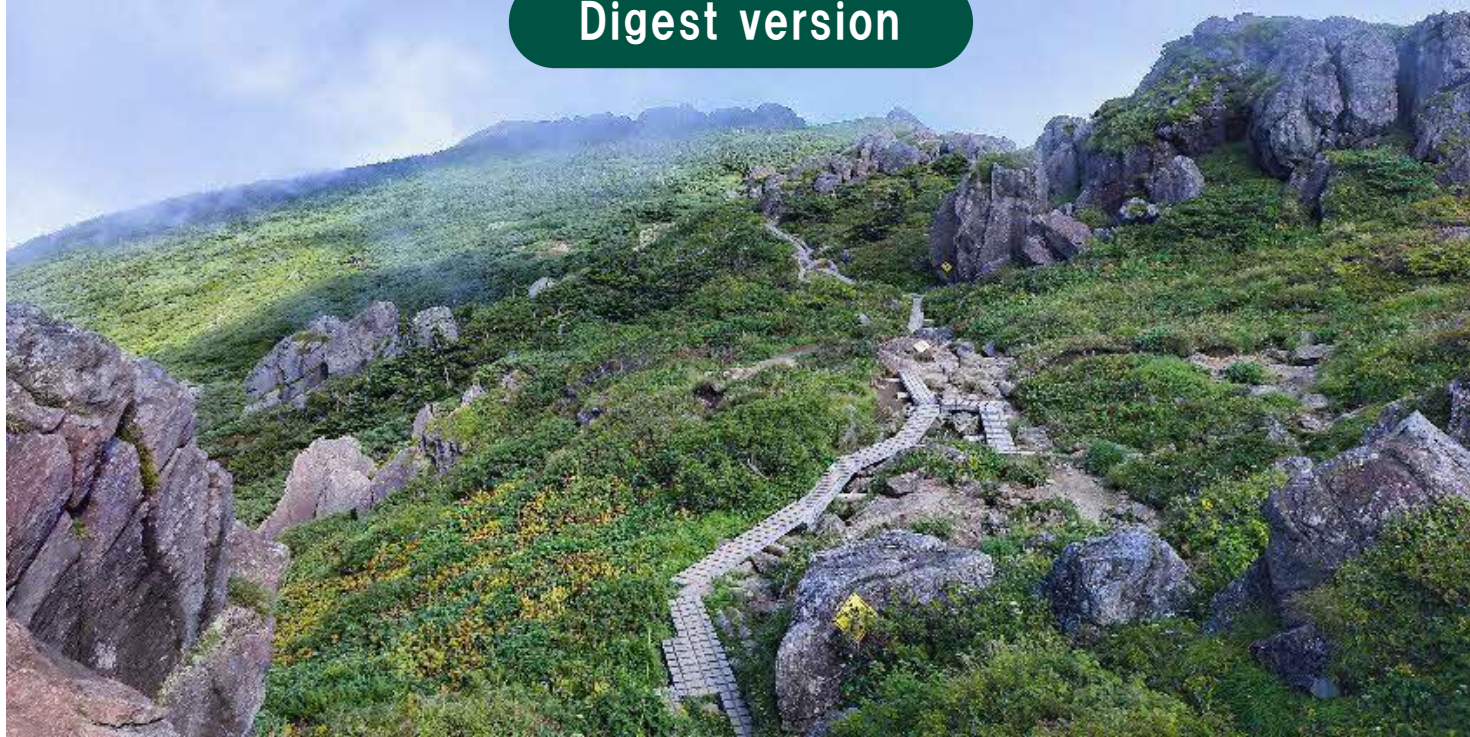


Third Hanamaki City Basic Environmental Plan

[Hanamaki City Global Warming Countermeasures
Implementation Plan (Area Policies)]

Digest version



*Passing down to the future a city with a
rich environment and culture where nature
and human activities are in harmony*

March 2024



Introduction

❖ Purpose of development of the plan

Hanamaki City is blessed with a beautiful and abundant natural environment including Mt. Hayachine and the Kitakami River. In order to pass down this rich natural environment and safe living environment to the next generations, we developed the “Third Hanamaki City Basic Environmental Plan.”

The purpose of this plan is to promote environmental efforts by citizens, business operators and the city together so that we can continue comfortable lifestyles while conserving the rich natural environment based on the concepts such as SDGs and the Regional Circular and Ecological Sphere.

