing standards | 1-2. Ratio of basic-pension recipients 3-3. Prevalence of lifestyle diseases 4-1. No. of youth clubs at schools 4-3. No. of cultural/arts performances and exhibitions and of spectators 4-4. No. of cultural/arts organizations receiving subsidies 11-1. Per-capita green area 11-2. Greenness index 11-5. Pavement ratio | 11-3. Per-capita urban park area 11-4. Public transit share |



Civil Community

With five poor indicators (19%), four average (15%) and seventeen good (66%) among the 26 indicators, it was evaluated to have a higher ratio of indicators that had both good and poor contribution to SDGs, compared to other sectors. Meanwhile, it has significantly a low ratio of average vis-a-vis others. There are three indicators marked as good, two as average and two as poor in G5, and two indicators as good and two as average in G10.

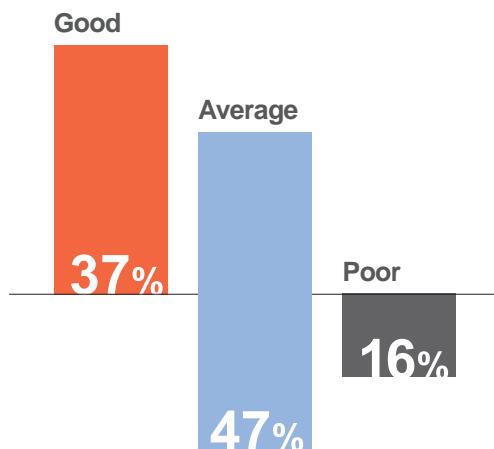
All of the indicators in G16 were classified as good while G17, with the largest number of indicators, had seven indicators as good and three as poor. Out of 88 indicators, there were three indicators marked as very poor. Two of them belong to G17.



| Good/ Very Good(17) | Average (4) | Very Poor/Poor (5) |
|---|---|--|
| 5-1. Ratio of children going to state-run/ public pre-schools 5-4. Women employment rate 5-7. No. of children requiring protection per 1,000 people 10-2. Ratio of budget supporting the disabled 10-4. Ratio of non-regular workers 16-1. No. of crimes per 1,000 people 16-2. Integrity of public institutes 16-3. Ratio of original information disclosure 16-4. No. of information disclosure claims and disclosure rate 16-5. Ratio of education budgets and No. of training sessions related to human rights 17-1. Complaint-handling satisfaction rate 17-2. No. of collective complaints 17-3. Volunteer participation ratio 17-4. Ratio of budget to support civil groups 17-5. Ratio of participatory budget 17-7. Financial independence ratio 17-10. Per-capita budget amount | 5-2. Ratio of policies conducting gender impact analysis/assessment 5-6. No. of consulting on violent crimes against women and of followup actions 10-1. Employment rate of the disabled 10-3. Ratio of support for multicultural households | 5-3. Ratio of paternity leave payment 5-5. Ratio of women public officials at Grade 6 or higher 17-6. Average No. of Committee meetings held 17-8. Ratio of administrative operating expenses 17-9. Ratio of hardware(facility) budget |

Contribution to SDGs

Economic Inclusiveness



With three indicators as poor (16%), nine as average (47%) and seven as good (37%) out of the nineteen indicators in total, it was evaluated to have low contribution to SDGs compared to other sectors. In particular, it had the highest ratio of average indicators.

That said, this sector saw the most improvements in its indicators among the sectors.

There were one indicator marked as good, two as poor in G2; two as good, three as average in G8; one as good and four as average in G9; and three as good, two as average and one as poor in G12.

| Good/ Very Good(7) | Average (9) | Very Poor/Poor (3) |
|--|--|---|
| 2-1. Area growing eco-friendly crops 8-1. Offshore income outflow 8-2. Unemployment/employment rate 9-4. No. of users of rural experience programs 12-2. Per-capita daily generation of domestic wastes 12-3. Recycling ratio of domestic wastes 12-4. Per-capita daily generation of food scrap | 8-3. Ratio of budget expenditures for youth employment and youth employment rate 8-4. No. of social enterprises and their employees 8-5. Industrial accident rate 9-1. Ratio of R&D budget to GRDP 9-2. No. of farms approving Haenaru Brand 9-3. Ratio of farmers participating in Local Food and increase rate of sales 9-5. Ratio of firms ISO 14000 certified 12-5. Generation of industrial wastes 12-6. Recycling ratio of industrial wastes | 2-2. Ratio of farmers joining the Chamber of Agriculture 2-3. No. of farms signing monthly-pay contracts with farmers 12-1. Ratio of sustainable public procurement |



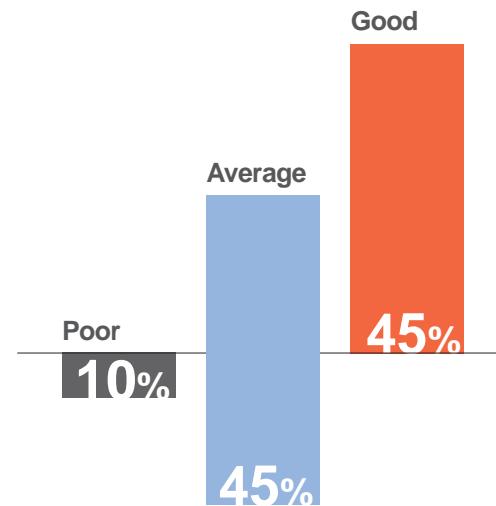


Energy & Environment

Out of the total 22 indicators, two were evaluated to have poor contribution to SDGs (10%) while ten were redeemed as average (45%) and ten as good (45%).

Despite exacerbated indicator values, the recycling ratio of domestic wastes and per-capita daily generation of food scrap (G12); the number of days exceeding threshold of fine dust (G13) and fry discharge (G14) were perceived to have good contribution to SDGs, which requires policy improvement in the implementation plan of a department concerned.

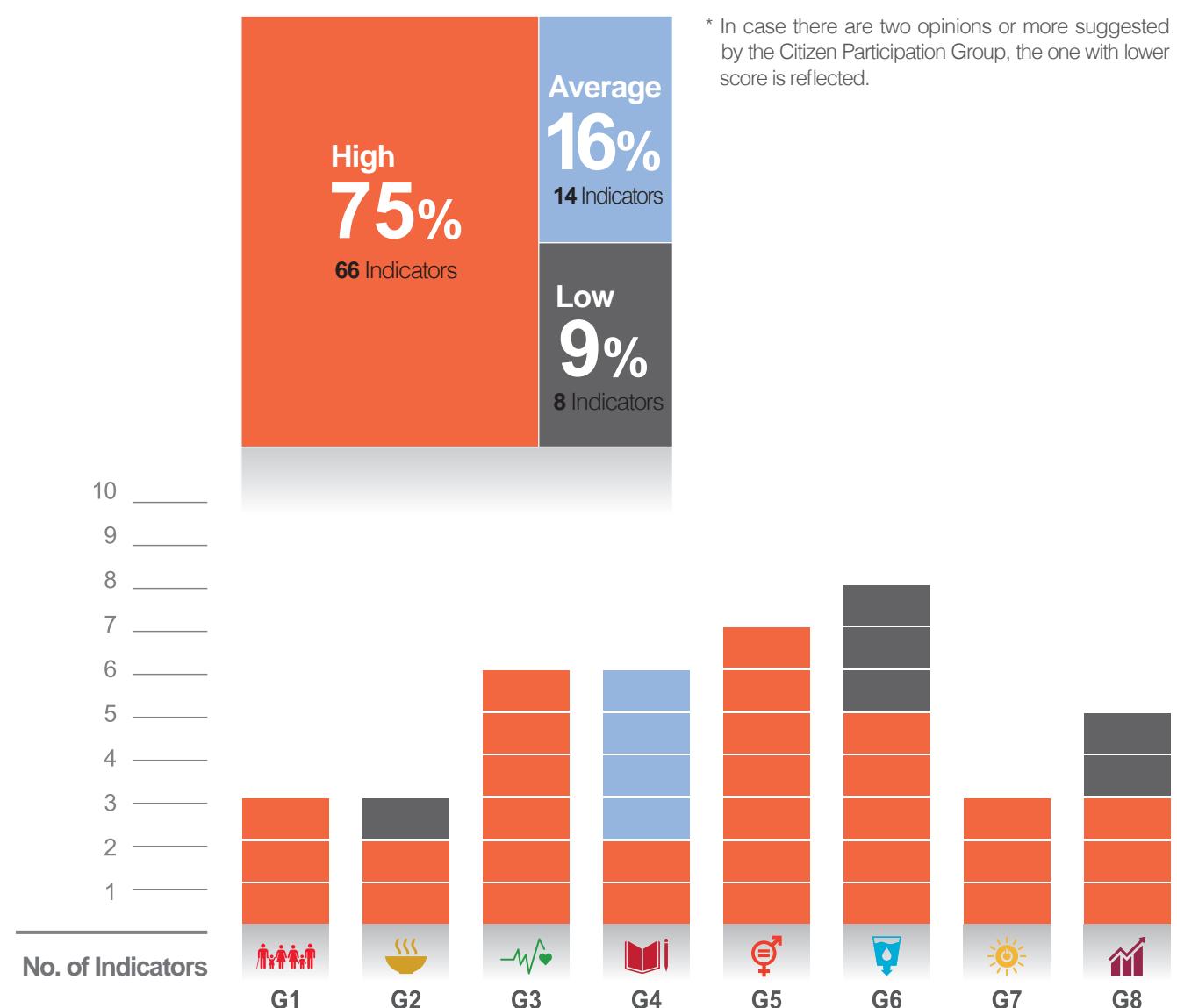
There are four indicators marked as good, three as average and one as poor in G6; two as average and one as poor in G7; two as good and two as average in G13; three as good and two as average in G14; and one as good and one as average in G15.



| Good/ Very Good(10) | Average (10) | Very Poor/Poor (2) |
|--|--|--|
| 6-4. Water supply ratio & local/regional waterworks rate | 6-1. Per-capita daily water consumption | 6-3. No. of abandoned tube well managed (restored) |
| 6-5. Sewer service ratio | 6-2. Rainwater utilization | 7-2. Production of renewable energy |
| 6-6. Reutilization rate of treated waste water | 6-8. Ratio of exceeding the threshold of underground water pollution | |
| 6-7. River pollution (BOD) | 7-1. Per-capita energy consumption | |
| 13-1. Per-capita GHG emissions and reductions | 7-3. Rate of underground power lines | |
| 13-2. No. of days exceeding threshold of fine dust (PM 10) | 13-3. Damage by wind and flood | |
| 14-1. Fry discharge | 13-4. Ratio of areas covered by crop disaster insurance | |
| 14-4. Ratio of areas with environmental improvement in coastal fishing grounds | 14-2. Coastal water pollution (COD) | |
| 14-5. Recycling rate of used Styrofoam for fishery | 14-3. Coastal marine pollution | |
| 15-2. Soundness of river ecosystems | 15-1. Ratio of exceeding the threshold of soil pollution | |

Level of Difficulty to Achieve

The degree of efforts and time required to achieve 88 sustainable development indicators was evaluated from the perspective of citizens. Although the level of improvements seen in indicator values is important, difficulty has been also included as one of evaluation items of the Citizen Participation Group, in order to distinguish indicators that need a different set of evaluation criteria from those that can easily achieve targets owing to low difficulty without additional efforts because some require a lot of efforts even to achieve a small improvement due to high difficulty.



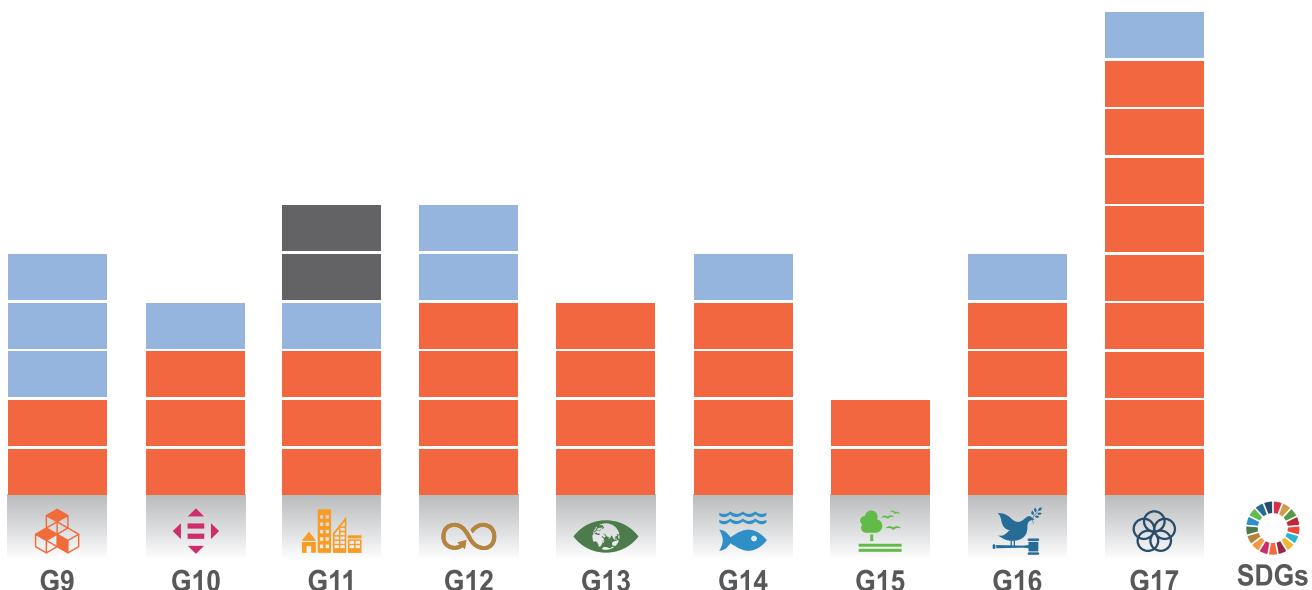
The evaluation showed that, out of 88 indicators, 66 indicators (75%) needed a lot of efforts and time to accomplish the targets (Very High : sixteen, High : 50), fourteen indicators were evaluated as average (16%) and eight had a low level of difficulty (Low : seven, Very Low: one), which indicates that difficulty of most indicators can be regarded as high.

With the poorest improvements observed, all of the six indicators in G3 (Healthy Life) turned out to require a lot of efforts and time to attain goals (Very much needed : two, Needed : four), and three indicators of the G7 (Energy Justice) also required lots of efforts and time.

As for G2 (Strong Agricultural Foundation as Strategic Industry), the area growing eco-friendly crops was evaluated to have a high level of contribution to SDGs and of difficulty whereas the number of farms signing monthly-pay contracts with farmers was assessed to have low contribution to SDGs and difficulty.

In G6 (City without Water Scarcity), the number of abandoned tube well managed (restored) was also redeemed to have low difficulty and contribution to SDGs.

