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**THE DEVELOPMENT OF THE
JAPANESE REMOTE ISLANDS**

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1. Introduction

Japan is a nation of islands. The mainland itself consists of five islands, namely Honshu, Hokkaido, Kyushu, Shikoku and Okinawa. There are also 435 inhabited small islands, constituting just under 3% of the total Japanese land area, in which around 1% of total inhabitants of Japan reside. Although the word island refers to a land surrounded by sea, in this study we shall confine our definition of an island as one with a land area of 1000 Km² or less. The five "mainland" islands are therefore excluded from this definition.

This study is an attempt to describe the main characteristics of the Japanese islands, and assess the extent to which the Remote Islands Development Act has contributed to their development. The study also contains a number of suggestions as to what could be done to further promote the development of the Japanese islands.



A View of Geiyo Islands in the Seto Inland Sea

With the closing of Japan to the outside world in the seventeenth century, many islands lost their "international" advantage and gradually became more backward than mainland Japan. Their isolation and small size proved to be a large disadvantage within a Japan closed to the rest of the world.

With the re-opening of Japan to the rest of the world, in the second half of the nineteenth century, the fate of the islands did not improve much. The advantage

of the islands was mostly related to their geographical location, in that they could be used as stepping stones for maritime transport, but with modern developments in sea transportation this function decreased in importance.

Immediately after World War II, Japan had a shattered economy both on the mainland and the islands. However, the main-

land started to develop at a relatively fast rate in the early fifties, but the islands failed to develop as fast, and the disparities in per capita income tended to grow.

The Remote Islands Development Act (RIDA) was passed in 1953, after it was realised that the 1950 Comprehensive National Land Development Act did not adequately cater for the special needs of certain areas with particular problems such as the remote islands.

The major thrust of RIDA is infrastructural development such as the construction of harbours, ports and roads. The projects are mainly implemented by the local government, and the subsidy element by the Central Government is usually higher than that of the main islands. This act will be discussed in some more detail in the next section.

Population and Area

The distribution of Japanese islands by prefecture is given in Appendix 1, which also gives the population

2. Demographic and Economic Trends

The Japanese islands are widely scattered, with the distance between the northernmost and the southernmost islands being around 4000 kilometres, which is approximately the same distance between the westernmost and the easternmost islands. The total area of ocean in which the islands are situated is about 13 times that of the land area of Japan.

These islands are rich in culture, natural beauty, and indigenous species of flora and fauna. Since ancient times the Japanese islands have played an important role in the formation of Japanese history and in conveying cultural and technological influences from other countries, especially from China and Korea.

In the past, many Japanese islands used to be more advanced than mainland Japan through their very productive coastal area and international interaction.

and land area of the islands. The prefecture which contains the largest number of islands is Nagasaki, with 60 islands, with a land area of 1610 Sq. Km. Other prefectures containing many islands are Kagoshima (28 islands), Yamaguchi (22 islands) and Hiroshima (20 islands).

Tables 1 gives a summary of the population and land area of the islands. In 1990, there were 432 inhabited islands, 280 benefiting from the provisions of RIDA, while 54 others from toher development acts, namely the Ogasawara Development Act, the Amami Development Act and the Okinawa Development Act. As stated, RIDA was enacted in early fifties, when the Amami, Ogasawara and Okinawa islands were still occupied by the US, and for these reasons these islands are covered by separate acts, which have many similarities to RIDA.

Around 100 inhabited islands do not fall under these development acts either because they are very near the mainland or bridged to it or because their eco-

nomic performance does not warrant special consideration.

Population. Table 2 shows the distribution of the Japanese remote islands by population size. It can be seen from the table that three fourths of the islands have a population of under 1000, with the smallest islands having a population of a few families. Only 16 islands have a population of over 10,000.

Land Area. Table 3 gives the distribution of the islands by land area. It can be seen that about a third of the islands have a land area of under 1 Km². About 45% of the islands have a land area of under 10 Km², which means that three fourths of the islands are really very small. Of interest is that 5% of the islands have around 70% of the Japa-

Table 1
General Information about Japan and its Islands

	Number of islands	Area Km ²	Population Thousands
Mainland "islands"	5	367,473	122,075
Inhabited small islands	432	10,264	1,536
Islands covered by RIDA	280	5472	604
Islands covered by OIDA	4	68	2
Islands covered by AIPD	8	1239	143
Islands covered by ODA	42	1017	129
Islands covered by Acts	334	7795	879

RIDA = Remote Islands Development Act. OIDA = Ogasawara Islands Development Act
AIDA = Amami Islands Development Act. ODA = Okinawa Developments Act.

nese land area covered by the small islands.

Population decline. A characteristic of the Japanese Remote islands is their declining population. Appendix 2 gives a picture of population change between 1990 and 1991, and shows that there was a population decline in practically all islands from all prefectures. It also shows that although there was a natural decrease in population (difference between births and deaths) this was very small, and the decline in population of the islands was mostly explained by out-migration.

Table 4 gives an indication of the population decline in islands ever since 1955. Although the figures in different years are not strictly speaking comparable, yet it is clear that there was a drastic decline in population. In 1960. The population was 1.23 million in 287 islands, which decreased by about 50% in by 1990 in approximately the same number of islands.

Ageing population. Coupled with the depopulation problems there is the additional one that the population is aging, in the sense that the older age groups are taking a large proportion of the total. In 1990, around 20% of the islands' population were aged 65 and over, compared to 15% in 1980. The

Table 3.
Japanese Remote Islands Classified by Size

Range (Sq. Km.)	Islands		Population	
	Number	%	Number	%
Under 1	106	31.6%	54	0.7%
1 - 10	150	44.9%	538	6.9%
11 - 50	52	15.7%	1099	14.1%
51 - 100	11	3.3%	772	9.9%
101 - 500	11	3.3%	2558	32.8%
Over 500	4	1.2%	2773	35.6%
Total	334	100.0%	7794	100.0%

Table 4.
Population Changes over Time in Islands under RIDA

Year	Number of Islands	Total Population	Percent of 1955	Per Island	Percent of 1955
1955	171	1124873	100.0%	6578	100.0%
1960	287	1237533	110.0%	4312	65.5%
1965	341	1269300	112.8%	3722	56.6%
1970	318	1048060	93.2%	3296	50.1%
1975	312	954610	84.9%	3060	46.5%
1980	293	724512	64.4%	2473	37.6%
1985	288	667134	59.3%	2316	35.2%
1990	280	604364	53.7%	2158	32.8%

in the Japanese islands work in the services sector, the bulk of which in wholesale and retail trades and in sundry personal services.