❖ Positioning and period of the plan

This plan presents the basic concept of the city's environmental administration and promotes the “Hanamaki City Comprehensive Development Plan,” which is an upper level plan of the city, from an environmental perspective. It also includes the “Hanamaki City Global Warming Countermeasures Implementation Plan (Area Policies)” and “Hanamaki City Climate Change Adaptation Plan.”

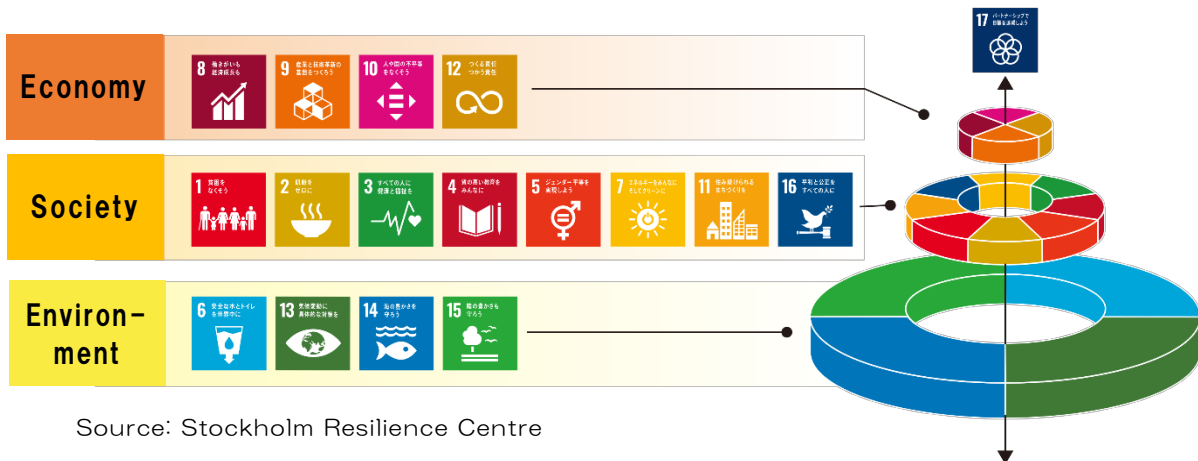
The planning period is eight years from FY2024 to FY2031.



SDGs and Regional Circular and Ecological Sphere

The **SDGs** set out 17 global goals for the world to achieve by 2030 with a view to allowing us to continue existing in this world.

To realize a sustainable society, we need to maintain a rich “environment (sound ecosystem, stable climate, safe water and air, etc.)” which is the foundation of all activities, on the basis that the “economy” supports “society” and “society” supports the “environment.”



Source: Stockholm Resilience Centre

Regional Circular and Ecological Sphere is a concept where each region solves its regional issues by utilizing its regional resources and creates networks with other regions by using its strength to support each other, thereby aiming to realize a sustainable society in the entire country.

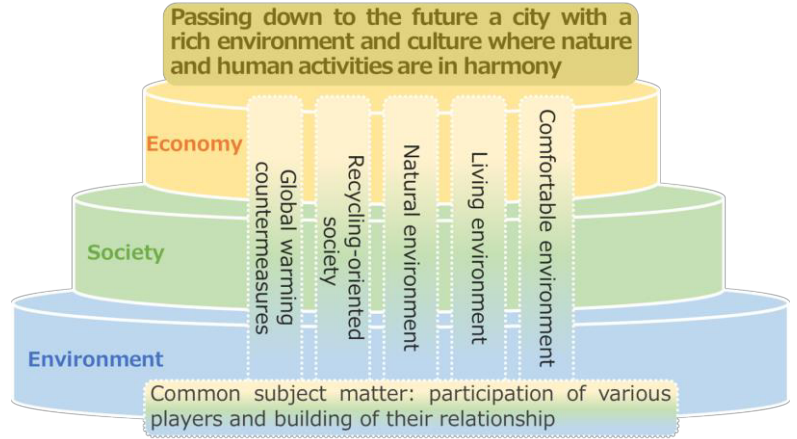
It aims to solve environmental, social and economic issues at the same time by utilizing regional characteristics and circulating human resources, materials and finance. Therefore, it is also called “Local SDGs.”