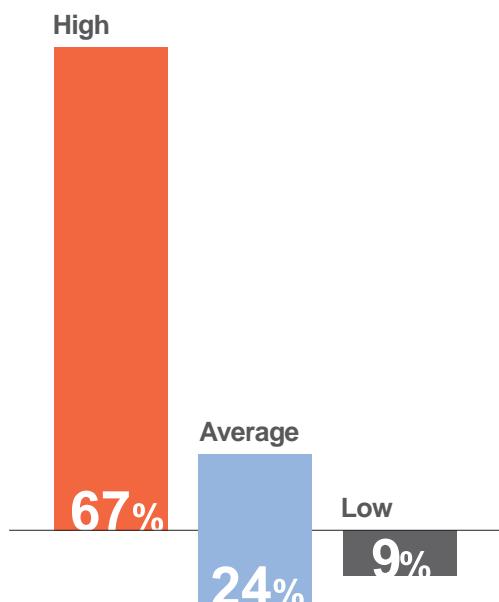
The following indicators were regarded to have high contribution to SDGs and difficulty : recycling ratio of domestic wastes and per-capita daily generation of food scrap in G12 (Sustainable Local Consumption System) and soundness of river ecosystems in G15 (Biodiversity for Eco-friendly City).



Level of Difficulty
to Achieve



Welfare & Education



Out of 21 indicators, the evaluation revealed that fourteen indicators required a lot of efforts and time (67%) while five were regarded as average (24%) and the remaining two had a low level of difficulty (9%).

All indicators of G1 and G3 turned out to be in need of lots of efforts and time. G4 had many indicators marked as average in terms of both contribution to SDGs and difficulty. In G11, the per-capita green area and greenness index that were evaluated to have an average level of contribution to SDGs were perceived to also have a low level of difficulty.

| High / Very High(14) | Average (5) | Very Low/Low (2) |
|--|---|--|
| 1-1. Ratio of social welfare costs 1-2. Ratio of basic-pension recipients 1-3. Elderly employment rate 3-1. Traffic accident casualties per 1,000 people 3-2. No. of public medical personnel per 1,000 people 3-3. Prevalence of lifestyle-related diseases 3-4. Prevalence of environmental diseases in children 3-5. Suicide rate per 100,000 people 3-6. Ratio of using local agricultural products at school food support centers 4-5. Lifelong education participation rate 4-6. No. of clubs for citizen education and culture 11-4. Public transit share 11-5. Pavement ratio 11-6. Ratio of households below minimum housing standards | 4-1. No. of youth clubs in school 4-2. No. of visitors to and new registrants of public libraries 4-3. No. of cultural/arts performances and exhibitions and of spectators 4-4. No. of cultural/arts organizations receiving subsidies 11-3. Per-capita urban park area | 11-1. Per-capita green area 11-2. Greenness index |





High

Level of Difficulty to Achieve

Civil Community

Among 26 indicators, the evaluation showed that 23 indicators needed lots of efforts and time (88%) while three were regarded to have a low level of difficulty (12%).

As seen from the results, the Citizen Participation Group regarded most of the civil community sector as indicators that require lots of efforts and time. In G5, the ratio of paternity leave payment and ratio of women public officials at Grade 6 or higher were evaluated to have a high level difficulty although they had little contribution to SDGs.

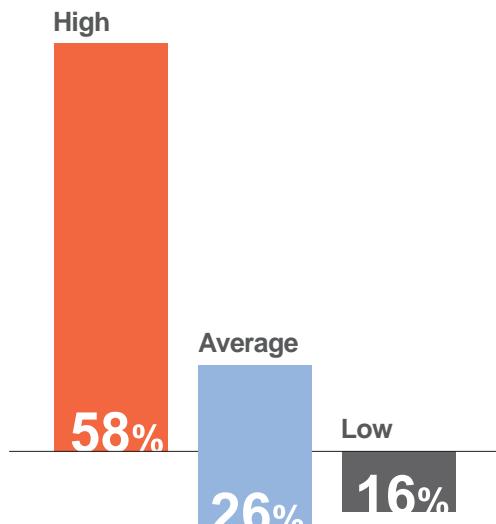


| High / Very High(23) | Average (3) | Very Low/Low (0) |
|--|---|------------------|
| 5-1. Ratio of children going to state-run/public pre-schools 5-2. Ratio of policies conducting gender impact analysis/assessment 5-3. Ratio of paternity leave payment 5-4. Women employment rate 5-5. Ratio of women public officials at Grade 6 or higher 5-6. No. of consulting on violent crimes against women and of follow-up actions 5-7. No. of children requiring protection per 1,000 people 10-2. Ratio of budget supporting the disabled 10-3. Ratio of support for multicultural households 10-4. Ratio of non-regular workers 16-1. No. of crimes per 1,000 people 16-2. Integrity of public institutes 16-4. No. of information disclosure claims and disclosure rate 16-5. Ratio of education budgets and No. of training session related to human rights 17-1. Complaint-handling satisfaction rate 17-2. No. of collective complaints 17-3. Volunteer participation ratio 17-4. Ratio of budget to support civil groups 17-5. Ratio of participatory budget 17-6. Average No. of Committee meetings held 17-7. Financial independence ratio 17-8. Ratio of administrative operating expenses 17-10. Per-capita budget amount | 10-1. Employment rate of the disabled 16-3. Ratio of original information disclosure 17-9. Ratio of hardware(facility) budget | |

Level of Difficulty
to Achieve



Economic Inclusiveness



Among nineteen indicators, the evaluation indicated that a lot of efforts and time were required for eleven indicators(58%) while five (26%) and the remaining three (16%) had an average and low level of difficulty respectively.

The ratio of farmers joining the Chamber of Agriculture of G2 and the ratio of sustainable public procurement of G12 were regarded to have a high level of difficulty although they had little contribution to SDGs.

| High / Very High(11) | Average (5) | Very Low/Low (3) |
|--|---|--|
| 2-1. Area growing eco-friendly crops 2-2. Ratio of farmers joining the Chamber of Agriculture 8-1. Offshore income outflow 8-3. Ratio of budget expenditures for youth employment and youth employment rate 8-4. No. of social enterprises and their employees 9-3. Ratio of farmers participating in Local Food and increase rate of sales 9-4. No. of users of rural experience programs 12-1. Ratio of sustainable public procurement 12-2. Per-capita daily generation of domestic wastes 12-3. Recycling ratio of domestic wastes 12-4. Per-capita daily generation of food scrap | 9-1. Ratio of R&D budget to GRDP 9-2. No. of farms approving Haenaru Brand 9-5. Ratio of firms ISO 14000 certified 12-5. Generation of industrial wastes 12-6. Recycling ratio of industrial wastes | 2-3. No. of farms signing monthly-pay contracts with farmers 8-2. Unemployment/employment rate 8-5. Industrial accident rate |



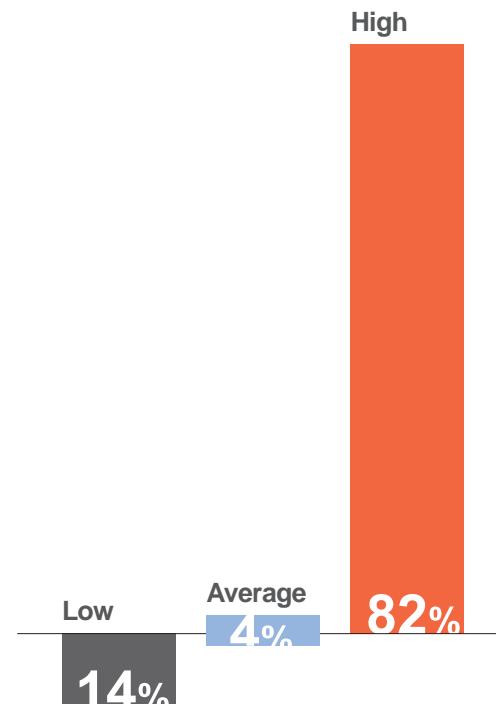
Level of Difficulty to Achieve

Energy & Environment

Out of 22 indicators, the evaluation revealed that eighteen indicators were in need of a large amount of efforts and time (82%) while one (4%) and the remaining three (14%) had an average and low level of difficulty respectively.

As seen in the results, the Citizen Participation Group regarded most of the energy and environment sector as indicators that require a lot of time and efforts.

Although the water supply ratio & local/regional waterworks rate of G6 had high contribution to SDGs, it turned out to have a low level of difficulty. With poor contribution to SDGs, all three indicators of G7 were considered to have a high level of difficulty.

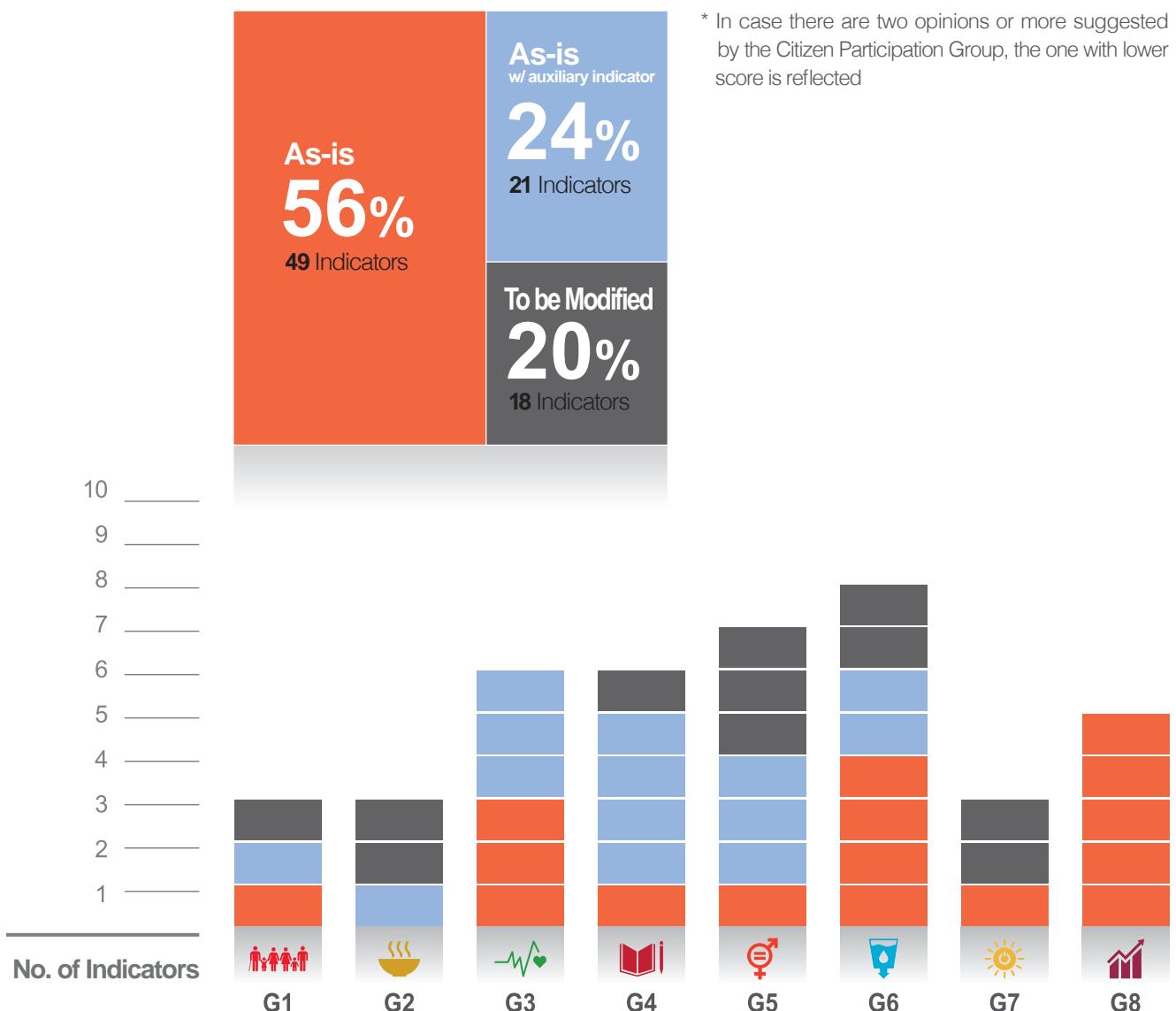


| High / Very High(18) | Average (1) | Very Low/Low (3) |
|--|---------------------|---|
| 6-1. Per-capita daily water consumption 6-2. Rainwater utilization 6-3. Sewer service ratio 6-6. Reutilization rate of treated waste water 6-7. River pollution (BOD) 7-1. Per-capita energy consumption 7-2. Production of renewable energy 7-3. Rate of underground power lines 13-1. Per-capita GHG emissions and reductions 13-2. No. of days exceeding threshold of fine dust (PM 10) 13-3. Damage by wind and flood 13-4. Ratio of areas covered by crop disaster insurance 14-2. Coastal water pollution (COD) 14-3. Coastal marine pollution 14-4. Ratio of areas with environmental improvement in coastal fishing grounds 14-5. Recycling rate of used Styrofoam for fishery 15-1. Ratio of exceeding the threshold of soil pollution 15-2. Soundness of river ecosystems | 14-1. Fry discharge | 6-4. Water supply ratio & local/ regional waterworks rate 6-8. Ratio of exceeding the threshold of underground water pollution 6-3. No. of abandoned tube well managed (restored) |

Adequacy of Indicators and Targets

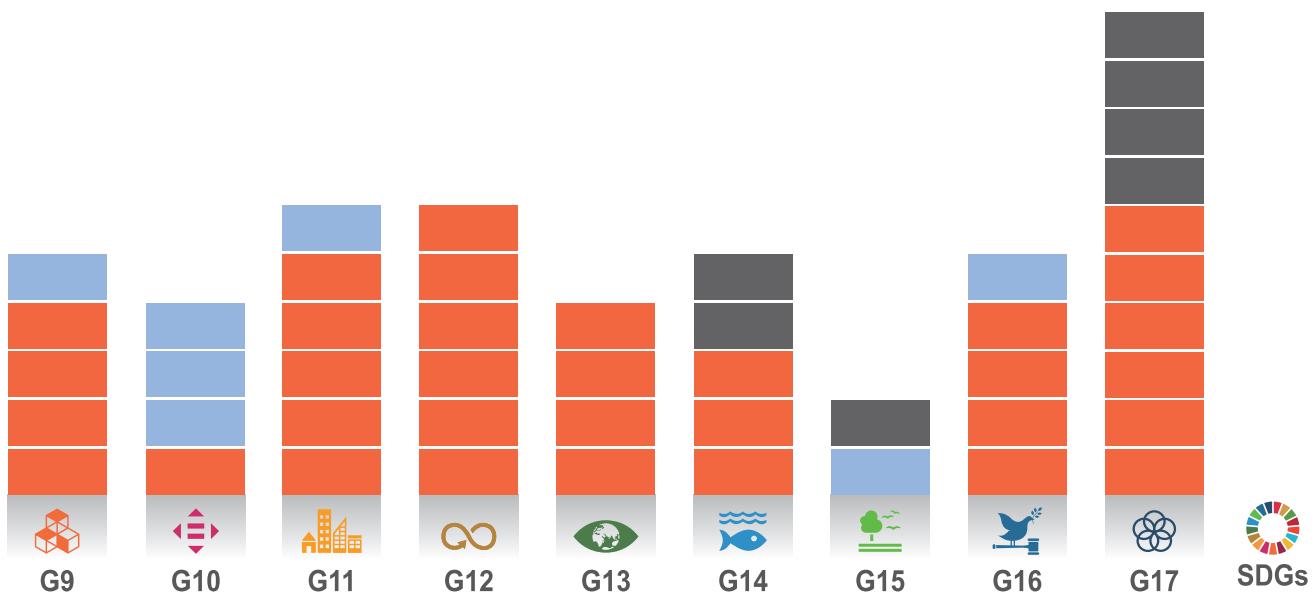
As one of the most critical items that evaluate 88 sustainable development indicators, this focused on evaluation from the perspective of citizens to see if the 88 indicators selected are appropriate to size up sustainability or need a total modification; auxiliary indicators are needed to be provided; or mid/long-term target values to be achieved by 2020, 2025 and 2035 have to be changed.

