



Higashiomi Environmental Roundtable

Higashiomi City in the Future: 2030

2011.3

Higashiomi Environmental Roundtable





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Please send information on projects or undertakings that can contribute to achieving our future visions.

Please send information on projects or undertakings that can contribute to achieving our future visions. This brochure introduces several projects currently underway to make the city's future visions a reality. If you happen to know any projects or undertakings that can contribute to achieving any of the future visions shown in this brochure, whether carried out in Higashiomi City or elsewhere, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

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Higashiomi City in the Future: 2030

The future visions of Higashiomi City contained in this brochure were developed by the Higashiomi Environmental Roundtable, a group of citizens from Higashiomi City and other people associated with the city, based on discussions from 10 meetings (six meetings by roundtable members and four meetings by interested parties) held between February 2009 and March 2011.

In what way should we shape the future in order to ensure that the citizens of Higashiomi City can continue to live a happy life in a sustainable manner? Our quest to answer this question led us to the publication of “Higashiomi City in the Future: 2030.” To create an ideal society in the future, we should address various issues, such as social welfare, child-rearing, global warming, and the natural environment. Our determination to make well-defined future visions a reality 20 years from now, instead of taking a “whatever will be, will be” attitude, is at the core of the concept of this brochure.

This brochure has a section titled “Future Visions by Category,” in which we show our future visions on the left page and then display notes on the visions on the right page, for each category. In editing the brochure, we tried to make the description of each of our future visions as simple as possible. For this reason, you may find it somewhat difficult to obtain a clear image of our future visions if you read the future visions pages only. If this is the case, please read the notes on the right pages for supplementary information.

We also provide an “Outline” for our future visions in each category, so that readers will be able to better understand the bigger picture of our visions by first reading the section titled “Higashiomi City in 2030: Our Desired Future” along with the “Outline” of each category. You may read this brochure from the first page, but if you think information on some particular category helps you better obtain an image of our society for 2030, then you are recommended to read that category first. As reference information, we included in this brochure a column titled “Higashiomi City in 2030: Worst-case Scenario.” This scenario was prepared by the roundtable secretariat and describes what our society might be like in 2030 if nothing is done to change the situation from 2010. It will be interesting to compare this scenario with the future visions that the roundtable members have developed, through discussions, and to see the differences between them.

We have about 20 years before 2030 arrives. During these years, some aspects of our society may remain unchanged, while other aspects may undergo drastic changes. In reading this brochure, you are expected to imagine what Higashiomi City will be like in 2030—20 years from now.

Lastly, please note that future visions are not described in equal detail in all the categories, which is because the level of expertise varies among the members of the Higashiomi Environmental Roundtable, whose names are shown in the “List of Higashiomi Environmental Roundtable Members” at the end of this brochure. The less-detailed descriptions will be complemented by discussions to follow.

It should also be noted that this brochure is a “2010 version,” which means that the future visions contained here are subject to change depending on the course of the discussions to take place.



Higashiomi Environmental Roundtable

The Higashiomi Environmental Roundtable was established under the 2008 Higashiomi City Basic Environmental Plan with a view to creating a venue for citizens, businesses, and municipal personnel to discuss the city's environmental measures on an equal footing. The roundtable will also discuss such topics as the future of Higashiomi City as a sustainable city and the introduction of indicators as a means to achieve the city's visions.

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【Membership of the roundtable】

For FY2009, the first year of the roundtable, the secretariat (Life Environment Division) appointed influential persons active in and out of the city to be members of the roundtable, in a manner that conforms to the city's Basic Environmental Plan. Specifically, the secretariat selected members from among leaders of environmental groups and persons capable of addressing environmental issues comprehensively, from the perspectives of welfare, education, industrial and local-area revitalization, and city planning.

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【Partnership with the Lake Biwa Environmental Research Institute】

The research conducted by the Lake Biwa Environmental Research Institute (Director: Dr. Masaaki Naito) provided a scientific basis for the governmental policy of the "Low-carbon Society Scenario: Reducing CO₂ Emissions by 50% by 2030," as developed by the Shiga prefectural government under the leadership of Dr. Yukiko Kada, governor of Shiga Prefecture. In FY2008, the institute launched a new research project entitled "Reform toward a Low-carbon Sustainable Society" under contract with the Japan Science and Technology Agency (JST), which will be completed in FY2011, and Higashiomi City is incorporated into this research project. Developing visions of an ideal society, desirable civil lifestyles, and a roadmap to implement specific measures for this ideal society through a citizen-based participatory approach is part of this project.

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【Mission of the roundtable】

With an understanding of the purpose of the research project mentioned above, the roundtable cooperates with the project by engaging in discussions to develop the visions and then the roadmap, through workshops and field work.

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【Participation in the city's master plan】

Since FY2010, Higashiomi City has been involved in the process of reviewing its master plan (latter phase), which will start in FY2012. Under the current municipal administration, the latter phase of the plan is likely to be designed to achieve the specific targets and numerical goals set for each category, instead of pursuing overall benefits. In line with the research activities carried out by the Lake Biwa Environmental Research Institute, the roundtable, for the near term, aims to incorporate into the master plan (latter phase) the city's future visions, specific measures, and numerical targets, developed through its discussions, taking into consideration the achievements of preceding projects such as the "Green Decentralization Reform" and the "Next-generation Energy Park Program."

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Higashiomi City in 2030: Our Desired Future

Fostering new interpersonal and person-community relationships

Putting in place a realistic and sustainable community

Developing and putting to use a variety of energy sources alternative to oil

Higashiomi City has undergone certain changes in various aspects over the past two decades. These changes have not taken place naturally, but they have resulted from our efforts to make our ideals a reality.

These changes began to occur around 2010, about 20 years ago, when the living standards of citizens were already high. Many useful products and services were available and easily accessible, allowing us to enjoy great convenience and comfort of living, even in Higashiomi City, which does not deserve to be considered “urban.” We could buy most of our daily necessities locally.

However, the citizens of Higashiomi City saw the necessity of changing the city in a favorable way. Indeed, our lives became richer than in the past, but we were convinced that we had to take some action to change the city with our own hands if we were to continue to live a happy life and remain attached to Higashiomi City.

The ideas proposed by citizens to change the city included developing a community where residents cooperate with each other and manage daily affairs by themselves to the furthest possible extent, along with producing daily necessities using local natural resources whenever possible. By doing this, we could revitalize local activities in various parts of Higashiomi City, which would enable us to generate job opportunities, deepen interpersonal bonds, and protect local nature. In addition, vigorous local activities and a beautiful natural environment could eventually attract people to Higashiomi City. These ideas gave rise to a vision for a new lifestyle that would bring about a different kind of richness, and citizens attracted to such “richness” began to take action to change Higashiomi City on their own.

In addition, there were other factors that could have facilitated a change. For example, one could say that the consumption of oil and gas for daily use was taken for granted in 2010, but today, the mass production and consumption of such energy is no longer possible. In addition, an international agreement to cut CO₂ emissions and other greenhouse gases by 50% obligates us to reduce our use of energy, especially fossil fuels such as oil and gas.

However, such restrictions also had positive aspects. Of course, we had to change our social system and our way of living to promote a shift from oil and gas to alternative energy sources, and this caused some inconvenience at first. We could not reduce greenhouse gas emissions only by introducing the latest technology, and considerable efforts were required to change our conventional lifestyle. However, we took this occasion as a good opportunity to create a new Higashiomi City. We thought that by working to realize our future visions for Higashiomi City we could renovate our conventional social system and the way of living that we had taken for granted, and we saw that we could eventually contribute to reducing greenhouse gas emissions.

In this brochure^{*1}, you will find such scenes of ordinary everyday life in Higashiomi City as we envision them for 2030.

*1: Future visions are presented in eight categories from p.7.

Higashiomi City in 2030: Worst-case Scenario

What future awaits Higashiomi City in 2030 if we do nothing to change the current situation? The following is an account of “Higashiomi City in 2030: Worst-case Scenario,” as envisioned by the roundtable secretariat. Of course, we do not think this is our inevitable future, considering it is very unlikely that no action would be taken if a problem arises. We present this scenario as a comparison with the future visions developed by the roundtable.

By 2030, Higashiomi City has undergone changes in various aspects. A large ship cannot change its course quickly when steered toward a different direction, and this also applies to municipal administration. We noticed this fact too late, when many problems had already arisen. We should have taken corrective measures on our own initiative at a much earlier stage.

Inapplicability of the current social system, resulting in an increase of the poor

Acceleration of the concentration of population and power in metropolitan areas

Delays in implementing the government's energy policy

In around 2010, about 20 years ago, there were signs of intensifying competition between developed and newly emerging countries for access to oil and other fossil fuels, but we did not see the necessity of changing our conventional way of living. A drastic change could come at any time. At around 2020, the competition for resources grew so fierce that we became no longer able to use oil and other energy as we had done in the past. Our social system, which was heavily dependent on fossil fuel, was not ready to meet such changes and failed to change its course in a timely manner. Due to the shortage of gasoline, the roads saw fewer private cars, while public transportation services, such as buses, had been reduced to the minimum, as the use of private cars had been taken for granted and no efforts had been made to improve these services.

Many manufacturers were also severely hit, as they still used oil in their manufacturing processes. The economic and social systems became mostly paralyzed due to their excessive reliance on external services. As a result, we cannot literally step out of our homes and have difficulty obtaining daily commodities. The technical excellence of Japan is also threatened, and the economy remains stagnant. In addition, we are suffering the consequences of our complete dependence on the government for medical, nursing care, welfare, and other social services. Monetary benefits paid under the health insurance and pension programs have continued to decline. While we hope to develop a community where residents cooperate with each other and manage daily affairs by themselves to the furthest possible extent, such a community cannot be created in one day. Thus, many people have difficulties maintaining the minimum standards of living.

As no measures were taken to stop the decline of the birth rate, we are now living in a super-aging society with few children around. The population has continued decreasing, and local businesses are mostly destined to fail because no customers can be found. Very few job opportunities are available in the city, which is accelerating the decline of the city's population.

Education is no exception. The conventional educational system has failed to foster in children the power to live a full life. Consequently, today's children seem to lack vitality. Then, what about food? Due to a shortage of oil, agricultural machines can no longer be used. Without agricultural land, it is impossible to grow crops for our own consumption. As a result, only limited kinds of food are available to most citizens.

However, humans have a strong will to survive. In Higashiomi City, efforts have begun to improve our society and enhance our standard of living, and certain situations are improving little by little. Yet, we have no idea how much wisdom, energy, and labor is required before we can achieve more substantial results.



Higashiomi City
in the Future:2030

Future Visions by Category

2010 Version

Community

A community is in place where various ways of living are respected and neighborhood bonds are valued.

From the period of rapid economic growth to the 2000s, Japan single-mindedly pursued economic development on national, local, and individual levels. During this period, Japanese people were desperate to earn money¹ to the extent that they could not have sufficient time to spend with their family members, and they felt reluctant to participate in community activities or even communicate with their neighbors. This resulted in a weakening of community ties. Perhaps, Japanese people placed too much emphasis on individuality, and, in turn, developed a sense of loneliness.

■ A mature society where interpersonal relationships bear greater importance than money and where community members can play their respective roles to the fullest

By 2030, we, the citizens of Higashiomi City, have renewed our awareness of the significance of the concept behind *yui* and *ko*, which are traditional local mutual aid systems. We are now convinced that rather than money,² community ties and interpersonal relationships³ have greater value for our life. We also exchange information to share and manage jobs⁴ within the community. While the terms “cooperative work” and “normalization” were often heard around 2010, today, cross-category work is taken for granted, such as work that encompasses the fields of the environment and welfare, because we are willing to do whatever we can to contribute to our community.

■ Citizens active as members of the local community, which covers urban/rural areas, and the thematic community

Unlike the past, when the nuclear family predominated, an increasing number of citizens now choose to live with a large family or live a communal life.⁵ This is due to the prevalence of the notion that living with those who share similar ideals and purposes is as conducive to mutual aid as community bonds and blood relations.

All people, male or female, young or old, and even foreign nationals, seriously contemplate the well-being of the local community. Citizens respect the lifestyles of other generations, work in cooperation toward disaster preparedness and crime prevention, share necessary resources, and live in harmony. In rural areas, newcomers⁶ play a positive role in preserving the traditional local culture/knowledge. They enjoy local events, such as festivals and *jizobon* Buddhist services, and participate in community activities, such as by preparing meals in case of emergencies, while also taking part in landscaping, thus fostering stronger neighborhood bonds.

Thematic communities,⁷ as well, are prospering. Programs are in place to train personnel who can play a leading role to ensure the continuity of community activities and who can coordinate such activities across different fields. The importance of the roles of these leaders and coordinators is recognized publicly. Thanks to their support, tours are arranged for urban residents to: visit mountainous areas and lakes in Higashiomi City, obtain hands-on experience in agriculture, forestry, and fisheries, and enjoy interaction with rural residents. From such thematic activities, a lifelong learning program has emerged, which allows local residents of all ages to study the topics of their interest in a setting similar to *terakoya*, which was a type of small-scale school common during the Edo Period.