Source: Website of the Ministry of the Environment

Desirable environmental image and basic objectives

In this plan, a desirable environmental image is defined as “Passing down to the future a city with a rich environment and culture where nature and human activities are in harmony” and five basic objectives are set with a view to passing down to the next generations “Hanamaki City” where citizens, business operators and the city play individual roles on their own initiative and work together in cooperation to nurture a rich spirit in abundant nature and to maintain secure and pleasant lives. In addition, the “participation of various players and building of their relationship through environmental learning, information transmission, etc.” is set as a common subject matter to achieve the basic objectives.

Working on measures from the integrated perspective of **environment**, **society** and **economy** and aiming to realize the desirable environmental image



Desirable environmental image

Passing down to the future a city with a rich environment and culture where nature and human activities are in harmony

Basic objectives

- Global warming countermeasures**
City promoting the realization of a decarbonized society and efforts on climate change
 - Recycling-oriented society**
City conserving and effectively using limited resources by promotion of 3R
 - Natural environment**
City where a rich nature and biodiversity are conserved and humans and nature coexist
 - Living environment**
City where people can live in safety and security in a clean environment
 - Comfortable environment**
City where attractive regional landscapes are protected and provide people with comfort and peace of mind
- (Subject matter common to the basic objectives)
Participation of various players and building of their relationship through environmental learning, information transmission, etc.

Basic objective 1: Global warming countermeasures

“City promoting the realization of a decarbonized society and efforts on climate change”

❖ Present state and issues

The progress of global warming has global-scale effects, such as melting of glaciers, a rise in sea level, occurrence of floods and droughts, expansion of tropical infectious diseases and changes in natural ecological systems. In recent years, our life has also been significantly affected in visible ways by intensifying and increasing disasters due to heavy rain, typhoons, etc., increased heatstroke risk, high temperature injury of agricultural crops, change in fish catches, etc.

In order to slow the progress of global warming as much as possible and mitigate the effects on our lives, citizens, business operators and the city need to make positive efforts to reduce energy consumption in their respective positions, promote the transition from fossil resources to renewable energy and take adaptation measures to cope with environmental changes due to the effects of climate change caused by global warming.

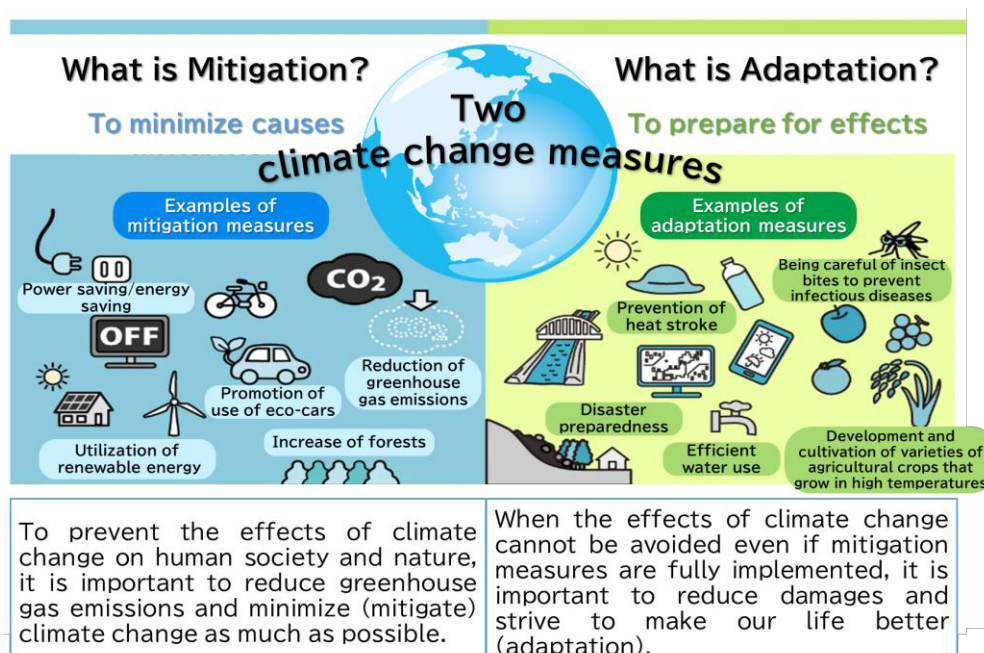
◇ Primarily related SDGs



Global warming

When fossil fuel is used to generate electricity, run automobiles and manufacture various products, greenhouse gases such as carbon dioxide (CO₂), methane (CH₄) and dinitrogen monoxide (N₂O) are emitted. When the concentration of greenhouse gases in the atmosphere increases, heat release from the surface of the earth is reduced, resulting in rises in air temperature and sea water temperature.