1. Adequacy of Indicators

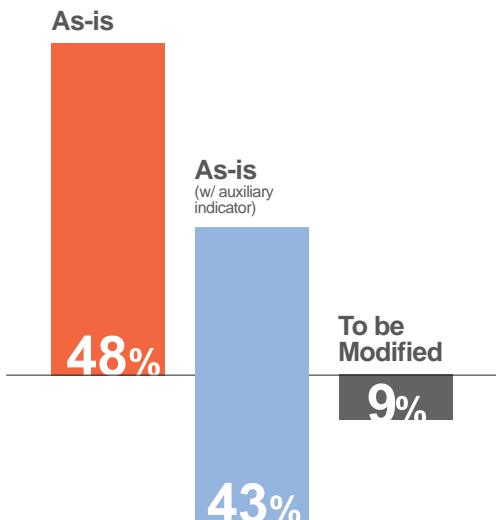


The evaluation revealed that, out of 88 indicators, 49 (56%) can remain as they are, but 21 (24%) require auxiliary indicators although they stay unchanged; however, the remaining eighteen indicators (20%) need a total modification.

What is striking about the evaluation opinions is that indicators with poor contribution to SDGs require a total modification. These indicators include the ratio of farmers joining the Chamber of Agriculture and number of farms signing monthly-pay contracts with farmers of G2 ; the number of youth clubs in schools of G4 ; the ratio of policies conducting gender impact analysis/assessment and ratio of women public officials at Grade 6 or higher of G5 ; the number of abandoned tube well managed (restored) of G6 ; the per-capita energy consumption and production of renewable energy of G7; the coastal marine pollution of G14 ; the ratio of exceeding the threshold of soil pollution of G15 ; and the average number of Committee meetings held, ratio of administrative operating expenses and ratio of hardware(facility) budget of G17.



Adequacy of Indicators

Welfare & Education

Among a total of 21 indicators, the evaluation showed that ten (48%) can remain as they are while nine (43%) require auxiliary indicators although they can stay unchanged; however, the remaining two indicators (9%) need modification.

Compared to other sectors, there were many evaluation opinions regarding this sector that auxiliary indicators are needed.

| As-is(10) | As-is (w/ Auxiliary Indicator)(9) | To be Modified(2) |
|---|---|---|
| 1-1. Ratio of social welfare costs 3-1. Traffic accident casualties per 1,000 people 3-2. No. of public medical personnel per 1,000 people 3-3. Prevalence of lifestyle-related diseases 4-6. No. of clubs for citizen education and culture 11-1. Per-capita green area 11-2. Greenness index 11-3. Per-capita urban park area 11-5. Pavement ratio 11-6. Ratio of households below minimum housing standards | 1-3. Elderly employment rate 3-4. Prevalence of environmental diseases in children 3-5. Suicide rate per 100,000 people 3-6. Ratio of using local agricultural products at school food support centers 4-2. No. of visitors to and new registrants of public libraries 4-3. No. of cultural/arts performances and exhibitions and of spectators 4-4. No. of cultural/arts organizations receiving subsidies 4-5. Lifelong education participation rate 11-4. Public transit share | 1-2. Ratio of basic-pension recipients 4-1. No. of youth clubs in school |

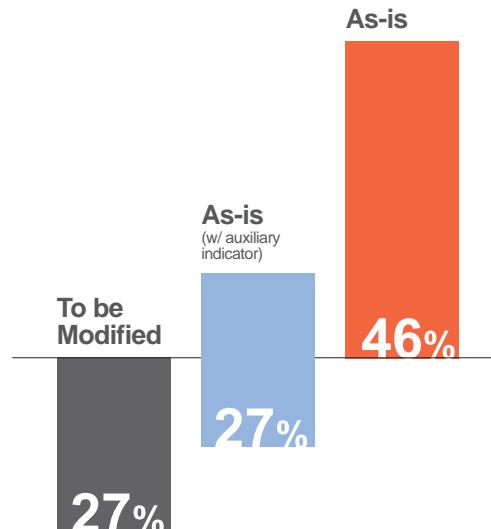


Adequacy of Indicators

Civil Community

Out of 26 indicators, the evaluation indicated that twelve (46%) can remain as they are while seven (27%) require auxiliary indicators although they can stay unchanged; however, the remaining seven indicators (27%) need modification.

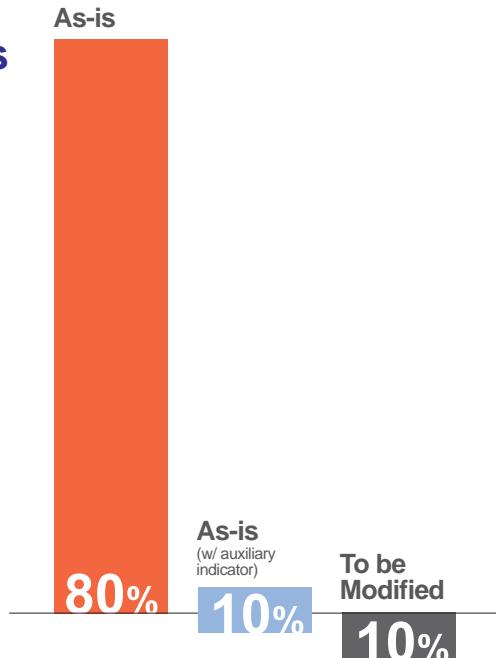
Compared to other sectors, there were many evaluation opinions regarding this sector that modification and auxiliary indicators are needed.



| As-is(12) | As-is (w/ Auxiliary Indicator)(7) | To be Modified(7) |
|---|---|---|
| 5-6. No. of consulting on violent crimes against women and of follow-up actions | 5-1. Ratio of children going to state-run/ public pre-schools | 5-2. Ratio of policies conducting gender impact analysis/assessment |
| 10-3. Ratio of support for multicultural households | 5-3. Ratio of paternity leave payment | 5-5. Ratio of women public officials at Grade 6 or higher |
| 16-2. Integrity of public institutes | 5-4. Women employment rate | 5-7. No. of children requiring protection per 1,000 people |
| 16-3. Ratio of original information disclosure | 10-1. Employment rate of the disabled | 17-4. Ratio of budget to support civil groups |
| 16-4. No. of information disclosure claims and disclosure rate | 10-2. Ratio of budget supporting the disabled | 17-6. Average No. of Committee meetings held |
| 16-5. Ratio of education budgets and No. of sessions related to human rights | 10-4. Ratio of non-regular workers | 17-8. Ratio of administrative operating expenses |
| 17-1. Complaint-handling satisfaction rate | 16-1. No. of crimes per 1,000 people | 17-9. Ratio of hardware(facility) budget |
| 17-2. No. of collective complaints | | |
| 17-3. Volunteer participation ratio | | |
| 17-5. Ratio of participatory budget | | |
| 17-7. Financial independence ratio | | |
| 17-10. Per-capita budget amount | | |

Adequacy of Indicators

Economic Inclusiveness



Among nineteen indicators, the evaluation showed that fifteen (80%) can remain as they are while two (10%) require auxiliary indicators although they can stay unchanged; however, the remaining two indicators (10%) need modification.

Compared to other sectors, there were many evaluation opinions regarding this sector that indicators can remain as they are.

| As-is(15) | As-is (w/ Auxiliary Indicator)(2) | To be Modified(2) |
|---|--|--|
| 8-1. Offshore income outflow 8-2. Unemployment/employment rate 8-3. Ratio of budget expenditures for youth employment and youth employment rate 8-4. No. of social enterprises and their employees 8-5. Industrial accident rate 9-1. Ratio of R&D budget to GRDP 9-2. No. of farms approving Haenaru Brand 9-3. Ratio of farmers participating in Local Food and increase rate of sales 9-5. Ratio of firms ISO 14000 certified 12-1. Ratio of sustainable public procurement 12-2. Per-capita daily generation of domestic wastes 12-3. Recycling ratio of domestic wastes 12-4. Per-capita daily generation of food scrap 12-5. Generation of industrial wastes 12-6. Recycling ratio of industrial wastes | 2-1. Area growing eco-friendly crops 9-4. No. of users of rural experience programs | 2-2. Ratio of farmers joining the Chamber of Agriculture 2-3. No. of farms signing monthly pay contracts with farmers |

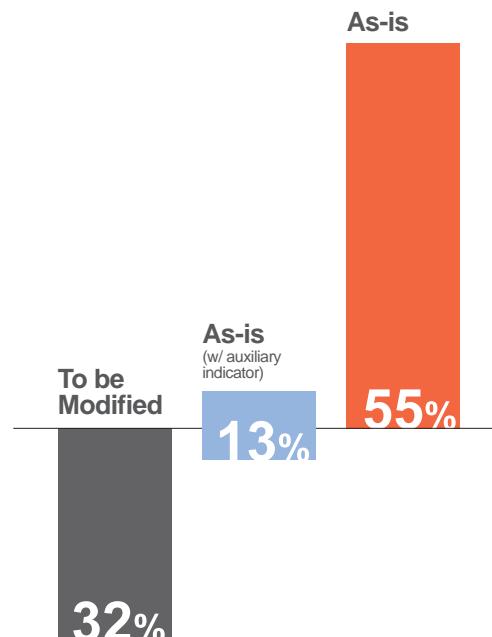


Adequacy of Indicators

Energy & Environment

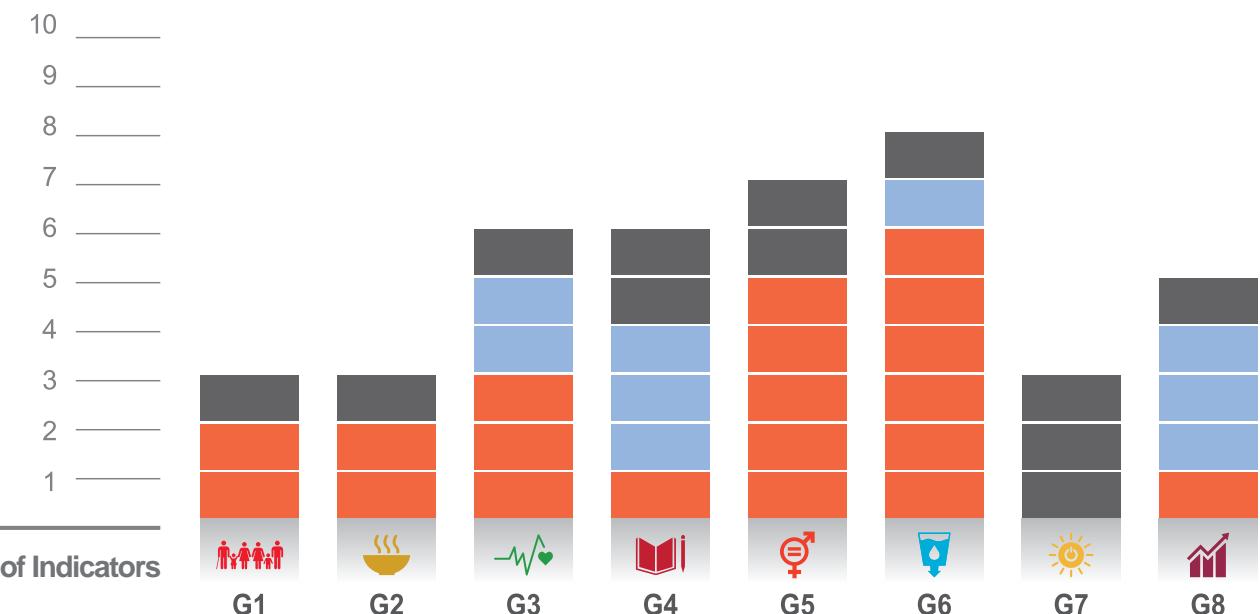
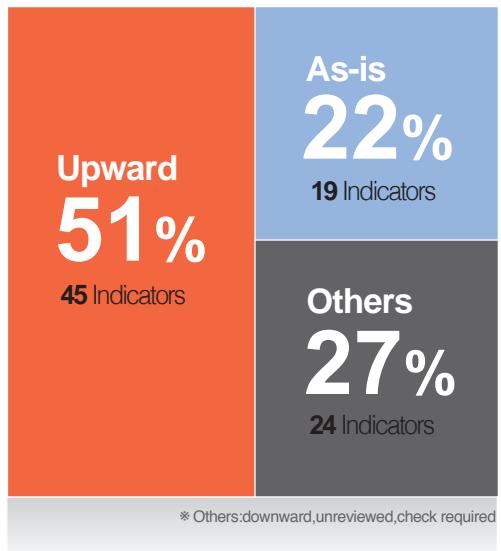
Among 22 indicators, the evaluation indicated that twelve (55%) can remain as they are while three (13%) require auxiliary indicators although they can stay unchanged; however, the remaining seven (32%) need modification.

