

A stylized, light blue silhouette of a city skyline is visible in the background. It features various building shapes, including a prominent tower with a spire on the right side. The skyline is set against a solid teal background.

LOCAL COMMUNITIES AND LIFESTYLES WHICH WE CAN MAKE SUSTAINABLE

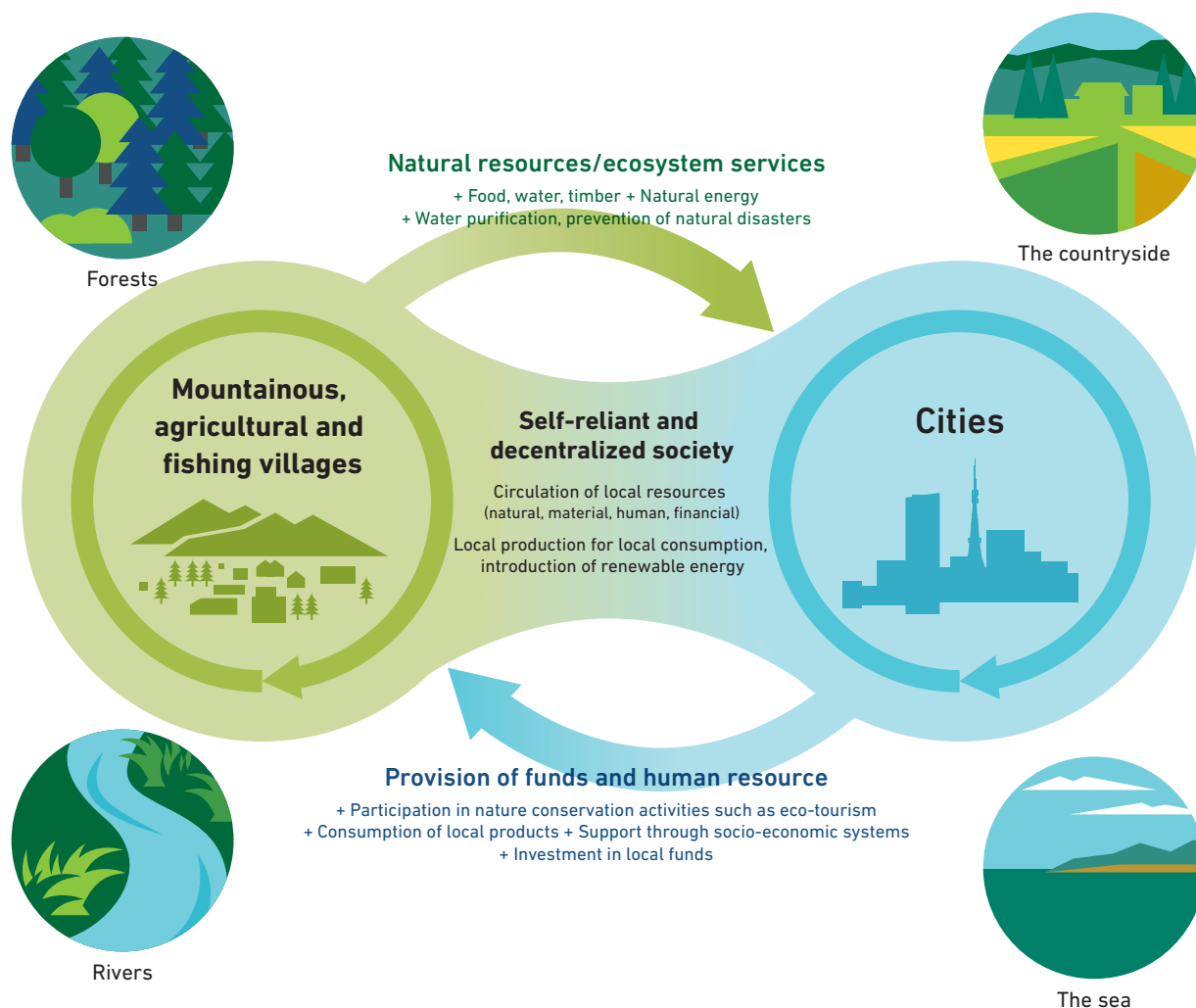
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1 FURTHER DEVELOPMENT OF THE CIRCULAR AND ECOLOGICAL ECONOMY