Tourism, which generates considerable employment jobs and income in the services sector in many islands of the world, is not very important when considering the Japanese islands considered as a whole, although there are about 30 islands whose major industry is tourism. Many other islands would seem to have a good potential for tourism due to their natural beauty, restful environments and unique cultures.

1990 percentage of elderly persons is much higher compared with Japan as a whole, which in the same year stood at 12%. This aging population tendency is leading to a reduction in the vitality of the local communities and a larger ratio of dependents on the gainfully occupied persons.

The Economy

The economy of the Japanese remote islands is dominated by the primary sector, mostly fishing and agriculture, and by services industries. This becomes evident by the 1990 distribution of employment given in Appendix 3.

Primary Production. About 19% of the gainfully employed work in agricultural and forestry activities and 12% in fishing activities, which means that about 31% of the gainfully occupied work in the primary sector. In Japan as a whole the proportion of gainfully occupied persons in the primary sector was around 7% in 1990.

These percentages are of course averages, and a more detailed examination would suggest that there are extreme cases where primary production employment in certain islands exceeds 80% of the total.

Although generally speaking, employment in primary production tends to be a relatively low earning one, there are some islands that have resorted to modern techniques such as fish farming, a common industry in the islands of the Miyagi prefecture, and horticulture.

Services Sector. About 41% of the gainfully employed

Because of the large dependence on personal services and primary production, firms on the islands tend to be relatively small. In the Japanese mainland, the average employment per firm is just over 9 persons, whereas on the islands the average is just 5 persons per firm.

Secondary production. Around 21% of the gainfully occupied work in the mining, construction and manufacturing. Only around 9% work in manufacturing, indicating that this type of production in the islands tends to be relatively small. On the mainland the manufacturing sector employs around 24% of the gainfully occupied.

Again here, the overall average hides considerable variation. There are about a dozen islands where manufacturing (including shipping) is very important. These include Kasadoshima in Yamaguchi prefecture, Ieshima in Hyogo Prefecture, Inujima in Okayama prefecture, Kanawajima and Chigirijima in Hiroshima Prefecture, Naoshima in Kagawa prefecture, Minoshima and Ohmijima in Ehime prefecture, and Ohshima, Koyagijima and Kiriniokojima in Nagasaki prefecture. However in the vast majority of the islands, manufacturing production is underdeveloped or non-existent.

Public sector employment. About 6% of those gainfully employed in the Japanese islands work in the public sector. Although public sector employment appears to take a small proportion, a considerable amount of employment in the Japanese islands is generated through municipal offices through the direct effect on employment of public sector workers and through the indirect effects of subsidised public works.

Table 5 . Changes in Number and Composition of Employment between 1985 and 1990

	Agriculture	Fishing	Construction	Manufacturing	Distribution	Personal Serv.	Other Serv.	Public Sect.	Total	Unknown
1985	99484	57107	51188	47378	23764	76254	70498	22957	448940	310
	22.2%	12.7%	11.4%	10.6%	5.3%	17.0%	15.7%	5.1%	100.0%	0.1%
1990	78871	49354	47799	38867	22813	80554	67238	23113	409477	868
	19.3%	12.1%	11.7%	9.5%	5.6%	19.7%	16.4%	5.6%	100.0%	0.2%

Table 6
Budget Revenue for the Remote Islands

Type of Inflow	1985	1986	1987	1988	1989	1990	1991
No. of Islands	340	340	340	338	336	335	332
Tax from Area	38525	41280	43430	43919	46376	46982	47581
Central Govt.	195925	202082	215449	234512	274363	288210	307617
Prefecture	43187	43158	46543	46685	48219	52268	55251
Loans	40420	42687	48506	50098	47660	52727	65519
Others	42981	44811	47466	48691	59159	71353	84285
Total	361038	374018	401394	423905	475777	511540	560253
% Central Govt.	54%	54%	54%	55%	57%	56%	55%
% Local Tax	11%	11%	11%	10%	10%	9%	9%

Changes of employment over time. Table 5 shows how the distribution of gainful employment between 1985 and 1990. Three important tendencies that emerge. Firstly employment has declined and secondly the relative share of manufacturing employment has declined and thirdly the percentage share services employment, notably in personal services, has increased.

Finance. Around 1.8% of central government funds have been allocated to the islands in recent years, which suggests that the budget allocation to the islands is proportionately higher than the population proportion in the islands. It is calculated that the average amount of money spent on public works for each islander is three times as large as that spent on each inhabitant of the mainland (Wake, 1992).

Table 6 shows that around 55% of the islands budget comes from central government funds. On the other hand, only around 9% of the islands financial requirements originate from locally raised taxes, and the ratio has tended to decrease in recent years.

Education. Although education facilities on the islands have improved, they do not compare favourably with those of the mainlands. One reason for this is that overhead costs for a small population tends to be rather high. The average size of schools tends to be very small and there are cases were an individual high school on an island takes less ten pupils.

The chances of finding a job following middle and high school graduation are not very high in the islands, a situation that has already been referred to with regard to out-migration. Table 7 shows that 96% of middle school pupils move on to high school, with only 1% finding a job on the islands. Out of those moving to

high school, about a third move on to college education and only 7% find a job on the island. The remaining 58% either move out of the island to find a job or remain unemployed.

Overall Picture

From the above brief description of the Japanese remote islands the following general characteristics emerge. The islands are experiencing a depopulation trend and have

an aging population. They depend excessively on primary production and have a very small manufacturing base. The chances of young persons finding a job on the island are not very good, giving rise to net migration. All this has happened against a background of infrastructural development arising from the Remote Island Development Act which however was not enough to reverse the out-migration tendency. Most of the financial requirements of the island originate from the central government.

This is not a pretty economic picture of the Japanese

Table 7. School Graduates in Japanese Islands

	Middle School		High School		Total	
	Amount	%	Amount	%	Amount	%
Number of Graduates	12973	100.0	10081	100.0	10653	100.0
Found Jobs in Island	129	1.0	722	7.2	851	8.0
Found Job out of Island	178	1.4	4140	41.1	4318	40.5
Continued School	12401	95.6	3411	33.8	3411	32.0
Left school without job	265	2.0	1808	17.9	2073	19.5

islands, and contrasts sharply with the pretty pictures of the scenic beauty of these same islands. We shall argue that the development policies with respect to islands should address a number of problems so as to promote lasting development.