Compared to other sectors, there were many evaluation opinions regarding this sector that modification of indicators is needed.



| As-is(12) | As-is (w/ Auxiliary Indicator)(3) | To be Modified(7) |
|---|---|---|
| 6-1. Per-capita daily water consumption 6-2. Rainwater utilization 6-5. Sewer service ratio 6-8. Ratio of exceeding the threshold of underground water pollution 7-3. Rate of underground power lines 13-1. Per-capita GHG emissions and reductions 13-2. No. of days exceeding threshold of fine dust (PM 10) 13-3. Damage by wind and flood 13-4. Ratio of areas covered by crop disaster insurance 14-1. Fry discharge 14-2. Coastal water pollution (COD) 14-4. Ratio of areas with environmental improvement in coastal fishing grounds | 6-6. Reutilization rate of treated waste water 6-7. River pollution (BOD) 15-2. Soundness of river ecosystems | 6-3. No. of abandoned tube well managed (restored) 6-4. Water supply ratio & local/regional waterworks rate 7-1. Per-capita energy consumption 7-2. Production of renewable energy 14-3. Coastal marine pollution 14-5. Recycling rate of used Styrofoam for fishery 15-1. Ratio of exceeding the threshold of soil pollution |

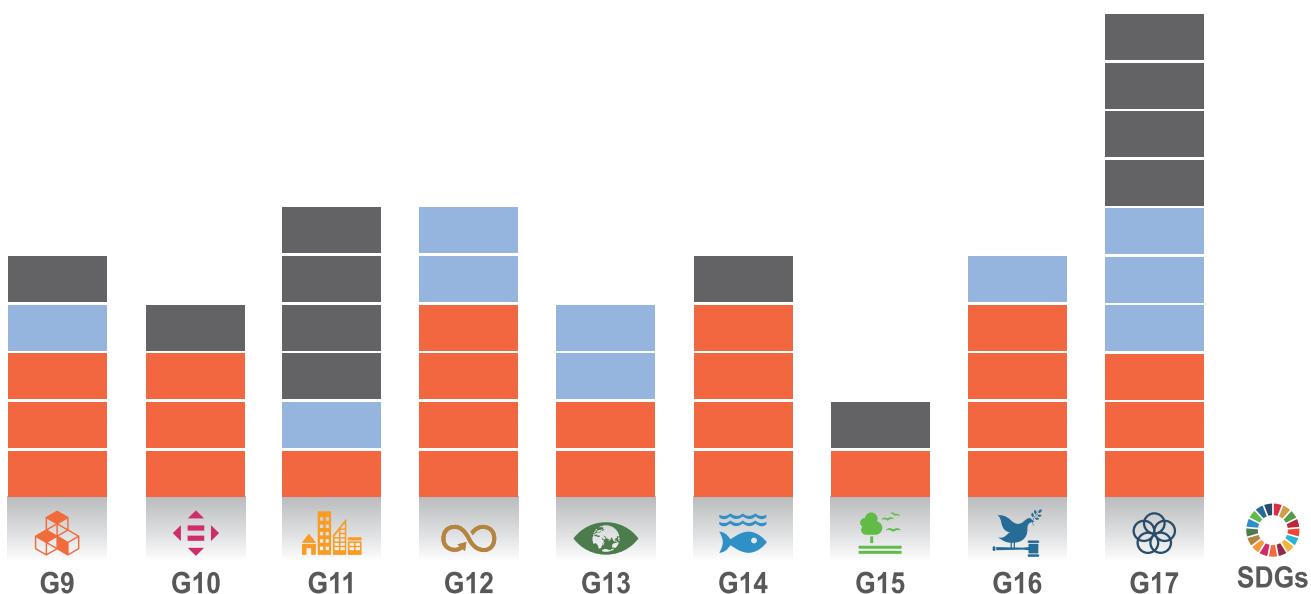
2. Adequacy of Targets



Out of 88 indicators, the evaluation showed that nineteen indicators can maintain the current target values as they are (22%) while 45 require raising their target values (51%); however, two remaining indicators need be modified downward (2%).

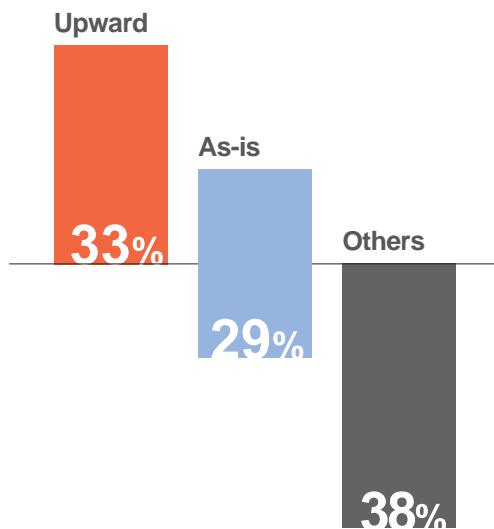
In addition, there were eight indicators that require an overall check to see if target values are befitting the current circumstances (9%) and fourteen indicators whose target values were unreviewed as modification is required (16%).

Indicators whose target values have to be modified downward from the current level include the ratio of non-regular workers of G10 (Local Community without Inequality) and the ratio of administrative operating expenses of G17 (Network-building for Sustainable Development). This is because they looked difficult to achieve the target values, considering the current indicator trends.



Adequacy of Targets

Welfare & Education



Out of 21 indicators, the evaluation showed that six indicators can maintain the current target values as they are(29%); seven need upward modification (33%); six indicators have to go through review of target values by checking the present conditions (29%). In addition, there are two indicators (9%) with no review opinions suggested as modification is required.

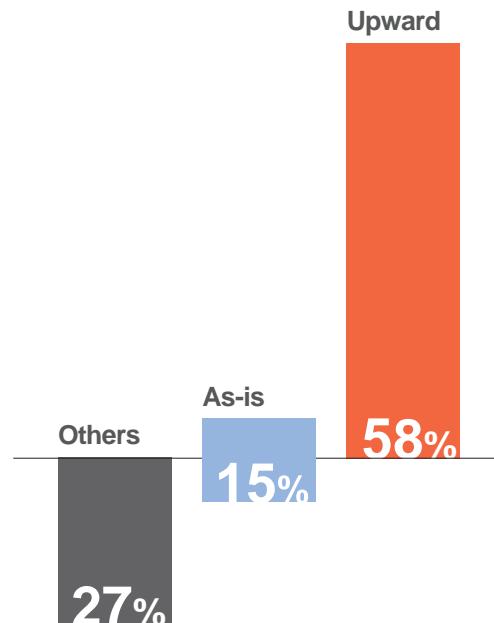
| Upward(7) | As-is(6) | Check required(6) / Unreviewed(2) |
|--|---|--|
| 1-1. Ratio of social welfare costs 1-3. Elderly employment rate 3-1. Traffic accident casualties per 1,000 people 3-3. Prevalence of lifestyle-related diseases 3-6. Ratio of using local agricultural products at school food support centers 4-6. No. of clubs for citizen education and culture 11-1. Per-capita green area | 3-4. Prevalence of environmental diseases in children 3-5. Suicide rate per 100,000 people 4-2. No. of visitors to and new registrants of public libraries 4-3. No. of cultural/arts performances and exhibitions and of spectators 4-4. No. of cultural/arts organizations receiving subsidies 11-5. Pavement ratio | <Check required> 3-2. No. of public medical personnel per 1,000 people 4-5. Lifelong education participation rate 11-2. Greenness index 11-3. Per-capita urban park area 11-4. Public transit share 11-6. Ratio of households below minimum housing standards <Unreviewed> 1-2. Ratio of basic-pension recipients 4-1. No. of youth clubs in school |



Adequacy of Targets

Civil Community

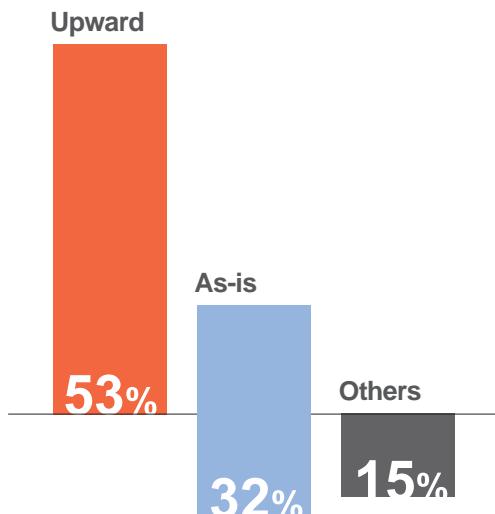
Out of 26 indicators, the evaluation indicated that four indicators can maintain the current target values as they are (15%), fifteen need upward modification (58%) and two need downward modification (8%). On top of that, there were five indicators with no review opinions as modification is required.



| Upward(15) | As-is(4) | Unreviewed(5) / Downward(2) |
|--|--|--|
| 5-1. Ratio of children going to state-run/ public pre-schools 5-2. Ratio of policies conducting gender impact analysis/assessment 5-3. Ratio of paternity leave payment 5-4. Women employment rate 5-6. No. of consulting on violent crimes against women and of followup actions 10-1. Employment rate of the disabled 10-2. Ratio of budget supporting the disabled 10-3. Ratio of support for multicultural households 16-1. No. of crimes per 1,000 people 16-3. Ratio of original information disclosure 16-4. No. of information disclosure claims and disclosure rate 16-5. Ratio of education budgets and No. of training sessions related to human rights 17-2. No. of collective complaints 17-7. Financial independence ratio 17-10. Per-capita budget amount | 16-2. Integrity of public institutes 17-1. Complaint-handling satisfaction rate 17-3. Volunteer participation ratio 17-5. Ratio of participatory budget | <Unreviewed> 5-5. Ratio of women public officials at Grade 6 or higher 5-7. No. of children requiring protection per 1,000 people 17-4. Ratio of budget to support civil groups 17-6. Average No. of Committee meetings held 17-9. Ratio of hardware(facility) budget <Downward> 10-4. Ratio of non-regular workers 17-8. Ratio of administrative operating expenses |

Adequacy of Targets

Economic Inclusivene



Out of 19 indicators, the evaluation showed that six indicators can maintain the current target values (32%), ten need upward modification, and one indicator has to go through review of target values by checking the present conditions (5%). In addition, there were two indicators with no review opinions suggested as modification is required (10%).

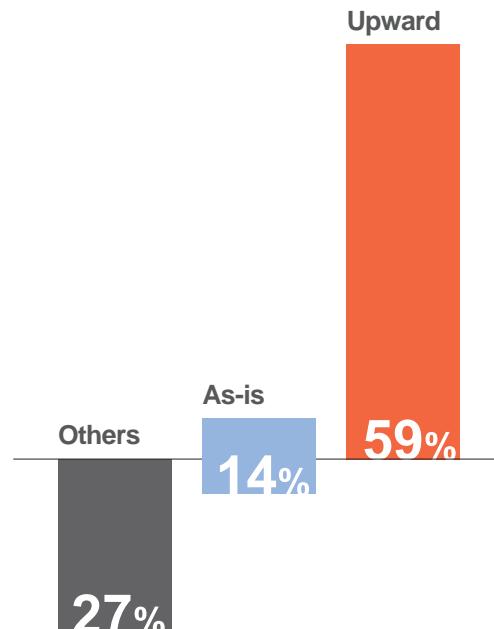
| Upward(10) | As-is(6) | Check required(1) / Unreviewed(2) |
|---|---|---|
| 2-1. Area growing eco-friendly crops 2-3. No. of farms signing monthly-pay contracts with farmers 8-4. No. of social enterprises and their employees 9-2. No. of farms approving Haenaru Brand 9-3. Ratio of farmers participating in Local Food and increase rate of sales 9-4. No. of users of rural experience programs 12-1. Ratio of sustainable public procurement 12-2. Per-capita daily generation of domestic wastes 12-4. Per-capita daily generation of food scrap 12-6. Recycling ratio of industrial wastes | 8-2. Unemployment/employment rate 8-3. Ratio of budget expenditures for youth employment and youth employment rate 8-5. Industrial accident rate 9-1. Ratio of R&D budget to GRDP 12-3. Recycling ratio of domestic wastes 12-5. Generation of industrial wastes | <Check required> 9-5. Ratio of firms ISO 14000 certified <Unreviewed> 2-2. Ratio of farmers joining the Chamber of Agriculture 8-1. Offshore income outflow |



Adequacy of Targets

Energy & Environment

Out of 22 indicators, the evaluation revealed that three indicators can maintain the current target values (14%), thirteen need upward modification (59%), and one indicator has to go through review of its target values by checking the present conditions (4%). In addition, there were five indicators (23%) with no review opinions suggested as modification is required.



| Upward(13) | As-is(3) | Check required(1) / Unreviewed(5) |
|--|---|---|
| 6-1. Per-capita daily water consumption 6-2. Rainwater utilization 6-4. Water supply ratio & local/ regional waterworks rate 6-5. Sewer service ratio 6-6. Reutilization rate of treated waste water 6-7. River pollution (BOD) 13-1. Per-capita GHG emissions and reductions 13-3. Damage by wind and flood 14-1. Fry discharge 14-2. Coastal water pollution (COD) 14-3. Coastal marine pollution 14-4. Ratio of areas with environmental improvement in coastal fishing grounds 15-2. Soundness of river ecosystems | 6-8. Ratio of exceeding the threshold of underground water pollution 13-2. No. of days exceeding threshold of fine dust (PM 10) 13-4. Ratio of areas covered by crop disaster insurance | <Check required> 7-3. Rate of underground power lines <Unreviewed> 6-3. No. of abandoned tube well managed (restored) 7-1. Per-capita energy consumption 7-2. Production of renewable energy 14-5. Recycling rate of used Styrofoam for fishery 15-1. Ratio of exceeding the threshold of soil pollution |



