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## Study on the Actual Condition of Participation Type Activities for Management of Environment Conservation in Okinawa Pref.

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### Abstract

The purpose of this paper is to research the actual condition about residents' and citizens' participation for management of the environment volunteer activities and to find the ideal of the support for the activity development. The study is based on the questionnaire and interview survey to 29 groups of environment volunteer activities in Okinawa prefecture, which presents the features characterize of subtropical island area. The result is follows two types of activities are found by differences of the base, the aim and activity field. As a whole, various programs at conservation fields have done, but, for the direct maintenance of the fields itself such as planting cleanup and breeding wildlife, there is at the rate of 19% of whole programs. Some of groups have problems of being short of funds, persons of ability and public participation in their communities, skills in practice. Therefore, in the future, for managing the organization itself and developing the activities, it is important to arrange the support system based on community involvement.

**Keywords:** participation type activity, natural environment conservation, living environment improvement

### 1. Introduction

In late years, in Okinawa, traditional life space and natural environment of subtropical zone islands are changed terribly by public works project and private development after the restoration of Okinawa pref. of Japan. In such situation, the method of the sustainable development which took into account the local taste of Okinawa is sought and, it becomes important that residents are independent and work on the imminent environmental conservation. Actually, such actions (which we will call participation type activities) appear in form of environmental management activities of resident composition of the community and citizens' environmental activities of the city. However, the present conditions grasp and support are not enough, and future study is needed.

As past studies about environmental conservation activities, the study that paid its attention to field of citizens' activities of Kanto region and relation of the activities contents of them.<sup>[1]</sup> There are the studies that grasped actual condition of various residents groups of Tanba area.<sup>[2]</sup> However, the study of actual condition grasp of participation type activities is not found yet in Okinawa area.

Thus from a viewpoint to position residents group as leading figures of environmental management of Okinawa, the purpose of this paper is to grasp actual condition of participation type activities of Okinawa and make clear characteristics and problems of the activities and consider the notice points on the support policy.

Method of study as for target groups, 45 groups was extracted from groups registered with the publication

<sup>[3]</sup> and documents<sup>1)</sup> of Okinawa according to the next choice condition. The group where there is the secretariat in Okinawa prefecture, and confirmation of the location is clear, and which moves into action really in prefecture, and which does not participate in base problem and politics movement deeply.

The method of survey depended on questionnaires and interview surveys. At first, we carried out questionnaires (Aug., 1996 enforcement, number of distribution 45 parts, number of effective collection 29) in target groups. Secondly, we had local field surveys and interviews with the representative of each group (Sep., 1996 to Feb., 1997, Mar., 1998<sup>2)</sup>). Survey items were opportunities of activities start, purpose, field, contents, support cooperation relation, result, problems, demands.

### 2. Tendency and Characteristics of Participation Type Activities

#### 2.1 Tendency of Participation Type Activities

Most of participation type activities start at the middle part in 1980's when large-scale development after the restoration concentrated on. While original scenery disappears, there are activities of community council composition of community society stood up in the new theme independently and citizen groups united toward solution of environmental problems. On the other hand, there is the case of which participation type activities started by advice from the administration side. It was "clean green gracious campaign"<sup>3)</sup> that became the big impelling force, and it made an achievement for the tree planting scene formation of Okinawa. It seems to be shown in table, such as participation type activities are divided into two of next from the relation of purpose and fields.

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**(1) Natural Environment Conservation Type (Type A)**

It is the activities that there is the purpose of management for specific natural environment conservation. In subtropical zone islands environmental compact water cycle, rivers or seashores where pollution progressed by cattle shed drainage and soil outflow<sup>4)</sup> are activities fields. Activities organization consists of residents group of local community and citizens' group in urban regions.