3. The Remote Island Development Act

The Remote Islands Development Act (Law number 72) was enacted in 1953 with a ten year duration, with the aim of mitigating the disadvantages that these islands face in view of the fact that they are surrounded by sea, have a relatively small area, and are isolated from the mainland.

Generally speaking the backwardness of the islands is measured in terms of their capita GNP, but other indicators related to the development of the infrastruc-

ture and health and education services are also utilised for this purpose. The Act was extended several times, for additional ten-year periods, with the last extension taking place in April 1993 until 1 March 2002.

Objectives of RIDA

The ultimate objective of RIDA was to develop the economies of remote islands and improving the welfare of the people living in those islands.

For an island to be included under this act, it must first of all be designated as such by the Prime Minister, following the advise of the National Land Agency. Such a designation has to be made public.

There are five categories of islands under the RIDA. Category 1 covers islands relatively close to the mainland. This refers to the islands in the Seto Inland Sea. These islands are very near the industrial heart of mainland Japan, and therefore have certain distinct characteristics.

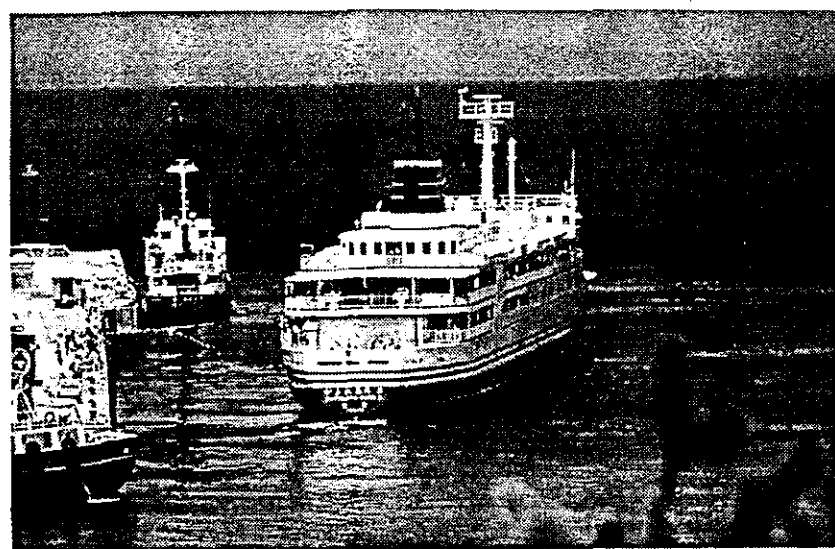
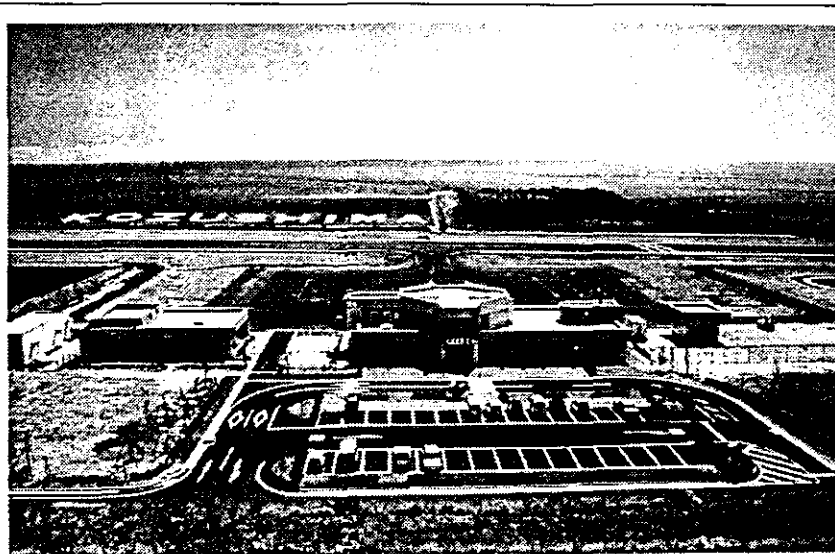
Category 2 are islands in the outer sea, but not very far from the mainland. Category 3 applies to islands which are in a cluster or group, while category 4 relates to relatively large single islands in the outer sea. The fifth category covers small isolated single islands.

The Remote Island Development Plan, as contemplated by law, must contain the following elements:

1. Improvement of sea and air transport and other methods of communication, including the building of harbours, roads, and airports with the aim of facilitating transport and communication between the island and the mainland and within the remote island itself;
2. Improvement of fishing ports, forest roads, farmland, electrical facilities, necessary for developing resources and promoting industrial development within the island;
3. Improvement in land conservation and methods to prevent or mitigate the effects of natural disasters such as floods and typhoons in remote islands;
4. Improvements in educational, cultural and medical facilities which are necessary for the welfare of inhabitants of remote islands

Procedures of the Act

Initially the Remote Island Development Act was beset by bureaucratic difficulties due to the fact that



In some islands sea and air transport communication has improved considerably as a result of the Remote Island Development Act. In others, however, there is much to be desired in this regard.

around 40 sections from a large number of ministries were involved, giving rise to delays and inefficiencies in appropriating funds.

Another initial problem was that RIDA did not specify what is a remote island, and during the ten years of the first act, islands were redesignated eleven times. Some islands have been removed from this designation due to being connected by bridges or land reclamation.

In 1957 this procedure was simplified with the end results that small scale funding was only processed through the Economic Planning Agency, and the latter created a new division to deal only with remote islands. More recently, the National Land Agency has been given this task.

The plans for a specific islands are drawn by the respective prefectural governors, and submitted to the Prime Minister. After receiving the plans, the Prime Minister will take steps to implement them, acting on

the advice of the National Land Development Council. If a plan already exists for the island, under the Comprehensive National Land Development Act (Act No. 205 of 1950) the plan under the RIDA must be in harmony with the former plan.

In principle the local governments are responsible for the expenses of their administration, but the national government assists in the payment of social welfare, public works projects, disaster relief, and other major expenses, with the aim of ensuring that national policies are implemented at the local level. In the case of the RIDA, there is a schedule of subsidisation by the state to the local public bodies or by others who are charged with the execution of the work involved, indicating the share of expenses met by the Treasury. The share is adjusted for grants received by the local public bodies under the Local Grant Tax Law (Law No. 211 of 1950) and the Law relating to Damage to Public City Engineering Facilities (Law No. 97 of 1951) and other laws where state subsidies are contemplated.

