

**1. Regional Profile**

Geographical Location	Country and Region	Odawara City, Kanagawa, Japan, East Asia												
	Longitude and Latitude	North Latitude 35.17' 52, East Longitude 139.03' 38 (Kuwahara, Odawara City)												
	Geographical Conditions	<ul style="list-style-type: none"> <li>• Suburban area</li> <li>• Approximately 5 km from the nearest sea in straight-line distance</li> <li>• Approximately 68 km from Tokyo (capital) in straight-line distance</li> <li>• Approximately 90 km from Yokohama (prefectural capital) in straight-line distance</li> </ul>												
Natural Environment	Topography and Altitude	<ul style="list-style-type: none"> <li>• Around the Sakawa River that runs through the center of the city stretches a lowland area, which is surrounded by hills on three directions except on the southeastern side touching the sea.</li> <li>• The lowest point in Odawara City is 0 m while the elevation in the mountainous region exceeds 900 m.</li> </ul>												
	Climate	<ul style="list-style-type: none"> <li>• The annual mean temperature is approximately 19.5°C and the annual precipitation is approximately 1,900 mm.</li> <li>• The city falls under Cfa (humid tropical climates) in the Koeppen climatic classification.</li> </ul>												
	Vegetation and Soil	<ul style="list-style-type: none"> <li>• The hills are composed mainly of orchards, afforestation areas and secondary konara oak forests. Rice paddies stretch in the flat areas.</li> <li>• The area has forest brown soil plus alluvial soil.</li> </ul>												
	Biodiversity and Ecosystem	<ul style="list-style-type: none"> <li>• Much of natural environment in Odawara City is secondary natural environment consisting of farmlands and secondary forests, etc. that have been artificially constructed and maintained over the long years where a variety of animals and plants inhabit and develop.</li> <li>• Abandoning of management over these areas of secondary natural environment is increasing in conjunction with the recent stagnation in the agricultural and forestry industries, the population drain, and the aging population, and there are concerns for the deterioration in quality of biodiversity and ecosystem due to the advancement in vegetation succession. Further, housing developments have expanded primarily in the flatlands, causing farmlands to decline.</li> </ul>												
Social Background	Population and Changes in Population	<ul style="list-style-type: none"> <li>• The population of Odawara City was 54,699 in 1940, but expanded above the 200,000 level to 200,103 in 1995. The population has been on a slight decline in the recent years, and totaled 198,586 in 2008.</li> <li>• The aging rate (the ratio of people aged 65 or above against the total population) of Odawara City was 4.4% in 1950; however, it increased to 19.9% in 2005.</li> </ul>												
	History and Culture	<ul style="list-style-type: none"> <li>• The area since the old days has been a focal point of transportation, and namely from around the 1500's, the city flourished as a post town and castle town. Today, a station on the Shinkansen, Japan's major transportation system, is located.</li> <li>• Owing to rich natural conditions such as the temperate climate and abundant water, agriculture and fishery have been prosperous.</li> </ul>												
	Regional Economy (Major Industries, Livelihood (including data and forecasts))	<ul style="list-style-type: none"> <li>• The primary industries of Odawara City are foodstuff manufacturing, chemical, and electric machinery manufacturing. In the agricultural segment, Japanese mandarin orange is the primary agricultural product, and there are orchards with a total area of 500 ha in the city area. In addition, rice and Japanese plum are produced.</li> <li>• The number of workers in each industry sector as of 2005 is as follows: <table border="1" data-bbox="582 1839 1428 1991"> <tr> <td>Primary Industry (agriculture, forestry, and fishery)</td> <td>3,023</td> <td>3.1%</td> </tr> <tr> <td>Secondary Industry (mining, manufacturing, and construction)</td> <td>28,505</td> <td>29.1%</td> </tr> <tr> <td>Tertiary Industry (commerce, tourism, and others)</td> <td>66,313</td> <td>67.8%</td> </tr> <tr> <td>Total</td> <td>97,851</td> <td>100.0%</td> </tr> </table> </li> </ul>		Primary Industry (agriculture, forestry, and fishery)	3,023	3.1%	Secondary Industry (mining, manufacturing, and construction)	28,505	29.1%	Tertiary Industry (commerce, tourism, and others)	66,313	67.8%	Total	97,851
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## 2. The Use and Management of Natural Resources in the Region