2020 Dangjin Sustainable Development Report



5

Detailed Opinion of Citizen Evaluation Group for Each Area

1. Welfare & Education
2. Civil Community
3. Economic Inclusiveness
4. Energy & Environment



Welfare & Education

Indicator Evaluation

5

Detailed Opinion of
Citizen Evaluation Group



2020 Dangjin
Sustainable Development Report

Indicator-specific Evaluation Table in Welfare & Education Sector

| Name of Indicator | | | Indicator Analysis | | Evaluation Result of Citizen Group | | | |
|-------------------|--|-----------------------------------|--------------------|----------------------|------------------------------------|------------|--------------------------------|----------------|
| | | | Improvement | 2020 Target Achieved | Contribution | Difficulty | Adequacy | |
| | | | | | | | Modify Indicator | Modify Target |
| 1-1 | Ratio of social welfare costs | | ● Improved | N | | | As-is | Upward |
| 1-2 | Ratio of basic-pension recipients | | ● Improved | Y | | | To be modified | - |
| 1-3 | Elderly employment rate | | ● Improved | N | | | As-is (w/ auxiliary indicator) | Upward |
| 3-1 | Traffic accident casualties per 1,000 people | | ▼ Worsened | Y | | | As-is | Upward |
| 3-2 | No. of public medical personnel per 1,000 people | | ● Improved | Y | | | As-is | Check required |
| 3-3 | Prevalence of lifestyle-related diseases | Hypertension | ■ Neutral | Y | | | As-is | Upward |
| | | Diabetes | ▼ Worsened | N | | | | |
| | | Dementia | ▼ Worsened | N | | | | |
| | | Stroke | ● Improved | Y | | | | |
| 3-4 | Prevalence of environmental diseases in children | Asthma | ▼ Worsened | N | | | As-is (w/ auxiliary indicator) | As-is |
| | | Atopy | ● Improved | N | | | | |
| 3-5 | Suicide rate per 100,000 people | | ▼ Worsened | N | | | As-is (w/ auxiliary indicator) | As-is |
| 3-6 | Ratio of using local agricultural products at school food support center | | ▼ Worsened | N | | | As-is (w/ auxiliary indicator) | Upward |
| 4-1 | No. of youth clubs in school | | ● Improved | Y | | | To be modified | - |
| 4-2 | No. of visitors to and new registrants of public libraries | No. of visitors | ● Improved | N | | | As-is (w/ auxiliary indicator) | As-is |
| | | No. of registrants | ● Improved | Y | | | | |
| | | No. of new registrants | ■ Neutral | N | | | | |
| 4-3 | No. of cultural/arts performances & exhibitions and of spectators | No. of performances/Exhibitions | ● Improved | Y | | | As-is (w/ auxiliary indicator) | As-is |
| | | No. of spectators | ● Improved | Y | | | | |
| 4-4 | No. of cultural/arts organizations receiving subsidies | | ▼ Worsened | N | | | As-is (w/ auxiliary indicator) | As-is |
| 4-5 | Lifelong education participation rate | | ● Improved | Y | | | As-is (w/ auxiliary indicator) | Check required |
| 4-6 | No. of clubs for citizen education and culture | | ● Improved | Y | | | As-is | Upward |
| 11-1 | Per-capita green area | | ■ Neutral | Y | | | As-is | Upward |
| 11-2 | Greenness Index | Under City Hall | | N | | | As-is | Check required |
| | | Complex Terminal | | | | | | |
| | | WondangTown APT | | | | | | |
| | | Prugio APT | | | | | | |
| | | Songak-eupOffice | | | | | | |
| | | Inter-city Terminal in Songak-eup | | | | | | |
| | | Hapdeok-eup Office | | | | | | |
| | | Bus terminal in Hapdeok-eup | | | | | | |
| 11-3 | Per-capita green area | | ■ Neutral | N | | | As-is | Check required |
| 11-4 | Public transit share | | ■ Neutral | N | | | As-is (w/ auxiliary indicator) | Check required |
| 11-5 | Coverage ratio | | ● Improved | N | | | As-is | As-is |
| 11-6 | Ratio of households below minimum housing stand | | ■ Neutral | N | | | As-is | Check required |

Advisory Committee's General Review regarding Welfare & Education Sector



Dangjin's ratio of social welfare costs is lower than other local governments in South Korea, but this is because of fewer demands for welfare. In fact, the city offers fairly good welfare services. What it needs is a policy that further enhances the quality of welfare services and protects the vulnerable even at the welfare blind spot who have been excluded from welfare benefits.

Despite growing interests in medical treatment of children and juveniles, emergency treatment and respiratory diseases in the sector of healthcare and sanitation, measures to respond to such demands have been inadequate, combined with insufficient indicators to evaluate policy implementation.

Furthermore, the education sector is one of the most critical sectors for improving settlement conditions in Dangjin. That said, indicators are insufficient, and in particular, here is no indicator associated with public school education, requiring development of indicators and projects related to education.

In the urban traffic sector, its statistical data should be complemented.

Although the evaluation approach still has a lot to be improved, it is meaningful to conduct the first evaluation of sustainable development indicators, together with the Citizen Participation Group.

The results of this evaluation can help indicators to be modified/complemented and give an impetus to future indicator evaluation and implementation based on insightful understanding on sustainable development that the administration and citizens obtained during the evaluation process.

As for the evaluation, prior training and enough dissuasions are needed to help understanding of SDGs, strategies and indicators. Moreover, expertise and diversity should be ensured when the Advisory Committee and Citizen Participation Group are formed, in order to engage in in-depth and thorough review of statistical data.

Still, the implementation plan, projects and review of performance indicators have left a lot to be desired.

This evaluation has taught us that it is necessary to fully modify/complement Dangjin's sustainable development indicators. It is correct that main tasks, unit projects and performance indicators established during the advancement of the implementation plan in 2019 play a role in expediting implementation of sustainable development, but there are some part not fully aligned with goals, strategies and indicators of the Basic Plan on Sustainable Development, implementation plan, projects or performance indicators, requiring refinement.

Above all, it is more crucial to discover sustainable development projects and have a process to breathe sustainability into existing projects.



Comprehensive Evaluation Opinions



G1 No Absolute Poverty

At a crowded school cafeteria, a tray filled with rice and side dishes is handed over by warm hands of senior citizens greeting children as if they were their own grandsons or daughters. They are members of Dangjin Senior Club that provides jobs only to the senior citizens of welfare. This is the moment when their cold and lonely hours are filled with the children's laughter and joy of precious labor while food trays are full of love and affection.

Although the evaluation was conducted by the Citizen Participation Group in an appropriate manner, there were not enough efforts to find data and comparative indicators and suggest opinions regarding modification/complementation of indicators.

It is necessary to include direct indicators such as the ratio of absolute poverty befitting the goal –G1. No Absolute Poverty.

As for the ratio of social welfare costs, it needs complementary data such as the ratio of welfare costs to legal recipients rather than simply moving the targets up because it'd be much better if recipients become better off and no longer eligible for subsidies. Statistics that show a fluctuation in legal recipients but a simple comparison would be needed as an auxiliary indicator.

The ratio of basic-pension recipients is not appropriate indicator to address alleviation of elderly poverty. As seen in statistics, basic pension has a lot to do with the national policymaking; thus, it is inadequate to be used as an indicator for a local government.

The elderly employment rate needs an auxiliary indicator that measures improvement of employment quality.

Comprehensive Evaluation Opinions



G3 Healthy Life

The residents association put up a banner at Wondang Park to inform "Moonlight Exercise." It is an exercise session carried out at dawn and evening as the name suggests. As it has been around for quite a long time with many participants, I decided to join a session. Breathing in a refreshing air at early morning, I was able to stretch my body out and energetically start my day. At this morning, it came to me that a healthy life lives in such a daily routine and I'd like to enjoy such a moment together with many more people.

Evaluation of the Citizen Participation Group was appropriate in general, but it would have been much better if there had been enough time for analysis. In fact, there was no analysis of goals and strategies conducted in connection with indicators, and it was insufficient to analyze statistical data or find and analyze comparative indicators.

It is necessary to add new indicators befitting the goal (G3. Healthy Life) and its strategies.

As for the number of traffic accident casualties per 1,000 people, it needs comparative indicators such as an example of neighboring local governments or nationwide. Since the current target values of the indicator are quite conservative, adjustment is needed to bring the targets way below the national average.

The number of public medical personnel per 1,000 people is in line with G3. Healthy Life, but it is not a suitable indicator for the strategy "Halve the Prevalence of Respiratory Diseases." A jump in the indicator values in 2018 and 2019 should be interpreted in consideration of the government's policies such as "Dementia Center" and "Visiting Nurses as a Regular Worker." With them, target values of the indicator should be drastically modified.

The prevalence of lifestyle diseases is in line with the goal "Healthy Life", but it is not aligned with the strategy "Halve the Prevalence of Respiratory Diseases." The number of patients with diabetes and dementia should be adjusted considering that the prevalence of these diseases is on a rise due to aging. The suicide rate per 100,000 people almost doubled compared to 2018, requiring analysis regarding a sudden increase.

For the ratio of using local agricultural products at school food support centers, an auxiliary indicator such as the rate of using eco-friendly agricultural products is needed to align with the strategy, and there should be analysis data to be attached to explain the reason behind a reduction in 2019.

Comprehensive Evaluation Opinions



G4 Tailor-made Education City

What is it like to have a library that comes to you? Pre-schoolers and children at childcare centers are waiting for the book bus with a throbbing heart. Children are mesmerized by the voice and gestures of a teacher doing story telling. It is indeed a grateful book bus that goes to those who have difficulties in accessing the library because they are far away, sick or busy. Today, the tailor-made library goes all through the town for education open to all.

The Citizen Participation Group did a good job in doing evaluation in general, but some indicators including the number of cultural/arts clubs receiving subsidies contained evaluation opinions that run counter to value orientation or difficulty evaluation.

The number of youth clubs in school is not an indicator that goes well with the strategy of enhancing education satisfaction by 10%, and what is more crucial is satisfaction with club activities not the number of clubs.

The number of visitors to public libraries and of new registrants has excellent projects, but the indicator is inadequate.

The number of cultural/arts performances/exhibitions and of spectators requires a upward modification of its target values.

For the number of cultural and arts organizations receiving subsidies, it is necessary to have an auxiliary indicator such as the amount of subsidies for cultural/arts organizations.

The lifelong learning rate saw a steady growth and already surpassed its target values;

Thus, it needs to raise the target values accordingly.

As for the number of clubs for citizen education and culture, due to vague criteria to distinguish clubs from ordinary organizations, it is necessary to make a complementation and increase the target values.

Comprehensive Evaluation Opinions



G11 People-oriented Urban Space

There is a space that allures people with green vitality coming between apartments and streets. This is Yeoul Waterside Park located along Dangjin Stream. While walking down the riverside surrounded by cherry trees with eyes looking at the clear sky, one could forget complexity of the urban life for a while. It is visited by many citizens with their family members than any other place. We dream of Dangjin as a city that creates space for citizens together with citizens.

The Citizen Participation Group did relatively good job in evaluation, but to some degree, some evaluation opinions resulted in confusions as some technical terms or impacts of the indicator failed to be accurately identified.

There are many indicators that have insufficient or no statistics.

The per-capita green area may be neglected during the urbanization process and seems to lack connection with the strategy to expand urban parks. It is considered as desirable to use biotope-related statistics as an indicator.

Given that the greenness index refers to statistics measuring the ratio of green areas such as street trees and building landscape in urbanized areas and is an indicator that can be managed through continuous monitoring, it is necessary to complement the system so that it becomes capable of defining measuring points and monitoring.

The per-capita urban park area needs a upward modification of target values.

With no statistics, the public transit share needs to accumulate statistical data.

The pavement rate worked well in a direction intended.

As for the ratio of households below minimum housing standards, it is a future indicator with no statistics or accurate criteria, requiring a process of quantifying indicators through research.



Civil Community

Indicator Evaluation

5

Detailed Opinion of
Citizen Evaluation Group

2020 Dangjin
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Indicator-specific Evaluation Table in Civil Community Sector

| | | | Contribution | Very Poor | Poor | AVG. | Good | Very Good | Difficulty | Very Low | Low | AVG. | High | Very High | as of 2019 |
|-------------------|---|------------|--------------------|----------------------|------------------------------------|------------|--------------------------------|-----------|------------------|---------------|-----|------|------|-----------|------------|
| Name of Indicator | | | Indicator Analysis | | Evaluation Result of Citizen Group | | | | | | | | | | |
| | | | Improvement | 2020 Target Achieved | Contribution | Difficulty | Adequacy | | Modify Indicator | Modify Target | | | | | |
| 5-1 | Ratio of children going to state-run/public pre-schools | ● Improved | Y | ● | ● | ● | As-is (w/ auxiliary indicator) | Upward | | | | | | | |
| 5-2 | Ratio of policies conducting gender impact analysis/assessment | ● Improved | Y | ● | ● | ● | To be modified | Upward | | | | | | | |
| 5-3 | Ratio of paternity leave payment | ● Improved | N | ● | ● | ● | As-is (w/ auxiliary indicator) | Upward | | | | | | | |
| 5-4 | Women employment rate | ■ Neutral | N | ● | ● | ● | As-is (w/ auxiliary indicator) | Upward | | | | | | | |
| 5-5 | Ratio of women public officials at Grade 6 or higher | ● Improved | Y | ● | ● | ● | To be modified | - | | | | | | | |
| 5-6 | No. of consulting on violent crimes against women and of follow-up actions | ■ Neutral | N | ● | ● | ● | As-is | As-is | | | | | | | |
| | | | | | | | | | | | | | | | |
| 5-7 | No. of children requiring protection per 1,000 people | ● Improved | Y | ● | ● | ● | To be modified | - | | | | | | | |
| 10-1 | Ratio of budget supporting the disabled | ● Improved | Y | ● | ● | ● | As-is (w/ auxiliary indicator) | Upward | | | | | | | |
| 10-2 | Employment rate of the disabled | ● Improved | Y | ● | ● | ● | As-is (w/ auxiliary indicator) | Upward | | | | | | | |
| 10-3 | Ratio of support for multicultural households | ● Improved | N | ● | ● | ● | As-is | Upward | | | | | | | |
| 10-4 | Ratio of non-regular workers | ■ Neutral | N | ● | ● | ● | As-is (w/ auxiliary indicator) | Downward | | | | | | | |
| 16-1 | No. of crimes per 1,000 people | ● Improved | Y | ● | ● | ● | As-is (w/ auxiliary indicator) | Upward | | | | | | | |
| 16-2 | Integrity of public institutes | ■ Neutral | N | ● | ● | ● | As-is | As-is | | | | | | | |
| 16-3 | Ratio of original information disclosure | ● Improved | N | ● | ● | ● | As-is | Upward | | | | | | | |
| 16-4 | No. of information disclosure claims & disclosure rate | ■ Neutral | N | ● | ● | ● | As-is | Upward | | | | | | | |
| 16-5 | Ratio of education budgets and No. of training sessions related to human rights | ▼ Worsened | N | ● | ● | ● | As-is | Upward | | | | | | | |
| 17-1 | Complaint-handling satisfaction rate | ● Improved | N | ● | ● | ● | As-is | As-is | | | | | | | |
| 17-2 | No. of collective complaints | ● Improved | Y | ● | ● | ● | As-is | Upward | | | | | | | |
| 17-3 | Volunteer participation ratio | ▼ Worsened | N | ● | ● | ● | As-is | As-is | | | | | | | |
| 17-4 | Ratio of budget to support civil groups | ▼ Worsened | Y | ● | ● | ● | To be modified | - | | | | | | | |
| 17-5 | Ratio of participatory budget | ▼ Worsened | N | ● | ● | ● | As-is | As-is | | | | | | | |
| 17-6 | Average No. of Committee meetings held | ▼ Worsened | N | ● | ● | ● | To be modified | - | | | | | | | |
| 17-7 | Financial independence ratio | ■ Neutral | Y | ● | ● | ● | As-is | Upward | | | | | | | |
| 17-8 | Ratio of administrative operating expenses | ▼ Worsened | N | ● | ● | ● | To be modified | Downward | | | | | | | |
| 17-9 | Ratio of hardware(facility) budget | ● Improved | Y | ● | ● | ● | To be modified | - | | | | | | | |
| 17-10 | Per-capita budget amount | ● Improved | Y | ● | ● | ● | As-is | Upward | | | | | | | |





Advisory Committee's General Review regarding Civil Community Sector

The SDGs 5 and 6 contain indicators regarding children, women, the disabled, multicultural families, and non-regular workers that are crucial factors to judge whether Dangjin has made sustainable development "leaving no one behind." With the COVID-19 outbreak, there are emerging concerns that the socially vulnerable would be hit the hardest. In fact, the news coverage shows that women unemployment rate has risen. This is reason I had a heavy heart even before evaluating the indicators. As young schoolers at elementary school cannot go to school and need caring at home, dualincome couples (G5-3) have been fallen into a panic state. If they have to opt for leave of absence or resignation due to the failure to find someone else to take care of their children, women disproportionately fall a victim to traditional custom or a wage gap (G5-4&5). No one would have thought about children not going to elementary, middle and high school when "expansion of state-run/public pre-schools (G5-1) was determined as an indicator. There are less and less social gatherings and dining together, resulting in more time at home during evening and weekends. Sadly, we often heard news about the increasing number of marital conflicts and domestic violence (G5-6). Then, what about the employment rate of the disabled (G101)? Does our city have enough budget related to the disabled (G10-2)? What assistance is granted to multicultural families (G10-3)? Aren't non-regular workers with no job security going through more difficult time (G10-4)?