The Circular and Ecological Economy is a concept of “self-reliant and decentralized society” that involves continuing creation of businesses that utilize local resources to improve the environment, economy, and society in an integrated manner, and also involves utilizing the individual characteristics of each region, such as cities and farming villages, to form a network of mutual support between regions. This concept can also be called local Sustainable Development Goals (SDGs), because it aims to comprehensively solve the various issues local communities facing through partnerships, starting with the environmental viewpoint.

Since 2019, the Ministry of the Environment has been implementing the “Platform for the Creation of a Circular and Ecological Economy to Revitalize Local Communities from Environmental Aspect” project, and is engaged in “environmental improvement” that supports the organization of stakeholders and “commercialization support” that supports the creation of project plans.

Conceptual Illustration of Circular and Ecological Economy



Source : Ministry of the Environment

Considering recent global circumstances, it is expected that production of renewable energy in particular in local communities will contribute to energy security, and also contribute to the environmental aspect which means decarbonization and the economic aspect which means money flow in local communities, and will thereby help to build self-reliant communities.

Introduction of rooftop solar power generation, which is not harmful to nature and realization of energy circulation by using green-tech (i GRID SOLUTIONS)

By introducing decentralized solar power plants utilizing the rooftops of existing facilities such as commercial and logistics facilities, i GRID SOLUTIONS has realized the use of renewable energy without placing a burden on the natural environment. By building an energy management system via its own AI and a platform that enables cyclical use of electric power, and supplying surplus power to other users, the company is making efficient use of renewable energy.



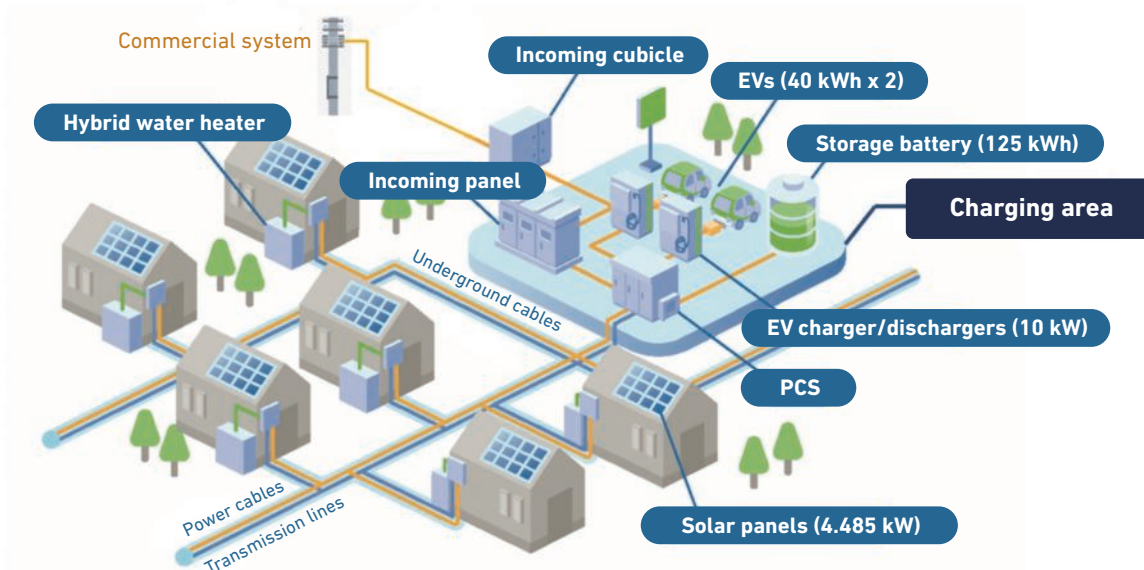
Commercial facility with solar power generation system
Source: i GRID SOLUTIONS