Ecotourism⁸ is now a major industry of Higashiomi City. Many people, for business and leisure, visit Higashiomi City from other parts of Japan and abroad. A variety of programs are offered to tourists, such as those for experiencing rural life and enjoying residential-type allotment gardening,⁹ which are popular among the urban residents who seek leisure activities and opportunities for interaction. In this connection, the reuse of vacant houses is also being promoted.

■ Shifting to an eco-friendly lifestyle

Citizens maintain an eco-friendly lifestyle¹⁰ in consideration of the well-being of future generations, and local companies and the government have changed their conventional way of business to facilitate a shift to a low-carbon society.¹¹ As a result, the city now has a social system that makes it easier for citizens to practice an eco-friendly lifestyle. In addition, a family garden program is implemented on a city-wide basis to encourage citizens to produce food for their own consumption. All the citizens are aware of their responsibility to act toward recycling and environmental protection.

- Efforts are underway to develop a community where different senses of value are respected and mutual aid is encouraged.
- Each and every resident has a role to play within the community and takes pride in being a part of it.

▼1 People were desperate to save enough money for life after retirement and wanted to have a steady job and earn a decent salary.

2 Shipments from Higashiomi City (value)

2000	<p>Total: 687 billion yen</p> <p><Primary industry> Shipments to other parts of the prefecture: 2 billion yen Shipments to outside the prefecture: 7.8 billion yen</p> <p><Secondary industry> Shipments to other parts of the prefecture: 70.8 billion yen Shipments to outside the prefecture: 382.9 billion yen</p> <p><Tertiary industry> Shipments to other parts of the prefecture: 69.6 billion yen Shipments to outside the prefecture: 154 billion yen</p>
2030	<p>Total: 523.2 billion yen</p> <p><Primary industry> Shipments to other parts of the prefecture: 3.3 billion yen Shipments to outside the prefecture: 40 million yen (Incoming shipments from other parts of the prefecture increase, while incoming shipments from outside the prefecture are reduced to almost zero.)</p> <p><Secondary industry> Shipments to other parts of the prefecture: 58.6 billion yen Shipments to outside the prefecture: 293.8 billion yen (Incoming shipments of food from other parts of the prefecture increase while that from outside the prefecture almost halves. Incoming shipments of wood products from other parts of the prefecture and outside the prefecture are reduced by about 70%.)</p> <p><Tertiary industry> Shipments to other parts of the prefecture: 57 billion yen Shipments to outside the prefecture: 110.5 billion yen (Incoming shipments of commercial, medical, and nursing care services from outside the prefecture are reduced by about 80%.)</p>

3 In the city, children, as they run from school to home, naturally greet the people they meet on their way, including strangers, which leaves a striking impression on some visitors.

4 For the purpose of this vision, the term “jobs” refers not only to for-profit business activities that generate revenue, but also to non-profit activities that contribute to the well-being of the community (activities that take advantage of the strengths of the community and the knowledge of residents).

▼5 A one-person household consumes excessive energy. Up to around 2010, we lived in a highly wasteful society, where virtually every member of a household possessed an air conditioner, TV, and car.

6 An increasing number of young urban residents have moved to rural areas, attracted to the availability of abundant resources. To encourage relocation to rural areas, newcomers are offered land and houses under favorable conditions. They are also given detailed information on traditional local events and rules regarding living.

7 Thematic communities refer to groups of people engaged in civil and volunteer activities under a specific theme, which are distinguishable from geographically defined local communities.

8 Ecotourism is a type of tourism (tours and recreation) conducted in a manner that maintains and protects ecosystems, both environmental and social, and contributes to the development of local communities. In this section, it specifically refers to long-term residential-type tourism.

9 Residential-type allotment gardening is also known as “kleingarten,” a German word meaning “small garden.” With a background in Germany 200 years ago, this current program offers a rental plot of about 330 m² on average for rent, which includes farmland and a house. Tourists, whether individually or as a group, rent a plot and enjoy growing vegetables and gardening. Some use the house offered under this program as their resort villa or second house. This program is popular among people who want to experience a rural, slow lifestyle on a short-term basis.

▼10 An eco-friendly lifestyle involves individual efforts to promote recycling and to reduce waste and energy consumption.

11 By “low-carbon society,” we mean a society that emits less CO₂, a major greenhouse gas that contributes to global warming.

Progressive case examples now underway

Support for the community debut of retired workers

The Community Debut Support School is designed to encourage retired workers to join community activities by fostering cooperative relationships. Retired workers are offered opportunities to use their skills to contribute to the community voluntarily, not under contract with the government, and they play a positive role in various community-based activities.

Higashiomi NPO Center

The center offers support to citizens in launching projects and developing cooperative ties among citizen-run projects, while providing information and promoting exchange activities. The center also aims to offer coordinating and matching services in various fields.

● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

Medical and Welfare Services

“Health, medical, and welfare services are offered in an integrated manner.”

Community-based medical and welfare systems supported by mutual aid enable us to manage our health on our own.

At around 2010, the number of elderly persons living alone in Higashiomi City totaled nearly 2,000. Citizens were always anxious about their future, worrying over illness and life in old age. Under the social system in place in those days, more than a few people died a solitary death. Citizens used medical and welfare services as if they had been “customers.”¹

As of 2010, suicides accounted for about 3% of all the deaths in Higashiomi City. The number of suicides had continued to increase since the 1990s. Survivors blamed themselves for having been unable to stop their attempted suicide. Everyone was fully occupied with dealing with imminent problems, and neither citizens nor communities had the time or energy to act for the public good.

Living in good health

Today, the citizens of Higashiomi City are highly interested in maintaining good health, not only for themselves but also for their neighbors.² Such an attitude by citizens has proven effective in preventing elderly people from developing conditions that require nursing care and becoming bedridden. In the city, elderly citizens live a positive life, happily engaging in farm work and spending time with friends at community centers, and were given a role at local schools, which helps them maintain their health. Advanced ICT³ also plays an important role, as it has enabled elderly citizens to receive medical care at home via a cable TV network.

Each household has a family doctor who conducts a regular health checkup on household members.⁴ The family doctor and nurse offer medical consultations in a manner tailored to individual health conditions.⁵ Core hospitals capable of providing advanced medical care are designated, and they accept patients who are likely to develop severe conditions, upon request from their family doctors. The hospitals and clinics are now working together more closely, allowing the effective use of local medical resources.⁶ The concept of medical welfare is firmly established in society. Today, the city has a well-developed emergency medical service system, including a perinatal hospital that provides medical care for high-risk pregnancies, a home-visit program run by health care workers, and day care centers for sick children⁷ that take care of children who suddenly fall ill, for working parents.

Emphasis on “interpersonal bonds”

In the days when privacy was given special importance, we felt reluctant to drop in on neighbors with no specific purpose. This is no longer the case for Higashiomi City in 2030. Today, citizens recognize the value of casual relationships with neighbors.

In the city, a delivery service for daily commodities and meals is available for elderly households,⁸ principally in each elementary school district, while citizens have taken over some of the roles that were previously played by helpers.⁹ Thus, greater emphasis is now placed on community-based “interpersonal bonds.” Temples and shrines,¹⁰ as well as local assembly centers and meeting places, offer part of their space for elderly citizens to spend time. As well, a social farming program¹¹ is actively promoted at each junior high school district.



Outline

- Due to stronger community ties, elderly persons are now less likely to develop conditions that require nursing care and that could render them bedridden.
- Core hospitals capable of providing advanced medical care are designated, and hospitals and clinics work in closer cooperation. The concept of medical welfare is firmly established in society.
- Various systems are introduced to reduce the citizens' share of medical welfare costs.

Notes

Legend Technical terms Background to the future vision ▼ Concrete examples

▼1 Some citizens went to the hospital during non-clinic hours for medical care even though there was no need for emergency treatment. For these people, going to hospital was like going to a convenience store open around-the-clock, and their own benefits were more important than the well-being of the entire community. Such selfish behavior sometimes resulted in the failure of the hospital to meet emergency medical needs and increased the burden of doctors on night duty.

2 The citizens of Higashiomi City often say that they are given power and energy through association with neighbors.

3 ICT stands for "Information and Communication Technology," and refers to a group of technologies that are used for information processing and communications via computers and the Internet.

4 While health checkup and medical care services are also provided online, in the case of Higashiomi City, face-to-face personal relationships are the basis of these services.

▼5 Family doctors give advice and consultation not in general terms but in a more personal manner, such as: "When

your father catches a cold, he usually gets a sore throat, and this is also the case for you. So rinse your throat well."

▼6 To be specific, an institution named the "Tri-parties Beneficial Policy Study Group" was established.

▼7 These day care centers also contribute to encouraging employment.

▼8 Necessary nursing care services are sufficiently available through home-visit nursing stations, small-scale nursing care facilities, and preventive and home-visit medical care centers, located throughout the city.

▼9 Social worker coordinators are in charge of the management of services and systems offered under the nursing care insurance program, as well as the activities undertaken by volunteer nursing care providers.

10 Facilities staffed around-the-clock, including temples and shrines, have assumed a new role as a gathering place for citizens.

11 Under the social farming program, people with disabilities or who experience difficulty in forming social relationships can employ themselves to earn their living and work in their own unique ways.

Case Examples

Progressive case examples now underway

■ Tri-parties Beneficial Policy Study Group

This group engages in promoting the development of a critical path framework involving medical professionals, nursing care workers, and citizens through a participatory community-based approach. Its achievements provide a basis for discussion on medical welfare by the Higashiomi Forum.

■ Welfare Mall Project


Conceived by the Higashiomi Forum, established to discuss medical welfare, this project is promoted by "Yui no ie," an NPO offering community-based support to elderly people, and it is now joined by welfare and medical personnel. The project aims to create an area and base of living where people with dementia, stroke-induced impairments, and disabilities, whether covered by nursing care insurance or not, can live in safety and comfort.

■ Care for people with dementia

To offer community-based support to people with dementia and their family members, this project provides venues to learn about the life review method and the missing person search support network, and it trains dementia supporters to educate citizens about dementia, in cooperation with museum and library staff.

■ Higashiomi Forum: Discussing medical welfare on a community level

Citizens work with medical professionals, nurses, nursing care workers, religious people, library staff, and emergency personnel to: protect the local medical welfare system; provide a section in the library for the records of patients in their fight against disease; and publish a brochure called "Before Going to Hospital" to warn people against going to the hospital "as if it were a convenience store."

 If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

■ **A society where local resources are put to effective use**

While levies^{▼12} on medical and welfare services were determined based on income alone in the past, today, the levied amount is calculated in consideration of the combination of income and assets. As a result, individual financial conditions are now better reflected in the levied amount.

This calculation method was introduced backed by the spread of the reverse mortgage system,¹³ which has increased the liquidity of properties such as land, vacant houses, farmland, and mountain forests. As a result, these properties are now more easily available for newcomers to the city and for other persons who have a need for such properties.^{▼14}



▼12 For the purpose of this section, levies refer to insurance premiums for medical, nursing care, and welfare services, along with the citizens' share of the costs incurred when receiving such services.

13 A reverse mortgage is a type of mortgage that allows a homeowner or landowner to borrow money against his/her home or land. For example, a credit limit is determined based on the value of the home or land, and the owner can borrow money on a monthly basis until the credit limit is reached. The lender is entitled to sell the land or home to recover the loan when the borrower dies. Under this system, the lender can take ownership of the land and mountain forests (properties with less value) that will be left unattended after

the death of the owner, and they can sell such properties for comprehensive development. Increasing the liquidity of such properties is expected to revitalize the community. Currently, the reverse mortgage system is operated by trust banks for wealthy persons, but in the future, the government, the community, or an NPO can be an operator of this system.

▼14 These persons include individuals and NPOs wishing to use such land, farmland, and forests as allotment gardens, community centers, or for other public purposes.

Progressive case examples now underway

■ Taijukai Network

This agricultural foundation was established to help people with disabilities who work for "Yuya no sato," an organization that promotes the employment of people with disabilities, to engage in such jobs as supporting elderly people, farming, and cattle grazing in a manner that preserves the rural environment, as well as jobs that involve controlling destructive animals. The network also plans to open a farmhouse restaurant in the future. Backed by this network, people with disabilities are expected to earn their living and live independently.

■ Eco-labo Heart Project: "Tekito-" Work and Life Support Center

This project is designed to create job opportunities for people with disabilities by tasking them with the delivery of eco-friendly products. At the same time, the project aims to educate citizens on disabilities and the environment by promoting activities that combine the "environment" with "disabilities," while carrying out CSR activities. Through cross-industrial partnership, efforts are underway to create new job opportunities for people with disabilities, such as funeral services, second-hand book sales, nursing care, landscaping, cooking, washing, rice milling, baking, udon noodle cooking, dairy farming, and postal services.