The annual development plans of the islands must follow certain procedures according to the law. Certain types of public works have a larger share of central government funds than is the case on the four main islands, to lighten the financial burden of the islands. In the case of ports and harbours, central government funds cover a very high proportion of expenses. Defrayment of expenses to central government for certain public works is also a common occurrence.

The act also permits the provision of loans and subsidies to the local government. This however has hardly ever been utilised.

The National Land Agency. RIDA assigns an important role to the National Land Development Council, with regard to assessing the development performance of the islands. This agency, which is a quasi-independent body, operates within the Office of the Prime Minister. It was set up in 1974 in line with the National Land Use Law. It is headed by a minister appointed by the Prime Minister. The Agency's main tasks are to formulate land-use plans, coordinate urban-planning, water resources management and regional land development.

Matters related to the development of the remote islands are dealt within this agency, through the Remote Island Development Division, which itself forms part of the Regional Development Bureau of the Agency.

Recent Extension of RIDA

The 1993 extension of the Act, until March 2002, introduced a number of innovations, including:

1. *Specification of more detail:* The act, as amended, introduces the clause "which play an important role

in national land preservation, marine resources use and environment protection" thereby assigning national importance to the fate of the islands, which in previous acts were not considered as nationally important. This clause also specifies the main areas in which islands can contribute most to the national well-being of Japan.

2. *Expansion of the specific areas:* Certain areas off the development plan have been expanded to include development of living environment, promotion of welfare for the elderly and development of the tourist industry.
3. *Introduction of a special depreciation and tax preferential treatment* These preferences apply to industrial machinery to promote industrial development.
4. *Special consideration for the small size of enterprises:* Island firms tend to be very small and this is given special consideration in the recent extension, by providing financial support, specially tailored fiscal measures to channel tax revenues into industrial investment, and the possibility for raising local bonds.

4. Brief Assessment of RIDA

The Remote Island Development Act has had a wide array of advantages to the Japanese Remote Islands. Although the Act is associated mostly with infrastructural development, it has also had a positive impact on other aspects of island life.

Infrastructural Development

Through the financial support of the Central and the Prefectural Governments, many islands have developed their infrastructural, through improved sea and air ports, better roads. In this way, the gap in infrastructural development between the islands and the mainland has narrowed.

Wake (1992) gives many indices of infrastructural development between 1970 and 1990 to show that great improvements have taken place in this regard. By way of example, he shows that water supply index was 80% of the national average in 1970 and reached 100% in 1990. Similarly sewage disposal was only 66% of the national average in 1970 and this increased to 83% in 1990.

There was also, as a result of RIDA, a marked improvement in sea transport and to a lesser extent in air transport, between the mainland and the islands.

Enhanced Awareness

An important success of RIDA has been that through it the islanders have become more aware of the prob-

lems which their islands face. The process of identifying suitable projects for financing under RIDA has itself helped the authorities and leaders of the islands to articulate the problem, identify its sources and propose solutions.

Identification of suitable projects. A related advantage is that through RIDA, the islanders know that the central government is aware of their problems, and that if suitable projects are identified, they could find financial backing for them.

This improved awareness by the islanders of their own problems has had two related advantages, namely the formation of island associations and has given rise to more attention being given by the planners on human needs.

Formation of Island Associations.

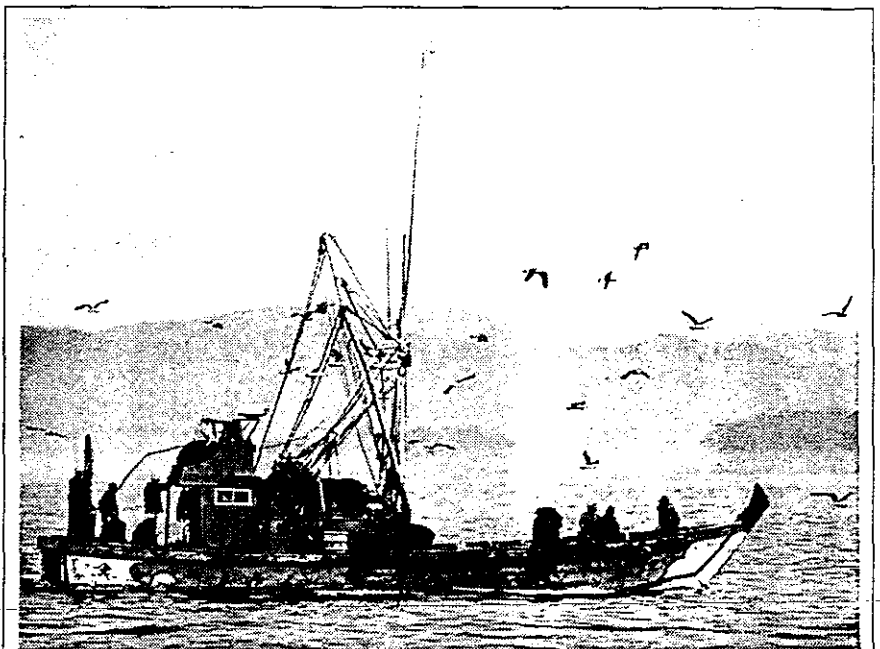
RIDA has stimulated the formation of associations to deal with island problems, within the Islands themselves and on the mainland. The Remote Island Development Centre is one of these, and it cooperates, in an advisory capacity, with the Remote Islands Division within the National Land Agency. Another association is the International Islands Symposium Executive Committee, which has organised a very important symposium on the subject in 1989 and has issued a number of important publications on the remote islands (see reference section).

More attention to human needs. With an increased awareness that infrastructural development is not a guarantee for overall development, there was also an increased attention, especially in recent extension of RIDA, on welfare schemes, education and cultural development, although as we shall state below, there is much more that could be done in this regard.

Defects of RIDA

The main defects of the act would seem to be related to the fact that there was not sufficient attention to the modernisation of human resources development. The RIDA, under its different extensions placed considerable emphasis on construction and other similar projects which Yamashina (1989) calls the "hardware" aspects, but maybe not enough on the "software".