Realization of the Smart City Saitama model with Urawa Misono District 3 as its core (Saitama City, Loop, Chuo Jutaku, Takasago Kensetsu, AQURAHOME)

In Saitama City, Saitama Prefecture, in order to realize the Smart City Saitama model that will lead to achieving the Sustainable Development Goals (SDGs), since 2015 various measures are being carried out within the "Urawa Misono E-Forest" in the Misono district of the city, such as the creation of shared spaces, the implementation of high insulation in houses, and the introduction of a next-generation electric power community and other advanced technologies, in an effort to connect nature, towns, and people in various ways and promote urban

development that fosters a virtuous circle for the future. Within this "Urawa Misono E-Forest," District 3 has been jointly developed by Saitama City, Loop, Chuo Jutaku, Takasago Kensetsu, and AQURAHOME. This is a 51-unit subdivision that has been open for occupancy since December 2021. More than 60% of the yearly electrical energy needs of District 3 is covered by renewable energy generated within the district, and the shortfall is covered by non-fossil fuel certified sources, which means the district effectively achieves a 100% renewable energy supply.

District 3: Energy System Overview



Source: Loop

Using renewable energy as content for promoting regional tourism (Genki Up Tsuchiyu)

Genki Up Tsuchiyu is a company engaged in the urban development of the Tsuchiyu Onsen hot spring resort town, which is located about 30 minutes by car from Fukushima City. It was established in 2012 through the investments of the Tsuchiyu Onsen Tourism Association and the Yuyu Tsuchiyu Onsen Cooperative Association in order to overcome the drastic decrease in tourism caused by the Great East Japan Earthquake in 2011. As a result of considerations

into promotion utilizing the hot springs as a local resource, a binary geothermal power plant was put into operation in 2015, and the revenue from the sale of electricity is being used to pay for commuter bus passes for residents to commute to Fukushima City and to subsidize the use of vacant stores. The binary geothermal power plant also serves as an industrial tourism resource, helping to boost tourism and create jobs.



Binary geothermal power plant

Source: Genki Up Tsuchiyu



Raising shrimp with cooling water used during power generation

Source: Genki Up Tsuchiyu

Deepening of the Circular and Ecological Economy

The year 2022 has been dubbed “The first year of regional decarbonization.” In order to promote regional decarbonization, it is important that decarbonization projects bring benefits to local communities, namely, that they contribute to the regional economy, solve regional issues, and support regional revitalization. Such projects are made possible through the cooperation and voluntary involvement of people from various fields within the region, and the connections and mutual support of people outside the region.

Realizing decarbonization also means achieving resource circulation and harmony with nature at the same time. It also means shifting away from the conventional mass-production, mass-consumption, and mass-disposal economic society centered on the utilization of underground resources, toward a new economic society centered on the utilization of terrestrial resources such as renewable energy and natural capital.