It is predicted that when global warming countermeasures are not promoted, the world’s average temperature around the year of 2100 will be 2.6 to 4.8°C higher than at present.



Source: A-PLAT (Climate Change Adaptation Information Platform)

Figure. Outline of mitigation measures and adaptation measures

❖ CO₂ emissions reduction target

Based on the targets to achieve carbon neutrality in 2050 and reduce greenhouse gas emissions by 46% by FY2030 (compared to FY2013 levels) set by the government, Hanamaki City has set the target to reduce CO₂ emissions by 53% (449 thousand t-CO₂) by FY2030 (compared to FY2013 levels).

In addition, in light of future technological innovation and change in social conditions, we aim to achieve net zero CO₂ emissions (carbon neutrality) by FY2050 as a long-term target.



❖ Efforts to be made

Major efforts by the city government

- Promoting the introduction of energy saving equipment in public facilities.
- Promoting the introduction of electric vehicles, plug-in hybrid vehicles, etc. in official cars.
- Promoting the introduction of solar power generation systems. etc. in public facilities.
- Promoting the spread of facilities using woody biomass.
- Studying the procurement of electricity from renewable energies.
- Seeking to provide information and raise awareness of the National Movement for New and Prosperous Lifestyles toward Decarbonization (Deco-Katsu).
- Improving the convenience of public transport and promoting its use.

Major efforts expected to be made by citizens

- Seeking to put a decarbonized lifestyle into practice.
- Seeking to save power (turn off lights, be careful of the temperature setting of air conditioning), conserve water, etc.
- Seeking to walk when moving to a close destination and using a bicycle or public transportation.
- Seeking to give consideration to energy saving by studying the introduction of Zero Energy House (ZEH), retrofitting with insulation, etc. when newly constructing or renovating a building, etc.
- Studying the installation of renewable energy facilities such as solar power generation systems and storage batteries.
- Seeking to choose next-generation vehicles such as electric vehicles and plug-in hybrid vehicles.

Major efforts expected to be made by business operators

- Seeking to introduce energy efficient facilities when upgrading facilities.
- Seeking to introduce renewable energy facilities such as solar power generation systems, storage batteries.
- Seeking to reduce the environmental load associated with business activities by implementing in-house training on the environment, energy and SDGs.

Carbon neutrality

For the realization of a sustainable society, it is necessary to reduce greenhouse gases such as CO₂ that cause global warming as much as possible.

Carbon neutrality is to achieve net “zero” emissions of CO₂ by balancing CO₂ emissions with CO₂ absorption by forests, etc.

🌳 To achieve carbon neutrality

- CO₂ emissions should be reduced through the utilization of renewable energy and promotion of energy saving.
- CO₂ absorption should be maintained and increased by tree planting and forest maintenance.

It is important that we protect lush forests while utilizing new technologies and each of us makes efforts to reasonably save power by reducing wasteful energy use.

Basic objective 2: Recycling-oriented society “City conserving and effectively using limited resources by promotion of 3R”

❖ Present state and issues

One of our most common environmental issues is “garbage (waste).” We continuously work on 3R* (Reduce: Reducing the generation of garbage, Reuse: Using repeatedly, Recycle: Recycling garbage as resources) in our lives and business activities, reduce the generation of garbage by conserving limited resources and effectively utilize resources to promote the creation of a recycling-oriented society that reduces environmental loads.

In recent years, the effects of marine plastic waste and microplastics on the environment have become increasingly serious. Littered trash and plastic waste discarded outdoors flow into the sea through rivers, etc. and significantly affect the sea's ecosystem, seashore landscape, etc. Therefore, it is important that people who live in inland areas make positive efforts, as our responsibility, to reduce the generation of garbage and recycle resources.

◇ Primarily related SDGs



❖ Efforts to be made

Major efforts by the city government

- Fully providing information and guidance on garbage sorting and appropriate garbage disposal methods to promote reducing garbage.
- Promoting composting of raw garbage.
- Providing information about Food Drive*, flea markets, etc.
- Promoting the separate collection of recyclable waste such as small electronic instruments and waste edible oil.
- Continuing the system of surveillance in a whole community to prevent the expansion of illegal dumping by early discovery and early response.
- Raising awareness of the reduction and recycling of garbage by providing visiting classes and lectures on garbage sorting, etc. with an awareness of 3R, implementing an observation tour of garbage disposal plants, etc.

