

1. Regional Profile

Geographical Location	Country and Region	Kamikatsu Town, Tokushima Prefecture, Japan, East Asia												
	Longitude and Latitude	North Latitude 33° 53' 20", East Longitude 134° 24' 7" (Kamikatsu Town town hall)												
	Geographical Conditions	<ul style="list-style-type: none"> Mountainous agricultural area away from urban districts Roughly 20 km away from the nearest ocean in straight-line distance Roughly 530 km away from Tokyo (capital) in straight-line distance Roughly 25 km away from Tokushima City (prefectural capital) in straight-line distance 												
Natural Environment	Topography and Altitude	<ul style="list-style-type: none"> Kamikatsu Town is located in a mountainous area of 100 to 1500 meters above sea level, and the majority of the area is sloped. 												
	Climate	<ul style="list-style-type: none"> No weather observatory in town. In the adjacent town of Kitou, Naka Town the annual mean temperature is about 13.2°C and the annual precipitation is roughly 3,037 mm. Falls under Cfb (humid subtropical climates) in the Koeppen climatic classification. 												
	Vegetation and Soil	<ul style="list-style-type: none"> About 85% of the town is forests; primarily afforested areas for cedar with the remainder as Japanese red pine forest, Japanese chinquapin and evergreen oak copse forest, and orchards. Very limited rice terraces along mountain slopes. The soil is brown forest soil. 												
	Biodiversity and Ecosystem	<ul style="list-style-type: none"> According to past research, rice terraces have a high ratio of ridges between rice fields with varying landscape existing in mosaic patterns and hence, were highly functional in maintaining species diversity of grass land plants (Kamata 2002). Rice terraces in Kamikatsu Town is thought to be an important environment for conserving biodiversity. However, the environment has been changing over the past several years with an increase in abandoned farmland. Takamaru Mountain, located to the west of the town, has an elevation of 1,438 meters and natural beech forests where various types of plants grow. Takamaru Mountain is at the source of a major river, the Katsuura River, which flows through the town, and is important as a headwater forest for villages. 												
Social Background	Population and Changes in Population	<ul style="list-style-type: none"> The population of Kamikatsu Town was 6,356 in 1950, but declined to 1,955 in 2005, due to the increased outflow of the population to urban areas. As of 2005, the aging rate (proportion of people aged 65 or older to the total population) is 48.5%. 												
	History and Culture	<ul style="list-style-type: none"> At Kamikatsu Town, forestry began in the Edo Period (1603-1868) and was a major producing area of lumber, firewood, and charcoal. 												
	Regional Economy (Major Industries, Livelihood (including data and forecasts))	<ul style="list-style-type: none"> The core industries of Kamikatsu Town are agriculture and forestry. The number of workers in each industry sector in 2005 is as follows. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Primary Industry (agriculture, forestry and fishery)</td> <td style="text-align: center;">414</td> <td style="text-align: center;">41.3%</td> </tr> <tr> <td>Secondary Industry (mining, manufacturing and construction)</td> <td style="text-align: center;">209</td> <td style="text-align: center;">20.8%</td> </tr> <tr> <td>Tertiary Industry (commerce, tourism and others)</td> <td style="text-align: center;">380</td> <td style="text-align: center;">37.9%</td> </tr> <tr> <td>Total*</td> <td style="text-align: center;">1,003</td> <td style="text-align: center;">100.0%</td> </tr> </table> <p><i>*Note: As the percentages of workers in Primary Industry, Secondary Industry, and Tertiary Industry are rounded off to one decimal place, they may not add up to 100.0%.</i></p>		Primary Industry (agriculture, forestry and fishery)	414	41.3%	Secondary Industry (mining, manufacturing and construction)	209	20.8%	Tertiary Industry (commerce, tourism and others)	380	37.9%	Total*	1,003
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2. 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

- Kamikatsu Town covers a total area of 10,968 ha of which 9,373 (85%) are forests and 224 ha (2%) are farmland (as of 2005).
- Almost all areas of Kamikatsu Town are forested mountainous regions. Given that forestry used to be pursued actively, this area primarily consists of artificially developed cedar forests.
- In addition to rice paddies that exist along mountain slopes and valleys, there are orchards that produce fruits such as yuzu (a citrus fruit). Together with the surrounding forests, they create the landscape of the farming village in a mosaic pattern.