In addition, the SDGs 16 and 17 show whether our citizens are respected and networks for sustainable development have been built. Generally speaking, SDGs 1 to 15 are goals in relation to society, economy and the environment while SDGs 16 and 17 are considered as a means to realize the aforementioned goals.

The society with gender equality is a society that does not even have terms like male and female. The same goes for inequality. An equal society is the one that does not need to mention the disabled and multicultural families. That said, there isn't such a society anywhere in the world. A saying goes that "Rome wasn't built in a day." We have just started the first evaluation of the goals to make Dangjin sustainable. Although the target values have been set too conservatively in overall, we can gradually change them over time. In this sense, it is also necessary to review some incentives for public servants who have set aggressive target values for an indicator and made efforts to achieve them. For the budget to support civil groups (G17-4) or participatory budget (G17-5), we may want to think about a "project to support sustainable learning, discussion and practice clubs" as a way to expand civil partners to realize all of the goals.

All citizens in Dangjin have the right to be happy. We should more thoroughly look at possibilities of being left behind and, at the same time, pay attention not to be trapped in existing indicators. We congratulate on the city's first evaluation of SDGs indicators. I, personally, believe that Dangjin, a citizen-oriented city, can do its job well. Whether the outcome be laudable or not, Dangjin has quite a decent administration as it published this report that put all the indicators together to share it with citizens.

Comprehensive Evaluation Opinions



G5 Real Gender Equality

As both a husband and wife of a dual-income couple are hard to make time to take care of their offspring, chances are that burden tends to fall squarely on one person. What if there is a "Communal Childcare Center" that unloads burden of childcare disproportionately concentrated on women and provides space where children can stay safe and secured without their parents for long hours? Herein, afternoon hours of children ranging from infants to elementary schoolers can be filled with various educational programs and playtime. Continuous assistance is needed to make sure that such a caring center can take its root in the local community to achieve gender equality that we can feel the difference.

The gender equality index is getting better in Dangjin. The ratio of children going to state-run/public pre-schools stood at 16.8% in 2019, but the 2020 target value is a mere 5%. It is inevitable to raise the target value. The ratio of policies conducting gender impact analysis/assessment equaled 27.2% and 11.6% respectively in 2018 and 2019, which fails to reflect the reality with a target value of 8% by 2020 and 9% by 2025.

As for gender-based impact analysis/assessment, more aggressive target values could lead to a positive impact on gender equality indicators in overall. A rising ratio of paternity leave payment is a clear sign that the perception of men and the society over child-rearing has been changing. The women employment rate has now amounted to about 55%. However, it requires review once again as disadvantageous figures might result if women aged 15 or older are given to estimate the indicator instead of those aged 15 to 64. The ratio of women public officials at Grade 6 or higher was 30.1% in 2019, which does need to modify the target value as it has been set too low.

As a women-friendly city, isn't Dangjin supposed to set a more ambitious target? For the number of consulting on violent crimes against women and of follow-up actions, consulting has been on an increase and follow-up actions reached 100% in 2018 and 2019. A healthy society would have a small number of consulting cases, but there are some cases where women tend not to report violence due to duress or threat. It is not right to interpret a rising number of consultations as solely a negative sign. Although the number of children requiring protection per 1,000 people has been on a decrease, it could be affected by a decline in the childbirth rate, thereby needing to take a deeper look at it.

Comprehensive Evaluation Opinions



G10 Local Community without Inequality

People come and go in front of vehicle parked at Dangjin in 1dong Welfare Center. This is a cafeteria "Multicultural Harmony" created for economic independence of migrated women.

We often use the term "harmony" to describe multicultural affairs. I hope that we all get to realize that it is a matter that not only migrated women but also local residents should join forces as it is called "harmony." Hopefully, strangeness and awkwardness could be turned into a sense of "us" through warm hands handing over a cup of coffee.

Indicators of Dangjin's SDGs 10 (Local Community without Inequality) has seen a little improvement or remained stagnant. The ratio of enterprises with mandatory employment of the disabled stood at 2.92% nationwide in 2019, which is higher than 2.53% (in 2019) in Dangjin. That said, it is difficult to directly compare the two since enterprises with 50 employees or less are not applicable. In addition, the figure is understandable considering the city's key industry, steel. Still, it is far from desirable. It is necessary to increase the target values. As the mandatory employment rate of the disabled at public institutes equaled 3.4% in 2020, more efforts are needed to realize the goal first at the public sector including Dangjin City.

The ratio of budget supporting the disabled is on an increase. Synergistic effects can be created if a project to promote employment of the disabled is formed in connection with the employment rate indicator. The 2019 figure already surpassed the target value of 2020. However, I wonder whether it is really necessary to modify target values since hardware projects such as establishment of a sports stadium for the disabled cannot be done each year. Rather, it is interesting to have a project that helps the disabled to build assets. The ratio of supporting multicultural households via a multicultural family center has risen and its target values look adequate.

The ratio of non-regular workers posted at 35.9% in 2017, 33.3% in 2018 and 34.6% in 2019, which are very high figures. The 2020 target value has been set as 13.5% and looks very ambitious. It is necessary to first take a look at the reason behind such a high ratio of non-regular workers, whether it be due to specific business owners or sporadic construction projects. Seoul Metropolitan City has embarked on discussions to provide higher incomes to non-regular employees. Dangjin should be also concerned over these jobs with higher unemployment risks.

Comprehensive Evaluation Opinions



G16 City where All Citizens are Respected

Way back home in the dark, green lights are all of a sudden turning on along the sidewalk. Walking along the lights toward a street lamp apart as if trailing cookie crumbs, I felt like being escorted by someone.

At the crosswalk, bright words shined on sidewalks this time. Reading the message written by the Police to assure you of safety on this deserted dark street with few cars and pedestrians passing by, I felt secured and protected and was relieved to know that I live in such a safe city.

"City where All Citizens are Respected" is Dangjin's SDGs16. The name of goal itself is appealing enough. In 2018, only 28 crime cases took place per 1,000 people, which has been on a steady decrease. Comparing to the national and Chungnam average, it is an outstanding figure. Thus, I also considered as constructive the opinions of the Citizen Participation Group that the crime rates by type of offense should be used as an auxiliary indicator.

The integrity of public institutes seems to have improved. It could make a further improvement through a nudge effect¹ such as provision of "integrity consulting" and "appointment of the public servant of integrity" as a new unit project, as suggested by the Citizen Participation Group.

The ratio of original information disclosure is not bad compared to other local governments, but it is below the national and Chungnam average and needs an improvement. As for the number of information disclosure claims and disclosure rate in Dangjin, the number of claims has increased while the disclosure rate, which had been on a rise until 2018, declined in 2019. It has to be closely observed whether it is due to an increase in claims by two folds compared to 2015 or sensitive matters with difficulty to disclose information.

Taking a look at the ratio of education budget and number of training sessions related to human rights, the budget has been on a decrease while there is no big difference in terms of the number of training provided. Selection and concentration are needed for this indicator between the budget ratio and number of training sessions. Personally speaking, it would be more effective in focusing on the number of training. It is inevitable to modify its target values.

* Nudge effect refers to a term that describes gentle intervention to induce others' behaviors and guide them to a smarter choice under the framework of a selective design.

Comprehensive Evaluation Opinions



G17 Network-building for Sustainable Development

Nowadays, residents can share community news and easily participate in discussions and decisionmaking of the community matters with some clicks away, without psychically gathering together. It is possible thanks to an application newly created in Dangjin, "Our Community." When there is a town-hall meeting, all they have to do is to simply visit the app. Residents can check agenda raised as community business, cast a ballot, and freely post their opinions. I hope that such a channel for residents to participate in the process of town policymaking would encourage residents to be more attentive and cooperate with each other. The more people joining their heads together, the better results will follow.

The SDGs17 has ten indicators which are the largest number out of the goals. The complaints-handling satisfaction rate hovered 90%, which is very high. Its target values also look appropriate. The number of collective complaints is also on a decline. That said, as the 2020 target value is similar to the status in 2015, modification is recommended.

The voluntary participation rate is decreasing. The number of people registered to volunteer service centers has increased, but the number of active volunteers is lower than those registered, which requires a measure to encourage active participation in volunteering. I am concerned that the target values have been set too high.

The ratio of budget to support civil groups is being adjusted to around 10%. The budget to support civil groups is important, but I'd like to raise a question whether this indicator is really befitting the network-building for sustainable development. Rather, wouldn't the number of projects under private-public cooperation and their budget amount be more appropriate?

The ratio of participatory budget is on a rapid decline despite the fact that the resident participatory budgeting is a key indicator for deliberation democracy and partnership-building. With a big jump in the target values expected, its change is noteworthy.

The average number of committee meetings held is 4.8 times, which is on a downward trajectory. That said, as a certain committee holds meetings more than 300 times per year, its average number of meetings is not meaningful. It'd be better to count the frequency of major groups participating in committees, rather than the number of committee meetings held.

With 65.21% in 2019, the financial independence ratio has not reached to national and Chungnam average. Its target values are lower than this, requiring a modification. There was an evaluation opinion from the Citizen Participation Group that the ratio of administration operating expenses seems to have nothing to do with this goal, but it is deeply relevant to the unit project that refines the budget operating manual in line with sustainability. Once the manual is refined, it could be evaluated as the "rate of observing the budget operating manual regarding sustainability of administrative operating expenses." It is also difficult to find relevancy between the ratio of hardware budget and the goal. Dangjin's per-capita budget amount is higher than that of Seoul but lower than national and Chungnam average. It'd be better to change the target values. It is true that some indicators have become less relevant as the goal covers too many indicators. There is no need to tire us out while chasing down two rabbits. I'd like to advise on integration and concentration.



Economic Inclusiveness

Indicator Evaluation

5

Detailed Opinion of
Citizen Evaluation Group



2020 Dangjin
Sustainable Development Report

Indicator-specific Evaluation Table in Economic Inclusiveness Sector

Contribution ▶ Very Poor ⚡ Poor ⚡ AVG. ⚡ Good ⚡ Very Good | Difficulty ▶ Very Low ⚡ Low ⚡ AVG. ⚡ High ⚡ Very High ≈ as of 2019

| Name of Indicator | | | Indicator Analysis | | Evaluation Result of Citizen Group | | | |
|-------------------|---|---------------------------|--------------------|----------------------|------------------------------------|------------|--------------------------------|----------------|
| | | | Improvement | 2020 Target Achieved | Contribu-tion | Difficulty | Adequacy | |
| | | | | | | | Modify Indicator | Modify Target |
| 2-1 | Area growing eco-friendly crops | | ● Improved | Y | | | As-is (w/ auxiliary indicator) | Upward |
| 2-2 | Ratio of farmers joining the Chamber of Agriculture | | ● Improved | N | | | To be modified | - |
| 2-3 | No. of farms signing monthly-pay contracts with farmers | | ● Improved | N | | | To be modified | Upward |
| 8-1 | Offshore income outflow | | ■ Neutral | N | | | As-is | - |
| 8-2 | Employment rate & Unemployment rate | Unemployment rate | ▼ Worsened | N | | | As-is | As-is |
| | | Employment rate | ● Improved | N | | | | |
| 8-3 | Ratio of budget expenditures for youth employment & youth employment | Ratio of expenditures | ● Improved | Y | | | As-is | As-is |
| | | Employment rate | ● Improved | Y | | | | |
| 8-4 | No. of social enterprises and their employees | No. of enterprises | ● Improved | Y | | | As-is | Upward |
| | | No. of employees | ● Improved | Y | | | | |
| 8-5 | Industrial accident rate | | ▼ Worsened | N | | | As-is | As-is |
| 9-1 | Ratio of R&D budget to GRDP | | ■ Neutral | N | | | As-is | As-is |
| 9-2 | No. of farms approving Haenaru Brand | | ● Improved | Y | | | As-is | Upward |
| 9-3 | Ratio of farmers participating in Local Food & increase rate of sales | Ratio of farmers | ● Improved | Y | | | As-is | Upward |
| | | Increase rate of sales | ● Improved | Y | | | | |
| 9-4 | No. of users of rural experience programs | | ● Improved | Y | | | As-is (w/ auxiliary indicator) | Upward |
| 9-5 | Ratio of firms ISO 14000 certified | | ● Improved | Y | | | As-is | Check required |
| 12-1 | Ratio of sustainable public procurement | | ● Improved | N | | | As-is | Upward |
| 12-2 | Per-capita daily generation of domestic wastes | | ● Improved | Y | | | As-is | Upward |
| 12-3 | Recycling ratio of domestic wastes | | ▼ Worsened | N | | | As-is | As-is |
| 12-4 | Per-capita daily generation of food scrap | | ● Improved | Y | | | As-is | Upward |
| 12-5 | Generation of industrial wastes | Amount generated | ▼ Worsened | N | | | As-is | As-is |
| | | Amount generated per GRDP | ■ Neutral | N | | | | |
| 12-6 | Recycling ratio of industrial wastes | | ● Improved | Y | | | As-is | Upward |

Advisory Committee's General Review regarding Economic Inclusiveness



To live a life, economic activities are essential like production, manufacturing, distribution, and consumption. However, divided economic activities in this modern era have caused social conflicts, depletion of resources and environmental destruction. As a result, the fate of future generations has fallen into uncertainties whether their lives could be sustainable.

Thus, in order to satisfy needs of future generations while fulfilling the needs of the present, we have to engage in sustainable economic activities including efforts to prevent environmental destruction and depletion of resources and to minimize social conflicts.

Under the banner of economic inclusiveness, Dangjin has devised strategies and main tasks to achieve goals such as strong agricultural foundation as a strategic industry, economic climate where anyone can work, foundation-building for growth of future strategic industries and sustainable local consumption system and pushed ahead with various unit projects to improve sustainable development indicators of each goal.

As a result, indicators related to agriculture and employment have obtained a decent outcome, but a lot have to be done to make improvements in the future strategic industries and circular economy.