Major efforts expected to be made by citizens

- Purchasing items in a planned manner to reduce the generation of garbage and food waste.
- Fully dewatering raw garbage before disposal.
- Choosing products and services with reduced environmental load such as products with simple packaging and products that are easily sorted.
- Using products that can be used repeatedly such as “my bottle,” “my bag” and refillable items.
- Sorting garbage according to the specified method and taking out garbage on the designated collection day to a garbage station so that the garbage can be appropriately processed.
- Cooperating in recycling activities such as group collection of resources.
- Refraining from the use of specific plastic products (spoons, forks, straws, etc.) and using products that can be used repeatedly and paper or wooden products.

Major efforts expected to be made by business operators

- Making efforts to reduce the amount of waste by thoroughly sorting garbage, reusing packaging materials, etc.
- Studying the use of reprocessed plastics or biomass resource-derived plastic products to the extent possible and seeking to provide services and products with reduced environmental load.
- Promoting green procurement.



Marine plastic waste

Plastic waste such as littered plastic bags and plastic bottles flows into the sea and becomes marine plastic waste.

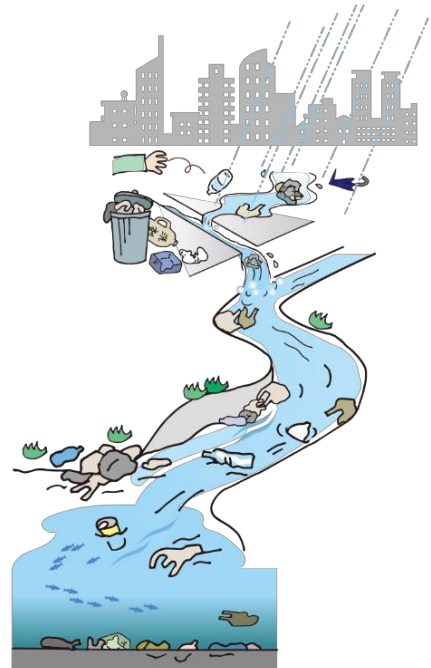
Marine plastic waste has been increasing and it is predicted that its amount will exceed the amount of fish in 2050.

Especially, the problems in marine plastic waste are that plastics are decomposed into microplastics while flowing into the sea and the microplastics deteriorate water quality or are swallowed by sea creatures and that boats or sea creatures get entangled with discarded fishing nets (ghosts nets), causing not only deterioration of the marine environment, but also adverse effects on fishing and tourist industries as well as human health.

To eliminate the effects of marine plastic waste, the “Osaka Blue Ocean Vision” which aims to reduce additional pollution by marine plastic waste to zero by 2050 was shared at the G20 Osaka Summit in 2019 as a common global vision. At the G7 Hiroshima Summit in 2023, an ambitious goal to achieve this vision 10 years ahead of time, that is, by 2040, was agreed on.

As one of the measures against marine plastic waste, advanced technologies and efforts for the reduction of plastic waste and efforts for the wise use of plastics are published on the website of the Ministry of the Environment.

Plastics Smart website of the Ministry of the Environment
(<https://plastics-smart.env.go.jp/>)



3R

Reduce: Reducing the amount of resources to be used in manufacturing products and reducing waste generation.

Reuse: Repeatedly using used products, their parts, etc.

Recycle: Sorting or chemically processing waste to effectively utilize it as a raw material or energy source.

Food Drive

Activities to collect surplus food at home and donate it to support organizations of regions in need of food, such as food banks, children’s cafeterias and welfare institutions.

Food waste

It refers to food that is fit for consumption but discarded. In Japan, “approximately one bowl of food (about 114 g)” per person is discarded every day.

Basic objective 3: Natural environment

“City where rich nature and biodiversity are conserved and humans and nature coexist”

❖ Present state and issues

In Hanamaki City, the urban district is surrounded by rich nature against a background of mountains, rivers and agricultural fields, providing a good environment where nature and human activities are in harmony. We must recognize that our lives and society are founded on the natural environment, think about how we ought to coexist with nature and keep striving to conserve the rich natural environment and biodiversity that is being threatened.

As the goal of international efforts on biodiversity, the realization of Nature Positive (nature restoration) which refers to halting and reversing biodiversity loss has been presented. In Japan, the “National Biodiversity Strategy and Action Plan of Japan 2023-2030 - Roadmap towards the realization of Nature Positive -” was decided by the Cabinet in March 2023 and various activities have been conducted towards the realization.