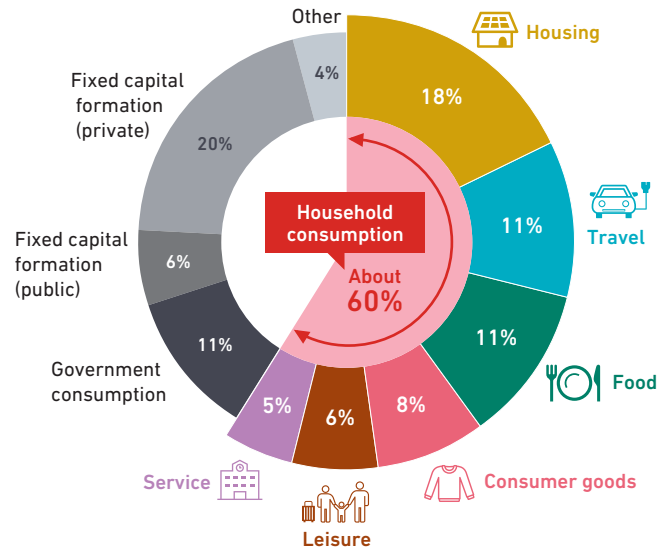
These ideas mean the creation of a circular and ecological economy centered on decarbonization. In conjunction with the creation of a circular and ecological economy, it is necessary to promote a shift in lifestyles. The reason being that by shifting to lifestyles based on the purpose and perspective of passing on the natural environment on which human economic society is based and the natural state of all living things to future generations and making them sustainable, the synergistic effect with the creation of a circular and ecological economy will bring about a truly cyclical and ecologically harmonious society in a new age in which the environment, life and living are the most important and fundamental values and in which people live healthy and fulfilling lives (i.e., a civilized society that values the environment and life). Major keys to realize such a society are transforming people’s sense of values, developing and securing human resources through promotion of environmental education, and digital transformation, which can achieve things that could not be done before by utilizing the digital technology that is evolving at an exponential speed.

2 LIFESTYLE CHANGE FOR THE REALIZATION OF A GREEN SOCIETY

Japan has declared that by 2050 it will realize carbon neutrality; that is, when the amount of removals by forests and other carbon sinks measures is subtracted from the amount of greenhouse gas emissions, the total amount of greenhouse gases will be net-zero. In order to realize net-zero, not only the national and local governments, companies, and other constituent units, but also all ordinary citizens need to change their familiar lifestyles. Looking at Japan's greenhouse gas emissions on a consumption basis, it has been reported that approximately 60% of the total is due to household economy, the need for which is obvious.

It is said that the conventional “mass-production, mass-consumption, mass-disposal” type of lifestyle is deteriorating “ecosystem services,” which are the various blessings that nature provides to support us with food, clothing, and shelter. In order to realize a green society, from the aspects of “food”, “housing”, “fashion”, and “travel”, we need to change our lifestyles with a view to reducing greenhouse gas emissions, reducing waste, and placing value on resource recycling and natural resources through the 3Rs +Renewable.

Life cycle greenhouse gas emissions in Japan on a consumption basis



Source: Estimated by National Institute for Environmental Studies and Institute for Global Environmental Strategies (IGES) based on: Keisuke Nansai, “Embodied Energy and Emission Intensity Data for Japan Using Input-Output Tables (3EID)” (National Institute for Environmental Studies, 2019); Nansai et al. Resources, Conservation & Recycling 152 104525 (2020); and Ministry of Internal Affairs and Communications, “Input-output Table 2015”
 *Each item represents the calculated total amount of greenhouse gas emissions (carbon footprint) throughout the life cycle (i.e., resource extraction, material processing, product manufacturing, distribution, retail, use, disposal) of each consumption/ fixed capital formation product or service in Japan (numbers do not match direct emissions based on domestic production).

Food

Organic agriculture, which promotes the reduction of chemical pesticides and chemical fertilizers, can be considered useful for maintaining the sustainability of so-called “natural capital” such as the land, water, and biological resources used in agriculture. The “Strategy for Sustainable Food Systems, MeaDRI” formulated by the Ministry of Agriculture, Forestry and Fisheries, states that the Ministry aims to “increase the ratio of organic agriculture to 25% (1 million ha) of cultivated land, while expanding the organic market, by 2050,” and efforts are being carried out in keeping with this goal.



Organic JAS mark

The organic JAS mark represents food produced by the power of nature based on the principle of not relying on the environmental risks of chemical substances such as pesticides and chemical fertilizers, and is placed on agricultural products, processed foods, animal feed, livestock products and algae products.