Human Resource Development. As already explained, in recent extensions of the RIDA there has been increasing reference to the need for training, medical care and other aspects of human resource development, but it appears that there is still lack of attention of this aspect of development. This has clearly emerged from responses to a questionnaire distributed by the present author to twenty administrators and



The fishing industry is a very important source of income and employment in many Japanese remote islands.

scholars engaged in Japanese remote island affairs.*

Business attitudes. The financing of projects by the central or prefectural governments cannot by themselves guarantee economic success. Economic development requires, amongst other things, the production of goods and services for which there is demand. The RIDA offers a backing role mostly through infrastructural development, but there is hardly any attempt to improve and modernise business practices and to promote marketing of island products.

Transportation. As stated, transportation networks between the islands and the mainland and between the islands themselves have improved as a result of RIDA, but they are still somewhat unsatisfactory, despite the huge financial outlays for development of the islands. Some islands are still very isolated, in the sense that they have no scheduled boat services. The existence of low interest loans on building ships for islands routes, as well as making up for losses on these routes has not been totally successful, because it does not attempt to create new routes to the islands (see Yamashina, 1989) pp. 25-26.

Depopulation. RIDA has not been sufficient in promoting a degree of economic development to dissuade a large section of the population from migrating to the mainland.

The depopulation of the islands is dramatically explained by Ishikuta (1989) who gives the example of Sado Island, belonging to Niigata Prefecture, off the west coast of Honshu. It has ten municipalities (one city, seven towns and 2 villages). In twenty years the

* The responses related to questions on the problems being faced by the Japanese remote islands today and on the benefits that the Remote Island Development Act had on these same islands.

population has fallen from 130,000 to 80,000.

Coupled with this depopulation problem there are others including aging population. As is well known this creates many problems, the most important of which is an increase in the dependency ratio of the non-productive on the productive population, and the loss of vitality of the population as a whole.

Environmental problems. In promoting infrastructural development, RIDA may have also created environmental problems. This danger always emerges when development takes place. There is hardly any activity which is environment neutral. However, care has not always been taken to minimise the environmental impact in projects on the islands. In some cases, the tastes and methods of mainland contractors have been imposed on the islanders, with major undesirable aesthetic and ecological repercussions.

A related dilemma is that discussed by Otani (1989) who sees a conflict of interests in islanders, who want to develop and at the same time want to preserve their environment and privacy.

5. Some Proposals

The proposals that will be put forward in this section are mostly related to the need to promote marketing strategies and to modernise business attitudes in the islands. There is also a plea for considering sustainable development strategies, in that longer term effects on the environment, the cultures and the social fabric of the island communities should be given adequate consideration.

The Experience of other Islands

In countries which consist of a mainland and a number of inhabited islands, disparities between the centre and the periphery tend to exist. This is certainly the case in Europe, where islands and other peripheral regions tend to have a lower per capita income and a less developed economy than the mainland.

However there are some success stories, which the Japanese policy makers could look into to learn from these experiences. Pirnie (1989), for example, gives four case studies of successful island enterprises in Scotland. He says that the success was mostly due to the fact that the strategies adopted were market-led, with good design and high quality. Moreover the business community in the Scottish islands has become increasingly committed to market oriented business attitudes.

Marketing Strategies

It appears that although RIDA has done much to improve the infrastructure of Japanese remote islands,

the islands in general have not adopted modern attitudes towards business. There is a developed set-up for tapping central government funds, but not enough attention is being given to promote sales of island products. An important consideration in this regard is marketing. Island products tend to have distinct characteristics and qualities, and these attributes can be used to the advantages of these islands.

Marketing the product, requires, among other things, publicity and advertising through appropriate institutions and improvement, in the product image.

Institutional arrangements. There is a need to set up or upgrade institutional arrangements for marketing, publicity and advertising of island products by, amongst other things, creating a buying and selling agency system in Tokyo and other metropolitan centres. In turn this would require some sort of published catalogue of island products for marketing and the holding exhibitions and trade fairs for potential trade and individual consumers. Island products could also be introduced for foreign exports in Japan stands in international trade fairs. This process would be facilitated with the setting up of national organisation in Japan focusing on marketing the island products.

These marketing drives would be strengthened through marketing training programmes aimed at upgrading the knowledge and skills of the islanders themselves in public relations and marketing.

Product Image. It is very important that the products of the Japanese small islands be of good quality and do not give the impression of shabbiness. The business producing and selling island products need also to have a good image, where modern management and good business attitudes should prevail.

A very important requisite in this regard is the development of suitable methods for quality control and new product development.

Not necessarily resource led. Island products need to be marketed, but they need not be based on existing natural resources in the island, although this would be a great advantage.

The essential requirement in this regard is that the islanders sell what the buyers want, preferably stimulating demand through marketing, and not necessarily what the islanders are given free by nature.

Human Resource Development

The upgrading of island products require human resource development, so that the islanders can receive the necessary technical and management training and acquire the necessary skills in line with the small size of the typical island enterprises.

Technical training and support. An important require-

ment for economic development of the islands, whose characteristic is small size, is the provision of technical services for developing appropriate technology for producing efficiently in small runs and developing suitable new tools for efficient production in small enterprises.

Given that many island products are cottage industry ones, the provision of training and education for island craftsmen is also called for.

Training and retaining managers. It often happens that island projects are run by mainland managers. A problem that may arise as a result is that the projects are run by persons who may not necessarily understand and appreciate the wishes of the islanders and the fragile ecosystem of the islands.

There may be various reasons for this, including the fact that the funds come mostly from the mainland and that there is a shortage of expertise on the islands.

The problem is exacerbated by the brain-drain problem which is a common occurrence in small islands. Persons with management skills tend to find more lucrative employment on the mainland, and more scope for specialising in a particular area of management.

There is therefore the need to encourage the acquisition of management skills among the islanders and to promote opportunities for retaining managers on the islands.