If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

Education and Child Care

“Developing human resources and creating jobs for local citizens”

Enhancing the ability of the community to nurture/educate children and offering stable jobs for all

After entering the 2000s, the birth rate decline in Japan became so obvious ¹ that a growing concern arose over its consequences for future society. The increase in the number of school-phobic children and stay-at-home youths also became a serious social problem. This is largely attributable to the totalitarian, depersonalized educational system that remained based on the principle of competition, even though competition was less important in child education in those days than in the past when the nation had a high birth rate. As a result, children who had difficulty in following the “predetermined course” found themselves with nowhere to go.

■ Social systems and community-based support that halted the declining birth rate

In the first place, various systems that help to create an environment conducive to childbirth and raising children were introduced, including: parental training for prospective fathers and mothers; child care consultations; day care services for sick children; and support to children with disabilities. In addition to conventional maternity leave and child care leave, workers are now eligible for a one-month leave upon childbirth, which is granted also to non-family members who are to take care of the child in place of the parents, subject to application. Today, the responsibility to raise children is not shouldered by family members alone. Besides parents and relatives, many people, including elderly citizens in the neighborhood, ² members of the organization in which the parents participate, and parents’ friends are also involved in raising children. Novice mothers and fathers no longer feel isolated and bewildered, as they, too, have had the experience of helping to take care of a baby and learned what to do. The conviction that they are not alone helps prevent them from being depressed. ³ Through the opportunities to interact with people raising children and to be involved in child care, young people learn the joy and pleasure of having children, and seriously consider getting married to give birth to and raise their own children. Consequently, the declining trend in the birth rate was reversed. ⁴

■ Value of teaching diversity and hands-on learning opportunities, offered in a manner unique to Higashiomi City

Small-scale community-based schools ⁵ similar to terakoya in the Edo Period are open in various parts of the city, where children learn knowledge and skills from citizens with different backgrounds, e.g., who are good at reading picture books, know a lot about living organisms, or who have disabilities. Through interactions with these citizens, children are taught that there are a variety of job options in society, that senses of value and ways of thinking vary from person to person, and that each person has an individuality that should be respected. Every citizen knows that society itself is full of learning opportunities. Unlike forced learning in a classroom setting, hands-on learning and work experience ⁶ leaves a deep impression on children and teaches them the important things to remember in order to live a fulfilled life. For this reason, children are allowed to be absent from school to participate in local events or to help with farm work during busy seasons. In addition, children in Higashiomi City are characterized by their well-developed reading habits, as well as a deep international understanding—which has been fostered through interpersonal exchanges. ⁷ Adults, in turn, are inspired by children and are now highly conscious of their responsibility as community members.



Outline

- In 2030, Higashiomi City has an increasing number of children, with its birth rate above 2.0.
- A curriculum that places special emphasis on diversity is in place.
- The notion of raising children on a society-wide basis is accepted publicly.



Notes

Legend

Technical terms

Background to the future vision

▼ Concrete examples

1 The city's population has changed as follows.

	2010	2030 (estimated)
Total population	117,914	114,683
Youth population	17,858	13,577
Productive-age population	75,585	69,094
Elderly population	24,471	32,012

▼2 Many elderly citizens enjoy interaction with children in the community, saying “playing with children gives me energy” and “I have no time to fall ill.”

▼3 Substantial support is offered to households with children and single-parent households by the community and

municipal government.

4 The birth rate of the city is now above 2.0.

5 Libraries can serve as a venue for lifelong study and information-sharing. School facilities and public halls can be of use for these purposes as well.

▼6 Hands-on learning and work experience include cutting firewood, doing farm and forestry work, and preparing and cooking chicken.

7 The term “interpersonal exchanges” is often used in comparison with “international exchanges.” While international exchanges pay heed to relationships between “nations,” “interpersonal exchanges” refer to interactions on a local level.

Case Examples

Progressive case examples now underway

■ Librarians' reading service

Librarians and members of the “Rupinasusan no kai” (or, the “Lupinus Association”) and the “Himawari ohanashi kai” (or, the “Sunflower Reading Club”) visit schools and day care centers in Higashiomi City to share the joy of reading books with children.

■ NPO Myogamura

In this NPO, people with and without disabilities live together in a commune in Hyakusaijiko-cho (Ohagi). There, they endeavor to achieve self-sufficiency by producing a small quantity of agricultural products for internal consumption on their own, in a manner that promotes resource recycling.

■ Project to Create Adventurous Playgrounds in Yokaichi

This project was conceived by the Yokaichi Community Development Council with an aim to develop playgrounds in local parks and other areas that give children the freedom to play and stir their adventurous spirit and curiosity. In doing so, the project ensures that families, schools, and day care centers will be given community-wide support in promoting the healthy growth of children, ranging from infants to adolescents.

■ Parenting Support Group of the Koto District Council

This group is engaged in coordinating activities to incorporate the knowledge and skills of local citizens in the school curriculum, using a volunteer bank established by them.

● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

■ **Repayment to the community by citizens who have grown up/studied and who now work in Higashiomi City**

Citizens in Higashiomi City are grateful for the wide range of career choices offered by the city. For example, junior high school students who are not interested in going to high school are willing to pursue career paths other than company employees, inspired by the past opportunities given by the city to work with farmers in growing grapes, rice, etc. In this way, they can find the job most suitable for them. Young people in the city benefit from the e-learning system, which allows them to attend lectures of urban and foreign universities without going out of the city. In addition, many companies and shops willingly accept students for internships to assist them in their studies. Adult citizens with children can also continue pursuing their work and study of their interest, thanks to the child care service offered by elderly citizens living near the workplace and the sufficient availability of day care centers for infants and elementary schoolchildren near train stations.

Today, various types of “schools”⁸ are increasingly available and open to anyone. In addition, a program named “Higashiomi City Olympics” is carried out to commend the No. 1 achievements in the city in many different fields, which motivates citizens in their respective activities. The point-addition scoring system⁹ employed for examinations also helps to foster a positive attitude toward studying.

The citizens of Higashiomi City are offered a wide range of options at each stage of their lives.¹⁰ They are also aware that their own individuality is valued in the community. As a result, they naturally feel inclined to repay the community, knowing that they owe their personal growth to the community and that they should work toward its further development.



8 These schools are similar to conventional vocational training schools, but what makes them distinguishable is their teaching style. Classes are held not using a lecture style, but in an interactive manner in which students and instructors mutually respect the past experience of the other. Various types of courses, both short-term and long-term, are offered with no age limit.

9 Instead of deducting points from 100, this system

recognizes the advantages of students and adds points accordingly. It aims to praise and motivate students.

10 For example, households that have difficulty paying a huge amount of educational expenses at one time are offered loans and subsidies. Consequently, today, no children give up going on to higher education or drop out of school for financial reasons.



Employment, Work, and Industry

“New trends in major industries and optimal work-life balance”

Creating local brands and promoting industry-academic cooperation

While gasoline and light oil are seldom used at home for private cars, they are still used for the operation of factories and agricultural machines as well as for transportation of heavy products, timber, and other materials, along with biofuel. ¹ The import of agricultural products and wood materials has declined from the level of the 2010s, and they are traded at higher prices than before.

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Agriculture, forestry, and fisheries

■ “Farmer” as a dream job for children

Today, being a farmer is one job that enjoys great popularity. ² The prevalence of the idea of local production for local consumption ³ has resulted in the increase in the shipment of local agricultural products to nearby urban areas, such as Osaka and Kyoto. As well, a system to offer farmland to would-be farmers is in place, which also contributes to the increasing popularity of agriculture. ⁴ Many citizens enjoy growing crops in family and allotment gardens for their own consumption. Now, people see greater value in living a self-sufficient life and grow more interested in agriculture.

15

Profitable farming

Full-time farming can be roughly divided into two types. One is large-scale intensive farming ⁵ and the other is specialized farming. The latter refers to organic and pesticide-free farming, which requires far more time and labor than conventional farming, but which can sell agricultural products at a higher price due to their quality and safety. ⁶ In addition, a new type of farming categorized as “senary industry” ⁷ is emerging. The agricultural sector has become so profitable ⁸ that some farmers have incorporated themselves as a company.

20

Growing interest in agriculture

In the city, hands-on farming programs ⁹ have become an important tourist attraction, which often encourages relocation to Higashiomi City. Of course, not all the tourists who have participated in the program turn to farming, but an increasing number of people have already moved to the city to enjoy a lifestyle closely associated with agriculture. ¹⁰

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■ Use of locally produced timber for building construction

Mountains as a treasury of natural resources

The importance of local mountains is widely recognized for their abundance of resources, which are indispensable for our lives. They produce timber, used for building construction, and energy sources, such as chips and pellets. Meanwhile, they also absorb CO₂ through their trees, and they support the growth of nuts and mushrooms, which are good to eat. Indeed, mountains are, literally, a treasure trove.

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Growth in the demand for wood products leading to the creation of stable jobs

When renovating public facilities, the city rebuilt most of them with wood. As of 2030, many of the local library and school buildings are built with wood. In addition, the number of houses built with locally produced timber is increasing. To meet the growing demand for wood products, an increasing number of timber mills and precut factories are now in operation. ¹¹ Forest thinnings and timber not suitable for building materials are converted into chips/pellets and are used as fuel. Well-managed forests function as absorbers of CO₂ while also generating profits. Against the backdrop of the prosperity of the wood-related business, the number of wood craftsmen has increased in Higashiomi City, making it a production center for woodworking.

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Outline

- The primary industry, namely, the agriculture/forestry/fisheries industry, is attracting greater interest and has become sufficiently profitable.
- An increasing number of retail stores are open locally, contributing to a revitalization of the community.
- Higashiomi City is home to a number of factories engaged in environmental business, and they are prospering.
- The conventional working style was improved so that workers can maintain an optimal work-life balance.

Notes

Legend

Technical terms

Background to the future vision

▼ Concrete examples

1 Biofuel is derived from plant products and replaces gasoline and light oil. In Higashiomi City, the nationally renowned “Nanohana Project” (or, the “Rape Blossoms Project”) is underway, which produces light oil alternative fuel from used cooking oil made from rapeseed.

2 In the 2010s, an extensive survey was conducted on idle land in the city to develop a program to offer land to those who need it. This program, along with the hands-on farming program, contributed to the increasing popularity of farming.

3 Local production for local consumption refers to producing and consuming products in the same prefecture in a strict sense, but the case of Higashiomi City can be deemed to fit into local production for local consumption, considering the close proximity of Higashiomi City to Kyoto and Osaka.

4 In the past, abandoned farmland was mainly transferred to the landowner’s relatives or neighbors. Today, farmland is made more freely available to those who need it, backed by the introduction of the reverse mortgage system mentioned in the “Medical and Welfare Services” section and by the listing of local idle farmland.

5 Large-scale intensive farming allows farmers to reduce production cost and earn profits.

6 Some organic and pesticide-free farmers not only grow commercial crops but also breed livestock to collect manure for use in farming. Agricultural products with high added value are sold as branded products.

7 The concept of senary industry was first advocated by Dr. Naraomi Imamura, professor emeritus at the University of Tokyo, who argues that by integrating the processes of production, processing, distribution, and sales, products can be sold at higher unit prices and greater profits can be garnered, when compared to businesses in the primary industry. Dr. Imamura named this industry the “senary industry” because this new industrial category is the sum of the primary (one), secondary (two), and tertiary (three)

industries (today, the industry is claimed to be a multiplication of these three industries). For example, a company engaged in all the processes involved in growing eggplants, making them into pickles, and selling them via the Internet can be classified into this industrial category. This company can set a higher price per eggplant than when simply distributing eggplants to retailers and thus can gain greater profits. In the future, senary industry can be promoted in combination with tourism.

8 The total farmland area in Higashiomi City as of 2030 has not increased much since 2010 (in 2008, the total rice field area and total crop field area in the city amounted to 8,199 hectares and 516 hectares, respectively). Accordingly, the number of large-scale intensive farmers has not increased much either. Large-scale intensive farming brings higher profitability, as it allows farmers to reduce production cost and increase the unit prices of agricultural products, thanks to the economy of scale. On the other hand, specialized farming does not necessarily require large farmland. It produces agricultural products that have high added value and that can be sold at higher prices, and thus it can generate substantial profits. In any case, we expect that the ratio of part-time farmers will have decreased against the backdrop of the increase of full-time farmers by 2030.

▼9 Already in 2010, hands-on farming program has been implemented by a Kyoto-based company and some other organizations. Hands-on farming program can be carried out under various interesting themes, such as “growing rice for yearly family consumption.”

10 Consequently, the agricultural population has increased, making the difficulty in finding successors to farming a problem of the past.