In the economic inclusiveness sector, the sustainable development indicators are a collection of representative indicators selected out of those that evaluate unit projects, rather than extensively covering respective goals and strategies. Due to this, there are some unit projects that are inappropriate or insufficient to improve sustainable development indicators, and many unit projects have fallen short of contributing to improving sustainable development indicators. Therefore, it is necessary to improve indicators that can accommodate more extensive evaluation and more actively develop unit projects to achieve goals and enhance indicators.

The goal of strong agricultural foundation as a strategic industry has accomplished positive results through a variety of unit projects for three-agricultural revolution, but what is lacking is systemic connectivity among unit projects. It is necessary to make improvements by handing agriculture-related projects among those under the “foundation-building for growth of future strategic industries” over to the goal of “strong agricultural foundation as a strategic industry” for more systematic management.

Under the goal to create economic climate where anyone can work, Dangjin's employment and unemployment rates showed a favorable result compared to the national average, but this is due to the benefits from companies located in the city. It is necessary to reinforce unit projects of the goal for those at a disadvantage position to get a job and to enhance an employment rate of the vulnerable with assistance for start-up and growth of socio-economic organizations.

As for unit projects for foundation-building for growth of future strategic industries, Dangjin's vision and strategies for future strategic industries should be created first. It is necessary to think about future strategic industries based on Dangjin's industrial bases.

To achieve the goal of building sustainable local consumption system, the city has made efforts for reduction of wastes and recycling to cut waste and pollution of resources, but there are not enough unit projects and they have remained at the level of ordinary management; thus, more active implementation of unit projects is needed.

Comprehensive Evaluation Opinions



G2 Strong Agricultural Foundation as Strategic Industry



"Dangjang" is a farmers' market in Dangjin voluntarily created by farmers. Putting up DIY signage, they experience some processing and exchange close conversations. They seem to put more value in communications regarding how farming is done, and importance of green produces rather than sales.

One may think the value of agriculture is going up thanks to young farmers and those returning to farming, but the reality is still grim with an ever decreasing number of farmers.

Going through a long monsoon season this year and fierce typhoons, now is the time to contemplate sustainable agriculture in this era of climate crisis

The strong agricultural foundation to foster agriculture as a strategic industry constitutes an adequate goal to overcome income gaps between regions in Dangjin, an urban-rural complex city. In this sense, it is also appropriate to have set three-agricultural revolution and foundation-building for production of eco-friendly agricultural and livestock products as a strategy. That said, the area growing eco-friendly crops, ratio of farmers joining the Chamber of Agriculture and number of farms signing monthly-pay contracts with farmers have been selected as a sustainable development indicator, but there are not enough unit projects to improve indicators. It is regarded as necessary to focus on unit projects for improvement of indicators.

For instance, as a unit project for the area growing eco-friendly crops, efforts have been made to expand certification of green produces, but the unit project should also include development and training of eco-friendly agricultural techniques for foundation-building; creation of environmental-friendly agricultural districts; and groundworks for distribution of green produces, to be managed altogether. Synergy effects can be created even further when unit projects that have already been implemented or will be implemented are managed all together including promotion of "Green Agriculture Course" at Dangjin Agriculture Technology University of Agricultural Technology Center, expansion of eco-friendly agricultural produces used for school food and an agriculture distribution center to be built by 2026.

Little relevancy was found between the following two indicators and the strong agricultural foundation: the ratio of farmers joining the Chamber of Agriculture and number of farms signing monthly-pay contracts with farmers. It was even difficult to find unit projects introduced to improve the indicators. It is necessary to enhance the indicators, and the monthly wage system for farmers should be managed together with public-purpose direct payment and allowances for farmers and fishermen.

Comprehensive Evaluation Opinions



G8 Economic Climate where Anyone Can Work

At Dangjin Women New Job Center, a completion ceremony was held after finishing vocational courses. Although women yearn to land a job, there are not enough longterm jobs for women and, like any other city, South Korea has an issue of low gender equality at workplace. There are a lot that have to be done to create jobs not only for youngsters but also for women whose career has been severed and those in their middle age in this era of centenarians. Increasing decent jobs and getting rid of discrimination at workplace have to be done first to protect citizens' right to work.

The employment and unemployment rates associated with Dangjin's economic activities stood at 69.2% and 2.8% in 2019 respectively, which are very good results compared to a national average of 66.8% and 3.8% and constitute complete employment. Thus, it is necessary to focus on projects that assist economic activities of the vulnerable, rather than creation of ordinary jobs.

In order to achieve the goal to create economic climate where anyone can work, there should be more efforts to create jobs for the disenfranchised such as the disabled, women and senior citizens (incl. those in the middle age). These jobs should also ensure an adequate level of incomes, welfare, and decent working conditions.

For this, assistance for start-up and growth of socio-economic organizations would be very much needed as one of the most effective projects. However, 62 socio-economic organizations in Dangjin have employed over 200 people, showing less than desirable performance. It clearly shows that unit projects to support socio-economic organizations are also greatly insufficient.

As for youth employment, the employment rate at the age of 15 to 29 was recorded at 44.8% in 2019 with a target value of 60% by 2035. Given that an absolute number of these youngsters engage in study, the current employment rate itself is high enough and the target of 60% is out of the question. Thus, it'd be better to prioritize efforts to reduce incomplete employment and secure decent jobs for youths, rather than simply increasing the employment rate.

Comprehensive Evaluation Opinions



G9 Foundation-building for Growth of Future Strategic Industries

What are Dangjin's future strategic industries? There is a series of strategic industries being fostered such as creation of a comprehensive support center at the energy industry convergence complex, establishment of a super-precision technology support center for the cutting-edge metal material industry, construction of an LNG base and the hydrogen industry. To push ahead with these plans, largescale projects are being implemented in Dangjin including construction of the double-track railway for West Sea Line and railroad accessing to Seokmun National Industrial Complex.

It is good to carry out all these projects, but it'd be desirable to think about what Dangjin citizens want for the city's future and draw it together.

As a sustainable development indicator that can measure the degree of achieving the goal "Foundation-building to foster future strategic industries (G9)," the following have been selected: the number of farms approving Haenaru Brand, ratio of farmers participating in Local Food and increase rate of sales, and number of users of rural experience programs, which is a positive move from the perspective of fostering the 6th industry. However, too much focus seems to be on the agriculture sector. If it is not that the city intends to dedicate itself only to agriculture as a future strategic industry, it should remember selection and concentration for growth of future strategic industries by taking advantages of existing conditions such as the steel industry, port logistics, energy production and marine leisure. It can also consider selection of a resources-recycling project that uses byproducts (emission gases, heated effluent, slag, etc.) of the manufacturing as a future strategic industry.

Fueled by Dangjin's efforts for three-agricultural revolution and various projects, the indicators associated with the 6th industry have all decent figures. However, the ratio of R&D budget to GRDP was 3.2% in 2016, which is much lower than the ratio to national GDP of 4.5% in 2018. Worse yet, there is no unit project to enhance the indicator. As for the ratio of firms ISO 14000 certified, in addition, it has seen a change in the calculation criteria, facing more difficulties.

Thus, indicators related to growth of the 6th industry should be transferred to the goal (G2. Strong Agricultural Foundation as Strategic Industry) and the vision and roadmap to foster future strategic industries are needed to be put in place for development of additional strategies and indicators. Aligned with the plan to turn Seokmun Industrial Complex into RE100 Industrial Complex, it is considered as necessary to foster renewable energy and a resource circulation project.

Comprehensive Evaluation Opinions



G12 Sustainable Local Consumption System

Assorted products are displayed in the yard of Dangjin City Hall where a sharing market takes place. People seem to make a careful choice to give a second life to products that have been deserted. All proceeds and goods left unsold will be donated to welfare centers, which makes my heart warm and resolved to making eco-friendly and sound consumption. Just like my useless junk becomes someone else's necessities, we should make a shift from a consumption society where people easily use and throw out to a society where value of sharing is shared.

To fulfill our needs, we have to go through a series of processes such as production, distribution and consumption, the result of which is consumption of resources and generation of wastes. We need economic activities that can reduce waste or pollution of resources for sustainable consumption system. From the environmental aspect, wastes generated from each stage have to be minimized and recycled. As for wastes incapable of being recycled, they should be separately managed to be naturalized again.

It is proper to manage the amounts of domestic and industrial wastes generated and their recycling rates as an indicator to build the sustainable local consumption system in Dangjin. It is necessary to actively reinforce recycling of domestic wastes and composting of food scrap as an adequate project through resource circulation centers.

However, Dangjin generates a small volume of domestic wastes while the recycling rate is low compared to the national average and getting exacerbated. On top of that, projects to reduce domestic wastes generated are few and far between. It is perceived to need unit projects such as multi-use containers for delivery food or assistance for green-packaging containers for agricultural and livestock products.

As consumption of products made by socio-economic organizations is also expected to bring positive benefits for establishment of the sustainable local consumption system from the socio-economic view, the ratio of sustainable public procurement can be also considered as a good indicator. However, the procurement ratio of companies located in Dangjin is very low and products made by socio-economic organizations such as cooperatives, self-supporting companies and town businesses are not included in the public procurement, which requires an improvement by including them in the public procurement.



Energy & Environment

Indicator Evaluation

5

Detailed Opinion of
Citizen Evaluation Group

2020 Dangjin
Sustainable Development Report



Indicator-specific Evaluation Table in Energy and Environment Sector

| | | | Indicator Analysis | | Evaluation Result of Citizen Group | | | |
|-------------------|--|---------------------------------|--------------------|----------------------|------------------------------------|------------|--------------------------------|----------------|
| Name of Indicator | | | Improvement | 2020 Target Achieved | Contribution | Difficulty | Adequacy | |
| | | | | | | | Modify Indicator | Modify Target |
| 6-1 | Per-capita daily water consumption | Total | ▼ Worsened | N | | | As-is | Upward |
| | | Households | ▼ Worsened | N | | | | |
| 6-2 | Rainwater utilization (total capacity of rainwater reservoir) | | ● Improved | Y | | | As-is | Upward |
| 6-3 | No. of abandoned tube well managed | Recovered | ● Improved | N | | | To be modified | - |
| 6-4 | Water supply ratio & local/regional waterworks rate | Water supply rate | ● Improved | Y | | | To be modified | Upward |
| | | Local/regional rate | ● Improved | Y | | | | |
| 6-5 | Sewer service ratio | | ● Improved | N | | | As-is | Upward |
| 6-6 | Reutilization rate of treated waste water | | ● Improved | N | | | As-is (w/ auxiliary indicator) | Upward |
| 6-7 | Water supply ratio & local/regional waterworks rate | Dangjin Stream | ● Improved | Y | | | As-is (w/ auxiliary indicator) | Upward |
| | | Dangjin Stream-1 | ● Improved | Y | | | | |
| | | Sapgyo Stream3 | ▼ Worsened | N | | | | |
| | | Namwon Stream | ● Improved | N | | | | |
| | | Seowon Stream | ▼ Worsened | N | | | | |
| | | Yeok Stream | ▼ Worsened | N | | | | |
| | | Yeomsol Stream | ● Improved | Y | | | | |
| 6-8 | Ratio of exceeding the threshold of underground water pollution | | ▼ Worsened | N | | | As-is | As-is |
| 7-1 | Per-capita energy consumption | | ▼ Worsened | N | | | To be modified | - |
| 7-2 | Production of renewable energy | | ● Improved | N | | | To be modified | - |
| 7-3 | Rate of underground power lines | | ■ Neutral | N | | | As-is | Check required |
| 13-1 | Per-capita GHG emissions and reductions | Emissions(tCO2/capita) | ● Improved | Y | | | As-is | Upward |
| | | Reductions(tCO2-eq/capita) | ● Improved | Y | | | | |
| 13-2 | No. of days exceeding threshold of fine dust (PM10) | No. of days exceeding threshold | ▼ Worsened | N | | | As-is | As-is |
| | | Annual average content | ▼ Worsened | N | | | | |
| 13-3 | Damage by wind and flood | | ● Improved | Y | | | As-is | Upward |
| 13-4 | Ratio of areas covered by crop disaster insurance | | ● Improved | Y | | | As-is | As-is |
| 14-1 | Fry discharge | Discharged (population) | ▼ Worsened | N | | | As-is | Upward |
| | | Budget (1,000 KRW) | | | | | | |
| 14-2 | Coastal water pollution (COD) | | ▼ Worsened | N | | | As-is | Upward |
| 14-3 | Coastal marine pollution | | ● Improved | N | | | To be modified | Upward |
| 14-4 | Ratio of areas with environmental improvement in coastal fishing grounds | | ● Improved | Y | | | As-is | Upward |
| 14-5 | Recycling rate of used Styrofoam for fishery | | ■ Neutral | N | | | To be modified | - |
| 15-1 | Ratio of exceeding the threshold of soil pollution | | ● Improved | Y | | | To be modified | - |
| 15-2 | Soundness of river ecosystems | Dangjin Stream | ■ Neutral | Y | | | As-is (w/ auxiliary indicator) | Upward |
| | | Namwon Stream | ■ Neutral | Y | | | | |





Advisory Committee's General Review regarding Energy & Environment Sector

I'd like to give some credit for the fact that, in this era of the climate crisis, the local government in Dangjin has taken the initiative in making active efforts to create a sustainable city, together with citizens. In particular, the system that defines, implements, and evaluates SDGs with citizens involved is laudable as it has upheld governance and the spirit of participation which are the key factors for sustainable development.

In addition, citizens involved in the review of energy and environment indicators presented various opinions and engaged in a mature discussion process, resulting in meaningful outcome. It makes me certain that citizens' involvement can contribute to complementing weakness and shortcomings that the administration may encounter while implementing SDGs.

For implementation of the 17 SDGs, such a process is expected to help the city engage in collaboration, share information between departments without partitions installed, and adopt a clear sense of purpose regarding SDGs based on citizens' feedback.

To further grow as a city with sustainable development by more successfully implementing SDGs than others in South Korea, first of all, Dangjin should take the following principles to heart while checking on indicators:

1. Do indicators well reflect the value of sustainable development?
2. Do measured values of indicators satisfy objectivity?
3. Are affecting indicators and indicators affected considered in a comprehensive manner?
4. Do the current indicators need to be improved?
5. Do indicators perform diagnostic function regarding sustainability?
6. Is there close cooperation among departments that should engage in discussions to improve indicators?
7. Is the governance well reflected?
8. Are there agreements and acceptance for policy directions to improve indicators?

These principles are critical elements to promote sustainability through indicator evaluation and can serve as a catalyst to growth. In fact, cities with vibrant sustainability tend to adhere to these principles.

Second, as Dangjin is home to energy-guzzling industry sectors, it is important to exert its own efforts more than any other region for industrial restructuring in the future. Recent media coverage in South Korea created the nation's climate crisis map which showed that Dangjin was the local government with the highest carbon emission reduction risks. It should be taken very seriously as these riskridden industry sectors could cause the local economy and community to fall apart.

