## Making homes that can be enjoyed by many generations

## Building homes under our long-life housing concept nurtures intergenerational relationships with our customers

Our mission is to create ideal homes together with our customers, so that for generations after construction, families feel that they are living in their optimal residence. This applies not only to our newly built homes, but also to existing homes. In our remodeling business, we add new value to older homes by revitalizing them through interior enhancements. The entire Sekisui House Group is united in its efforts to promote the building of recycling-oriented sustainable homes.

"We can really feel the benefits of building sustainable homes.

The remodeling of our home has strengthened our family ties across the generations"



## After-sale services for peace of mind after moving in

Representatives from our 66 customer centers regularly visit homes after they have been constructed. In addition to the 10-year guarantee based on laws in the Housing Quality Assurance Act, our homes carry an



extra 10 years for a long-term 20-year guarantee. And even when this guarantee period expires, we offer additional 10-year renewable guarantees subject to inspection and maintenance through our unique U-trus house guarantee system.

## From owner to owner.

## EVERLOOP: The emergence of a high quality home lifecycle

We are undertaking home revitalization operations that aim to improve the quality and longevity of homes. Under the name EVERLOOP, sales of such homes are already underway. These homes, purchased from the previous owners, are rejuvenated with the latest specifications and features using our unique and new appraisal method. Our long life, high-quality homes contribute to the revitalization of the existing home market by offering newly remodeled homes at an affordable price. Resources are not wasted, and cherished homes can be passed on for new owners to enjoy.



Pre-revitalization





A revitalized home with the same quality as a new home



**Actions for** 

Our homes are highly sought-after in the existing home market. Our homes retain their value and we believe that adding new value to the home is the responsibility of the builder. This is the sort of operation we have launched. Owners often tell us that they would like someone else to continue living in the home and for it not to be destroyed. Looking forward, I will endeavor to promote the revitalization of homes and contribute to the satisfaction of our customers and the realization of a sustainable society. Hironobu Seto





# By building recycling-oriented homes—an industry we pioneered and promote—we offer the best in housing consultation

Japanese homes are regarded as having shorter lives than those in the West. However, with earthquake protection and insulation quality having improved over the years, the value of Japanese homes as an asset would increase further if the homes themselves could smoothly handle changes in family structure and lifestyles stemming from an aging society and declining population. The key issues for promoting the resale of homes are pricing and quality improvements, as they are merits to both the buyer and the seller. Having built nearly 1.9 million houses, we are more active in building recycling-oriented houses than any other firm.

Average lifespan of homes in Japan, the USA and England (average number of years after construction) 77 yrs



## **Building homes that satisfy**

## Our Home Amenities Experience Studio and Large Scale Experience-based Facilities provide a taste of everlasting comfort

In order to provide an image of a dream life, we have established demonstration centers across Japan, including a Home Amenities Experience Studio in Kyoto and six Large Scale Experience-based facilities. Those who visit have the opportunity to gain a wide range of information about the features and quality of our homes. Targeting those concerned about home construction, displays include a full-sized model demonstrating the latest technologies for safety and comfort as well as the creation of open spaces, along with home structures, earthquake resistant frames and more. We aim to provide a genuine insight into high-quality homes built to provide everlasting comfort.





Demonstration centers such as our Home Amenities Experience Studio and Large Scale Experience-based facilities are located throughout Japan

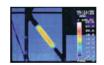
## Quality supported with the ideas and technology of many researchers and builders

## A system that absorbs the energy from an earthquake SHEQAS promotes the longevity of homes

Protecting homes and lives from earthquakes is an essential element for the building of homes and lifestyles. In addition to developing housing structures that meet current earthquake resistance standards and the addition of base isolated structures, we have also developed SHEQAS, our unique earthquake energy absorbing system. The SHEQAS damper converts earthquake energy into heat energy, absorbing the building movement to reduce pressure on the structure of the home by about half. In further promoting the longevity of homes, superior levels of safety and reassurance are provided by demonstrating an ability to minimize interior and exterior damage from repeated earthquake activity.



A SHEQAS frame with a K-shaped SHEQAS damper



Pressure on the structure is reduced by about half

### Each piece of the home is built to specification under tight production quality management

\*SHEQAS is not compatible with all plans and features.

For each Sekisui house that is built, 60,000 parts are used. In order to provide a consistent level of quality, we employ high-level production and supply inspection systems. We were the first in the industry to acquire the Global ISO 9001 certification for our production division in recognition of our superior quality management, having launched new computer control systems and spot checks and having implemented regular training for factory technicians.



Thorough inspections and improvements

## Comprehensive examinations and feedback aimed at raising construction quality

Our inspection systems have been strengthened, based on a system of accepting responsibility down to the finest detail. In addition to our on-site inspectors who inspect the main processes, voluntary examinations are carried out by construction managers from Sekiwa Construction, our group vendors, and others. This is in addition to our own rigorous 3-key checking system, an impartial examination done objectively and on-site by the inspection director from the head office Construction Quality Administration Department.