◇ Primarily related SDGs



❖ Efforts to be made

Major efforts by the city government

- The number of wild animals such as Japanese deer has excessively increased and agriculture and forestry and alpine plants have been damaged by those wild animals. Therefore, to appropriately manage wild animals, the city takes measures such as elimination in cooperation with the relevant organizations.
- Promoting the study of measures for the conservation and utilization of abandoned farmland in cooperation with the relevant organizations.
- Studying the utilization of the J-Credit* scheme.
- Posting nature park rangers at nature parks who conduct activities to protect rare types of animals and plants and educate visitors on rules and etiquette.
- To protect the ecosystem of native living things, the city transmits information about invasive alien species and makes known to citizens that the keeping and cultivating of designated invasive alien species are prohibited.
- Supporting invasive alien species elimination activities that are conducted by groups, citizens and business operators working on the conservation of rare species.
- Providing various opportunities for people to learn about the natural environment by dispatching Environmental Meisters, providing environmental learning courses, providing tree planting experiences, conducting seminars on knowledge and techniques of Satoyama management, etc.

Major efforts expected to be made by citizens

- Appropriately managing privately owned forests and farmlands.
- Cooperating in local production for local consumption by using local agricultural and livestock products.
- Seeking to learn about animals and plants or designated invasive alien species in local areas and deepening the understanding of the importance of biodiversity including the protection of rare species.
- Participating in Satoyama conservation activities and greening activities such as tree planting and clearing of the undergrowth.

Major efforts expected to be made by business operators

- Seeking to procure materials in consideration of the proper use and appropriate conservation of forests.
- Seeking to conserve biodiversity in consideration of the effects of business activities on the surrounding environment.

Examples of rare kinds of animals and plants that can be seen in Hanamaki City

In the City, various rare animals and plants exist, such as “Hayachine-usuyuki-so (Leontopodium hayachinense),” a flower (indigenous species) representing Mt. Hayachine, which grows in Kitakami Kochi and the Ou Mountains and the “mountain hawk eagle” which has a wingspan of about 160 cm. There is a possibility that these species of animals and plants will be extinguished unless they are protected from the effects of human activities and changes in the environment.

*Both Hayachine-usuyuki-so and the mountain hawk-eagle are listed as Rank A in Iwate’s Red Data Book (2014 version)

【Hayachine-usuyuki-so】



【Mountain hawk eagle】



(The photos taken by Mr. Yaegashi Yoshihiko)

Examples of designated invasive alien species inhabiting or growing naturally in Hanamaki City



Largemouth bass
(Commonly called
black bass)



Red swamp
crayfish



Burcucumber



Golden Glow

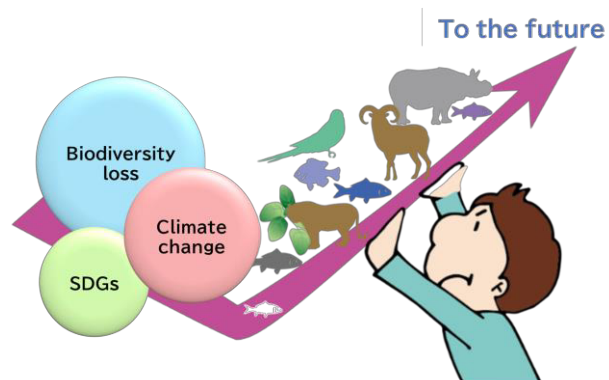


Nature Positive (nature restoration)

It is said that about 68% of the biodiversity in the world has been lost since 1970. Nature Positive is a term which means not only halting biodiversity loss, but also restoring biodiversity.

Nature Positive is a new global goal following Carbon Neutrality and the Circular Economy and is also related to Goal 14 of the SDGs “Life below water - Conserve and sustainably use the oceans, seas and marine resources for sustainable development” and Goal 15 “Life on land - Protect, restore and promote sustainable use of terrestrial ecosystems.”

Towards the realization of Nature Positive, the 30by30 target which aims to conserve or protect at least 30% of the land and sea areas by 2030 has been set. In Japan, as of FY2021, 20.5% of the land area and 13.3% of the sea area have been conserved or protected as protected areas such as national parks.



Basic objective 4: Living environment

“City where people can live in safety and security in a clean environment”

❖ Present state and issues

Clean air and water are essential for a safe and secure life. Hanamaki City meets the environmental standards on atmosphere and water quality and has a good environment. On the other hand, we continue to address longstanding issues such as complaints about offensive odors in cooperation with the relevant parties.