Source: Ministry of Agriculture, Forestry and Fisheries

Additionally, while most Sika deer and wild boars captured in efforts for damage prevention, etc. are currently buried or incinerated, and are thus underutilized except for cases of personal consumption, making effective use of these as gibier (game meat) is expected to lead to an increase in income for rural villages and a reduction in damage to crops and the living environment due to increased motivation to capture those animals. Moreover, as the meat continues to be used in various areas such as restaurants, retail, farm stays, tourism, school lunches, and even pet food, it is expected to not only revitalize local communities but also provide a means of utilizing resources that would otherwise have been discarded.

Popularization of gibier (game meat) products (MUJI)

MUJI has been earnest in promoting initiatives to expand the use of game meat, with the hope that it will lead to the conservation of agricultural land and the resource circulation of community-based forest areas, and that it will create an opportunity for people to learn about current circumstances in hilly and mountainous areas.

Since March 2020, MUJI has been selling gibier curry using wild boar meat at its Café & Meal MUJI restaurants around Japan, and in October 2021, it commercialized packeted gibier curry and began selling it from MUJI stores nationwide and online, increasing opportunities for people to easily purchase the product and contributing to an increase in the consumption of game meat.



"Gibier (Wild Game) Curry that makes the most of ingredients: Venison & Mushroom Curry" and "Gibier (Wild Game) Curry that makes the most of ingredients: Three-Bean Curry with Wild Boar Meat"

Source: Ryohin Keikaku

Housing

From April to August 2021, the Ministry of Land, Infrastructure, Transport and Tourism, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment jointly held the "Study Group on Energy Efficiency Measures, etc. in Housing and Buildings toward a Decarbonized Society" to discuss the vision for housing and construction that should be pursued to realize carbon neutrality by 2050. In order to achieve the vision for 2050 (securing energy-saving performance at the level of ZEH/ZEB standards in the stock average, and popularization of the introduction of renewable energy such as solar power generation equipment in houses and buildings where it is reasonable) and the vision for 2030 (securing energy-saving performance at the level of ZEH/ZEB standards for new houses and buildings, and installation of solar power generation equipment in 60% of new detached houses), the study group compiled instructions on "How to proceed with efforts," including such things as making compliance with energy-saving standards mandatory for all buildings, including houses, and raising the energy-saving standards.