### Third-party comment

## Building environmentally friendly homes with families

A house is the largest purchase a family makes. But what really makes a home is the time that children spend growing up and the time that we spend with our parents, as well as the time we spend thinking about the future happiness we can have with our families. A house is full of memories and is lived in by children and grandchildren, and so it should be treated with care. Longevity means not wasting resources and being environmentally friendly. The building of homes should be carried out with this in mind and should be considered with your children.



Momoko Kyukawa Nikkei Business Publications, Inc. ecomom Producer

Publishes ecomom, an environmentally friendly lifestyle and homes magazine, six times annually. The magazine includes lifestyle-related eco-friendly information and is also published on the web.



## Action Plan 20: Global warming prevention

# Together with our customers, we are striving to both reduce CO<sub>2</sub> emissions and create a pleasant living environment

2000

The reduction of residential CO2 emissions has a significant part to play in global warming prevention when the Kyoto Protocol takes effect in 2008. Because of the important role played by the housing industry, Sekisui House has been improving insulation and other basic housing functions through an integrated approach to R&D, production and construction. In 2005, we launched Action Plan 20, our program to markedly reduce residential CO2 emissions as part of measures to prevent global warming.

# Action Plan 20: Aiming to lower CO<sub>2</sub> emissions by 6% from 1990 levels

According to the Ministry of the Environment, CO<sub>2</sub> emissions in the residential sector have increased some 30% over the 16-year period from 1990 to 2006. Sekisui House launched Action Plan 20 in an effort to decrease CO<sub>2</sub> emissions in newly built houses by 6% from 1990 levels, in keeping with the targets set in the Kyoto Protocol. In specific terms, we have projected the level of CO<sub>2</sub> emissions in 2010, based on survey data on emission levels in 1990 and 2000 and assuming no countermeasures, with the aim of reducing the actual level of emissions by 20% compared to the projections.

# CO<sub>2</sub> emission reduction equivalent to 1.666 million trees in FY 2007

Under Action Plan 20, CO<sub>2</sub> emissions are reduced in the following three ways: through enhanced thermal insulation; the introduction of high efficiency hot water

supply systems, including *Eco-Jose* (latent heat recovery), *Eco-Cute* (electric) and *Eco-Will* (gas) systems; and solar power generation. In 2007, annual CO<sub>2</sub> emissions were reduced by 23,379 tons, equivalent to the annual CO<sub>2</sub> absorption of 1.666 million trees.

1990

(Base year)

(Note: Total CO<sub>2</sub> emissions have decreased since FY2006 due mainly to a lower level of housing orders.)

Sekisui House receives Ministry of Environment's Global Warming Countermeasures Award two years in a row



Solar power generation: 1,533t

Award ceremony on December 17, 2007



CO2 Emissions Reduction(t- CO2/year)

2005
21,551t
Equivalent to 1,536 thousand trees
2006
26,378t
Equivalent to 1,880 thousand trees
Reduction equal to
annual CO2 absorption by
1.666 million trees



2010

(Estimate

## Kenichi Ishida

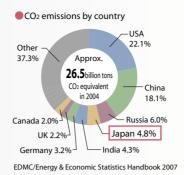
General Manager Global Warning Prevention R&D Institut

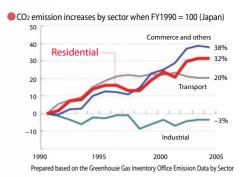
Global Warning Prevention R&D Institute
By combining widely used construction technology for housing with cutting edge technologies—including Carbon Neutral House (a zero CO2 emissions house: see page 15)—we can reduce CO2 emissions effectively in the residential sector across Japan. By expanding the supply of environmentally friendly houses across Japan, we can contribute meaningfully to the development of a sustainable society.

Source: Sekisui House

## CO<sub>2</sub> emission reduction in residential sector holds the key to global warming prevention

Japan ranks fourth in the world in terms of CO2 emissions, accounting for 4.8% of the world total. Moreover, as the country accounts for about 2% of the global population, its CO2 emissions per capita is far higher than the average. We need to take the initiative in meeting the challenge of global warming. Of particular importance to us is the reduction of CO2 emissions in the residential sector, which have been increasing every year.





### Accelerating global warming countermeasures, based on industry-leading insulation performance

Even though society has become more aware of global warming, we believe that it is important to implement strategies that enhance health and comfort in our houses. Action Plan 20 therefore seeks to create pleasant living environments, concomitant with implementing global warming countermeasures. In FY 2004, only 32% of the houses newly built in Japan met next-generation energy-saving standards. Sekisui House spearheaded the industry by adopting these specifications as standard in core detached housing products in 1999 and in all detached houses in 2003, exceeding the government target of 50% of new houses.