11 Yet, in 2030, the city’s forestry workers are mainly engaged in the supply of glued-laminated timber, due to the insufficiency of afforestation efforts in around 2010. In 2030, intensive afforestation is underway for the development of next-generation forestry

Case Examples

Progressive case examples now underway

■ Higashiomi Handshake Council

This council consists of five environmental NPOs active in the city, four district councils in the eastern part of the city, a foundation, and the municipal government. Established in July 2008, this council works to discover local resources, both tangible and intangible, and encourages the combined use of such resources to facilitate the autonomy of the community. To be specific, this council develops programs to enjoy eco-friendly activities and rural life, creates venues to offer local dishes, runs farm restaurants, organizes farm-stay tours, and promotes the use of vacant houses.

●●● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.



■ **Fisheries that support the local food culture**

Around 2010, only a handful of people were engaged in fisheries. In 2030, Higashiomi City has a greater number of newcomers, who brought with them different cultures. This situation led to a renewed recognition of the value of the local food culture of Higashiomi City. Today, traditional freshwater dishes such as funazushi and moroko-no-tsukudani are served more frequently at home, and fisheries that support this food culture are flourishing more than they did in 2010.

Commerce

■ **Living and doing business in Higashiomi City**

In the past, citizens of Higashiomi City had to travel long distances to purchase daily commodities, but this is no longer the case. ¹² Today, more groceries and retail stores are in operation in the city than ever before. This situation reflects the growing interest in the practice of producing and consuming products locally to reduce food mileage and wood mileage ¹³ and the increasing awareness among residents of the importance of protecting local stores. Community currency ¹⁴ is used widely, which encourages the circulation of money within the community and produces positive impact on the local economy. To purchase products not available locally, residents generally use mail order services via local stores, while an extensive home delivery service is offered to elderly persons and persons with disabilities, as well as those who are too busy to go shopping and who live in villages where few stores are open. In Higashiomi City, local merchants, who support local lifestyle, do business locally and are in turn supported by local customers. Such a practice of mutual support is firmly in place throughout the city.

■ **Emergence of new community leaders**

Such local business is undertaken by entrepreneurs who started companies in the city in various fields, as well as NPOs and local groups. Attractive job opportunities have been created in a variety of categories, resulting in an increase of people working in the city by nearly 20%. Elderly persons and persons with disabilities, too, play their part in contributing to the community as its members. ¹⁵

Industry

■ **Continued prosperity of the local industry of Higashiomi City**

All of the companies that opened factories in Higashiomi City by 2010 have been promoting sustainability-oriented activities. ¹⁶ Accordingly, the factories located in the city have enjoyed continued prosperity since their opening. For companies, the advantages of doing business in Higashiomi City include the abundant availability of wooden chips and other natural energy sources which can be supplied stably, the well-developed infrastructure, and the safe and congenial work environment.

■ **Resurgence of traditional handicraft work and the growing popularity of being a craftsman as a career option**

In the past, the career options of the youth living in the city were almost limited to working for a company or for local government, or taking over a family business. Today, however, more young people are interested in working as a craftsman. ¹⁷ The city's traditional handicraft work, including Nunobikiyaki pottery, hanging bells, woodwork, woven textiles, and fabrics (*omijofu* fabric), are recovering their momentum, and local craftsmanship, with 700 to 800 years of history behind it, has experienced a resurgence in the 21st century.

12 In 2030, it is no longer possible to drive a multi-passenger car alone as we did in the past, as gasoline and light oil are reserved preferentially for agriculture, forestry, fisheries, industry, and the transportation business, and are hardly available for private use. While small electric cars are prevailing, their limited cargo capacity has made people resistant to driving to a store distant from home. For this reason, people prefer to do their necessary shopping locally, even though large suburban shopping centers still exist in 2030.

13 The concept of food mileage (originally called “food miles”) was conceived by a British consumer activist, Tim Lang, in 1994. Food mileage is calculated by multiplying the total weight of the imported food by the distance the food has traveled. A longer distance from the place of production for the food to the consumer means greater fuel consumption and CO₂ emissions. Therefore, a country with high food mileage is adversely affecting the environment through food consumption. According to the report of Tetsuya Nakata, a policy research coordinator at the Policy Research Institute of the Ministry of Agriculture, Forestry and Fisheries (the title is as of the time of the report), Japan imported about 53 million tons of foods from abroad in 2000, and the food mileage obtained by multiplying this amount by the distance of transportation totals about 500 billion ton-kilometers, which is approximately 3.4 times and 3.7 times higher than Korea and the U.S., respectively. Wood mileage, on the other hand, is an indicator developed by applying the concept of food mileage to wood products and is calculated by multiplying the wood volume by the distance between the place of production for the wood products to the place of their consumption. In Japan, domestic wood products account for only 18.2% of all wood products used, 40% of which are transported over a distance of more than 8,000 kilometers from South America, Africa, Europe, and Oceania. Consequently, Japan’s wood mileage totals 38.4 billion kilometers, which is 4.6 times and 21

times higher than the U.S. and Germany, respectively. Today, research is underway on the measurement of the amount of CO₂ emitted during transportation (wood mileage CO₂), while a certification system is being introduced on a trial basis. (This text is quoted from the Environmental Information & Communication Network’s “Environmental Terminology,” excluding some parts.)

14 Unlike the currency issued by the national government (national currency), community currency is issued by residents of the community and is also called “eco money.” Designed to promote mutual support among community members, community currency can be used only in a specified area. Characteristically, it bears no interest and cannot be saved. It is modeled after a homemade shoulder massage coupon that children give to their grandparents on Respect for the Aged Day and other occasions, and therefore, it is exchangeable for items of similar value as well as for goodwill services. Community currency is tailored for a volunteer economy that is supported by mutual trust and can take various forms, such as eco points, LETS (Local Exchange and Trading System), Time Dollars, and the Fureai Ticket. (This text is quoted from the Environmental Information & Communication Network’s “Environmental Terminology,” excluding some parts.)

▼15 While some elderly persons and persons with disabilities engage in paid work, others offer volunteer services to the community, such as looking after children, in order to contribute to the community itself.

16 As of 2010, Kyocera, Murata Manufacturing, Panasonic, Nippon Electric Glass, Toppan Printing (PCB operation), and PanaHome have factories in Higashiomi City.

▼17 Measures to boost the local traditional handicraft industries include introducing an evaluation system for craftsmanship skills in various genres and enhancing the social status of craftsmen through the “Meister” system.

Progressive case examples now underway

■ Higashiomi Community Business Promotion Council

This council aims to supply energy on a “local production for local consumption” basis using community funds, while working to boost local commerce and industry by use of community-based gift coupons.

■ Stays at fishermen’s homes

A council consisting of fishery/agricultural/forestry groups and local community associations in Notogawa and other parts of Higashiomi City offers opportunities for tourists to experience fishery, agricultural, and forestry work while staying at the private homes.



If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

Social responsibilities of companies

Companies and stores in Higashiomi City fulfill their responsibilities as corporate citizens by offering support to community activities.¹⁸

Work-life balance

The working style is about to change drastically. To be specific, citizens and the municipal government are working together to offer idle facilities and vacant houses to SOHO workers¹⁹ or to remodel them into ateliers for creative activities. With the rise of the female employment rate,²⁰ households where both husband and wife are working are increasing, and the work-sharing system is being more extensively introduced. Working close to home is now taken for granted,²¹ allowing citizens to have more time to spend with their family members and participate in community activities. Daily working hours are about two hours less than in 2010. Households with children, including single-parent households and those where both parents are working, are offered substantial community support and service for child care,²² which makes raising children easier and much more fun, and this rejuvenates the community at the same time. As a result, many people outside of the city take more interest in Higashiomi City and consider moving there, and a variety of information is offered by the community to encourage relocation.²³



▼18 For example, they maintain local forests for carbon offset purposes and work with forest managers to obtain sustainable forest certifications (e.g., Sustainable Green Ecosystem Council certification), thereby ensuring that local forests are used in a sustainable manner.

19 SOHO workers refer to business persons working from a small office or their home using a PC and the Internet. SOHO stands for “Small Office/Home Office.”

20 The expected change of the city’s employment rate is as follows.

	2000	2030
Men aged between 15 and 64	81.4 %	84.7 %
Men aged 65 and older	33.3 %	40.9 %
Women aged between 15 and 64	56.2 %	70.1 %
Women aged 65 and older	12.0 %	21.9 %

21 The rate of Higashiomi citizens working in the city has increased from about 66% to about 83% from 2000 to 2030.

22 The municipal government is not the only provider of such support and service. Elderly persons and persons with disabilities, as well, are expected to play their part in supporting the community by taking care of children and offering service in other ways.

23 To facilitate relocation to Higashiomi City, various information and hands-on programs are offered to persons considering moving to the city—not only by the municipal government but also by NPOs and local groups that work together to create programs to offer information.

Progressive case examples now underway

■ Council on the Recycling System of Locally-produced Wood Products in the Koto Area: Kikito

This council consists of forest owners, lumber producers, timber processing companies, house-building organizations, designers, wood energy companies, civil groups, and the municipal government who have established working groups to take advantage of their respective strengths and promote cross-industry cooperation, with the goal of developing business that promotes locally produced wood products. To be specific, the council engages in the development of paper products and other items made of wood thinned from forests around Lake Biwa, along with the operation of the certification system for CO₂ absorption by forests around this lake.

● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

Food, Consumption, and Waste



“Developing a community based on two key concepts:
‘local production for local consumption’ and ‘recycling’”
Moving toward a recycling-oriented society

Before 2030, we lived in a throwaway society in a literal sense, where oil was used lavishly for the manufacturing of many industrial products. In 2030, however, this is no longer the case. We had to undergo a shift to a self-sufficient society capable of producing not only food crops for local consumption, but also compost to grow crops and other daily commodities locally. Waste is now valued as a resource, and most products are recycled and made available within the community. Today, recycling is part of the life of the citizens of Higashiomi City.

Citizen attitudes toward food

■ Eating locally produced, in-season foodstuffs at their best

By 2030, agriculture has become prosperous in Higashiomi City, and the idea of “local production for local consumption” is widely accepted by citizens. The city’s self-sufficiency rate for food has grown so high ¹ that the city is now called the “kitchen” of the “Keihanshin” (Kyoto-Osaka-Kobe) area. This situation is attributable to the change in the way food is treated and consumed, as well as the efforts of farmers.

Seasonal vegetables are usually brought to the market at one time in bulk. To effectively deal with these vegetables, barter stations are open in villages where the vegetables are exchanged with *miso*, *tofu*, and other surplus vegetables. ² In addition, many citizens enjoy family/allotment gardening and eat vegetables that they grow themselves, without wasting them. Information useful for cooking is exchanged widely among citizens, such as traditional ways to preserve vegetables, tips for freezing ingredients, and easy-to-cook energy-saving recipes using a pressure pan. Rice powder is used for more dishes, creating a larger demand for rice. ³

■ Enjoying interpersonal exchanges via food

Various food-related events are held to deepen neighborhood ties. For example, lunch/dinner parties are organized by local residents for newcomers where participants learn about different food cultures, while women in the neighborhood gather on designated days to prepare dishes using vegetables grown by children. In some workplaces, workers are offered lunch prepared by neighbors. In addition, a meal delivery service is provided by neighbors, which helps to ensure the health and safety of those living alone.

Today, many drinking establishments offer locally produced *sake* and dishes made from local ingredients and in-season foodstuffs. On non-working days, neighbors often gather to enjoy cooking and eating together. In this way, citizens enjoy cooking and eating locally produced vegetables on many occasions. Children are also offered more opportunities to engage in cooking as part of food education.

Higashiomi City is also home to several *sake* breweries. Locally produced *sake* is popular among citizens, helping to foster closer ties among them.

Outline

- Citizens put the idea of local production for local consumption into practice and enjoy locally produced, in-season food at its best.
- Interpersonal and inter-community exchanges are promoted via food.
- Citizens are encouraged not to buy disposable items, while used products are recycled or processed in a manner that minimizes waste.

Notes

Legend

Technical terms

Background to the future vision

▼ Concrete examples

1 This description does not mean that no agricultural products are shipped to Higashiomi City from areas outside the city. The city's high sufficiency rate for food means that the amount of locally produced agricultural products exceeds the amount of incoming shipments.

2 By creating venues for citizens to casually exchange foodstuffs, we can reduce the amount of food waste. In addition, by encouraging citizens to make basic seasonings

such as *miso* and soy sauce at home, we can minimize the use of containers (e.g., PET bottles and plastic containers).

3 As of 2010, flour used to make bread and noodles is mostly imported from abroad. In 2030, however, it may be difficult to maintain the current level of imports due to the limited availability of energy, and more bread and noodles can be made from rice powder.

4 The "3Rs" refer to "reducing waste," "reusing

Case Examples

Progressive case examples now underway

■ Getting rid of animals that do harm to local farmers for local consumption

Projects in which participants hunt animals that cause harm to local agricultural produce and use the meat for local consumption are currently being promoted. For example, some local restaurants and hotels have begun to offer venison dishes.