**(2) Living Environment Improvement Type (Type B)**

It is the activities that there is the purpose of environmental improvement of the living environment whole of a community. At the same time, it includes local activation activities by agriculture promotion and life

improvement. In the local common<sup>5)</sup> and open space of town area, tree planting and cleaning beautification, recycling activities are developed. Activities organizations are constituted mainly in the community council organization of community society and local residents groups.

**2.2 Activities Contents**

We arranged it about concrete contents described every activities division of 12 items and the number changed into it. (Table2)

On the whole, kinds of activities are various. The activities that do not really affect management of field hold most of all activities. In the concrete, there are information activities for "request to administration"

Table 1 The Activity Type from the Relation of the Purpose and Field

Type	No	Name of Group	Y. of start	Purpose / Motive / Field of Activity	Basic body
T Y P E  A	1	The group of calling back a sweetfish in Genga river	1986	It started by an appeal of young man society to regain the river of the sweetfish which was a symbol of original scenery.	community organization
	2	Regain clear stream in Nagadou river of Yamakawa	1990	Local residents called for purification of a dirty river by pigpen drainage and started	
	3	Make clean Tengan river conference	1986	A women's society moved into action that "delicious water wanted to swallow it up" and started it.	
	4	Shuri residents circle of cleaning Aja river	1995	It started to regain the waterside environment where children could play an administrative appeal.	residents
	5	Keep nature of Shiraishi river	1983	It started by a proposal of President first generation to make a good hometown by regaining noble lineage.	
	6	The society of revive Kouchi river	1988	It started by an appeal of mothers to want to revive the river which lost an old feature.	
	7	The society of revive Hija river	1974	It started in local residents in order to regain old noble lineage in Hija river.	cooperative association
	8	You/Play/Hija river executive committee	1988	For image enhancement of a town, a river festival began by business and industry society, young man society.	
	9	Call back butterfly to Ishikawa citizens' forest	1992	Aiming at local activation, it started to call back a butterfly to the forest.	
	10	Onna fishermen's cooperative association	1970	Because the sea was polluted by red earth, activity was started to keep environment.	agreement citizen
	11	Ginoza fishermen's cooperative association	1988	Activity began to protect a fishing ground from pollution of the sea by red earth.	
	12	Kumoji river festival executive committee	1986	A volunteer began an action to revitalize Kumoji river of whole country river worst 5.	
	13	The society of ryukyus sweetfish revive	1991	Researchers started for a purpose by Ryukyus sweetfish reproduction in a volunteer in a north river.	public corporation
	14	Okinawa green and tideland	1981	Activity was started to conserve habitation environmental damp ground of a wild bird.	
	15	Okinawa International clean beach club	1992	It began by an American appeal resident in Okinawa to preserve the sea from pollution of trash.	
	16	Yeyama branch office of Japan wild bird Foundation	1972	Conservation of nature of the whole area set sail to prevent environmental aggravation of a wild bird habitat.	community organization
	17	Okinawa International mangrove association	1989	Established to contribute to an environmental conservation, international cooperation by prefecture.	
T Y P E  B	18	Komesu activation conference	1996	Started by an appeal of community for industrial promotion and the conservation of area.	community organization
	19	Ogidoi /Ooshiro conference	1984	Flower activity was developed by the CGG campaign with an opportunity.	
	20	Rich by a flower and green, Namihira promotion conference	1993	It was started community design conference by introduction of an activation enterprise.	
	21	The Boy Scouts of green of Enobi	1987	It was started in a tree-planting ceremony as an opportunity.	residents
	22	Higashi village school of learning through living	1986	One case of consumption enlarged campaign of a pine was an opportunity, and it was started.	
	23	Gushikawa village life improvement communication conference	1970	It was started aiming at activation of the farm village area.	
	24	Ishigaki city School of learning through living	1987	It was developed as a beautification campaign of sea country body.	association
	25	Thinking about trash of Tketoni	1991	Natural destruction by trash was concerned about, and it was started in the women's society alliance society	
	26	Hirara citizens movement practice conference green sectional meeting	1990	Tree planting activity was promoted by a feeling of anxiety for decrease of green.	
	27	Cheerful citizen conference	1977	Aiming at local activation, it was started by an appeal by Junior chamber of commerce.	corporation
	28	Tomishiro Kids' clean adventure	1986	It was wrestled improving life of a kid through moving into action cleaning of park.	
	29	Okinawa recycling campaign citizens	1982	Citizens worked as life improvement activity for the disposable times	