### (1) Use and Management of Natural Resources in the Past and Present

#### 1) Land Use Related to the Use and Management of Natural Resources in the Past and Present

- Of the area of Odawara City totaling 114.09 km<sup>2</sup>, forests accounts for 42.7 km<sup>2</sup> (37.4% of total area) and farmlands account for 19.4 km<sup>2</sup> (17.0% of total area). Although the majority of the city area used to be the target for use and management of natural resources, today, the region primarily in the plains is becoming more and more urbanized.
- The plains area has a mixture of rice paddies and residential districts while orchards for Japanese mandarin oranges and others are distributed widely across the hills.
- As illustrated in the figure below, in the past, natural resources were used and managed through mutually related use of land. Today, however, such relations have declined considerably.

#### 2) Objectives and Details of the Current Use and Management of Natural Resources

- Forestry: Production of lumber, charcoal, compost, and other forestry products used to be conducted, however, the production volume has dropped significantly in the recent years.
- Agriculture: The largest segment of agriculture in Odawara City is fruits, and production for 2006 was worth a total of 2,190 million yen. This is followed by vegetables, rice, and dairy cow in this order.
- Fishery: Processing of marine products is active with a large haul of various types of fish.

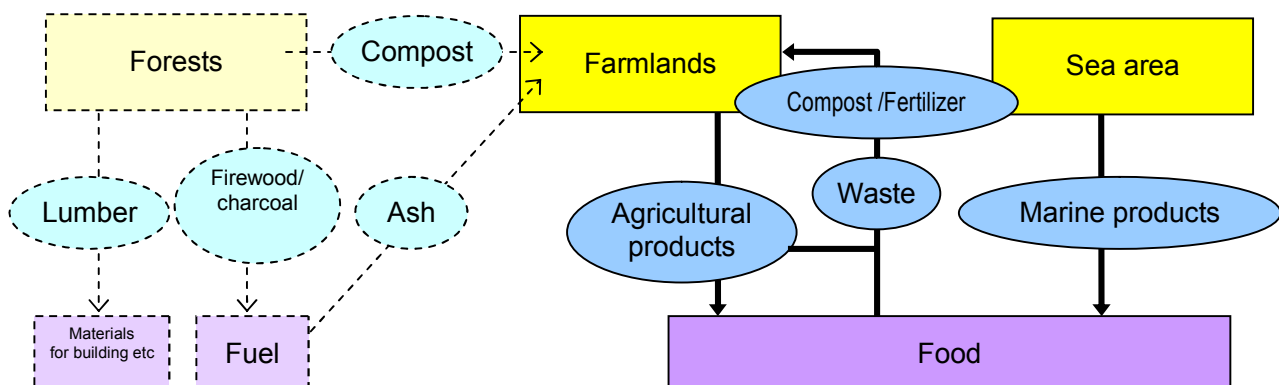


Figure: Overview of Use of Natural Resources  
(Items in light colors and dotted lines: Use has currently declined significantly)

## (2) Problems Associated with the Use and Management of Natural Resources and their Impact on Biodiversity

- Due to the decline in demand for firewood and charcoal caused by the penetration of fossil fuel and the weakened demand for forest-based compost owing to the penetration of chemical fertilizers, the use of forests has declined significantly, which has pushed the succession of secondary forests that had been maintained for a number of years and has caused deterioration of the habitat environment for wild animals and plants.
- Although the penetration of chemical fertilizers and agricultural chemicals in the agricultural industry has bolstered production volume, it has been causing deterioration of the inhabitant environment for wild animals and plants.
- While Odawara City has a population of approximately 200,000, the decreasing number and the aging of workers in the tertiary industry have caused stagnancy in the use and management of natural resources, more abandonment of cultivation land, and weakened management of forests. In the plains area, residential development has become more active, and rice paddies that serve as precious habitats for wild animals and plants, are decreasing.
- On the hills, the lack of proper management has been causing greater damage from birds and wild animals and consequently leading to further stagnancy in agriculture, forestry, and fishery, resulting in the formation of a vicious circle.