If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.



Zero waste and zero disposal

■ Choosing high-quality products usable for a long period of time and recycling used products instead of disposing of them

5 The idea of the “3Rs”⁴ is now firmly in place in society, and greater emphasis is placed on “no waste” rather than recycling.⁵ Consumers choose products with longer service lives, and if the products are broken, they repair and continue to use them. Producers and retailers do not offer and consumers do not purchase non-recyclable products as much as possible.

10 Customers opt to shop at local groceries where vegetables and fruits are sold without wrapping, and they usually bring along their own containers when buying meat, *tofu*, and other fresh produce.⁶ Spices and drinks are offered in returnable containers⁷ and recently, traditional barrels are used more and more. By avoiding wrappers and disposable containers, the city has succeeded in considerably reducing waste.

■ Reusing kitchen waste as a valuable resource

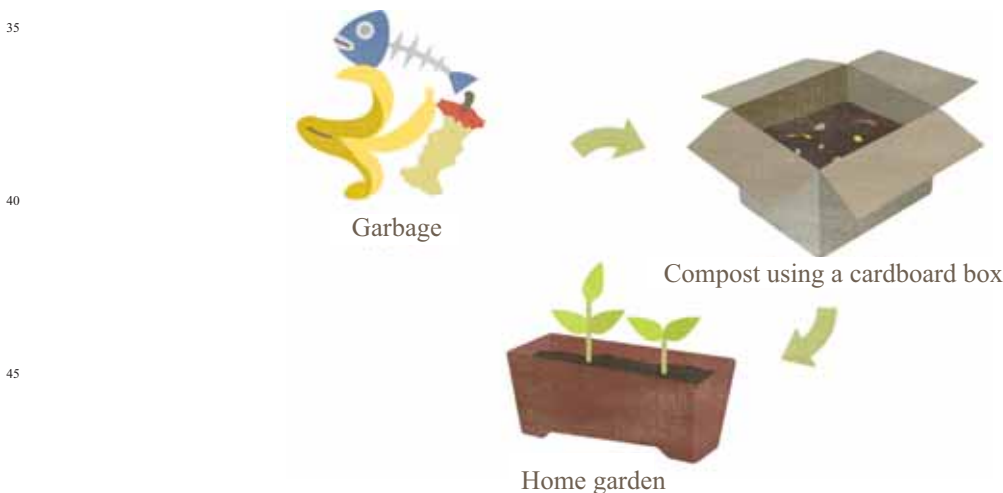
15 Kitchen waste is treated in a manner that suits individual lifestyles, and little is destined for final disposal.⁸ For example, urban residents pre-compost kitchen waste at home and take it to local composting centers, sort out the waste for separate collection, or turn it into compost using cardboard boxes at home. Rural residents and citizens engaged in family gardening make compost from kitchen waste at home to use in their crop-growing activities.

20 Today, we can no longer use chemical fertilizer in large quantities as we did in the past, and waste-turned-compost is valued as an alternative to chemical fertilizer.

■ Maximizing recycling, and reducing waste to the absolute minimum

25 While not all kitchen waste is composted, a system is in place to recycle a substantial amount of the remaining waste. Non-recyclable waste is eventually incinerated, but heat is recovered during the incineration process to generate electricity.⁹

30 Industrial waste is sorted completely by industrial category, and food waste from food factories is 100% reused either as compost or animal feed.





Notes

Legend Technical terms Background to the future vision ▼ Concrete examples

products,” and “recycling used products.” As of 2010, recycling has already been practiced to some extent, but reducing and reusing efforts are not sufficiently made, and need to be reinforced if we are to achieve a sustainable society where little waste is generated.

5 General waste treated by Higashiomi City in fiscal year 2009 is as shown in the following table.

Category	Weight
Combustible waste	26,400 t
Non-combustible waste	1,579 t
Bulk waste	291 t
Recyclable waste (bottle)	2,353 t
Earth, sand, and rubble	121 t
PET bottle	225 t
Used paper	2,126 t
Total	33,095 t

6 It is unlikely that foam trays will completely go out of use by 2030.

7 Returnable containers include beer and *sake* bottles, which consumers return to retailers after use. Then, manufacturers collect bottles and reuse them repeatedly after washing them. As of 2010, most of the returnable containers consist of glass bottles.

▼8 Already by 2010, the composting of kitchen waste had started in Higashiomi City. As well, several other local governments implement the separate collection and composting of kitchen waste in urban areas. For example, Koka City in Shiga Prefecture collects domestic kitchen waste in a style known as the “Minakuchi Method,” while Nagai City in Yamagata Prefecture is carrying out a waste recycling project named “Rainbow Plan.” In Higashiomi City, about 800 households are engaged in the composting of kitchen waste using cardboard boxes, led mainly by the district councils in the southern parts of the city.

9 The process of recovering heat from the incineration of waste to generate electricity is called “thermal recycling.”

Case Examples

Progressive case examples now underway

■ Aito Recycle System

Inspired by the Lake Biwa Soap Movement, volunteers in the former Aito-cho Township embarked on efforts to reduce and recycle domestic waste, which has led to the establishment of the Aito Recycle System in which resident associations, civil groups, and the municipal government work in unison. The Aito Recycle System has since been promoting recycling efforts through cooperation among residents, increasing the categories of waste to be recycled. Recently, they began collecting foam trays, recycling a total of 11 kinds of waste in seven categories.

■ Development of a “zero kitchen waste community”

In Gamo-okamoto-cho Township, efforts are underway to separate and collect domestic kitchen waste for composting.

■ Composting of waste using cardboard boxes

Currently, about 800 households are engaged in the composting of waste using cardboard boxes in various parts of Higashiomi City, especially in the southern district of Yokaichi.

■ Using heat from waste incineration (thermal recycling)

Hino Cleaning Center, one of combustible waste treatment facilities in Higashiomi City, generates electricity using heat recovered during the waste incineration process, while at the Re-Birth Center (Hirayanagi-cho, Higashiomi City), refuse-derived fuel (RDF) is produced.

●●● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

Relationships with Nature

“Support and utilization of fields, rivers, and forests”

Sustainable use of rivers and forests as part of a rich ecosystem

In our past oil-dependent society, people used to be detached from nature. Most people did not care about mountains or rivers unless, for example, a river causes flooding. By 2030, however, people have become more conscious of nature, more than ever before, because they have to live more according to the blessings of nature itself. It actually is the beginning of an age of symbiosis with nature. For example, in the spring, some expect to eat mountain vegetables. In the summer, some brim with excitement hoping to eat Biwa trout. In the fall, some say, “I wonder if it will be time for chestnuts soon... I will go check the forest.” When the winter is approaching, some go into the mountains to gather firewood. This may remind you that, since the old days, local people living in the Eigenji area, for instance, have been traditionally using the nearby mountains as a place for making charcoal and for *kijishi*, or traditional woodcrafters; thus they have been effectively living “with” these mountains. Thus, Higashiomi City has always been surrounded by nature, which is closely related to its people. In 2030, despite the city having no more original wilderness, nature in Higashiomi City is richer and related more closely with local people than it was in 2010.

Fields

Fields ¹ offer us opportunities to connect with nature. Many people have adopted a lifestyle based on agriculture, and the value of a fielded landscape has been reconsidered. Now, people can feel nature in fields and think of the rivers and mountains that lie ahead. The water-holding capability of rice paddies has been also reconsidered. Abandoned fields have also become available for rent to those who wish to do farm work, and there are an increasing number of people who are involved in agriculture.

Rivers and lakes

A total of 44 rivers of various sizes meander through the city, including Echi River, which runs through almost the center of the city, and Hino River in the Gamo Plains—thus, the city is indeed blessed with abundant water resources. In the Gamo district, the value of the irrigation ponds, ² which had been out of use, was reconsidered, and now they are used as valuable water resources. Furthermore, since conventional large-scale dam development often uses a great deal of resources and energy, the city made deliberations regarding whether to continue an existing large-scale dam construction project or dismantle it after a thorough discussion of necessity. Currently, there are only small-scale weirs and mudslide control dams to the extent essential to secure safety. ³ These mudslide control dams continue to remain functional. In addition, the waterfront of Lake Biwa has recovered its original landscape, as part of a rich ecosystem. This native ecosystem is vulnerable to non-native animals and plants, but there are fewer of them than before due to substantial efforts to eradicate them.

Forests

Forests cover about 60% of the city’s area. ⁴ The hilly areas are utilized in a sustainable way and in a well-planned manner, balancing the area used as forest resources and the remaining untouched nature. The forests are being improved not only as a source of lumber but also as a source of energy. ⁵ The forests are now more accessible to people than ever before and help ensure that nuts, mushrooms, and other various ingredients grace our tables. With the progress of the improvement and utilization of forests and the control of the border between these forests and the fields, ⁶ fewer boars and deer come near human dwellings—they used to cause damage to the facilities of local people. The utilization of the forest is bringing back nature’s blessings. In addition, there are more golden eagles, Hodgson’s hawk-eagles, and other wild animals than ever before, and they can often be seen in the more wild areas of the city.

Higashiomi City is not just blessed with nature, but it also gets along with nature and utilizes it in a sustainable way. Therefore, many people visit from all over the country to inspect the city as a successful example. In the city, the tourist business, such as hands-on agriculture and trekking, is also active. ⁷

These are the outcomes of a stance that attaches importance to biodiversity preservation.

Outline

- The city limits development to only that which is necessary and sufficient, while taking the measures necessary to prevent a great deal of harm if a disaster occurs. It maintains a harmonious balance with nature.
- The city encourages people to become more involved with nature and to respect it naturally.

Notes

Legend

Technical terms

Background to the future vision

▼ Concrete examples

- 1 Higashiomi City has about 7,800 hectares of fields.
- 2 In the Gamo district, almost 100 irrigation ponds still remain, and it is pointed out that endemic species may exist there.
- 3 The older dams were renovated or demolished, and the city is taking adaptation measures, such as the utilization of flood control basins.
- 4 The forests in the city are very large in area. Moreover, the riverside forest along Echi River has been selected as one of the “100 Hometown Forests with Creatures” by the Ministry of the Environment.
- 5 Lumber is processed into firewood, chips, and pellets, to be used as fuel.
- ▼6 The land left abandoned at the boundary between mountain forests and fields is considered responsible for the

increase in bird and animal damage. It is known that invasion by destructive animals can be prevented by eliminating weeds from such abandoned land, but this requires a great deal of effort. One feasible countermeasure is “Yamaguchi-style grazing”—a method prevalent in Yamaguchi Prefecture. In this method, which is also known as “small-scale mobile pasturing,” “delivery pasturing,” or “terraced rice field grazing,” they leave beef cattle to eat weeds on abandoned land. It is an effective way to eliminate weeds and prevent invasion by destructive animals.

7 As an excellent example of a harmonious relationship between nature and human life, the tourist business in the city will become more active and will lead to a senary sector of the agricultural industry with the tourism industry involved. (See the “Employment, Work, and Industry” section.)

Case Examples

Progressive case examples now underway

■ *Iba-no-satoumi* (hometown lake in Iba) Development Project

To recover wilderness in the aquatic areas of Iba around Lake Biwa, various efforts are being taken, such as a reed-cutting activity and a nature observation tour, in collaboration with the community.

■ “Riverside Forest with Creatures”

The riverside forest along Echi River is a peculiar area, where *Tilia japonica*, *Anemone pseudo-altaica*, and other plants grow, even though they do not usually grow and root at this elevation. The area is preserved with the help of volunteers and is utilized as a place for environmental education.

●●● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.



Traffic

“When people’s way of living changes, the traffic will change too.”

Mutually-supportive living within a community activates the movement of people and the physical distribution within the community.

Movement of people and physical distribution always take place somewhere, ¹ as long as people continue to live. The methods of transportation greatly vary depending on their way of living. Here, let’s take a look at images of Higashiomi City in 2030 from the viewpoint of traffic.

5 **Movement of people: More active movement within the neighborhood**

■ **Working for someone in the community will allow everyone to stay nearby.**

10 In 2030, our life depends on our efforts to get whatever is necessary for ourselves or those close to us, without outside assistance, to the furthest extent possible. About two decades ago, it was quite common to drive your elder family members to and from a hospital in a neighboring town, to take about a 10-minute ride to a large supermarket to get food for supper, and so on.

15 Nowadays, there are doctors’ offices in each neighborhood, and sometimes the doctors make house calls. Nearby stores sell various local products and other items. Some people have their own fields and try to grow vegetables with their family members. People continue to live like that, and some of them will eventually realize that their grandparents do not go to the hospital so often. People work for their own or someone else more actively than before, and as a result, people do not have to go a long way so often ² or not at all.

20 People still enjoy going away for shopping or travel on occasional days off, but the need to drive a long way to do anything became a thing in the past.