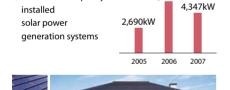
### Standardization of the next generation energy-saving specification standard

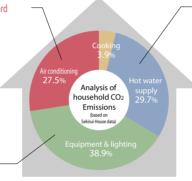
All Sekisui House's detached houses meet the next generation energy-saving specification standard, offering a pleasant living environment while protecting families from temperature extremes and dampness.



### Recommending solar power generation systems

By using solar power systems as a source of clean energy we can reduce consumption of fossil fuels. Solar power generators can also supply householders with energy in the event of major disasters.

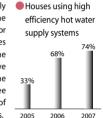




## Standardization of high-efficiency hot water supply system

In houses using gas as an energy source, Sekisui House offers *Eco-Jose* as a standardized system which recycles waste heat and

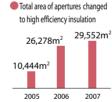
achieves efficiency levels 15% higher than conventional gas hot water supply systems. We also recommend the adoption of the *Eco-Will* gas generator and hot water supply system. In houses using electricity for all appliances—the so-called all electric houses—we encourage families to install the *Eco-Cute* system, which offers three times the energy efficiency of conventional electric hot water systems.



### Promoting Action Plan R20 through home remodeling

In existing homes, we are aiming to achieve a 20% reduction in CO<sub>2</sub> emissions by 2010. Sekisui House Remodeling, one of our group companies, is promoting *Action Plan R20* by installing high performance insulation materials in

the open parts of the house (windows, doors and ventilation holes in walls and ceilings, etc.) as well as adopting high efficiency hot water supply systems as part of home remodeling.





Global warming prevention

Annual total capacity of

starts at home

5.562kW

A visit to the newly built the Hirama house in Kyoto Pref.





## "Looking at our annual energy costs makes us realize the benefits of saving and generating power"

"We decided on our new house when we found out what Sekisui House is doing to save energy. The house stays warm and comfortable with residual heat even after we switch off the gas-heated hot water floor heating system, and we usually don't use air conditioning even in winter. Now

we've got into the habit of checking the amount of solar energy we have generated and sold to the power company. It's a great energy system and we're looking forward to living in this house for a long time."





Upgrade specifications

for insulation and

airtightness

## Achieving zero net CO<sub>2</sub> emissions with energy saving + energy creation. Adopting leading technology to develop the Carbon Neutral House

The primary feature of Action Plan 20 is the introduction of energy generation and energy saving technologies to conserve the environment while creating pleasant houses to live in. As part of this initiative, we have developed the Carbon Neutral House. In these houses, energy

consumption is minimized, and remaining CO<sub>2</sub> emissions are offset by the adoption of solar power generators and fuel cells. Through these technologies, we are aiming to attain net zero CO<sub>2</sub> emissions by striking a balance between energy generation and energy conservation.

To effectively reduce CO2 emissions, we need to take the characteristics of individual technologies into consideration and use them in combination. For each home location we need to coordinate a number of factors, such as cutting energy consumption by installing higher efficiency equipment, balancing the use of electricity and gas, or developing a smaller physical footprint for solar power generators installed in combination with fuel cells. In this way, we are able to pursue the twin aims of reducing environmental impact and creating comfortable and pleasant homes.

# Energy saving Reduce total heat loss in the house. Reduce power usage by installing advanced equipment Energy generation Zero emissions power generation CO2 emissions by using gas power generation Zero net CO2

Solar power

neration system

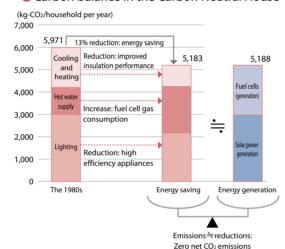
### Carbon balance in the Carbon Neutral House

Use high efficiency

and energy saving

appliances

Mechanisms used in the Carbon Neutral House



### Basis of Calculation

uel cell system

This equation assumes a house for four family members with total floor area of 155m² in Tokyo, having a 4.3kW solar power generation system and fuel cells (33% power generation efficiency and 45% heat efficiency). The CO2 emission coefficient of electricity is based on the average of thermal power generation computed by Tokyo Gas Co., Ltd.

emissions



## "What a difference a small change makes!" Energy in everyday life

## Children's Ecology Study Club

Ecology House Seminar for Parents and Children

An important aspect of addressing the issue of global warming is educating the next generation. For this reason, we hosted a seminar at our comprehensive Housing R&D Institute in Kyoto to present families with practical ways to reduce energy consumption.

Attendees: 32 children and adults from 12 families

Participants in this seminar learned about CO<sub>2</sub> emissions and electric power, asking questions and enjoying the technical demonstrations. As part of the seminar they measured actual power consumption in new and old home appliances (refrigerators and TV sets), and realized that power saving technology is making progress at a faster pace than they had imagined.