and "residents' enlightenment" activities to demand understanding for activities, and "festivals and events" as interchange activities of local activation, "survey" activities, "activities support".

On the other hand, the management activities to act directly for the field hold 19.1% of all activities. There are many "cleaning" activities that it is easy to deal with, in addition, "preservation upbringing of the animals and plants" activities having specialty are developed. Judging from the whole, the role of citizens' management for environmental conservation is still low in the existing stage, but, in one part as for the environmental management of fields, the technical level can be high.<sup>6)</sup>

### 2.3 Cooperation of Group

From descriptions about the group in cooperation relation of each group, we analyzed concrete support relations, and the number changed into it by number of

content which we collected at. (The plural number answers) (Table 3)

On the whole, there is the most of administration as the cooperation partner of groups. There are various contents of cooperation such as support of activities fund, an information offer, technology advice, survey cooperation, activities receptionist, jointly holding of events. Next is cooperation with local residents group and citizen group (amounted to 39, 32.7%). By cooperation relation with establishments, there are activities fund support and offers of supplies mainly. In addition, with local organizations, there are held some events jointly from a point of view to appeal to in the area.

In this way, partnerships of groups have expanses such as local residents, citizens' group, administration, establishments, the commercial and industrial association or agriculture co-op, and cooperation

Table 2 Activity Division and Contents

Activity division	Type A number	Type B number	Total (Ratio to all activities)	Concrete contents
① Request to administration	16	7	22 (12.4%)	Request information disclosure of river preparation and water purification, activity participation cooperation
② Residents enlightenment	13	9	22 (12.4%)	Activity to enlighten residents through mass communication or publication of the bulletin
③ Spot inspection	10	9	19 (10.7%)	Activity to get close to environment through spot observation
④ Learning activity	11	8	19 (10.7%)	Holding of the lecture by an expert and a symposium. Except ③
⑤ Event and Festival	9	8	17 (9.6%)	Activity to experience local nature through a play and a festival
⑥ Recycling	6	7	13 (7.3%)	The making of waste oil soap, empty can / uselessness product collection, holding of a bazaar
⑦ Survey and Investigation	12	5	17 (9.6%)	Survey of local resources and investigation of trash processing, citizen consciousness investigation.
⑧ Cleaning	9	7	16 (9.0%)	Cleaning river and shore, cleaning activity in local streets and parks.
⑨ Planting	4	6	10 (5.6%)	Tree and flower planting activity on the riverside and the shore, or, in local streets and parks.
⑩ Habitat preservation	6	2	8 (4.5%)	Firefly and upbringing and preservation of the sweetfish. Tree planting such as an edible grass tree or a mangrove. The making of habitat environment. Conservation of a local history tree. Except ⑨
⑪ Research activities	6	2	8 (4.5%)	The vision formation and measures to ecotechnology that stepped on activation of activity.
⑫ Activity support	6	0	6 (3.4%)	Collection of contributions activities. Practice of support activity and environmental education
Total	107	70	177 (100.0%)	