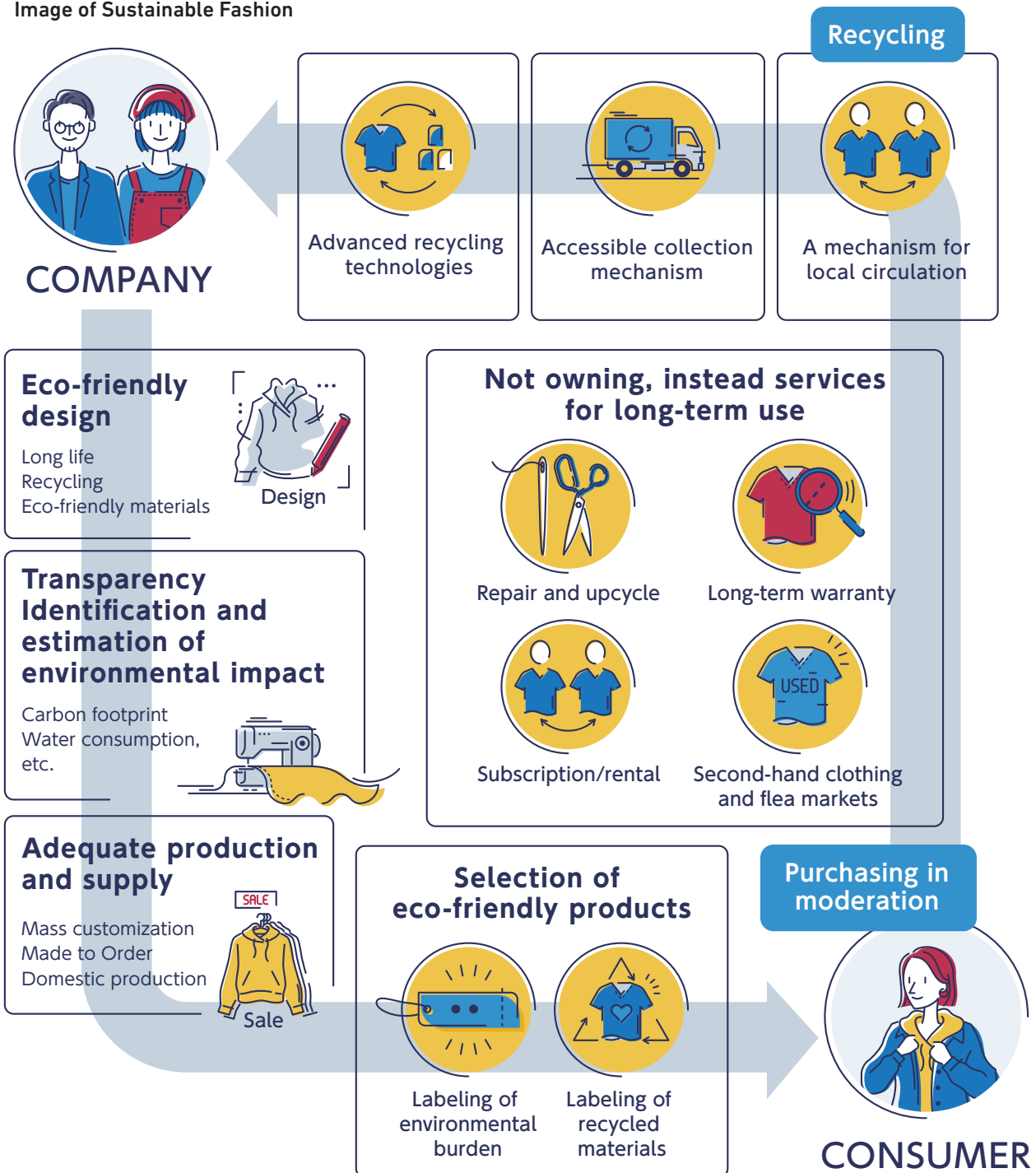
Travel

Modes of transport that are an essential part of our daily lives tend to become habitual and fixed. In particular, it is important to consider the degree of CO₂ emissions when using vehicles. The Ministry of the Environment has named driving that utilizes renewable power and electric vehicles (EV), etc. as "Zero Carbon Drive" and is supporting efforts to utilize Zero Carbon Drive among households, communities and companies.

Fashion

Approximately 98% of Japan’s clothing is imported, so most of the environmental burden is generated overseas. Our clothing is also indirectly related to overseas labor issues. According to a survey conducted by the Ministry of the Environment in FY 2020, approximately 96% of the clothing newly supplied to Japan in one year is given up after use, and about 62% is discarded without being reused or recycled. In order to change the current situation, there is a need to promote sustainable fashion, and efforts in this regard have begun, both by the industry (establishment of Japan Sustainable Fashion Alliance [JSFA]) and by the government (holding of the “Consortium of relevant ministries for the promotion of sustainable fashion”).

Image of Sustainable Fashion



Source : Ministry of the Environment

3 EFFORTS TO PROTECT PUBLIC HEALTH, WHICH IS THE FOUNDATION OF A SUSTAINABLE SOCIETY

Fundamental efforts to protect human life and the environment are the starting point and mission of the Ministry of the Environment, which was born as an organization dealing with nature and environmental conservation from regulations related to pollution. With that starting point remaining unchanged, the Ministry of the Environment is working on policies that respond to people's lifestyles, social changes, and changes in the times.