The children showed keen interest in the demonstrations





## Common Life Koga: A community-wide project to explore the potential of fuel cell technology

In November 2007, Sekisui House started a two-year experimental project to demonstrate the use of a distributed energy system in which electricity and heat can be shared on a community-wide basis. This project is being carried out jointly with The Japan Research Institute, Limited, and WEB POWER Service LLC as part of the undertakings commissioned by the Ministry of the Environment in Common Life Koga, a housing subdivision block developed by Sekisui House. With currently available technology, fuel cells cannot

test Cot Conjunction.

Home use fuel cells are installed in all 14 detached houses

be operated optimally, because electricity and hot water generated by these cells must be consumed in the premises where they are installed. In the distributed energy system, several houses within a small area can share surplus electricity and hot water

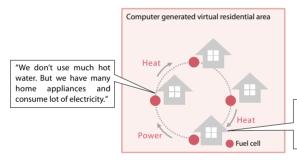
using a network. In this way, fuel cells can be operated with greater efficiency. Fuel cells are gaining attention as an energy system for



Energy savings are being estimated for the entire residential area

the future, because they offer a number of advantages, including reduced electricity transmission losses, greater resistance to the impact of a major disaster, and distributed energy supply risk by combining various forms of power generation. The current experiment has not yet reached the stage where surplus energy is actually shared. Nevertheless, we will explore the possibility of effective energy use on a community-wide basis by measuring and analyzing the patterns of power and hot water consumption in 14 houses in Common Life Koga as well as those of power and hot water supply systems that use fuel cells.

### Demonstration project: Distributed energy system



"Our electricity consumption is low. However, we need a lot of hot water as we have many family members."

### Actions for Sustainability



Today, an increasing number of children are losing interest in science. I believe that by providing children with a chance to use measuring instruments and reveal scientific facts, we can teach them to obtain accurate information and put it to practical use. I hope that the awareness they have gained through this experience will make a real difference to their actions.

Yasuhito Sugimura

Manager Global Warming Prevention R&D Institute

### Responses from Participants

- "I didn't know there was such a big difference in energy consumption between old and new home appliances." (Boy, Age 11)
- "Now I want to use these power meters to check the appliances in my house!" (Girl, Age 12)
- "We couldn't learn this at school. The lecture was very easy to understand." (Boy, Age 12)
- "I'll try to reduce my use of the electric iron and hair dryer." (Boy, Age 11)
- "We clearly need to reconsider our own lifestyles, rather than merely blaming the government and corporations." (Parent)
- "It would be great if you could hold lecture meetings for a few days while the school is closed for summer vacation." (Parent)

#### Third - party comment

### Rising expectations for energy saving, energy generation and Children's Ecology Study Club

Household activities account for about 20% of total CO<sub>2</sub> emission in Japan. Therefore, homebuilders are faced with the pressing need for CO<sub>2</sub> reduction. It is against such a backdrop that we have rising expectations for further progress in energy saving and energy generation through Action Plan 20 and Action Plan R20. Moreover, the Children's Ecology Study Club provides a valuable opportunity to increase awareness of the extent to which we can reduce CO<sub>2</sub> emissions in our daily lives. I hope the club meetings will be held more often to help spread these ideas.



### Toshiharu Ikaga Professor of System Design Engineering Department of Science and Engineering, Keio University

Professor Ikaga is engaged in the study of the environment, equipment design and assessment of buildings as well as in the projection of global warming countermeasures undertaken by prefectures toward 2050.



## The Gohon no ki gardening concept

## Gardening modeled on Japan's Satoyama woodlands, aiming to restore pristine ecosystems

Satoyama is a part of the Japanese landscape that has been developed from centuries of agricultural use, in a manner that skilfully harmonizes human activities with the natural environment. However, the thickets of various naturally grown trees, groves around village shrines and footpaths between rice fields and streams have gradually been disappearing. In recent years, the richness of Satoyama's ecosystem and cultural values have been rediscovered, and activities are underway to preserve them as part of Japan's unique landscape. At Sekisui House, we are building an eco-network that links nature in different locations by creating small satoyamas in the gardens of individual houses.



# "It has become our habit to exchange greetings with small birds every morning"

Case study The Gohon no ki gardening concept

When they moved to their newly built house 11 years ago, Mr. and Mrs. Sakai started gardening—something in which they had long been interested. They planted a Japanese snowbell, aquifoliaceae and flowering dogwood, as included in the *Gohon no ki* gardening concept. Since then, Mrs. Sakai has acquired expertise and skills in the course of developing her garden and she is now active as a gardening coordinator.



Mr. and Mrs. Sakai with the Sekisui House staff member who advised on the selection of tree species and gardening 11 years ago.

Satoyama network establishing link with nature

Having indigenous plants in the garden encourages birds and butterflies to visit, helping bring nature into the lives of homeowners.