Psychological Attitudes

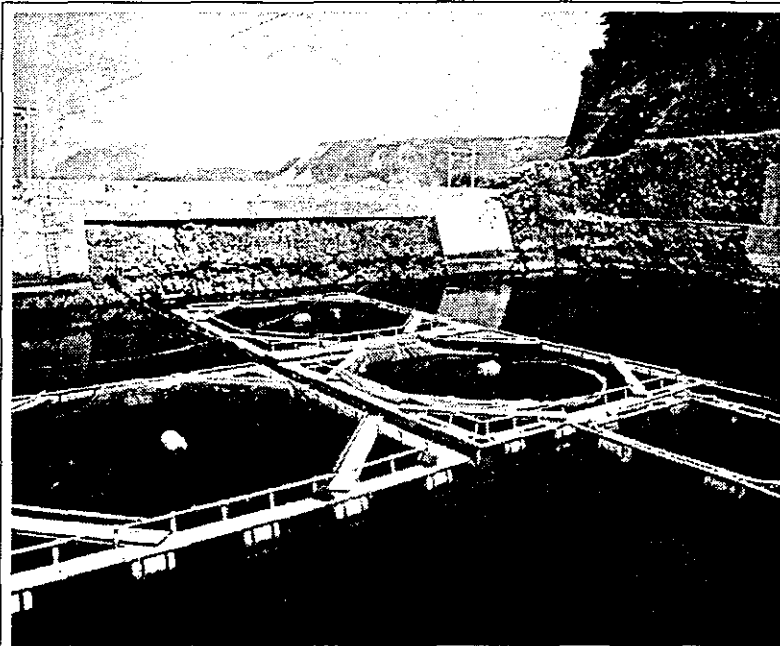
Creativity. It is very important for islanders to be creative and not simply be repetitive. Islanders must have a clear direction backed by policy. It can be argued that this "knowing what they want" will effectively enhance their autonomy (Wake, 1989).

Careful attention should also be given to promote the idea that development is not necessarily the result of cash handouts. Although "parasitic development" may be attractive to some islanders, and to some mainlanders benefiting from the projects that ensue, it should not be allowed to go on forever. The aim of financial

support should be to reduce reliance on it.

Involvement of the Islanders. As already argued, the acquiring of management and technical skills for island development require the support of the islanders themselves, who must be willing to develop and commit themselves towards this end. There must therefore be self motivation on the part of the islanders.

For this reason, the planners and policy makers must be very selective in the projects chosen so as to enlist the support and enthusiasm of the island authorities and of the islanders themselves.



Fishfarming is being developed in some of the Japanese remote islands as an alternative, high yielding, form of production.

It is important that the islanders are not given the impression that the islands are being developed mainly in the interest of mainland business (see Yamazaki, 1989).

Depopulation. The depopulation problem in the islands is giving rise to a number of problems, including a smaller human resource pool and an aging population. As already argued, lack of employment could be one reason for this, but there are also certain conditions on the islands which have a psychological effect in this regard.

Some possible ways which have been suggested to reduce, and possibly stopped, the depopulation tendency include:

- provision of evening recreational and sport facilities and activities for young man to discourage out-migration of youth;
- building of road networks on island to link towns and villages to render life more interesting there;
- financial inducements to young married couples to remain on the island.

Promotion of New Forms of Economic Activity

There are two economic sectors, in which many islands should have a comparative advantage in production, and which may not be exploited enough at present. These are tourism and marine resources.

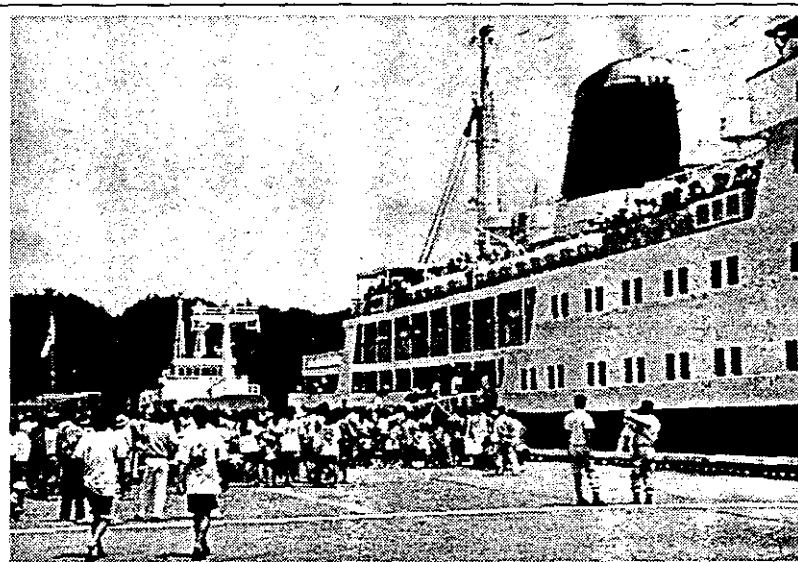
Tourism. As already stated, the islands would seem to have a good potential for attracting tourists from the

Japanese mainland, in view of their natural beauty, unique cultures and relaxing environment. Attracting non-Japanese tourists would seem to be more difficult in view of the value of the Yen.

The development of tourism calls for improved air and sea communication, which, as argued above, at present leaves much to be desired.

In promoting tourism great care should be taken to avoid as much as possible the negative effects of this type of economic activity, such as excessive exploitation of the coastal zone and monstrous constructions out of line with the environment of the islands. Tourism is also notorious for attracting funds from the mainland, with considerable benefits to the mainland entrepreneurs, rather than to the islands themselves.

Here again, it is important to secure the support and involvement of the local communities when tourist projects are planned. First of all because tourists affect the lives of the islanders in many ways, through, amongst other things, land competition and intrusion in their social life. Secondly because the interaction with the local people is a major factor affecting the success or otherwise of touristic enterprises.



Tourism is an important industry only in a few islands, but it has great potential in many other islands, with further development of air and sea communications.

Marine and Coastal Resources. As stated in the beginning of this paper, the islands of Japan cover a wide ocean area, and therefore have a rich natural resource which could be exploited to the benefit of the islands themselves. Moreover, the small land area of most islands render these islands as coastal territories, and this calls for effective coastal zone management.

There is therefore the need to pay more attention to the utilisation of and coastal marine resources, not simply through traditional fishing, but through other activities utilising modern techniques. This could promote the diversification of the production away from traditional low-yielding agricultural production towards higher yielding business activities. Again here it is important to secure the support and participation of the islanders themselves so as to avoid the danger of having mainland interests dominating these ventures. Moreover, careful consideration should be given so as not to over-exploit and pollute the seas and the coastal zone.

6. Conclusion

The ultimate objective of development, whether it is national, regional or local, is to advance public welfare and improve the standard of living of the residents in the locality which is being developed. In this regard, the results of the development exercise could be measured by means of at least three indices, namely (1) infrastructural improvements such as such construction of roads, parks, water supply, sewerage, education and cultural facilities (2) economic improvements such as employment creation and growth of output or income and (3) socio-cultural improvements such as higher educational standards, improved human resources, better welfare schemes and so on.