## (3) Regional Plans and Other Measures toward Resolution of the Above Problems

- Kanagawa Prefecture, the administrative organ of the subject region has issued the “Ordinance on Promotion of Conservation, Regeneration, and Use of Satochi-Satoyama in Kanagawa Prefecture”. Based on this Ordinance, Kanagawa developed “Guidelines for Promotion of Conservation of Satochi-Satoyama in Kanagawa” in 2009 and has been taking initiatives to contribute in resolving the issues described above and conserving Satochi-Satoyama.

### **[Direction of Initiatives under the Guidelines for Promotion of Conservation of Satochi-Satoyama in Kanagawa]**

#### <Power of Sato>

- Promote selection of areas subject to Satochi-Satoyama conservation
- Promote certification of Satochi-Satoyama Activity Agreement and support activities

#### <Power of community>

- Promote understanding of residents in Kanagawa regarding conservation of Satochi-Satoyama
- Promote participation of residents in cities, etc. in conservation of Satochi-Satoyama

#### <Managing parties of Sato>

- Promote collaboration among various entities
- Strengthen mutual collaboration between organization engaged in activities
- Promote examination and research through collaboration with universities, research institutions, and other parties

Source: Guidelines for Promotion of Conservation of Satochi-Satoyama in Kanagawa  
(Kanagawa Prefecture 2009)

### 3. Details

#### (1) Overview

Location	Kuwahara, Odawara, Kanagawa
Involved Parties	<p><b>[Implementation of use and management of natural resources]</b> Local farms</p> <p><b>[Initiation of activities on local production for local consumption]</b> Group of Kuwahara Medaka Rice</p> <p><b>[Community groups in cooperative relationships]</b> Group to Protect the Medaka in Nest Pond of Sakawa River and the Habitat; Ashigara Group of Agriculture; Odawara City Citizens Medaka Committee; Group to Appreciate the Blessings from Rice Paddies</p> <p><b>[Collaborating organizations]</b> Committee to Discuss Conservation of Medaka, etc. in Kuwahara and Oniyanagi Districts of Odawara</p>
Background and History	<p><b>[Largest habitat for Medaka (Japanese killifish) in Kanagawa survived]</b></p> <ul style="list-style-type: none"> <li>• The region is located in the flood plains of Sakawa River, and according to the large drawing of 1876, there used to be springs here and there and as many as 9 waterways existed in an area of about 400 m east to west. Rich in water, rice cultivation was active and until around 1955, even Japanese otters used to appear.</li> <li>• The rice paddies in the region were specified as a general reservation area under development plans where no houses were constructed and no modern agricultural infrastructure improvement was implemented. The separation of irrigation and drainage implemented in the modern flat rice paddies in Japan widened the gap between the surface of rice fields and the ditch due, which in many cases has cut off movements of aquatic life. However, in the subject region, the water level of waterways is roughly the same as the full-capacity water level of rice paddies, which retains an environment that allows water-dependent species to easily move about.</li> <li>• As noxious insects in rice paddies rarely appeared to start with, the use of agricultural chemicals was limited. In addition, given that this region is located on the left bank of Sakawa River, the level of groundwater was high, and many springs were found, there were waterways with water throughout the year and deep water lakes to supply water even during the agricultural off-season.</li> <li>• It is presumably for these factors that the habitat for native Medaka (Japanese killifish) continued to exist in an area of about 2 km north-south and 400 meters east-west, and today, it is the largest habitat for Medaka in Kanagawa Prefecture. Medaka in this region has been proven to be of native species based on the comparison made with the genes extracted from the Medaka in the 1950's.</li> <li>• The scientific name for Medaka is <i>Oryzias latipes</i> and the generic name originates from the scientific name for rice plant, <i>Oryza</i>. This reflects the fact that the behavioral ecology of Medaka is deeply related with rice paddies and that Medaka used to be the most familiar type of fish for the general people. In the recent years, however, Medaka is in danger of extinction.</li> </ul> <p><b>[Birth of Group of Kuwahara Medaka Rice and start of activities]</b></p> <ul style="list-style-type: none"> <li>• Subsequently, there began talks on the plan to construct urban planning roads and an industrial park, which prompted the launch of various activities calling for the conservation of Medaka.</li> <li>• Despite such activities, the decision was made to construct the roads. However, amid the heightening sentiment to protect biodiversity, citizens continued to question the actions taken. As a result, a "Committee to Discuss Conservation of flora &amp; fauna including Medaka in Kuwahara and Oniyanagi Districts of Odawara" was formed to hold discussions on protection measures among various interested parties.</li> <li>• Based on the activities of the citizens' groups and the Committee, various protection measures were considered, and the process raised the issue of who would be responsible for maintaining the environment. Hence, the Group of Kuwahara Medaka Rice and initiated a full-scale process to develop an economic system to conserve the environment.</li> <li>• Group of Kuwahara Medaka Rice, setting Medaka as its symbol, began pursuing activities to protect the habitat of Medaka through linking the value of living in the region with food as well as promoting continuation of agriculture.</li> <li>• Initially, the Group exploited sales channels using agricultural cooperatives and school lunch services, and subsequently, began direct sales to the general public. Rice has been sold under the name of "Kuwahara Medaka Rice" since the production of the fiscal year 2005.</li> </ul>