In addition, chemical substances have been used in various products to support our convenient and good lives, but there are some substances that have unclear effects on the ecosystem, our health, etc. Among them, organofluorine compounds, which have been used in the semiconductor industry and a wide range of applications such as textile products that require many years to decompose in nature, have been gaining attention recently for movements in the environment.

◇ Primarily related SDGs



❖ Efforts to be made

Major efforts by the city government

- Concerning measures for the conservation of atmospheric and water environments, noise and vibration, offensive odors and chemical substances, the city continues to give guidance to factories and business operators based on related laws and regulations.
- Grasping the status of achievement of environmental standards and implementing necessary measures depending on the status of achievement.
- Reducing the application of herbicides in parks, etc. and instructing agricultural pesticide users not to cause harm to nearby residents.
- Conducting the measurement of radiation levels in the air and concentrations of radioactive substances in food upon the request of citizens, etc.

Major efforts expected to be made by citizens

- Cooperating in the conservation of water quality by appropriately treating waste edible oil and kitchen waste without directly discharging into a drain.
- Seeking to prevent pets from crying and noise or offensive odor from generating in daily life.
- Seeking to reduce the usage of insecticides and herbicides.
- Appropriately disposing of garbage without burning in gardens or the like.

Major efforts expected to be made by business operators

- Seeking to prevent environmental pollution and disruption in compliance with laws and regulations.
- Seeking to disclose information about the discharge of chemical substances in the environment and control of them.

Organofluorine compounds

Organofluorine compounds have properties of water and oil repellency and heat resistance and are used in various applications such as the coating of waterproof cloth and cooking utensils and pesticides.

It has been pointed out that since these substances are difficult to decompose in nature, they may remain in the ground or water, causing adverse effects on human health and the living and growth of animals and plants through the food chain.

Basic objective 5: Comfortable environment “City where attractive regional landscapes are protected and provide people with comfort and peace of mind”

❖ Present state and issues

Hanamaki City promotes the development of a city filled with flowers which lives up to its name of Hanamaki and works on the conservation of the rich natural environment and the creation of an atmospheric culture, thereby promoting the creation of an environment in which not only citizens, but also visitors from outside the city or prefecture and abroad can find the city more attractive.

Due to the decrease in population and the aging of the population, Hanamaki City has also faced problems in securing players in local activities and proper management of increasingly vacant housing stock and we continue to develop measures towards the creation of a comfortable environment and strive to develop players in activities and create good landscapes.

◇ Primarily related SDGs



Implementing the development of a pleasant and beautiful city through flower campaigns

❖ Efforts to be made

Major efforts by the city government

- Promoting the “development of a city filled with flowers” through projects such as the distribution of flower seedlings and creation of flower gardens at community and public facilities.
- Implementing clean-up campaigns in which citizens participate and continuing river cleaning by outsourcing to local organizations.
- Protecting the buildings and remains having historical and cultural values and passing them down together with blessed and rich nature to the next generations.
- Providing support of taking measures and making a proper management request based on the “Hanamaki City Vacant Houses Measures Plan”.
- Promoting awareness raising on the beautification of the city by making known to citizens the rules and etiquette about garbage disposal and how to keep pets in cooperation with the relevant agencies.

Major efforts expected to be made by citizens

- Positively participating in flower campaigns.
- Taking responsibility for taking garbage home that we create while being out and appropriately disposing of pet excrement.
- Positively participating in cleaning activities and early-morning cleanup activities that are implemented in local communities.
- Cooperating in the creation of a good regional landscape by properly managing privately owned grounds and buildings.
- Deepening the understanding of regional history, culture, etc. to cooperate in passing them down to the future.

Major efforts expected to be made by business operators

- Seeking to plant trees in the premises of business places, etc.
- Positively participating in beautification activities at communities.
- Giving consideration to the harmonization of the designs and colors of signboards and buildings with the surrounding environments.

**Matters common to the basic objectives:
Environmental learning, information transmission, etc.
“Participation of various players and building of their
relationship through environmental learning, information
transmission, etc.”**

❖ Present state and issues

The five basic targets of “global warming countermeasures,” “recycling-oriented society,” “natural environment,” “living environment” and “comfortable environment” are not independent entities but are interrelated.