25 As for ways of working, more people work at local workplaces not far from their houses, which is different than before. Nowadays, an increasing number of people are able to conduct business meetings and exchange documents over the Internet. ³ Many of them work at home or at nearby offices. In addition, some people live in Higashiomi City and commute to work in Kyoto or Osaka, and many of them make it a rule to work on fields or in a nearby forest several days a week.

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Outline

- A mutually-supportive community activates the movement of people within the neighborhood.
- The means of transportation around local areas mainly includes bicycles, buses, and electric cars.
- Collaboration by the people who work in a community builds an effective system of physical distribution.

Notes

Legend

Technical terms

Background to the future vision

▼ Concrete examples

1 If we just stay at home, we cannot do everything we need for work or leisure. If you want something, you have to go shopping. Products on the store shelves are transported from somewhere else.

2 Based on this assumption, we estimate that people's movement distance within the city will decrease by 25% on average.

3 Of course, this does not necessarily mean that people will no longer meet anyone in person. However, the use of video phones on the Internet (which is already in practical use and used by many people as of 2010) and other devices will reduce the frequency of going out and talking in person.

Case Examples

Progressive case examples now underway

■ Chokotto Bus

This is a community bus system commissioned by Higashiomi City. Closely connected with daily life, such as shopping, hospital visits, and commuting to school, it runs on seven routes within the city.

■ Chokotto Taxi


This is a share-ride taxi system (reservation required) commissioned by Higashiomi City. Like the Chokotto Bus, which run within the city, these taxis run on fixed routes according to a timetable.

■ Ohmi Railway's "bicycle train"

The Ohmi Railway runs a "bicycle train" as a new means of transportation, which uses a combination of rail and bicycles. You can take your bicycle aboard the train without paying an extra fare, and the train runs on a fixed section within fixed hours.

■ Fare-paying passenger transport by privately-owned cars

This system allows non-profit organizations and other organizations to use their privately-owned vehicles (with white license plates) for paid bus or taxi services, such as for paid transportation in underpopulated areas and paid welfare transportation. The system is being introduced in an increasing number of areas without public transportation services, all over the country.

 If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.

■ Means of transportation within communities

Meanwhile, the movement of people within a local area or the city is very active.

In the past two decades, more and more people began to feel it troublesome to use their cars, for they can do almost everything without them—including shopping and working in their neighborhood. In addition, although many elderly people are healthy and vigorous, an increasing number of them somehow hesitate to drive by themselves. Therefore, the city has been taking a gradual approach to the development of a transportation system focusing on bicycles and public means of transportation, namely, buses and rail. Specifically, efforts have been made to operate a public bus system through the cooperation of the community ⁴ and to improve bicycle-friendly roads to and from local shopping areas. ⁵

As a result, an increasing number of people began to feel that it is a waste of money for a family to own several cars. Still, there is some resistance to give all of them up. If you think about it, most people usually drive their car alone, excluding the occasional family outing. Nowadays, with the rise in gasoline prices, a number of compact single-seat or two-seat electric cars are seen, and car-sharing and other efforts are undertaken in urban areas. People use electric cars when they need to go a long distance or if there is no public bus available. Where there were gas stations, there are now battery replacement stations for electric cars.

For shorter-distance movement, electric power-assisted bicycles are also very useful. You often see a number of bicycles on roads that used to be occupied by automobiles. In addition, pedestrian- and bicycle-friendly measures and systems have drastically reduced the number of traffic accidents.

Movement of things: Make it more efficient through mutual cooperation.

The more actively the citizens of Higashiomi City communicate with one another, the more briskly goods are exchanged within the city. Therefore, the citizens decided to establish their own system for the efficient transportation of goods.

For instance, to deliver rice and vegetables from farmers to shops in the city, trucks are used. The farmers or shops run an advertisement on the network bulletin board, which is available for people working in the city, in order to inform them when, where, and what goods they are going to carry. Some may ask the advertiser to drop by and carry something if there is room for it, while some may ask to carry something in an empty space in one's truck on the way back. Mutual cooperation and information exchange among people make physical distribution more efficient and economical.

Moreover, conventional freight trucks have been replaced by trucks with higher energy-saving efficiency, ⁶ and there has been an increase in freight transport by rail. ⁷

4 It is anticipated that the city might experience financial difficulty when providing bus services independently. It may be possible for each community to provide bus services independently or in collaboration with the city.

5 Most existing roads are structured with higher priority given to automobiles. It will be possible to improve that structure by providing separate lanes for pedestrians, bicycles, and automobiles.

6 Assuming that half of all trucks will be hybrids with higher energy efficiency, the energy consumption for transportation by truck is expected to drop by 10% in total.

7 It is anticipated that 25% of the deliveries to nearby areas mainly within the prefecture will depend on rail.

Progressive case examples now underway

Electric power-assisted bicycles

In Higashiomi City, a project called “Ginrin Biz” is underway. Ginrin means “bicycle” in Japanese, and “Biz” stands for business. The project combines the merits of electric power-assisted bicycles, solar power generation, and battery charging systems.

Bicycle lanes


Bicycles should run on roads in principle, but actually many bicycle riders may feel it dangerous and difficult owing to parallel-parked cars and other reasons. Bicycle lanes make bicycle rides more comfortable. Since existing roads need to be improved to add bicycle lanes, there seem to be many hurdles to overcome before realization. However, an experimental approach without extensive road construction is underway on a national route that extends through the urban area of Yamagata City, Yamagata Prefecture. More specifically, to prevent parallel parked trucks and other automobiles from obstructing bicycles, the space for parallel parking is created by narrowing the sidewalk.

Compact electric cars

It may not be very popular, yet. However, compact single-seat or two-seat electric cars for short-distance rides are already in practical use and most of them are available at prices up to ¥1,000,000. In addition, electric motorbikes are becoming popular.

Retail shop joint delivery services

This service enables a shopper to ask a butcher shop, for instance, to deliver meat and drop by at a fruit and vegetable shop next door, and a liquor shop on the way, during the delivery, to buy other goods for delivery—all at one time. Even though a service charge may be required in some cases, there is growing demand from elderly people who have difficulty going out shopping. Many shopping areas around the country are attempting this service.

 If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.



Energy

“When our way of living changes, energy will also change.”

Renewable energy leads to business, and energy conservation is achieved through mutual support within a community.

This section is based on assumptions that the energy consumed in Higashiomi City will be reduced by 45.6%, compared to around 2010, and that Higashiomi City will supply 10% of the energy from renewable energy generated within the city while purchasing the rest from an electric power company and oil and gas companies. In addition, it is estimated that the basic unit of electric power (CO₂ emissions per kWh) will be improved by 21% compared to around 2010.

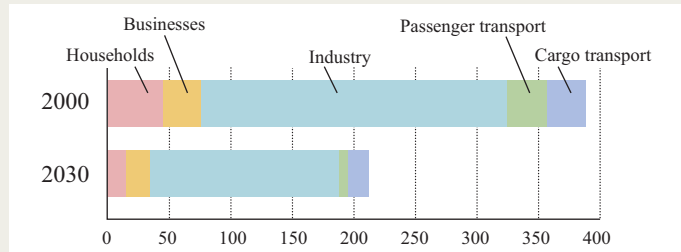
The table shown on the right lists the configuration of energy sources for grid power (electricity generation ratios of various types of energy).

Configuration of energy sources for grid power (second conversion)

	Coal	Oil	Natural gas	Hydraulic power	Nuclear power	New energy
2000	18 %	11 %	26 %	10 %	34 %	1 %
2030	16 %	5 %	25 %	10 %	40 %	4 %

The chart displayed on the right shows changes in energy use by household, business (e.g., offices), industry (e.g., factories), passenger transport (movement of people), and cargo transport (movement of goods).

Comparison of the energy (second conversion) consumed in Higashiomi City (converted to crude oil, by the kiloton)



Use of energy has drastically changed. Let’s look at the future of Higashiomi City from the viewpoint of energy.

Renewable energy

Making energy from a rich natural environment

Higashiomi City is blessed with nature. To maintain our peaceful landscape, we need to become more in tune with nature in terms of our daily activities. From this viewpoint, Higashiomi City decided to actively use the energy produced in the natural environment, that is to say, renewable energy.

Forest improvement yields thinnings, and the thinnings that cannot be used as lumber are processed into firewood, chips, and pellets to be used as fuel. ¹ The “Nanohana Project” (or, the “Rape Blossoms Project”), aimed at making BDF ² from rape blossoms, originated in Higashiomi City, and now the activity circle is growing more widely than ever. ³

One of the typical sources of renewable energy available at home is solar power. With the backing of the government, it is not uncommon to find a solar power generation panel on a roof. In Higashiomi City, as well, half of all single-family houses are equipped with a solar power generation panel. Electricity generated from solar power is used for schools, municipal offices, and street lamps. In addition, solar water heaters are too good not to use.

In the Suzuka Mountains, where strong winds blow, it would be possible to set up approx. 1,400 units of 750 kW-class windmills. ⁴ In fact, however, the number of windmills used was limited to one tenth, considering the impact on wild creatures. Still, wind power is a valuable energy source that supports people’s lives in Higashiomi City. Huts perched on mountain areas or beside fields are supplied with electricity from a small electricity generator set in a nearby ditch or stream. ⁵

Outline

- The city utilizes the rich natural environment as a source of renewable energy.
- Renewable energy is used in daily life; for example: firewood for fueling stoves and BDF for agricultural machinery.
- Various efforts to reduce energy consumption are becoming prevalent, and mutually supportive living within a community contributes to energy conservation.

Notes

Legend Technical terms Background to the future vision ▼ Concrete examples

1 There are other uses for waste wood, such as for the generation of electricity and the production of alcohol fuel. However, the production of firewood and pellets is technically easier, and chip-making machines, stoves, and boilers can be repaired locally.

2 BDF stands for “biodiesel fuel,” which is a liquid fuel made mainly from vegetable oil, and it can be used in place of light oil.

3 Some people have begun a new agriculture-based business by utilizing fallow rice fields in the city. Some people were attracted by nature and moved into the city from a bigger city. The increase in the number of such people has revitalized the agricultural landscape. Under these circumstances, more and more people are growing rape blossoms.

4 A 750 kW-class windmill consists of blades about 40 meters in diameter. The possible number of windmills

to be installed was estimated based on a wind resource map prepared by NEDO (New Energy and Industrial Technology Development Organization).

5 With the increase in the number of people who work in mountains or fields, there will be more demand for places for storing tools or for short breaks. Thus, people will eventually want to use electricity at these locations. A small water-powered electricity generator will work for this purpose. It can generate only a small amount of electricity, but this will be sufficient enough for a single hut. In addition, since existing water source flow is relatively stable in these areas, there will be no need to worry about power shortages when electricity is needed. Such an electricity generator is structured so simply that it can be easily repaired even if it becomes worn out.

Case Examples

Progressive case examples now underway

■ Nanohana Project (“Rape Blossoms Project”)

This project aims to make rapeseed oil and then produce BDF (biodiesel fuel) from waste rapeseed oil. The project, which originated in the Aito district based on a proposal by citizens, is aimed at creating a local cycle of energy and food. This leading program is spreading throughout the country.

■ Higashiomi Next-generation Energy Park Program

This is aimed at creating new industry and activating tourism by using new energy. Based at Nunobiki Sports Park, Nanohana-Kan, the citizens’ cooperative power-generating stations, and the Chamber of Commerce (SUN San Project), etc., development is now underway to plan an eco-tour and a learning program.

■ Higashiomi City SUN San Project

In order to increase the energy self-sufficiency ratio and realize a low-carbon society, the city is promoting the “Aito Nanohana Project” and the “Higashiomi City SUN San Project.” The former, which originated in the city, is conducted in cooperation with citizens, and the latter, which was initiated by commercial and industrial organizations, is aimed at revitalizing the local economy by installing a citizens’ cooperative power-generating station and by returning the profits from the sales of electricity to citizens in the form of community-based gift coupons.

● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.





Pellet

■ Using renewable energy in daily living

The energy generated by ourselves is limited in quantity. We need to think about how we actually use it and minimize its use.

5 Wood has been indispensable as fuel for human beings since the distant past. Wood chips, firewood, and pellets from the local forests are used as daily-use energy for heating rooms and water at homes, offices, and factories. Nowadays, 20% of all households and 10% of all offices use stoves and boilers that burn this type of fuel. ⁶

10 BDF made from rape blossoms came to be used for powering agricultural machinery, such as tractors and combine harvesters. This approach is based on the idea that agriculture supports our daily diet and that it could also produce energy for itself. A large amount of straw and grass clippings is used as fuel for heating plastic greenhouses and processing crops. Today, 15% of the energy necessary for agricultural work and crop processing is supplied by renewable energy.