Purpose and objectives	<ul style="list-style-type: none"> <li>• In order to protect the beautiful landscape with organisms such as Medaka and agriculture, and to recover the relationship of local production for local consumption that serves as the base for this objective, the purpose is to purchase rice grown in the paddies of Kuwahara from local farms at the price favored by farmers and sell the rice to citizens at attractive price while conveying to the farms the wish to maintain the habitat of Medaka.</li> <li>• The basic concept is to link the local natural landscape maintained through agriculture, the value of local living, and food, maintain the relationship itself, and expand similar relationships in areas along the river. The characteristic of the initiative is that the “relationship” is valued and is considered more important than the concept of “organic, safe, and secure” which is attracting attention in Japan.</li> </ul>
Main contents	<p><b>[Major initiatives]</b></p> <ul style="list-style-type: none"> <li>• Sale of Kuwahara Medaka rice (mutually beneficial price-setting, exploitation of distribution channels, etc.)</li> <li>• Improvement of farming methods to conserve the habitat for Medaka, etc., which is the symbol of activities, and implementation of biotope.</li> <li>• Interaction between citizens and farms through agricultural experiences</li> </ul> <p><b>[Characteristics of initiatives]</b></p> <ul style="list-style-type: none"> <li>• By considering rice paddies and waterways as the commons of the local community and offering try-outs to experience agricultural activities as a start, there is an aim to have the citizens undertake management of the environment.</li> <li>• Sale of rice is considered as a means to link agriculture and citizens, and sales prices of rice are creatively set from the perspectives of enhancement of labor productivity at farms, improvement of taste and corresponding prices, and prices affordable to general citizens.</li> </ul>
Main achievements	<ul style="list-style-type: none"> <li>• It has become possible for farms to maintain a certain level of labor productivity, and simultaneously, for citizens to purchase tasty rice. There is growing awareness for the relationship among the local natural landscape, the value of local living, and food, which is maintained through pursuing agriculture.</li> <li>• With the continuation of agriculture, habitat for living things such as Medaka, newt, and catfish is protected. It has been confirmed that ten species of plants in danger of extinction also exist.</li> </ul>

## (2) Details of the Use and Management of Natural Resources from the “Five Perspectives” of the Satoyama Initiative

The table below shows the primary relevance of this case study to the five perspectives.

Details are given below the table for the perspectives which have high relevance (items with the “◎” mark in the table).