In recent years, the concept of sustainable development has also ushered in a fourth "long term" consideration, including the environmental impact, which may render development less enduring due to, amongst other things, the negative effect on future generations.

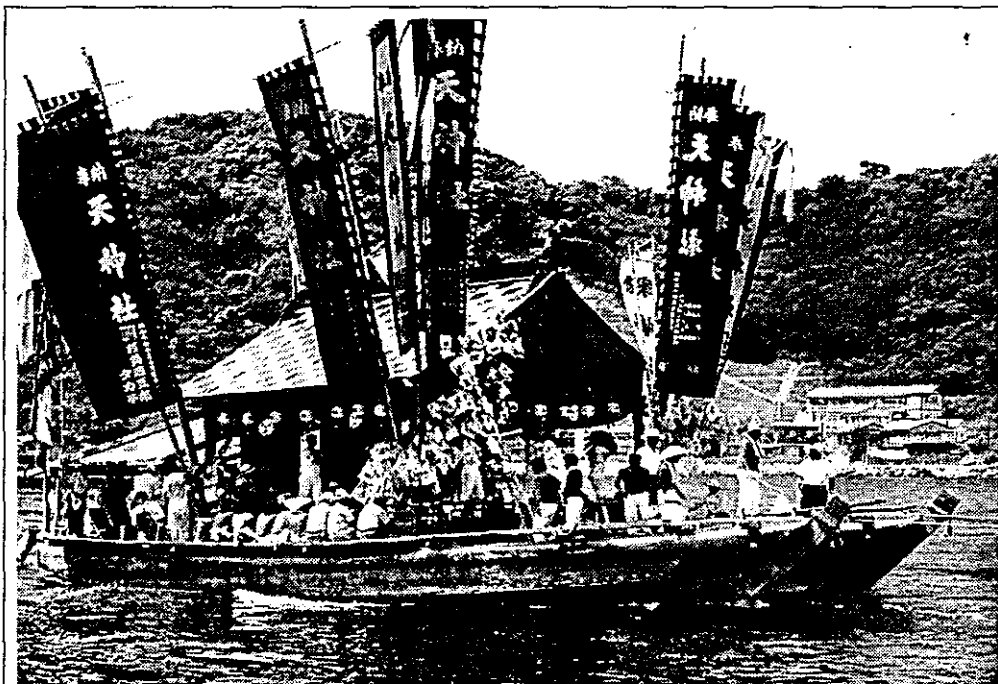
The question arises as to which of the four aspects of development should one give more priority than others. The best approach is to have a balance, so as to ensure that the attainment of one does not contradict the other. The balance between infrastructural development and production of final products has a long history and was discussed by many authors in the context of balanced and unbalanced growth (see for example Mieier (1970, ch. 6). What is certainly true is that infrastructural development should not be an end in itself, although it is very necessary, since its aim is to promote output, employment and income.

In many countries that rely to a large extent on market forces to allocate resources, particularly Western European ones, economic development was promoted hand in hand with social development, and welfare schemes were put in place to ensure that disequalities are as much as possible reduced when it comes to education, health and other "merit" goods and services. They have also ensured that human resource development is not left entirely to market forces, and invested heavily in its development.

As stated, the relatively recent focus on sustainable

development has brought in a long term dimension into the development equation. Tourism, for example, could be an important income earner to many islands, but its negative impacts on the environment, cultures and social fabric of the islands may have long term undesirable economic, social, ecological repercussions, which could work against long term development. This is not an argument against tourism, which to many islands of the world is a life-saver, but a plea for sustainable development.

The time dimension of development is very important. One would think that in the initial stages of development, emphasis should be given to improvements in the infrastructure such as roads, harbours, ports, water supply and telecommunications systems, followed by social development projects such as housing and schools. As the income level rises, the economic objectives of promoting directly productive activities should be given increased importance. The improvement in income, brought about by the initial capital outlay and employment promotion associated with it, should bring about an increase in demand for final products. It would also increase demand for welfare improvements and cultural products. When it comes to considering specifically the development of the remote islands, an important consideration comes into play. This is that although island



Many Japanese islands have a unique cultural heritage, reflecting their rich historical patrimony. This could serve as a great attraction to tourists.

development aims at improving the living standards of residents in the region, it should also enhance the well-being of Japan as a nation. The islands constitute an ecological and cultural treasure to the nation as a whole, and as Wake (1992) argues, the welfare of the islanders is therefore in the national interest.

It is therefore proper that the social and economic development imbalances between the mainland and the island people should as much as possible be reduced. Otherwise, many island communities will continue to exist in a "parasitic" economy, and the islands will continue to depopulate themselves, with the eventual danger that these islands will lose their vitality and some of them possible becoming uninhabited.

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APPENDIX 1.
AREA AND POPULATION JAPANESE ISLANDS
CLASSIFIED BY PREFECTURE (1990)

Prefecture	Number	Population	%	Area (KM ²)	%
Hakkaido	6	20728	2.36%	417.2	5.35%
Miyagi	9	8049	0.92%	24.5	0.31%
Yamagata	1	597	0.07%	3.3	0.04%
Tokyo	13	32336	3.68%	361.7	4.64%
R.I.D.A.	9	29975	3.41%	293.4	3.76%
O.I.D.A.	4	2361	0.27%	68.3	0.88%
Nigata	2	78540	8.94%	864.4	11.09%
Ishikawa	1	321	0.04%	1.0	0.01%
Shizouka	1	163	0.02%	0.4	0.01%
Aichi	3	5242	0.60%	3.3	0.04%
Mie	6	6751	0.77%	14.6	0.19%
Hyogo	6	11360	1.29%	53.7	0.69%
Wakayama	1	1829	0.21%	9.9	0.13%
Shimane	4	27493	3.13%	345.7	4.43%
Okayama	17	6191	0.70%	31.6	0.41%
Hiroshima	20	36221	4.12%	133.5	1.71%
Yamaguchi	22	9020	1.03%	70.2	0.90%
Tokushima	2	512	0.06%	2.2	0.03%
Kagawa	22	7779	0.89%	58.0	0.74%
Ehime	35	52734	6.00%	216.1	2.77%
Kochi	2	618	0.07%	11.8	0.15%
Fukuoka	8	3438	0.39%	13.8	0.18%
Saga	7	3199	0.36%	10.8	0.14%
Nagasaki	60	214060	24.37%	1609.9	20.65%
Kumamoto	6	5372	0.61%	21.6	0.28%
Ohita	7	8226	0.94%	17.7	0.23%
Miyazaki	3	1685	0.19%	5.3	0.07%
Kagoshima	28	207095	23.57%	2476.3	31.77%
RIDA	20	64261	7.31%	1237.1	15.88%
AIDA	8	142834	16.26%	1238.7	15.89%
Okinawa (ODA)	42	128957	14.68%	1016.6	13.04%
Total	334	878516	100.00%	7795.3	100.00%
RIDA	280	604364	68.79%	5471.8	70.19%
Other Acts	54	274152	31.21%	2323.5	29.81%