Thus, sustainable development indicators should include efforts to restructure energy-guzzling industries into renewable energy in the long term.

Third, this indicator evaluation was a precious opportunity to take a look at indicators from the perspective of citizens.

Now, the ball is at the court of the administration again. I'd like to recommend the administration to be committed to reflecting opinions of residents during a process to implement SDGs. Such a commitment should be followed by policies and budgets.

Once again, it should improve/complement indicators that don't agree with citizen's view and check the administrative system to make sure that it can implement SDGs.

It should endeavor to create a vicious-circle system ranging from SDGs planning, implementation, check and re-implementation.

Sustainable development cannot be accomplished overnight. Sustainability of a city can thrive only with continuous efforts and hard work. Regardless of the term of the head of a local government, we should build a system that can ensure continuous efforts of the administration, together with civil society.

Comprehensive Evaluation Opinions



G6 City without Water Scarcity

I have a reason to gladly see a heavy rain outside the window. Rain moisturizes soil and clears air, but rainwater collected can be also very useful.

The so-called rainwater collector can store up rainwater in a tank or pack to be used as agricultural and residential water later. Due to research on various rainwater utilization methods, we can harvest crops by supplying water in time and use water without scarcity in our daily life.

Chungnam is ranked No.1 in the livestock industry nationwide. With large-scale livestock farms, Dangjin is only second to Hongseong-gun within Chungnam.

To create a city with no water scarcity, it is important to block off pollutants that could be originated from the livestock industry. Along with establishment of indicators for this, it is necessary to define annual and mid/long-term plans depending on the target amount of the total livestock excretions at the public treatment facilities.

A rising target value of the per-capita daily water consumption is a problem. As Dangjin is an industrial city, however, efforts to bring down the industrial and commercial water consumption are all the more crucial. Thus, it is necessary to divide water consumption into industrial/commercial and household use for better management and to build a governance system for water saving together with those concerned with enterprises and business owners.

Reuse of water is the most critical factor to create a city without water scarcity. For this, Dangjin has used both the rain utilization and reutilization rate of treated waste water as an indicator.

As water reuse is divided into three areas, namely, reuse of treated sewage/waste water, supply of heavy water and utilization of rainwater for policy enforcement, the heavy water should be also used as a separate indicator to increase the reutilization of water in the city.

In line with Chungnam's comprehensive plan on water demand management, the "Water Reuse and Management Plan (2017)" in each city and county of Chungnam specifies that heavy water facilities have to be installed. Dangjin should also check on the plan and make efforts to install the heavy water facilities. In particular, under the Act on Promotion and Support of Water Reuse, the water reuse facilities shall be installed and operated to reuse at least 10% of water used, and sewage and waste water shall be also reused 10% of its treated amount. Thus, it is necessary to bring to a higher level the current target values of respective indicator.

As water management is very important to sustain a healthy city, efforts such as organizational integration of the administration, restructuring for functional integration and establishment of ordinances should come hand in hand.

For a healthy community, a policy for the vulnerable is very much needed, and there should be efforts to realize assistance for water supply according to the policy.

The water welfare policy should make sure that the vulnerable are also included in the water supply network and also review whether there is enough assistance for households inevitable to drink underground water due to no access to the waterworks to support them. It looks necessary to separately calculate a water welfare indicator for the vulnerable.

Comprehensive Evaluation Opinions



G7 Energy Justice

From sometime ago, it was hard to see utility poles stretching over the sky throughout Dangjin city. This is due to underground power lines. However, once entering a mountainous region, one can easily see power lines and transmission towers.

There has been criticism over the high-voltage transmission towers whose electromagnetic waves are to blame for cancers. Multiple reports have told that a large number of residents near the transmission towers developed a cancer. People living in a city are supplied with electricity in a pleasant living environment, but the damage is felt by those living in such a rural area. Energy that we get at the expense of others asks us a question about what justice is.

With an energy-guzzling industrial structure, Dangjin teems with thermal power plants and steel mills. To thrive as a sustainable city, it has to grapple with industrial restructuring.

That said, as there is an insufficient number of indicators given their significance of realizing energy justice, it is necessary to manage additional indicators regarding energy efficiency performance of business sites that consume a large amount of energy down the road. Data should be also accumulated through case studies and research on individual enterprises which have successfully improved energy efficiency.

In particular, a council or network to support corporate energy efficiency would be needed that can be joined by firms, both large and small, in the region. In addition, renewable energy should be distinguished from new energy in their indicator status as renewable energy plays a very critical role in energy transition. Since mutual cooperation is very much needed not only with energy departments but also with business areas such as the environment, agricultural sites, forests and animal excretion, it would be beneficial to create a collaboration system. It is also necessary to review the establishment of indicators related to buildings with the largest energy consumption such as the number of energy-efficient building certified.

The performance indicators include the number of discussions about energy special zones, residents-driven power capacity and the number of participants at energy transition events. However, these performance indicators look less relevant with sustainable development indicators. There are various projects up and running to increase the production of new and renewable energy. To raise the ratio of renewable energy, we need to come up with measures to reduce conflicts raised during the installation of solar panels. To overcome this, it is necessary to actively introduce a profit-sharing system. In Dangjin, the ratio of underground power lines stood at 3.26%, which is very low compared to the national average of 12.3% in 2017. It would be desirable to increase the target value to 10%, but there should be concrete efforts to secure funds in parallel. The installation of underground power lines cannot be done by a local government alone. As it should persuade the National Assembly and KEPCO through heated discussions, cooperation with the civil society is very crucial.

Last but not least, it is a shame that there is no energy welfare indicator. With widening polarization, there is growing importance of welfare policies in the energy sector. Thus, energy welfare policies such as an energy voucher are worth contemplating.

Comprehensive Evaluation Opinions



G13 Reduction of GHGs to NDC

Looking up an apartment, we can sometimes spot a solar panel attached to the wall. Unlike the familiar scene of an outdoor unit installed for each household, a solar panel is somewhat unfamiliar. When the house is filled with hot and humid air, automatically we turn on an air-conditioning unit. Then, if the air-conditioning is up and running for a long time, we feel a sense of guilt. With a solar panel that harnesses sunlight, however, we might feel a sense of satisfaction. It might be a small step, but I expect a day when solar panels become as familiar as the outdoor unit. The outdoor unit emits greenhouse gases whereas PV panels have an offsetting effect (to some degree).

Chungnam is a provincial government ranked No.1 in GHG emissions nationwide whereas Dangjin tops the list out of local governments throughout the nation. Given Dangjin's declaration as a sustainable development city and leading efforts for GHG mitigation, however, its reduction targets are modest at best. It needs to actively establish more ambitious indicators and projects. In particular, as climate change spares no one on earth, it is a challenge that we must grapple with. On top of that, as industries take up a large proportion out of the city's economy, it should also consider action plans for a cooperative project with the industrial sector to cut GHG emissions. Better yet, it is necessary to discover action plans that can expand the role of governance together with the private, public, academic, and industrial sectors which serve as a pivot of putting sustainable development into practice.

For GHG mitigation, a project to reduce emission gases from the fleets has been put into force. However, it is also necessary to identify action plans that can reduce pollutants from construction equipment, vessels, and other mobile sources that take up a considerable share of emissions. Above all, a multi-faceted policy to promote public transit is needed. As for the number of days exceeding the threshold of fine dust (PM10), it's better to distinguish PM10 from PM2.5 which is more dangerous than PM10 or it would be more appropriate to take air pollutant emissions (or reductions) as a indicator by reviewing whether the content of fine dust is affected by weather conditions or external factors. Now that the damage caused by climate change is getting bigger and happening at a shorter interval, the climate disasters are becoming an urgent matter. Therefore, the response to the climate crisis should be used as a very critical indicator. In this sense, as for the damage by wind and flood (Indicator No. 13-3), it would be more desirable to change the indicator as "Local Safety (Grade) during Natural Disasters, rather than the amount of damage, and its main ask to expand agricultural infrastructure for eco-friendly agriculture has nothing to do with the indicator. In order to successfully implement the indicator, it needs to expand educational programs related to climate change adaptation; take the operation of the system to support restoration from disasters as a main task; and divide the unit projects into organizational formation, recovery equipment and creation of manuals for efficient execution.

Comprehensive Evaluation Opinions



G14 Healthy Marine Ecosystem

A mountain of garbage at Dangjin Port. Fortunately, it fell short to being exported to Southeast Asia, but even if it is buried or incinerated, where will all the remains flow away? We know where all of this garbage came from. Garbage has accumulated a layer after another as we stepped outside the cafeteria with a plastic cup in our hand and enjoyed delivery foods comfortably at home, ending up inside the belly of marine creatures. Now, we should be aware that seafood caught in this polluted ocean will be on our dining table.

Together with reduction of marine pollutants, efforts to maintain a healthy ecosystem in the ocean are the key to upholding soundness of marine ecosystems.

Dangjin has selected various indicators to achieve the SDGs 14, and for this, has engaged in various projects to create value-added marine resources through fry discharge and improve the environments of coastal fishing grounds.

In addition to these efforts, if an indicator to "systematically protect and manage habitats for marine creatures" is established, it is expected to bring a great benefit to the implementation of the goal. For instance, it is necessary to set aside areas of marine reserves (km^2) by year for protection and management of habitats for coastal life in a systematic manner and reinforce unit projects regarding planning and monitoring of marines reserves and management of marine sanctuaries (creation of habitats).

Furthermore, the indicator, coastal water pollution (COD), has been set for the SDG 14, together with a unit protect to build the marine environmental surveillance and a performance indicator that defines the amount of marine wastes collected and treated.

However, I am wondering whether this unit project and performance indicator would be enough to achieve the target of the coastal water pollution indicator and accomplish the goal of maintaining healthy marine ecosystem.

As one of the main causes behind marine wastes originates from the land, it is necessary to establish a performance indicator that manages marine wastes and pollutants coming from the land and to create a collaborative system for picking up the trashes together with various activists of the civil society under a unit project.

In particular, there should be more education and measures to help fishermen to realize the importance of the see by changing their way of thinking and eradicate illicit littering and illegal fishing.

Comprehensive Evaluation Opinions



G15 Biodiversity for Eco-freindly City

I was very much excited due to expectations to see an endangered animal. Witnesses say that otters passed through bushes on a path along the river penetrating the downtown area of Dangjin city. However, whenever I visited, otters did not show themselves. What I saw is discarded vinyl along the river. I came to me that it'd not be a surprise even if otters disappear one day. People and nature should co-exist. While picking up the discarded vinyl, I hope that otters thrive in the habitat of Dangjin Stream. exist

G15 has two indicators as follows: the ratio of exceeding the threshold of soil pollution and soundness of river ecosystem.

Among them, however, the ratio of exceeding the threshold of soil pollution has stood at 0% since 2011 and there is no target value suggested, casting a doubt whether it is a meaningful indicator.

The establishment/utilization of an urban ecological map was suggested as a project. As it has not provided any detail, it is hard to predict what benefit it can bring to accomplish the goal.

Plus, it is very crucial to figure out how much endeavor is needed to set and expand the ratio of nature reserves for biodiversity. With this set as an indicator, it could be beneficial in achieving the goal.

However, as many factors including an enormous budget and resident acceptance have to be considered before increasing the ratio of nature reserves, projects should be implemented step-by-step under the roadmap to ensure that mid/long-term efforts are exerted.

In particular, the forest areas are very important in maintaining biodiversity. Dangjin is a local government that has taken the initiative and set an example in establishing forest ecological axes. Dangjin takes up 0.31% out of total forest ecological axes in Chungnam area. Although it is the lowest figure among 15 cities/counties in Chungnam, it is precious space that protects ecology in the region. More thorough fact-finding surveys and monitoring on reserves should be implemented, combined with efforts to restore ecological axes, which will be a great help to achieve the goal.

Appendix



Comments from Contributors

1. What sustainable development means to me

My future indicator

- Hyeondeok Yoon

A sustainable indicator for people and nature

- Nanyeong Yu

A step toward a better world

- Jeongseon Yoon

A beautiful stepping stone connecting the present and future generations

- Misuk Oh

New start that we create and change together

- Gyeongsuk Kim

A path toward more beautiful and happier future than now

- Miseon Kim

My small mind for the future world of our sons and daughters

- Chunghui Lee

My future and our future

- Eunyeong Son

Hope for life

- Seungnam Gu

Our action for future where we can only see clean environments and clear sky with some efforts

- Eunhwa Lee

Essential item for future generations

- Seungman Choi

Driving force that moves relentlessly

- Miyae Lee

Our obligations to future generations!

- Suyeong Song

Living a long life like a star!

- Junkuk Cha

Bright future

- Gyeongnyeo Song

Becoming a person who knows how to think and take action

- Mikyeong Lee

Thing that has to be done by us not me

- Seokmin Hong

Task to be put into practice!

- Eunja Park

Tending the forest not trees

- Jinok Kim

A shortcut to administrative revolution

- Sangwoo Lee

Companion to me

- Jonghun Jeon

Spirit of era that we should take to heart for long!

- Yonghee Kim

A friend who walks down together

- Hyanguk Kim

Do you like as it is?

- Yeonggyu Park

Dangjin's hope generator that thinks of and creates a better future together!

- Hyeongtae Kim

A must not an option, together!

- Seonhee Jeong

A navigator that guides us to uncharted territories

- Yojeong Lee



2. What was it like to join Citizen Participation Group?

A sense of responsibility to which we pay attention and uphold to live a life ahead!
 - Eunyeong Nam

Prerequisites to sustain my life
 - Sujeong Kim

Difficult...tough...academic...
 - Yeongyul Kim

Beautiful agreement between the present and future
 - Jongjun Yu

Our life for beautiful future!
 - Yunsil Jang

Earth is the home of public good
 - Junseop Lee

Task that the past, present and future keep solving together
 -Mija Kim

It empowered me as I was able to learn municipal information as a citizen.
 - Eunyeong Nam

I have been intrigued in the area I wasn't interested in before and it was an opportunity to get to know about Dangjin's administration. - Sujeong Kim

I realized that voluntary participation of citizens was precious energy for the future of sustainable Dangjin. - Yeongyul Kim

It was a great experience to see Dangjin's affairs that I was not interested in and didn't know before at a glimpse. - Jongjun Yu

It's like looking at the world under the microscope. Small things started to be seen.
 - Sook Kim

It should keep being managed as a main project of Dangjin Sustainable Development Council. - Deokyeong Jeong

I cut consumption of disposables and meat that I love so much to reduce carbon emissions, and I was resolved to attaining SDGs to hand over the society and environment that we borrow from the generations to come in a safe and beautiful state - Sangmin Lee

I was happy to take a step toward new learning. - Jonghun Jeon

It is necessary to streamline the administration and cut unnecessary documentation.
 - Eunja Park

It was my first encounter to sustainable development while doing the same work over and over again in the same direction as if I was on a treadmill. I was happy to have companions, not alone. - Yojeong Lee

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