15 **Reduction in energy consumption**

As described above, it is very important to utilize the local renewable energy resources that have been ignored. Still, it does not seem so easy to say that Higashiomi City has no need to worry about energy any longer. If people continue to use energy in the same way as before, renewable energy would be like a drop in the bucket ⁷—even for
20 Higashiomi City, surrounded by rich nature. We need to reduce energy consumption in daily living.

■ Energy conservation has become part of life at home, at the workplace, and in the town in general.

Nowadays, commercially available home electric appliances and gas equipment have been significantly improved regarding energy conservation. Home builders construct extremely insulated houses, in which air conditioners
25 work better than before. Without special attention, one can save energy to some extent. Over the past two decades, offices and factories within the city have become able to save a great deal of energy by replacing devices with higher-performance models. Moreover, the initiative by schools and municipal offices within the city succeeded in disseminating the energy conservation approach among average families and companies.

30 There are many hot days in summer, partly owing to global warming. Thus, the city decided to increase its green areas in order to minimize the use of air conditioners during summer. You can see “green curtains” or shade-producing plants, rooftop gardens, and planting zones beside houses and buildings. The city is promoting these efforts to increase shaded areas so that people can feel cooler.

35 **■ The ways of living in 2030 will eventually reduce energy consumption.**

When talking about energy in Higashiomi City, it is impossible to disregard how people’s ways of living have changed.

40 In Higashiomi City in 2030, it is not uncommon that family members, relatives, and unrelated close friends live together. ⁸ Getting together and sharing time leads to energy conservation. ⁹

A drastic change in people’s ways of working is another key point. There are much fewer people than before who work very hard for a company from morning to night. Instead, an increasing number of people work in their own vegetable gardens in the morning. Some of them usually work at an office or a factory and do volunteer work once a
45 week. As a result, energy consumption has been decreased. ¹⁰ The question was: “How can we get what we need for daily life for ourselves?” In these ways, people have reconsidered their way of working and succeeded in reducing energy consumption.

What supports energy used in Higashiomi City may be the energy of these citizens themselves.

6 One could say that these stoves and boilers require troublesome tasks, like putting more firewood in or getting rid of ashes. Still, they are popular because many people have more free time at home than before. In addition, because someone from each family usually stays at home, it is not as dangerous as anticipated.

7 Reviewing the progress over the past 100 years, with the rise of “exhaustible energy” (an antonym to “renewable energy”), such as oil, coal, and natural gas, our way of life became more convenient than ever before. As a result, our lives demanded more energy than ever before. Energy used per capita is about 20 times more than 100 years ago. (Source: EDMC *Handbook of Energy & Economics Statistics in Japan*)

▼8 Interpersonal communication is active in the city. You can often see people inviting their neighbors to their houses for a cup of tea and enjoyable conversation after performing field work.

9 People have different reasons: “It is more fun”; “It is more economical”; or they can help each other when someone is in trouble. When people spend time together in one room, they will need much less energy than when they stay in their own rooms separately.

10 As a result of this way of working, people do not have to bring in many agricultural crops from distant locations or ask a company located far away to come for maintenance.

Progressive case examples now underway

■ Energy conservation at home

As a means of energy conservation at home, there are various options, including a review of the use of home electric appliances and other energy-consuming appliances, the replacement of products with those that are superior in energy conservation, and housing improvements (heat insulation, etc.).

■ Green curtains

It is an effort to provide more light and heat shielding by planting goya (or, bitter melon), Japanese morning glory, and other climbing plants near windows. Nowadays, many people grow “green curtains,” and Higashiomi City Hall also grows them every summer.

● If you happen to know any projects or undertakings that can contribute to achieving the abovementioned future vision, please send the information to the secretariat of the Higashiomi Environmental Roundtable.



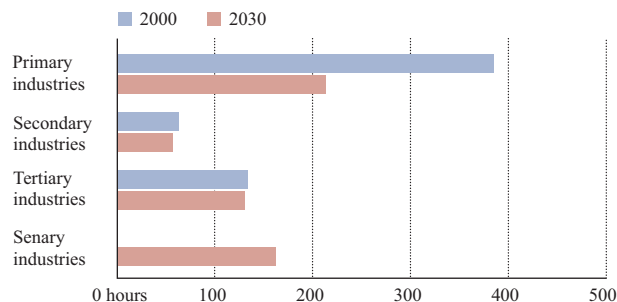
Appendix: Assumed Future Society of Higashiomi City in 2030

Improvement in working hours per million yen (labor productivity)

Improvement in working hours per million yen (labor productivity)

	2000	2030	Improvement rate
Primary industries	386 hours	213 hours	Improved by 45%
Secondary industries	63 hours	57 hours	Improved by 10%
Tertiary industries	133 hours	131 hours	Improved by 2%
Senary industries	-	162 hours	-

The hours in the table refer to the working hours required to produce goods or services worth one million yen. It is assumed that this would be significantly improved in primary industries.



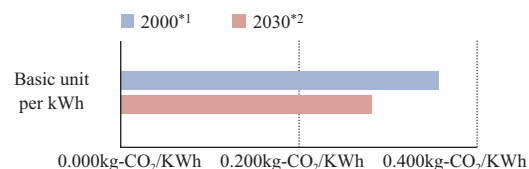
Basic unit per kWh

Basic unit per kWh (kg CO₂/kWh)

	2000*1	2030*2	Improvement rate
Basic unit per kWh	0.358	0.282	Improved by 21%

*1 Actual figure in 2005

*2 Applied from Kansai Electric Power Company's 2012 mid-term target

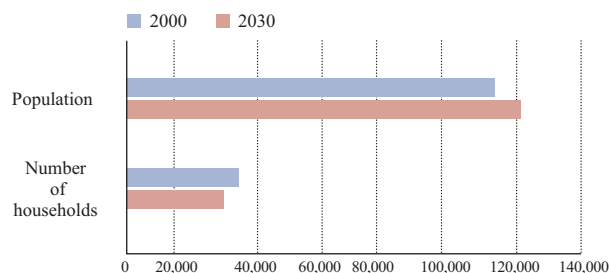


Population and number of households

Population and number of households

	2000	2030	Increase-decrease rate
Population	114,000	122,000	7 %
Number of households	35,000	30,400	-13 %
Average number of persons in a household	3.3	4.0	23 %

It is assumed that more people will live in a large family or live in a shared house in 2030 compared to the age of nuclear families, and there will be an increase in the average number of persons in each household. The idea of living together within a community will prevail.

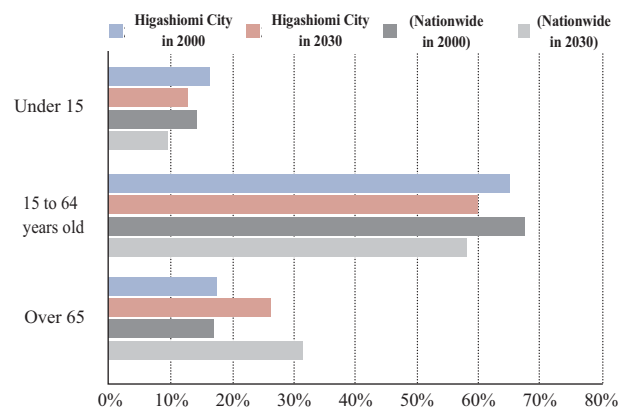


Age composition

Age composition

	Higashiomi City in 2000	Higashiomi City in 2030	(Nationwide in 2000)	(Nationwide in 2030)	Increase-decrease rate
Under 15	16.8 %	13.0 %	14.6 %	9.7 %	-23 %
15 to 64 years old	65.4 %	60.3 %	67.9 %	58.5 %	-8 %
Over 65	17.8 %	26.7 %	17.3 %	31.8 %	50 %

In 2030, there will be enhanced support and an improvement in environment surrounding child-rearing families, single-parent families, and two-income families, and accordingly, people will feel more secure raising children, contributing to vibrant communities. An increasing number of people will move into the city because they consider it a place where they can realize a way of living connected with agriculture. As a result, the city will have a lower percentage of elderly citizens than the national average.

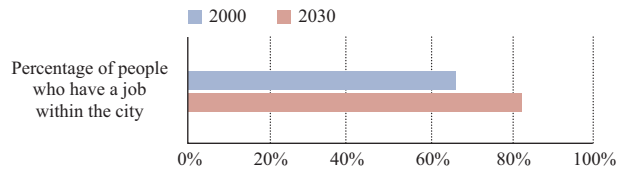


Percentage of people who have a job within the city

Percentage of people who have a job within the city

	2000	2030
Percentage of people who have a job within the city	About 66%	About 83%

The percentage of people who work locally will increase by nearly 20%.

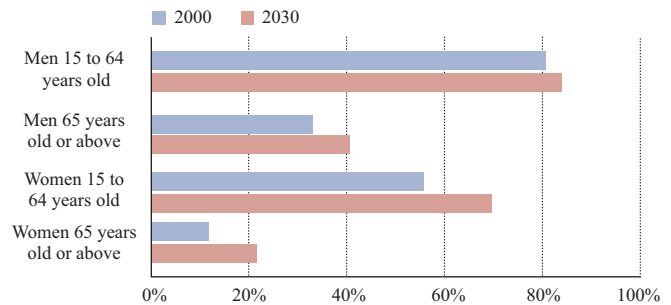


Employment rate by age and gender

Employment rate by age and gender

	2000	2030	Increase-decrease rate
Men 15 to 64 years old	81.4 %	84.7 %	4 %
Men 65 years old or above	33.3 %	40.9 %	23 %
Women 15 to 64 years old	56.2 %	70.1 %	25 %
Women 65 years old or above	12.0 %	21.9 %	83 %

There will be enhanced support and an improvement in environment surrounding child-rearing families and two-income families, and accordingly, people will feel more secure raising children, contributing to vibrant communities. An increasing number of people will move into the city because they consider it a place where they can realize a way of living connected with agriculture.

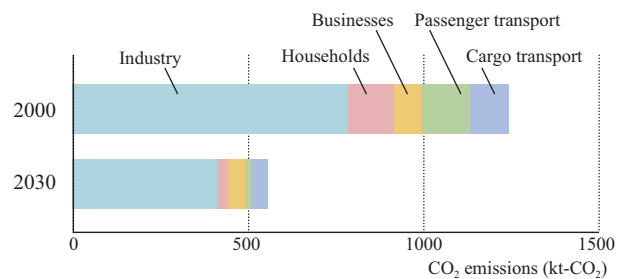


Amount of greenhouse gas emissions

Changes in CO₂ emissions (Kt-CO₂)

	2000	2030	Increase-decrease rate
Households	129	29	-77.9 %
Businesses	78	49	-36.8 %
Industry	794	418	-47.3 %
Passenger transport	143	15	-89.5 %
Cargo transport	111	48	-56.8 %
Total	1,255	559	-55.4 %

Based on future expectations, it is estimated that CO₂ emissions will be reduced by about 55% in 2030 compared with that in 2000. There will be a significant decline especially in households and passenger transport.



Others

【Ways in which work is conducted at workplaces】

- About 10% of all air conditioning and 10% of all hot water supply will depend on biomass.
- Sunlight will be used to generate electricity for public purposes (equivalent to about 10% of the amount of electricity generated in households)
- About 10% of all hot water supply will depend on solar power, and another 10% will depend on biomass.
- About 10% of all offices will incorporate “passive” design.
- BEMS (Building and Energy Management Systems) will be used in about 20% of all workplaces.
- Highly efficient equipment, including home electric appliances, water heaters, and air conditioners, will become widely used in all offices, and a next-generation level of heat insulation will be achieved.

【Movement of people】

- The average distance of people’s movement within the city will decrease by 25%.
- As a means of transportation within the city, regular automobiles will be replaced with rail by 10%, bus by 20%,

walking and bicycles by 30%, and electric cars by 30%.

- As a means of going to areas outside the city, either in or outside the prefecture, automobiles will be replaced with rail by 50%.

- The idea of eco-driving will prevail—it is assumed that half of the drivers will put this into practice—and almost all the gasoline-powered cars will be replaced with hybrid models.

【Physical distribution】

- The percentage of the transportation of products from the agricultural/forestry/fisheries sector to far-away prefectures will be reduced by half.

- Energy consumed for truck transportation will be reduced by 10%.

- Regarding transportation within the prefecture and to nearby areas, 25% will depend on rail and 15% on lake-based vessels. Sailboats will be used for about 10% of transportation by ship, and marine transportation will handle 5% of distant transportation.

- About half of the trucks will be replaced with hybrid models.

Appendix: Proceedings of the Higashiomi Environmental Roundtable Meetings

Higashiomi Environmental Roundtable members met for discussion as shown below.