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

- On the farm, rice, vegetables, and fruits are produced as food. Livestock (chicken) is also raised.
- While the area has abundant farmland as well as forests, the cyclic use of agricultural and forestry resources, e.g. the acquisition of compost from the woods to be applied in farmland, is diminishing rapidly.
- The production of firewood and charcoal as an energy source was active in Kamikatsu Town and used to compose a major industry. At the present, however, demand for firewood and charcoal as a fuel source is rapidly decreasing.

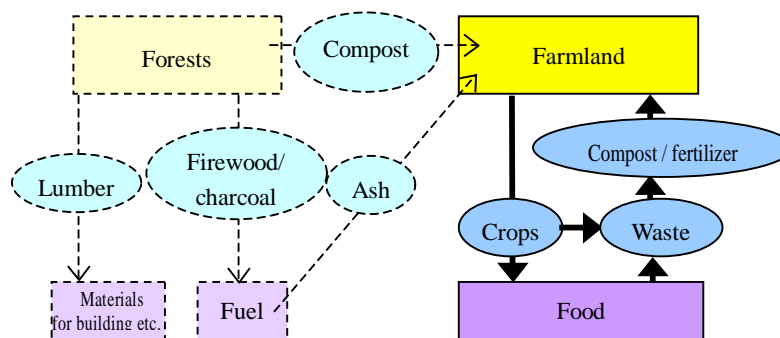


Figure: Overview of use of natural resources
(Light-color and dotted lines: items whose use has been considerably decreased)

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

[Agriculture & forestry in the past]

- Most part of the town of Kamikatsu is sloped land in between mountains. On the mountain slopes there used to be rice terraces where the double-cropping of rice and barley / soybean, etc. was carried out. The rice terraces formed a distinctive farming village landscape.
- Forests covered most of the town and the warm and humid climate was suited for cedar growing. Therefore, forestry was an active industry since the Edo Period. Also thereafter, demand for lumber, firewood, and charcoal was high, and forestry became a core activity in Kamikatsu Town. When demand for lumber jumped due to post-war high economic growth and a restoration rush in residential constructions, cedar trees were widely planted to expand the woods.

[Decrease in rice terraces due to changes in crops and a reduction of land for cultivation]

- The “Act on Special Measures Concerning the Promotion of the Fruit-Growing Industry” was enforced in 1961 as a result of which the growing of Japanese tangerines became active. Japanese tangerine cultivation was economically more attractive than rice growing and it became the key source of revenue as rice terraces shifted to orchards.
- Given the promotion of bread after the World War II, demand for rice began to decline and gradually eliminated the need to grow rice as a second crop. In addition, a policy of reducing rice fields aimed at production adjustments was implemented, which made it difficult even to maintain rice production. As a result, rice terraces at Kamikatsu Town dramatically declined.

[Deactivation of agriculture & forestry due to changes in socioeconomic conditions and disasters]

- As the importing of lumber liberalized and the distribution of low-priced imported lumber began, domestic lumber prices collapsed and forestry could no longer function as an economic activity. As a result, the vast afforested area was left unmanaged. It turned to a “green desert” with no undergrowth, and there was danger that the woods could no longer serve as headwater forest, prevent landslides, or offer other public benefits.
- As areas of Japanese tangerine cultivation expanded to western Japan and the importation of fruits such as bananas and oranges liberalized, Japanese tangerine prices fell sharply. Further, Kamikatsu Town was hit by an unprecedented cold wave that destroyed most of its tangerines, ultimately ruined the Japanese tangerines cultivation in the area.

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

- In order for the town and the residents to think for themselves as one entity and make independent efforts to develop the town, Kamikatsu Town promoted concurrence among the residents and developed the “Kamikatsu Town Regional Activation and Promotion Plan”. Based on this plan, various efforts are pursued to develop the region.

3. Details

(1) Overview

Among the various efforts made to activate Kamikatsu Town, “Irodori (coloring) Agriculture” which is a way of gathering various plants in the town and selling them as “tsumamono (garnish)” (any leaf, branch, flower, etc. placed as a decoration to a Japanese dish), is a widely known example of a successful business that utilizes the natural resources of mountainous farming villages. The following outlines this “Leaf Business”.