## "Small birds and butterflies visit our garden. It's nice to feel the cycle of nature in harmony with the near mountains"

"We wanted our neighbors to share in the enjoyment of our garden. So after repeated consultation, we chose the style of open exterior. When I am working in the garden, neighbors often talk to me. I enjoy chatting with them about flowers and trees. We chose and bought the saplings of these trees from a nursery quite far from here, so I feel a strong attachment to them and take care of them every day. Although it's a bit of work clearing leaves in the fall, I like deciduous trees because I can feel the change of the four seasons very closely. I recommend that you plant at least one deciduous tree in your garden. We have designed our garden in a way that allows us to observe the season's plants from every room. I specifically requested the gardener to design a garden in which I can spend as

much time as possible. The drooping plum tree, which you can see from the living room and the terrace, was there before we rebuilt this place. Bush warblers and Japanese white-eyes are frequently perched on this tree. I enjoy listening to them chirping. I have a sense of being part of the cycle of nature, observing small birds and butterflies nearby. It is truly peaceful."





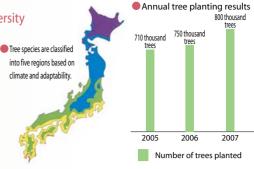


The carefully nurtured garden beyond the grove by the gate

A chickadee visits the garden

## Learning from the wisdom of Satoyama—living with nature and protecting biodiversity

The Gohon no ki gardening concept is a proposal to create a garden centering on the species of plants that have been growing naturally in the region since ancient times. Taking climatic characteristics into consideration, we introduce native tree species that grow naturally in each of the five regions of Japan and which have different birds and butterflies depending on them. By planting regionally native trees in this way we can recover and preserve natural ecosystems. Various small birds and butterflies will visit your garden and, through them, you can keep in touch with nature. This will also help your children develop their sensitivity. In collaboration with Mr. Kazunori Fujimoto of an NGO named the Sharing Earth Society, we are conveying the importance of protecting biodiversity and ecosystems.



## Creating a better living environment through tree planting under the *Gohon no ki* gardening concept

Responding promptly to the initiative of the *Gohon no ki* gardening concept launched by Sekisui House, we are working to create a greener living environment by supplying trees. The Japanese archipelago, which stretches along the eastern edge of the Asian continent, features a very cold region in the north and a subtropical climate in the south. There are a great variety of native trees in these regions. I think it is important that we plant native trees in our gardens to create *satoyama* with rich greenery as a link to each region's ecosystem. Our staff are working hard every day to create an environment that can be enjoyed from one generation to the next.



Takaaki Yamazaki

Representative Director of Yamazaki Zuishoen

Mr. Yamazaki operates a nursery that supplies the saplings of naturally grown and native trees chosen in the *Gohon no ki* gardening concept. He has organized a producer network comprising 80 tree nurseries across Japan.

## Learning firsthand using the "Letters from Dr. Forest" work/study program

"Letters from Dr. Forest" is an educational program to teach children attending elementary and junior high schools firsthand about the *Gohon no ki* gardening concept. Sekisui House provides teaching materials and our employees conduct the program as instructors.



### Joining other companies in a biodiversity initiative

Sekisui House, in collaboration with a range other companies, has established a corporate network aiming to preserve biodiversity. We will conduct joint research and contribute to the preservation of biodiversity from an international standpoint by promoting dialog with other companies and stakeholders, based on research findings.

Field guide to birds on the Gohon no ki mobile phone website

http://5honnoki.jp



At this site you can instantly find the names of 24 birds (with recordings of their songs), 24 butterflies, and 92 trees.



### Third-party comment

# Raising awareness of ecosystems by spreading community activities

Both companies and individual citizens need to ask themselves what they can do to address the biodiversity crisis. Through the Gohon no ki gardening concept, Sekisui House has not only raised customers' awareness and organized their activities but also expanded its influence to neighborhood communities and producer networks. I hope that this initiative will make further progress toward the preservation of biodiversity on a regional basis.



Naoki Adachi, D.Sc. Representative Director ResponseAbility, Inc.

Dr. Adachi is supporting corporate activities that contribute to the advent of a sustainable society. He also provides consulting on biodiversity and CSR procurement practices.

## Building towns with the concept of beauty that blooms with time

A community-wide commitment to ensure comfort and security toward the future. Sekisui House is building towns that will retain enhanced aesthetic value over many years.

In today's Japan, how many towns exist in which we can live with a sense of security and peace of mind? Town planning that places excessive importance on efficiency and townscapes that lack uniformity will negatively affect the residents' sense of unity and inhibit the fostering of a local culture and community. At Sekisui House, we go to extra lengths to create ideal towns with enhanced beauty - towns in which successive generations of parents, children and grandchildren will continue to live in the future.

## Creating townscapes with beauty that blooms with time

Sekisui House is building towns based on the concept of beauty that blooms with time. As part of this we stress the importance of preserving topography and greenery on sloping land areas, along with a range of other specific measures that are outlined in manuals such as the Urban Development Charter, Urban Development Basic Policy, 24 Guidelines for Urban Development and 100 Design Methods for Sustainable Urban Development.