Heat illness countermeasures

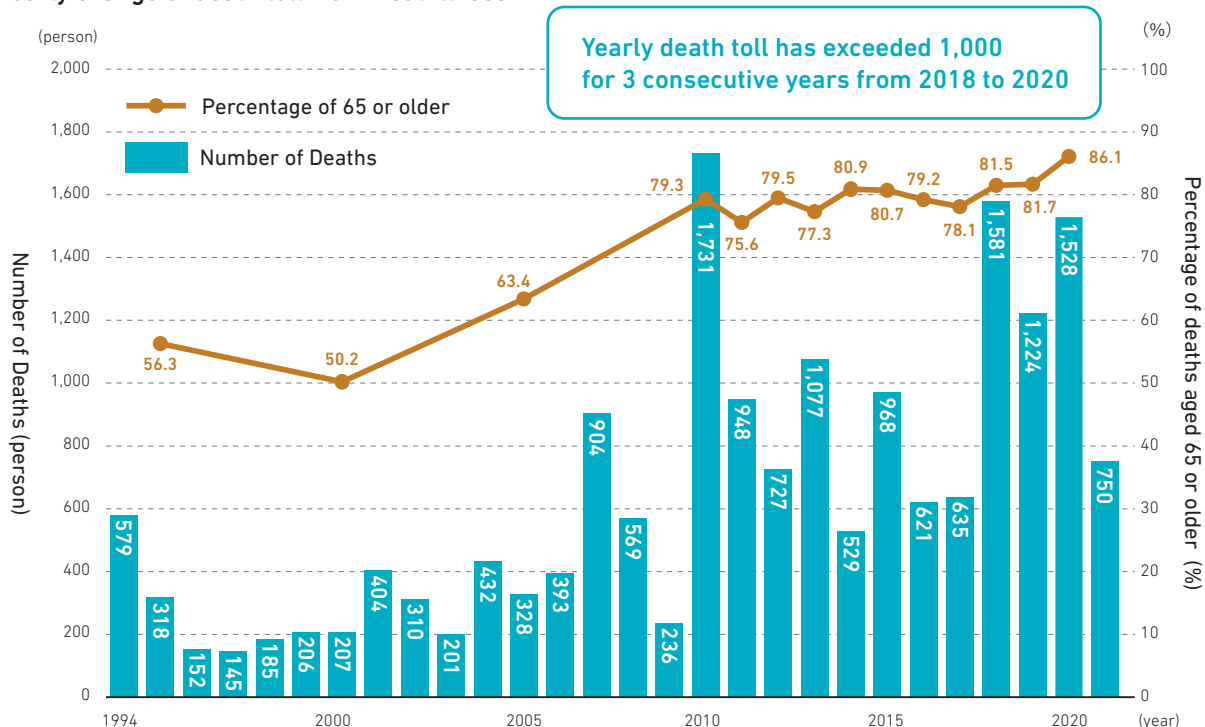
In light of the progression of climate change, the government promotes comprehensive measures to prevent heat illness at a local level and aims to ensure that the whole society works on heat illness countermeasures.

The national death toll due to heat illness has remained high, and according to data for the 23 wards of Tokyo in the summer of 2021, approximately 80% of those who died of heat illness were elderly citizens aged 65 or older, and of those who died of heat illness indoors, approximately 90% did not have or use air conditioners. As a measure to prevent heat illness in elderly households that do not have air conditioners installed, promoting the spread of air conditioners is urgent. Thus, in 2022, a model project that utilizes subscription method with no initial cost (flat-rate service) is being implemented.

Furthermore, based on the “Heat Illness Action Plan” (revised in April 2022), the government will continue to implement the “Heat Stroke Alert”, which has been in operation nationwide since April 2021. In 2021, Heat Stroke Alerts were announced in 53 areas for a total of 75 days, and the total number of alerts nationwide was 613.

Nationwide awareness of the Heat Stroke Alert in FY 2021 was approximately 80%, showing a certain level of awareness. On the other hand, for example, the proportion of people who refrained from going out or engaging in outdoor activities upon the announcement of an alert was less than 40%. This is still not high enough, and so the government aims to further establish the practices to prevent heat illness.

Yearly change of death toll from Heat Illness



*Figures for 2021 are preliminary.

Source: Ministry of the Environment, based on Ministry of Health, Labour and Welfare, “Vital Statistics”