Location	Kamikatsu Town, Tokushima Prefecture
Involved Parties	[Land owner] Local residents (primarily farmers) [Parties involved in efforts] Irodori Sectional Meeting, Kamikatsu Town, Irodori Corporation
Background and history	<p>[Current status and progress of agriculture & forestry]</p> <ul style="list-style-type: none"> Forestry, rice-growing on terraces, and Japanese tangerine cultivation once were the core activities of the town. However, impacted by social conditions such as the liberalization of imports and a decline in population, it became difficult to continue these activities. Tangerine cultivation, in particular, was destroyed due to a cold wave. <p><i>* For details, refer to “2-2) Problems Associated with the Use and Management of Natural Resources and their Impact on Biodiversity”.</i></p> <p>[Launch and growth of Irodori (coloring) Agriculture]</p> <ul style="list-style-type: none"> In order to establish a core industry to replace Japanese tangerine cultivation, Kamikatsu Town and the agriculture cooperative union considered various possibilities. They came up with an idea of utilizing “leaves”, which are abundant in Kamikatsu Town, as “tsumamono (garnish)” products. In 1986, a test sale of “tsumamono” was initiated with the support from four farmers. As a result of subsequent trial and error, the sale of “tsumamono” gradually got on track, and in 1991, Irodori Corporation was established as a third-sector company. Today, the business has grown to record annual sales of 260 million yen, supported by as many as 190 producers.
Purpose and objectives	<ul style="list-style-type: none"> To turn a non-sustainable social system into something that is sustainable, making the small town of Kamikatsu succeed with this major global issue ahead of any other area in the world, and to make Kamikatsu Town a town to be proud of. As part of the above objective, have residents take the lead and make good use of local natural resources to pursue “Irodori (coloring) Agriculture” with the aim to promote enhancement of welfare and income for residents
Main contents	<ul style="list-style-type: none"> Parts of plants harvested in the region, such as coloring leaves, persimmon leaves, branches and leaves of nandina, camellia leaves, and blossoms of plum, cherry, and peach, are sold as core products to be used as “tsumamono (garnish)” in Japanese dishes.
Main achievements	<ul style="list-style-type: none"> “ Irodori (coloring) Agriculture” as a new core industry for the town, contributes to stimulating the economy. In addition, it also has significant economic impact as it caused the increased number of visitors to the town, for example to observe the business. An industry led by the residents and that utilizes natural resources of the area has grown to the extent that it attracts attention not only in Japan but also overseas, and consequently, is a source of pride and confidence among the residents. Elderly people can actively be involved in “Irodori (coloring) Agriculture”, which helps them earn income and makes them feel fulfilled in life. As a result, the town realizes welfare through promoting industry (industrial welfare).

(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 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"> Kamikatsu Town utilizes its topographical feature of having notable differences in elevation as well as production of flowers and plants which has been carried out to distribute a wide variety of products (currently over 320 types) over the long term. <p><i>* Details to follow.</i></p>
2)Cyclic use of natural resources	○	(Nothing in particular)
3)Recognition of the value and importance of local traditions and cultures		<ul style="list-style-type: none"> The “Leaf Business” succeeded by linking the various plants available in the town with “tsumamono (garnish)” that accompanies traditional Japanese dishes and cultivating a new market. <p><i>* Details to follow.</i></p>
4)Natural resource management by various participating and cooperating entities		<ul style="list-style-type: none"> The residents, Kamikatsu Town, the agricultural cooperative union and other key entities of the area cooperate and work together on a town-wide basis to run the business. To facilitate the handling of orders and promote smooth communication, efforts are focused on developing an information network. <p><i>* Details to follow.</i></p>
5) Contributions to local socio-economics		<ul style="list-style-type: none"> An industry that enriches the lives of the elderly and provides income has been created, as a result of which “industrial welfare” has been realized. - “ Irodori (coloring) Agriculture” has grown to a business that achieves annual sales of 260 million yen, and the producers involved have grown to 190 people. Consequently, the business contributes to stimulating the economy of the town. This has also produced economic impact on other industries (accommodation facilities and market) in the town through the increased number of visitors to the town, for example to observe the business or attend seminars. By planting various plants in abandoned agricultural fields, this project also contributes in the conservation of landscape and environment. <p><i>* Details to follow.</i></p>

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

[Products that well utilize natural and industrial features]

- The farmlands in Kamikatsu Town have differences in elevation that range from 100 to 700 meters. Due to this, not only is it possible for the area to offer a wide selection of agricultural products and trees, it can also supply various products over the long term, since even the same item can be harvested at

varying periods in accordance with the elevation.

- Kamikatsu Town has long been producing flowers and trees, and also growing garden plants in plastic green houses for early blooming and distribution in the market. Hence, the town has been capable of offering a variety of beautiful gardening flowers and plants.
- In the “Irodori (coloring) Agriculture” business, such natural and industrial features of Kamikatsu Town are effectively used to distribute a wide variety of products (currently more than 320 types or more) over the long term.