Case study



Leader of the Yunoyama Green Club



"Our asset is the fostering of communities in which we can continue to live in security and comfort."

## Community-wide exchange

Green Hills Yunoyama in Ehime Prefecture, is the largest subdivision developed by Sekisui House in the Shikoku Region. Since subdivision started in 1986, a total of 950 households, or some 3,000 family members, have moved to live in this town. We are playing an active role in the development of the community,

supporting the operation of various organizations. A wide range of activities and events are held, with frequent exchange among the residents. The Yunoyama Green Club, which promotes greenery activities and cultivates vegetable gardens, is one of these community groups.





## Ms. Orita: "Our resident volunteer group carries out its own greenery plan"

"We have been living in this town for 16 years. We built our new home here on the advice of Mr. Sato. This was the beginning of our long relationship with him. At that time I was thinking that if we

could fill about 1.1 hectares of untended sloping land on the south end of the block, it would serve as a role model for developing a town for the future. In 2007, when I heard Mr. Sato's proposal to create an environment for the sustainable growth of the town, I agreed to form the Yunoyama Green Club. Our members are all volunteers. In March 2007, we cleared the weeds covering the untended land and conducted a tree planting campaign. In addition to the club members, many of their friends also participated in this event. Altogether, we planted a total of about 6,600 trees, three trees for each of 70 different species including fig trees, persimmon trees, acorns and cherry trees. The experts at Sekisui House told us to grow those trees that survive in nature. Remembering this advice, I remove weeds whenever I take a walk on the sloped land, imagining the landscape as it will look in 10, 20 or even 50 years later. We have



Regionally adapted trees are planted

also developed about 400 square meters of rice field and vegetable gardens in a section of the town. We welcome those town people who wish to cultivate them. In this way, we share the joy of growing trees and harvesting agricultural

### Building towns that grow and mature with their residents, based on the Sekisui House Urban Development Charter

At Sekisui House, we consider it our responsibility as a company to build towns in which the people will continue to live from one generation to the next. It is in this sprit that we are developing towns sustainable in the future in accordance with the Sekisui House Urban Development Charter, Urban Development Basic Policy and 24 Guidelines for Urban Development. At the same time, we are creating houses that will become valuable regional assets across the nation.

#### Sekisui House Urban Development Charter

Our sincere wish is to preserve nature and the Earth's precious environment, while nurturing local cultures and communities, helping to stimulate local economies, and protecting the asset value of neighborhoods, so that people are able to live affluent lifestyles with peace of mind. As a socially responsible corporate citizen, Sekisui House is committed to contributing to the creation of a sustainable society through urban development, based on the belief that the living environment of our home and town serves as the foundation of our lives as human beings.







I support the building of communities in which residents can solve problems on their own. Although local autonomous groups are organized by volunteers, I'm aiming to develop a system under which these groups can operate on an economically sustainable basis, as NPOs do.

Naotaka Sato

Manager of the Yunoyama Office Matsuyama Branch

crops, strengthening ties among the community. I am hoping that these activities will help our children develop their sensitivity to nature.

Although the town has no formal building code, we maintain a beautiful townscape because we share aspirations and joy through community activities, holding a common image of ideal living."



Building a richer life linked with the *Gohon no ki* gardening concept

Case Study Yamanashi Prefecture

Commore Shiotsu Tricoparc



The entire landscape area is covered with rich greenery.

Started as a subdivision in 1991, Commore Shiotsu is a town with attractive scenery that draws on nature and the original landscape of the local area. A block consisting of 45 houses incorporating a new concept of "n times richer" life linked with the Gohon no ki concept has been developed in a section of the town. The term "n times richer" means that, instead of enclosing each lot, properties are designed to be linked with the views of gardens in the neighborhood and beyond. This is based on our new idea for increasing the amenity of the environment.

\* "n" signifies nature and the number of houses."n times richer" is the name of the town building method jointly developed by Sekisui House and TeamNet Co., Ltd.



All houses face south regardless of land demarcation and lot direction.

Three rules of "n times richer"



The key is to take advantage of the exterior environment to achieve temperatures that are more comfortable. The design draws the ambient climate through greenery into the interior. It is important that all areas, from the edge of the windows, carden and the sections beyond, are covered by greenery.



The key is to make the landscape seen from the windows more captivating. It is designed to achieve continuity with distant scenery. It is important to arrange greenery on the edge of the windows to create a visual link with the green areas beyond the property.



The key is to expand the living area from the house interior to the exterior, utilizing the space of the surrounding environment. It is important to create space that encompasses the interior and the town in continuity.

# まちなみ参観日

### Machinami Sankan-bi

The Machinami Sankan-bi is held in spring and autumn every year across Japan. Visitors can see attractive towns developed using the design methodology based on the Urban Development Basic Policy and 24 Guidelines for Urban Development in keeping with the Urban Development Charter. Moreover, these towns have been planned in a flexible fashion, taking the region's unique landscape and the environment into consideration. Those responsible for design, construction, the exterior and gardening are working hard to build excellent quality towns utilizing the characteristics of the location. They consult frequently in advance and obtain the Environmentally symbiotic House certification. In addition, they use the commonly shared concept of gardening based on the *Gohon no ki* gardening concept.