■ Higashiomi Environmental Roundtable Meetings

No.	Date, venue, and agenda	Goal and outcome
1	<p>February 8, 2010, 7:00 p.m.–9:00 p.m. Meeting room 3A on the third floor of the Higashiomi Municipal Government main building Brainstorming to develop visions for Higashiomi City in 2030 Specifying issues to be addressed:</p> <ul style="list-style-type: none"> ●Lecture by Dr. Masaaki Naito ●Determining the schedule and agenda of roundtable meetings (workshops) and sharing goals among the members ●Brainstorming to develop visions for Higashiomi City in 2030 	<p>Agreeing on the schedule and agenda of roundtable meetings (workshops) Sharing goals Identifying categories for which future visions are to be developed</p>
2	<p>February 20, 2010, 10:00 a.m.–5:00 p.m. Hall on the fifth floor of Koto Shinkin Bank Developing visions for a 2030 society with 50% less CO₂ emissions and discussing measures to make the visions a reality (1) Having in-depth discussion on the specified issues:</p> <ul style="list-style-type: none"> ●Agreeing on categorization ●Discussing future visions in each of the three roughly grouped categories 	<p>Envisioning a society with 50% less CO₂ emissions and presenting future visions by category Agreeing on the conclusions achieved at the working groups</p>
3	<p>March 8, 2010, 10:00 a.m.–5:00 p.m. Former site of “Mori no restaurant” at “Aikyo no mori” Developing visions for a 2030 society with 50% less CO₂ emissions and discussing measures to make the visions a reality (2) Reconsidering the specified issues:</p> <ul style="list-style-type: none"> ●Discussing the future visions in each of the nine categories, taking into account the results of calculations (adding/adjusting measures) 	<p>Adjusting the visions of a society with 50% less CO₂ emissions and adding future visions by category in accordance with the results of calculations (1) Agreeing on the conclusions achieved at the working groups</p>
4	<p>March 19, 2010, 7: 30 p.m.–9:30 p.m. Meeting room 3A on the third floor of the Higashiomi Municipal Government main building Visions of Higashiomi City in 2030</p> <ul style="list-style-type: none"> ●Developing visions of a sustainable future for Higashiomi City to share with citizens 	<p>Developing future visions by category (drawing up a report as an interim version)</p>
5	<p>October 17, 2010, 10:00 a.m.–4:00 p.m. Large hall on the fourth floor of the Yokaichi Chamber of Commerce and Industry Summing up the points to be considered to adjust the visions for Higashiomi City in 2030</p> <ul style="list-style-type: none"> ●Summing up the points to be considered based on the feedback given to the interim version of the future visions and discussing each of the points to adjust the visions 	<p>Summing up the points to be considered to develop the final version of the future visions</p>
	<p>The “Interested-party Council to Discuss Future Visions in Detail” met three times between the fifth and the sixth meetings.</p>	
6	<p>December 11, 2010, 2:00 p.m.–5:00 p.m. Large hall on the second floor of the Higashiomi Municipal Government annex building Discussing the final version (2010 version) of the future visions for Higashiomi City in 2030</p> <ul style="list-style-type: none"> ●Discussing the final 2010 version of the future visions 	<p>Developing the final 2010 version of the future visions</p>
	<p>The “Interested-party Council to Discuss Future Visions in Detail” met once for the final confirmation of the future visions.</p>	

■ Meetings of the “Interested-party Council to Discuss Future Visions in Detail”

No.	Date, venue, and agenda	Goal and outcome
1	November 9, 2010, 6:00 p.m.–8:00 p.m. Meeting room in the Higashiomi Municipal Government building	Confirming the future visions as revised following the discussion of the fifth meeting
2	November 16, 2010, 2:00 p.m.–4:00 p.m. Women’s Learning Room at the Notogawa Community Center	Continuing the discussion of the preceding meeting
3	November 25, 2010, 6:00 p.m.–8:00 p.m. Meeting room in the Higashiomi Municipal Government building	Discussing the future visions revised following the discussions of the two preceding meetings
4	March 15, 2011, 2:00 p.m.–4:00 p.m. Meeting room in the Higashiomi Municipal Government building	Providing the final confirmation of the future visions completed following the discussion of the sixth meeting

In FY2009, the first meeting was convened to develop a rough picture of the future of Higashiomi City through brainstorming. In the second meeting, we held a workshop to consider the future visions in a more comprehensive manner. To facilitate discussion, we roughly specified three categories, and all the roundtable members joined the discussions on the future visions from each of these categories. At the third meeting, to add more specific details to our future visions, we classified various aspects of society into nine categories, taking into consideration the discussions held during the two preceding meetings. In the category of “nature,” we simply made sure that we had a shared understanding of the issues to be addressed, while in the remaining eight categories, we discussed our visions for the future. Based on the discussion of the third meeting, the roundtable secretariat prepared a written report on the future visions and presented the report to the roundtable members during the fourth meeting, and they checked whether the visions written in the report were consistent with past discussions or not and made changes/additions as appropriate to develop an interim version of future visions. Thus, a report titled, “Higashiomi City in the Future: 2030 (Interim Version),” was drawn up, based on the discussions of the four roundtable meetings held during FY2009.

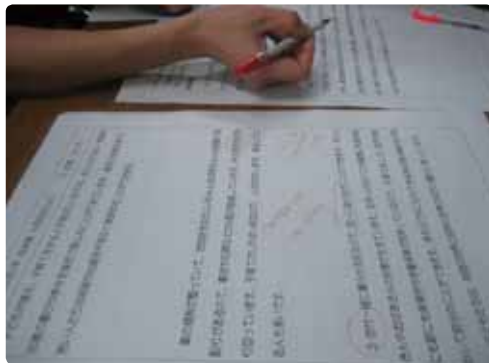
In FY2010, the roundtable members offered “Higashiomi City in the Future: 2030 (Interim Version),” drawn up in the previous fiscal year, to citizens for review and feedback, and at the fifth meeting, the attendees discussed the issues that were raised from the feedback of citizens. To continue to discuss some issues that remained outstanding, the “Interested-party Council to Discuss Future Visions in Detail” was established and met three times.

At the sixth meeting, the roundtable members were divided into three groups, and each group examined the proposed final version of the future visions in the respective three categories and made changes as necessary. Through this process, “Higashiomi City in the Future: 2030 (2010 Version), by the Higashiomi Environmental Roundtable” was completed.

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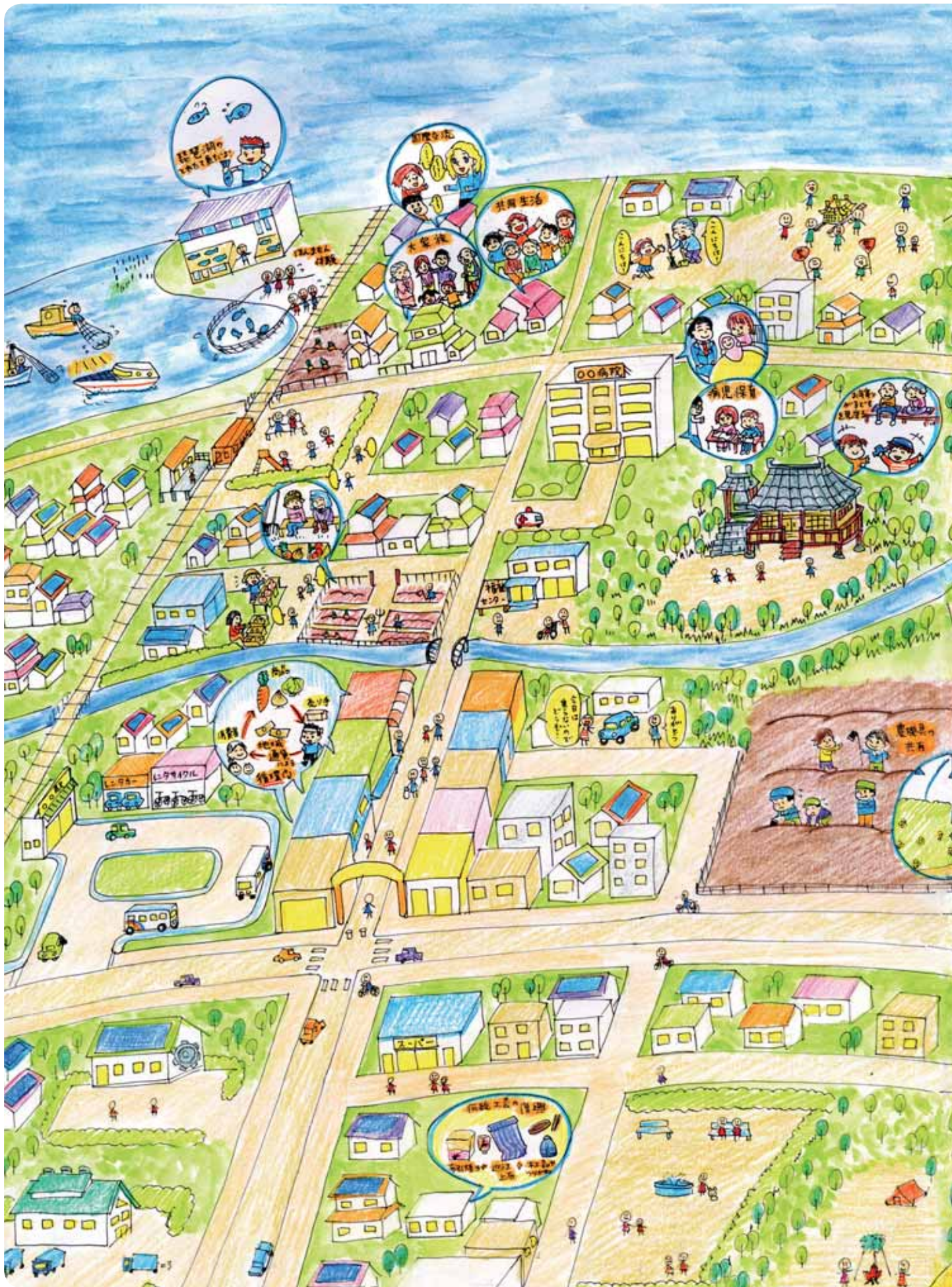
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Higashiomi Environmental Roundtable



Appendix:List of Higashiomi Environmental Roundtable Members

	No.	Name	Affiliation	Territory
Chairman	1	Takeshi Kokaji	Director of a nonprofit organization(NPO) called "Siminfukushi no ie Yokaichi"	Urban planning
Vice-chairman	2	Masaaki Naito	Director of the Lake Biwa Environmental Research Institute	Environment
Committee	3	Fuminobu Okada	Chief of envieonmental division of "Council for urban development of GAMO area"	Environment, Urban planning
	4	Hiroki Ochibe	Staff of "Forest Cooperatives Eigenjicho"	Forest
	5	Eishi Murayama	Senior general manager of a nonprofit organization(NPO) called "Ai no machi eco club (SATOMORITAI)"	Forest, Urban planning
	6	Shigenobu Kurokawa Yukihiko Shirasaki	KOTO Shinkin Bank (Credit union)	Finance Finance
	7	Hisatsugu Fukunaga	AITO Pears Productive Cooperatives	Agriculture
	8	Kunio Shimazawa	Director of "Uriuzu Solar Power Generation Council"	Urban planning
	9	Yoshinori Takashima	Director of "Higashiomi New Energy Implementation Council"	Environment
	10	Takashi Masuda	Director of "Higashiomi Handshake Council"	Environment
	11	Kikuko Ikeda	Executive director of "IKEDA BOKUJO company with limited liability"	Dairy husbandry
	12	Seizou Ota	Director of a nonprofit organization(NPO) called "Yui no ie"	Welfare
	13	Takeshi Irie	CEO of "APOLO Electron Co., Ltd"	Environment
	14	Rikunosuke Imai	Director of "Council for urban development of NOTOGAWA area"	Urban planning
	15	Daisuke Kageyama	Chief of secretary's office of "SHIGAKENKI Group"	Business
	16	Naoshi Isaka	Director of a nonprofit organization(NPO) called "GAMONOKOUGEN Club"	Education, Environment
	17	Masashi Aoki	Executive Office of "BIWAKO Floating School"	Education
	18	Ayako Fujii	Director of a nonprofit organization(NPO) called "Nanohana Eco Project Network"	Environment
	19	Yoshihiro Abe	Coordinator for NPO	Community
	20	Kuniomi Kishimoto	CEO of "Hitomi winery Co., Ltd"	Urban planning
	21	Katsuhiko Takada	CEO of "Takada Motors company with limited liability"	Environment
	22	Hatsue Morita	Committee of "Council for urban development of GAMO area"	Urban planning
	23	Masami Tani	Director of a nonprofit organization(NPO) called "Renga no entotsu tomare"	Welfare
	24	Junko Fukuda	Vice-director of "Council for urban development of KOTO area"	Urban planning
	25	Sachiyo Monzaki	Fomer-director of "Conference on Women of Higashiomi"	Urban planning
	26	Kazunori Tanaka	Director of "Council on the Recycling System of Locally-produced Wood Products in the KOTO Area"	Forest





Title:Higashiomi City in the Future 2030

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Higashiomi Environmental Roundtable
Higashiomi City in the Future: 2030

2011.3

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