Five Perspectives	Relevance to this Case	
	Degree of Relevance	Summary of Relevance
1) Resource use within the carrying capacity and resilience of the environment	◎	<ul style="list-style-type: none"> <li>By implementing farming methods in consideration of living things in rice paddies such as Medaka and restraining the burden on the environment, the regenerative power of nature is sustained. At the same time, use of natural resources in harmony with the regenerative power of nature has been achieved through production and distribution of tasty rice, and a secondary ecosystem in which Medaka, hygrophyte plants, and others inhabit and develop.</li> </ul> <p><i>*Details to follow.</i></p>
2) Cyclic use of natural resources	○	<ul style="list-style-type: none"> <li>The system of locally consuming the rice produced locally is being achieved.</li> </ul>
3) Recognition of the value and importance of local traditions and cultures	○	<ul style="list-style-type: none"> <li>Identification of the traditional method of using water by studying the large drawing created in 1876 has served as a reference in the activities conducted today.</li> <li>Use of winter-flooded rice paddies, installation of multi-natural waterways, and other initiatives led to the recovery of the function similar to what found in rice paddies prior to the implementation of agricultural infrastructure improvement when the area was a habitat of various animals and plants, and a rice paddy environment that also maintains productivity has been formed.</li> </ul>
4) Natural resource management by various participating and cooperating entities	◎	<ul style="list-style-type: none"> <li>Other organizations besides the Group of Kuwahara Medaka Rice are also involved, and the Committee to Discuss Conservation of Medaka, etc. in Kuwahara and Oniyanagi Districts of Odawara has been created to promote collaboration with Kanagawa Prefecture, Odawara City, and experts.</li> <li>Citizens can get involved in agriculture through agricultural try-out activities, cleaning of waterways, and etc., and there is a growing awareness toward considering rice paddies and waterways as the commons.</li> </ul> <p><i>*Details to follow.</i></p>
5) Contributions to local socio-economics	◎	<ul style="list-style-type: none"> <li>Production of tasty rice, appropriate price setting, and improvement of labor productivity through exploitation of distribution channels have led to the continuation of agriculture.</li> <li>Citizens are able to purchase safe, tasty rice, and there is a growing awareness for the linkage between the local community and food.</li> </ul> <p><i>*Details to follow.</i></p>

### 1) Resource use within the carrying capacity and resilience of the environment

- Given that the area is the largest habitat for Medaka in Kanagawa Prefecture, Medaka has been set as a symbol in pursuing agriculture that incorporates technology to conserve the ecosystem.
- Specific elements of such technology for ecosystem protection include: securing of passage channels for Medaka by implementing Medaka fish ways, implementation of multi-natural type waterways, implementation of biotopes, maintenance of weeds in ridges between rice paddies to protect precious plants, and installation of winter-flooded rice paddies.

- A Medaka fish way, also called the small-scale rice paddy fish way, is furnished to enable Medaka and other fish to move about, by adjusting and connecting the waterways with rice paddies where gaps had widened in between, due to the implementation of modern agricultural infrastructure improvement. As rice paddies are temporary water zones where no large flesh-eating fish inhabit and are rich in various types of plankton, they are suitable for Medaka to lay eggs and grow. However, in recent rice paddies that emphasize productivity, passage channels in many cases are cut off in which case the small-scale rice paddy fish ways become effective. In Kuwahara District, some waterways have hardly any gaps with rice paddies in terms of water level, as the modern agricultural infrastructure improvement was not implemented. Near the connection between the waterway and the rice paddy, one can observe during certain seasons Medaka gathering around for plankton.
- Considering that while the activities to conserve Medaka can simultaneously conserve other living things, there exist living organisms that grow in different types of environment, biotopes of varying environment-types have been set. In addition, activities are pursued in consideration that biodiversity and organic cultivation do not necessarily match at all times, and hence various types of carefully categorized habitat must be formed in order to conserve biodiversity.
- Group to Protect Medaka and its Habitat in Sakawa River Waters, active in the local area, was established in 1999 and has been conducting research of Medaka for over 10 years. The Group has also worked in collaboration with various experts such as researchers in the local museums to conduct detailed research and monitoring. It has studied as many as 1,000 living species. The monitoring results are utilized to review and improve farming methods.

## 2) Natural resource management by various participating and cooperating entities

- In the subject region, multiple organizations other than the Group of Kuwahara Medaka Rice pursue activities that correspond to their respective objectives. Key activities are as described below.