In FY 2007, Sekisui House supplied 1,639 houses in 179 residential subdivisions: 3,141 houses and 337 subdivisions.

## Offering a roadmap for desirable towns of the future and living environments that reflect the aspirations of owners

### Sha-Maison Town——Building communities of low-rise apartments that offer a quality living environment

Sekisui House puts the concept of beauty that blooms with time into practice in the supply of low-rise apartments. Taking future changes into account, we propose plans for the development of greenery and the exterior using trees, boulders and other natural materials so that different views can be enjoyed in each season. We create environments with charm that increases in harmony with surrounding townscapes, enhancing value for tenants, owners and neighbors.

Sha-Maison Town – Growing in Harmony with and Providing Added Elegance to the Town in the Past 10 Years



Some 60 species of trees and flowers were growing in 2007, providing a green curtain in the space between neighbors and a touch of gracefulness to each property.



Construction was completed in 1998

Ten years after the completion of construction, the growth of the trees planted in the entrance area of the parking lot gives you a sense of serenity. The carefully propogated greenery imparts distinctive character to the houses. Here the tenants are satisfied with the environment, so the occupancy rates are high. Young leaves of photinia glabra (Japanese photinia) and other trees are beautiful and, in autumn, they turn to red and yellow. You can also enjoy evergreen trees throughout the year, creating a setting that adds elegance to the community.

Sha-Maison Verdi Patio

## Sha-Maison town with an exterior highlighting a tree more than 50 years old



The area around the camphor tree is used as community space by the residents. Children play here. There is a relaxed atmosphere, despite the relatively high density of the houses.



We transplanted three plum trees, which an owner has tended carefully.

The camphor tree that rises in the entrance area of the premises is more than 50 years old. We retained this large tree as the symbol of this rental house community. The houses are located around the tree so that the residents can enjoy the view of refreshing green scenery, breeze, and the song of small birds. It is our hope that the camphor tree will continue to serve as the symbol of the community for the next generation.

## Building towns offering a high-quality living environment on a nationwide scale

Sekisui House built 1,743 "environmentally symbiotic houses" in FY 2007. We have taken active measures to acquire the Environmentally Symbiotic House certification of the Institute for Building Environment and Energy Conservation (IBEC) .



Common Stage Nishinarusawa



Common City Ina Gakuen Toshi



Common Stage Oyumino



Common Garden Nakamachidai



Greenland Karayama

# Complex malls—Ensuring peace of mind by developing combined medical and nursing care facilities

In today's rapidly aging society with a falling birthrate, Sekisui House is charged with an important mission of developing high quality medical and nursing care facilities. Our Care Facilities Promotion Division is playing a pivotal role in building clinic and residence combined houses, clinics and clinic malls, nursing homes for the elderly and group homes as well as other related businesses, including rental houses for the elderly. Through these undertakings, we are achieving a living environment in which owners can make long-term, stable investment in their land assets, contributing to the community and also providing security to residents.

Case study Niigata Prefecture

Medical Care Garden Tsubame

The construction of Medical Care Garden Tsubame was completed in 2007 as a model combined medical and nursing care facility. Here, orthopedics, internal medicine and otorhinology clinics, a pharmacy and a fee-charging nursing home for the elderly are assembled in a single block of the town.









Helpers' station

### Facilities that help local communities and visitors find comfort

"The complex mall has been developed from our desire to help the local community by building a hospital, nursing home for the elderly and other welfare facilities in the environment in which local people can find comfort and peace watching the flow of the stream and hearing the songs of small birds. There are growing expectations for

joint operations by medical and nursing care providers, who bear increasing social responsibilities. As our facilities are located in Niigata, which has deep snow in winter, we adopted a tropical theme in our design to create an image of warmth. We hope the patients and the elderly who stay in our facilities will continue to live in peace and comfort."



Mr. and Mrs. Endo, owners of Medical Care Garden Tsubame

#### Third-party comment

# Growing expectations for the development of intangible community value

Today the value of real estate is shifting from land to houses and the living environment. The tangible value of the living environment consists of community facilities, common spaces, townscapes and scenery, while the intangible values include the community and housing services. We need to sustain these assets, generate value in an efficient and effective way and manage the living environment economically, democratically and autonomously. As Sekisui House has a proven record of creating these values in tangible assets, I believe it will also make significant progress in enhancing the intangible assets of the living environment.



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Dr. Saito specializes in the design and management of the living environment of detached houses and condominiums. She evaluates residential land at home and abroad.