Pictures: Examples of “tsumamono (garnish)” used. (Source: Irodori Corporation website)

3) Recognition of the value and importance of local traditions and cultures

[Focus on “tsumamono (garnish)” that accompanies traditional Japanese dishes]

- Prior to the launch of “Irodori (coloring) Agriculture”, there was no market for “tsumamono” and chefs used to gather materials in the woods and gardens on their own.
- A staff of the agricultural cooperative union, who is one of the founders of the business, (currently a representative of Irodori Corporation) initially undertook sales by bringing leaves and flowers produced in Kamikatsu Town and visiting Japanese restaurants and hot spring inns. At that time, however, there was no concept of purchasing “tsumamono (garnish)” and it was difficult to identify the needs of chefs. Hence, closing deals was quite difficult.
- By spending a lot of time conducting research, requirements for “tsumamono” were identified and the business got on track.

4) Natural resource management by various participating and cooperating entities

[Doing business town-wide]

- The “Irodori (coloring) Agriculture” was planned and launched right from the start as a “regional business” from which residents can gain benefits. Individual residents get involved in the production of items and the Kamikatsu Town administration together with the agricultural cooperative union function to provide support and carry out the sales.
- Sales and distribution of “tsumamono (garnish)” initially were done through the agricultural cooperative union. As the business grew, however, there was a need for a more structured approach and hence in 1999, Irodori Corporation, a third-sector company was established.
- Irodori Corporation, serving as an integrator that links individual producers with the market, carries out business activities, provides information that connects the market with producers, operates an information network system for handling orders, and performs other activities.

[Development of an information network enabling stable provision and expanded distribution]

- Demand for “tsumamono (garnish)” can fluctuate considerably where for example; events and gatherings can push up orders. In addition, as the freshness of products is essential, items must be prepared and delivered in a short time frame.
- To respond to such tough requirements, efforts were focused on the development of an information network to quickly and accurately handle orders in collaboration with the individual producers.
- In 1992, a system that links the town’s disaster prevention wireless with household fax machines was implemented. In 1999, a type of PC that can be easily used even by the elderly was developed, and a network system that links individual producers, sales and distribution locations, and the market was developed.
- These efforts led to realizing the distribution of “necessary products of necessary volume when necessary” to the market. Consequently, the “tsumamono (garnish)” of Kamikatsu Town gained increasing credibility and further growth.
- The computer network system is used not only for processing orders but also for producers to understand market conditions and the results of their efforts (sales, ranking, etc.). Thus the system has contributed considerably in increasing eagerness and promoting creativity.

5) Contributions to local socio-economics

[Realization of “industrial welfare” based on participation by the elderly]

- The “Irodori (coloring) Agriculture” involves the simple gathering of products such as leaves and flowers in the neighborhood that are light-weight and of low volume. Therefore, even females and the elderly can easily take part in this activity.
- “Irodori (coloring) Agriculture” has taken into account the participation of females and the elderly right from the beginning. In 1998, 100 million yen were spent on the development of a computer system that can be handled easily even by the elderly so that the participants can check market conditions in their homes. And then, PC were set up in home of each participant.
- Today, of the 190 individuals participating in the “Irodori (coloring) Agriculture”, more than 50% are females and the average age is 70. For the elderly, walking up slopes to gather leaves, accessing the daily delivered “Today’s Message” on the PC to check sales, rankings, and other data, and thinking, “What shall I deliver tomorrow? What can I grow?” can add fulfillment to their daily lives. It also leads to preventing cognitive impairment.
- Through these efforts, “industrial welfare” was realized where the elderly engage in business and consider working as a way to enrich their lives.

[Other contributions to activating the local community and economy]

- The “Irodori (coloring) Agriculture” has today grown to be a business earning 260 million yen in annual sales, and the products are delivered nation-wide including the metropolitan areas of Kyoto, Osaka, Kobe, and Tokyo. The business accounts for approximately 80% of the “tsumamono (garnish)” market in Japan.
- Producers have increased from an initial four to 190, and the business has contributed considerably to stimulating the economy of the town. As individual producers can easily participate, immediately gain income, and expand income with some creativity, the business has become quite attractive.

- Given that the “Irodori (coloring) Agriculture” and various other efforts proved successful, Kamikatsu Town has attracted attention not only in Japan but also from overseas. This led each of the residents to have confidence and pride in being a resident of Kamikatsu Town.



Picture: A producer that supports the “Irodori (coloring) Agriculture” (Source: Irodori Corporation website)

End