RIDA = Remote Island Development Act. OIDA = Ogasawara Islands Development Act

AIDA = Amami Islands Development Act. ODA = Okinawa Development Act

Source: *Annual Strategic Report on the Japanese Islands*

APPENDIX 2.
BIRTHS, DEATHS AND MIGRATION (1990)

Prefecture	No. of Islands	Population	Births (%)	Deaths (%)	Migration Net (%)
Hakkaido	6	21379	0.8%	0.9%	-2.3%
Miyagi	9	8252	0.5%	1.1%	-2.8%
Yamagata	1	627	0.0%	0.3%	-2.9%
Tokyo	13	32258	0.9%	1.2%	-0.6%
Nigata	2	79503	0.8%	1.2%	-0.3%
Ishikawa	1	225	0.0%	0.0%	4.4%
Shizouka	1	162	0.6%	1.2%	-2.5%
Aichi	3	5393	1.0%	0.7%	-0.5%
Mie	6	6906	0.8%	0.9%	-1.3%
Hयोग	6	11261	1.1%	1.0%	-1.4%
Wakayama	1	1893	0.8%	0.8%	-1.2%
Shimane	4	27634	0.8%	1.2%	-1.0%
Okayama	17	6663	0.6%	1.3%	-2.6%
Hiroshima	20	37698	0.4%	1.3%	-1.5%
Yamaguchi	22	9478	0.5%	1.5%	-2.4%
Tokushima	2	532	1.1%	0.6%	-0.8%
Kagawa	22	8169	0.4%	1.5%	-2.0%
Ehime	35	54760	0.6%	1.3%	-1.3%
Kochi	2	596	0.8%	2.0%	-1.8%
Fukuoka	8	3734	0.8%	1.0%	-1.5%
Saga	7	3354	0.7%	1.0%	-2.6%
Nagasaki	60	215749	1.0%	1.0%	-1.7%
Kumamoto	6	5819	0.9%	0.8%	-2.1%
Ohita	7	8470	0.5%	1.0%	-2.1%
Miyazaki	3	1799	0.8%	0.8%	-3.6%
Kagoshima	28	207258	1.0%	1.0%	-1.7%
Okinawa	40	132458	1.2%	0.7%	-1.5%
Total	334	892030	0.9%	1.0%	-1.5%
RIDA	280	614952	0.9%	1.1%	-1.4%
Other Acts	54	277078	1.1%	0.9%	-1.6%

APPENDIX 3.
PERCENTAGE DISTRIBUTION OF GAINFUL EMPLOYMENT (1990)

Prefecture	No. of Islands	Persons Employed	Agric..	Fishing	Primary Prod.	Secondary Prod.	Market Services	Public Sector
Hakkaido	6	11586	1.0%	45.2%	46.2%	18.2%	29.9%	5.8%
Miyagi	9	3899	3.1%	47.3%	50.4%	14.4%	34.0%	1.3%
Yamagata	1	372	6.2%	64.5%	70.7%	4.6%	23.4%	1.3%
Tokyo	13	16597	11.1%	5.3%	16.4%	18.9%	53.1%	11.5%
Nigata	2	44099	26.4%	3.2%	29.6%	23.5%	42.6%	4.3%
Ishikawa	1	200	0.0%	88.5%	88.5%	2.5%	2.5%	6.5%
Shizouka	1	120	0.0%	12.5%	12.5%	10.8%	76.7%	0.0%
Aichi	3	2533	1.4%	48.7%	50.1%	9.8%	38.9%	1.2%
Mie	6	3665	0.4%	40.4%	40.8%	13.0%	45.1%	1.0%
Hyogo	6	4559	6.7%	22.4%	29.0%	14.1%	53.5%	2.3%
Wakayama	1	782	7.2%	25.7%	32.9%	10.1%	36.6%	20.5%
Shimane	4	12930	13.3%	12.0%	25.3%	19.9%	48.5%	6.3%
Okayama	17	2633	6.4%	18.9%	25.3%	42.1%	31.4%	1.2%
Hiroshima	20	17723	28.4%	7.6%	36.0%	26.0%	34.5%	3.5%
Yamaguchi	22	4838	27.0%	34.7%	61.7%	10.1%	22.6%	5.3%
Tokushima	2	278	0.0%	63.3%	63.3%	4.3%	31.3%	1.1%
Kagawa	22	3613	8.4%	33.8%	42.2%	22.2%	33.6%	1.5%
Ehime	35	25173	28.2%	9.8%	37.9%	25.1%	33.7%	3.3%
Kochi	2	297	18.9%	25.6%	44.4%	14.5%	39.1%	2.0%
Fukuoka	8	1651	2.8%	58.2%	61.0%	5.6%	30.9%	2.2%
Saga	7	1341	2.2%	53.7%	55.9%	15.4%	27.2%	1.5%
Nagasaki	60	93682	12.5%	17.6%	30.1%	21.4%	42.6%	5.8%
Kumamoto	6	2468	4.2%	49.3%	53.5%	12.7%	29.8%	4.0%
Ohita	7	3693	0.6%	49.8%	50.4%	14.9%	31.9%	2.7%
Miyazaki	3	910	0.3%	52.2%	52.5%	27.6%	19.1%	0.5%
Kagoshima	28	91639	23.7%	3.4%	27.1%	23.5%	43.1%	6.2%
Okinawa	42	58196	26.5%	3.0%	29.5%	17.3%	44.8%	7.2%
Total	334	409477	19.3%	12.1%	31.3%	21.2%	41.7%	5.6%
RIDA	280	289110	17.5%	16.0%	33.6%	21.1%	40.3%	5.0%
Other Acts	54	120367	23.4%	2.5%	25.9%	21.4%	44.9%	7.1%

Source: Annual Strategic Report on the Japanese Islands