Common City Midorigaoka (Mie Prefecture)



Refre Misaki Refre Wahaha House (Osaka Prefecture)



Vercollina Yamaguchi (Yamaguchi Prefecture)



Common Hills Yamatodai (Nagasaki Prefecture)



Common Garden Ohji



## Resource recycling strengthened by Group capabilities

For the first time in the industry, the Sekisui House Group has achieved zero emissions in the four categories of production, construction, after-sales service and remodeling

The Group is committed to zero emissions to bring about a sustainable society. Having already achieved zero emissions in production, construction, and after-sales service, in October 2007 we achieved zero emissions for our nationwide residential remodeling activities. In keeping with this commitment, we are now tackling new challenges.

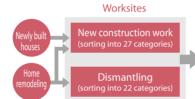
Our home remodeling operations have also now been certified by the Minster of the Environment as we move ahead with the creation of a sophisticated,

### comprehensive zero emissions system.

For the first time in the construction industry, Sekisui House in 2004 was authorized by the Ministry of the Environment to dispose of construction site waste across administrative boundaries under special provisions of the Waste Disposal Law. We have now been granted new certification that includes the home remodeling sector, enabling us to manage the recovery and recycling of waste in an integrated manner in our residential remodeling operations. As a result, Sekisui House has become the first homebuilder to achieve zero emissions at home remodeling worksites under the special provisions of the law.

At home remodeling worksites, we apply the principle of zero emissions to waste generated in the course of dismantling, remodeling and extending the houses built and sold by Sekisui House. During the home remodeling process, it is often necessary to dispose of construction materials and large equipment installations from many decades ago. Although the sorting and recycling of these materials has been considered difficult, we have ensured their recycling and a high level of traceability by thoroughly sorting waste using a process in which dismantling and new construction are clearly divided.

### Flow of zero emissions





After-sales

March 2006







Expanding zero

emissions



remodeling

October 2007

### Resource management

The Resource Management Center and outsourced recycling operators recover waste collected from worksites and use some of them as building materials internally.







Waste packaging materials are used in bathroom entrance frames in Sha-Maison rental apartments.



Waste packaging materials are used to produce 2,200 tons of roofing tile underlay annually for Sekisui House across Japan.

## Examples of the production and internal use of recycled building materials



Waste packing materials are used to produce ALC damp-proof membranes spread on the second floor of houses.

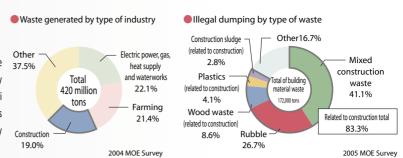


Waste wood is used as the material for wooden decks.



## Resource recycling promoted under direct control to ensure effective use and environmental protection

Waste building materials account for about 20% of total industrial waste. Moreover, there is growing concern about the problem of illegal dumping, with the housing industry having been identified as responsible for more dumping than other industries. At Sekisui House, we have accomplished 100% recycling of waste without disposing of it in landfills or incineration without heat recovery. At the same time, we are preventing the possibility of illegal dumping to the greatest extent possible via a rigorous system of checking.



# Trial of next-generation zero emissions system using IC tags

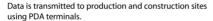
In January 2007, Sekisui House started trial operation of a comprehensive next-generation zero emissions system that collects and analyzes data on waste generation using IC tags.\* Waste building materials generated at new construction sites are sorted into 27 categories which are measured and managed using information technology and IC tags. Using this

system, we monitor and analyze waste generated in the construction of each new house.

\*This project is conducted under the Advanced Technology Development Support System of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT.)









# Playing an active part in waste reduction and zero emissions at the worksite

Having achieved zero emissions, we are continuing with a wide array of measures to further enhance the quality of our green campaign at worksites throughout our domestic operations, placing special importance on waste reduction. For example, the amount of waste at each new construction site is managed using a circular e-mail system called Gurutto Mail. Based on this data, we calculate and set waste reduction targets for each new home, and our employees work hard to achieve these goals. We also encourage our contractors to send in suggestions for work improvement and waste reduction through our My Idea 21 scheme. Working together with our contractors and partnering companies, we are making steady progress in reducing waste.



Waste has been reduced by 1,247 kg from FY2000 levels.

\*Waste calculations are based on homes with total floor area of 145 m².

### Third-party comment

### Outstanding total system based on the Resource Management Center

It is no exaggeration to say that Sekisui House has the most advanced resource recycling system in the construction industry. Comprehensive recycling is achieved by collecting and sorting even small quantities of waste generated at each construction site. Specifically, the company has set guidelines for waste sorting not only at the Resource Management Center but also at worksites, as well as pursuing efficient transportation operations. I am impressed by the ingenuity with which they have devised various methods of reducing waste at each step of the construction process. I believe the development of this recycling system will significantly reduce environmental burden.



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Professor Seike is mainly engaged in the study of building construction systems and building production. Since 1999, he has been conducting research into the dismantling and recycling of buildings and the assessment of environmental impact. He has also been involved in the development of CASBEE (Comprehensive Assessment System for Building Environmental Efficiency).