- (1) Group to Protect Medaka and its Habitat in Sakawa River Waters: In addition to conducting monthly research of Medaka, the Group hosts symposiums and on-site visits.
- (2) Ashigara Group of Agriculture: The Group practices organic farming methods (especially deep-water rice paddies)
- (3) Odawara City Citizens Medaka Committee: An organization led by the municipal office, engaged in rearing activities, etc. to prevent extinction at schools and homes.
- (4) Group to Appreciate the Blessing of Rice Paddies: An organization based in the Junior Chamber International Odawara, which is engaged in hosting events of 250-participant level and in cultivation. The Group serves as the eye of the Junior Chamber International Odawara, and kindergartens and nursing support facilities are also organizationally involved. “Sakuradote (bank with cherry blossoms)”, the location in which the Group performs cultivation, is known for its beautiful cherry blossoms in spring, just as the name indicates, and some visitors have praised, “Have never seen such a beautiful Medaka habitat”.

- Given that currently, agriculture is undertaken in many cases by workers aged around 65 to 75, it is difficult to pursue various activities solely by farmers and even the maintenance of waterways is not an easy task. If the waterways are not adequately managed and algae grow excessively, the habitat of Medaka would shrink spatially. With the call of conservation group leaders, ordinary citizens have joined the effort to clean and maintain the waterways, and now support the infrastructure improvement. Although until then, rice paddies and waterways had been recognized as belonging to farms, by considering them as the commons and expanding the management body to include general citizens, the Group aims to secure individuals to undertake management.
- Currently, there are young workers in their 20’s involved in management activities, and in an effort to

sustain agriculture, there is a plan to develop such individuals as operators to enter into contracts with other farms. By doing so, it is estimated that an operator may be able to earn the level of income comparable to that of an average white collar in Japan based on revenues from his own farm as well as from operator fees.

### 3) Contribution to local socio-economics

- Group of Kuwahara Medaka Rice, by purchasing rice from farms at prices satisfying to farmers and selling the rice at prices attractive to general citizens, pursues activities for sustaining agriculture to link conservation of the secondary nature of the region, enhancement of the value of living in the region, and “food”.
- Group of Kuwahara Medaka Rice rolled out its activities by exploiting a distribution channel of having the local agricultural cooperatives purchase and stock rice to be used for public school lunches, and starting the system of selling rice produced in Kuwahara District. However, the agricultural cooperatives purchased rice at low prices, and even when rice was produced using the farming method considerate to Medaka’s inhabitation and environmental matters, there were limited benefits for farmers because the rice, in terms of the distribution structure, was no different from rice cultivated under regular methods.
- In addition, as the development plan for urban development roads emerged and purchasing of land began at a price of 250,000 to 300,000 yen per tsubo, it became evident that development would be pursued even in farmlands of Kuwahara if no action were taken.
- Taking into account such circumstances and the fact that farms had not pursued agriculture for the purpose of conserving Medaka, there was the need to have the farmers hold the willingness to continue agriculture, and Group of Kuwahara Medaka Rice independently began profit-generating sale of rice to general citizens.
- As the sale of rice was considered as the means for “linking local natural landscape maintained through agriculture, the value of local living, and food”, creative efforts were made in setting the sales prices.
- First of all, the purchase price from farms was set in the range between ¥10,200 and ¥10,700 per 30 kg of unpolished rice to achieve the level of labor productivity comparable to that of an average white collar in Japan. Although the price is far from being comparable to the transfer price of land for road construction, it is a key factor for driving motivation in farmers wishing to continue farming, and this approach has contributed to sustaining agriculture. There are also hopes that family members of farmers currently working in private companies may consider taking over farming in the future if they can earn the level of income comparable to that of an average white collar. Specific quantitative data is provided below.