To promote these efforts, each of us needs to have an interest in environmental issues, deepen our understanding and actually take action. People who have never engaged in environmental activities may make new efforts and people who have already participated in activities may engage in more satisfactory activities. To provide opportunities for ideas to form and take action, we transmit information about the environment, systematically implement environmental conservation activities and environmental learning and promote participation and relationship building of various players.

◇ Primarily related SDGs



❖ Efforts to be made

Major efforts by the city government

- Enhancing the learning support system through dispatching of Environmental Meisters, etc. to promote the voluntary environmental learning of citizens.
- Providing learning through practical experience and environmental education materials such as books about environmental learning challenges to increase children's interest in the environment and raise awareness of the environment.
- Promoting information exchange with private organizations, etc. working on environmental conservation to promote environmental conservation activities and raise awareness.
- Transmitting information about environmental events and lectures, Environmental Meisters dispatch system, etc. through the city's website, Public Relations Magazine HANAMAKI, etc.
- Preparing and publishing the annual report in which the city's environmental status and efforts are described.





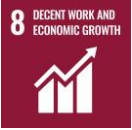







Major efforts expected to be made by citizens

- Positively participating in seminars and events on the environment.
- Sharing what we learned about the environment and environmental topics in which we have interest and concerns with family members and friends to take small actions, first.
- Providing privately owned forests, etc. as regional environmental education and learning fields to the extent possible.
- Cooperating in environmental activities by utilizing our expertise and skills.

Major efforts expected to be made by business operators

- Positively participating in regional environment-related events and activities.
- Promoting environmental conservation activities in business activities based on the corporate social responsibility (CSR) and SDGs and seeking to positively transmit information.
- Implementing education and training on actions with consideration given to the environment and CSR, SDGs, etc. for employees.
- Providing lecture meetings and visiting classes on the environment in communities and conducting observation tours of business places in cooperation with municipal or regional environmental activity groups, etc.

<Relationship between SDGs and main environmental measures of this plan>

<p>GOOD HEALTH AND WELL-BEING</p>  <ul style="list-style-type: none"> • Conservation of atmospheric environment • Conservation of water environment • Noise and vibration control • Offensive odor control • Measures for chemical substances • Measures for radioactive materials 	<p>QUALITY EDUCATION</p>  <ul style="list-style-type: none"> • Promotion of environmental education and learning • Promotion of contact with nature
<p>CLEAN WATER AND SANITATION</p>  <ul style="list-style-type: none"> • Conservation of water environment • Measures for chemical substances 	<p>AFFORDABLE CLEAN ENERGY</p>  <ul style="list-style-type: none"> • More efficient energy use • Promotion of introduction and utilization of renewable energy
<p>DECENT WORK AND ECONOMIC GROWTH</p>  <ul style="list-style-type: none"> • More efficient energy use • Promotion of introduction and utilization of renewable energy • Reduction of household waste and creation of a recycling system • Promotion of reduction of commercial waste 	<p>INDUSTRIES, INNOVATION AND INFRASTRUCTURE</p>  <ul style="list-style-type: none"> • Promotion of introduction and utilization of renewable energy • Reduction of household waste and creation of a recycling system • Promotion of reduction of commercial waste
<p>SUSTAINABLE CITIES AND COMMUNITIES</p>  <ul style="list-style-type: none"> • More efficient energy use • Promotion of introduction and utilization of renewable energy • Beautification activities • Conservation and formation of familiar landscape 	<p>RESPONSIBLE CONSUMPTION AND PRODUCTION</p>  <ul style="list-style-type: none"> • Reduction of household waste and creation of a recycling system • Promotion of reduction of commercial waste • Prevention of illegal dumping
<p>CLIMATE ACTION</p>  <ul style="list-style-type: none"> • More efficient energy use • Promotion of introduction and utilization of renewable energy • Conservation of Satochi and Satoyama 	<p>LIFE BELOW WATER</p>  <ul style="list-style-type: none"> • Reduction of household waste and creation of a recycling system • Promotion of reduction of commercial waste • Prevention of illegal dumping
<p>LIFE ON LAND</p>  <ul style="list-style-type: none"> • Conservation of blessed natural environment and biodiversity • Conservation of Satochi and Satoyama • Promotion of contact with nature • Prevention of illegal dumping 	<p>PARTNERSHIPS FOR THE GOALS</p>  <ul style="list-style-type: none"> • Educational activities • Promotion of contact with nature • Transmission of environmental information

**Edited and issued by: Consumer and Environmental Protection Division,
Hanamaki City (Issued in March 2024)**

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