<p>■ Income earned by producer of Kuwahara Medaka Rice: 2,500 yen per hour (earnings of 85,000 yen per tan (approximately 991 m<sup>2</sup>); labor of 34 hours per tan)</p> <p>■ Income earned by an average office worker in Japan: 2,400 yen per hour (annual income of 4.3 million yen* for 1,791 hours**)</p> <p><i>*Average annual income of office workers, directors, and part-time workers in private companies based on “the statistical survey of actual statistics for salary in the private sector” by the National Tax Agency.</i></p> <p><i>**Monthly gross working hours of offices with 5 workers or more in Japan based on “Monthly Labour Survey” by the Ministry of Health, Labour and Welfare (149.3 hours per month) multiplied by months (12 months).</i></p>
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- For farmlands to be retained in this region where residential developments and road constructions are active is extremely important also from the perspective of conserving the natural environment.
- It is important that the price of rice purchased from farms and sold to citizens is considered to be “a bit expensive” by the citizens. The price is set at a slightly high but affordable level for citizens to purchase (10 kg of polished rice for 5,400 yen).
- To ensure that Kuwahara Medaka rice, which is more expensive than others sold in the general market, to be continually consumed, it is important that the rice be tasty. Therefore, to secure good taste, the rice



mill was set in a low-temperature storage for milling rice, which was not the normal condition seen elsewhere. This kept the temperature of rice from rising even during milling, and rice could be milled without diminishing the good taste.

- Taste of rice was rated by testing and the price was set in accordance with the level of taste based on the advice of a professional. In the actual taste testing, it was proved that Kuwahara Medaka rice tasted better than the Niigata-made Koshihikari (a popular brand in Japan for its good taste) sold in the general market. Medaka rice, given its good taste and being cultivated in the local habitat of Medaka, the symbol of the region, continues to be consumed by local residents even though it is higher priced.
- Regionally featured free gifts are offered to periodic purchasers of Medaka rice, such as “Mizukakena (leaf vegetable)”, a local product not distributed in the general market, and black rice.
- Although Medaka rice is not inspected by a third-party to certify that it has been grown in the habitat of Medaka, the symbol of the region, visitors to the farmland can actually see for themselves Medaka swimming, which serves as proof.
- The concept of local production for local consumption is being realized as the rice cultivated locally is consumed in the region. As a result, farmlands are retained, which leads to conserving the precious secondary natural environment including the habitat of Medaka.
- As of today in 2010, Group of Kuwahara Medaka Rice purchases approximately 8.54 tons of rice for sale in the general market. Going forward, the Group plans on increasing the volume up to 20 tons. To achieve this objective, the following three-phased scheme has been considered, and the Group currently is in Phase I.

Phase I:	Low-temperature storage and mills have been secured to maintain good quality of rice.
Phase II:	Implement a rice separator to eliminate irregular grains to reduce processing time. Currently, the separation of irregular and stained rice is done manually, which takes about 90 minutes of the total pre-shipment process of two to three hours per bag (30 kg). By implementing the separation machine, processing efficiency can be improved and the handling volume can be increased up to 20 tons. Meanwhile, to expand business, sales of approximately 4.5 million yen per 10 tons are required at the least, and measures are currently being developed to achieve this objective.
Phase III:	Implement an economic model for a full-time farmer to be profitable In order to live on farming, rice must be sold at a higher price. There are cases of rice being marketed at very high prices, e.g. “Dozuki Rice”, milled using a method of 100 years ago, which does not damage the surface of unpolished rice, and rice with “embryo bud coating” distributed in Italy. Kuwahara is exploring various ideas to add creativity in production and distribution, such as increasing sales targets for black rice and supplying Indica rice. There is also the mechanism of a young worker to become an operator to enter into contracts with other farms and earn revenue. Under this system, the operator conducts farming at a contracted price determined by the landowner and the landowner can earn revenue simply from owning farmland and leaving the farming to the operator. The Group plans on making various creative efforts under this scheme in the aim to enable full-time farmers to earn enough revenue to live on.

- Multiple nursery schools organizationally participate in the activities conducted in Kuwahara District and the activities offer great opportunities especially for children residing in the suburbs to be in contact with nature. In fact, children, although they quickly get tired of performing tasks in rice paddies, look extremely happy playing in the paddies and waterways, and such activities are well recognized also by parents and teachers. Group of Kuwahara Medaka Rice recognizes the importance for children especially in ages around three to five to experience having fun in rice paddies, and even holds the idea of having the Kuwahara District itself serve as a nursery school.

End