Table 3 Contents of Support Cooperation

Partner	Number	Type	Main concrete contents of support cooperation to the group
Local residents group	23(19.3%)	A (11)	1) Street guild holds festivals 2) Women's society and senior high school participate in river festivals 3) Study combination with a community council by a sweetfish revival enterprise 4) Study combination with a community council by a sweetfish revival enterprise 5) Purification of a river by conference system 6) Learning environment with the PTA and community council
		B (12)	1) Participation to activities of cleaning beautifications such as tree planting as community council, a school 2) Collaboration with management of a tree planting contest in cooperation with community council and a school 3) Investigation the village scene with old man society, a children's association
Citizen group	16(13.4%)	A (8)	1) The cosponsorship of festival 2) Management of a seed and sapling center of sweetfish 3) Information exchange about activities 4) Joint cleaning of a beach
		B (8)	5) Cooperation to event activities festivals 6) Tie-up of tree planting activities 7) Exchange of activities information 8) Technical support cooperation 9) Cooperation of symposium
Administration	47(39.5%)	A (27)	1) Advice to activities policy 2) Print dispatch of news letters 3) Survey cooperation 4) Preparation of pro-water riverwall considered ecosystem 5) Cooperation as the office work communication entrance of activities 6) Support of activities fund 7) Joint management of sweetfish seed and sapling center 8) Offer of information about activities 9) Material offers to cleaning activities
		B (20)	1) Cooperation as an entrance of the administration side 2) Support of activities fund 3) Offer of material to tree planting activities 4) Organization management and advice to activities plan 5) Offer of information and technical advice 6) Establishment of a stock yard 7) Enforcement of a lecture
Establishment	21(17.7%)	A (10)	1) Fund support to a festival / cleaning / tree planting activities 2) Dispatch of efficient staffs 3) Meeting rooms offer of the active place 4) Material support of drink
		B (11)	1) Advice to tree planting activities 2) Transportation cooperation of trash 3) Information offer 4) Technical support about activities 5) Cooperation to a lecture / the inspection training
Business industry association	12(10.1%)	A (5)	1) Cooperation to events 2) Cooperation as activities communication entrance 3) Management of Tengan river day
		B (7)	1) Cooperation to events 2) Upbringing of efficient staffs 3) Support of activities fund 4) Technical support to activities
Total	119(100%)		

relations are various. But, degree of maturity of cooperation in each group has a big difference.”

3.Results and Problems of Activities

3.1 Results of Activities

From results of free answers, we arranged similar contents and number about cooperation relation with person, effects to field, concrete results. (Table4)

Generally, the connection of persons related to activities is evaluated greatly (amounted to 45, 71.4%). In the concrete, there are “rise of interest” of residents and “sprouting of independent activities”, and influence of activities to the community area is evaluated from a lot of groups. In addition, for administration, constant evaluation for development about cooperation is recognized from groups of around half.

On the other hand, there is not many, but improvement effects of the concrete place where “oasis was formed” or “that became clean” are appearing gradually. Furthermore, it draws attention that environmental conservation activities promote individual community improvement.

3.2 Problems of Activities

There is the most “lack of activities fund” as a problem on activities (figure1), about half of groups occupy it. The Next, there are problems such as lack of

member or generation change In addition, there is the problem of participation to activities. In other words, it is the problem of persons concerned with activities, and we can think of ‘all these as indication about partnership. In addition, in the concrete problems that “which technical knowledge is hard to get”, “result is hard to be provided”, there are lack of river quantity of water and red soil outflow to the sea area, pollution of some remote island sea area by trash outflow. Under the delicate subtropical zone islands environment of Okinawa, it is pointed out difficulty of management of the place. Measures study of water environmental conservation management of Okinawa area is needed immediately.

4. Demands and Prospects of Partnership Formation

4.1 Demands about Support Cooperation

From descriptions about demands of concrete support cooperation for the person concerned with residents, administration, establishments, professionals, we gathered up the cooperation contents resembled it and arranged the number (plural number answers). (Table 5)

On the whole, there are the most demands for administration, and the making of backup system of support cooperation is demanded with understanding of activities strongly. In the concrete contents, there are some demands about fund and material support, personnel training, structure of local participation in planning, consideration to ecosystem for the working plan. For local residents, the action by life style is demanded from the situation of living person sharing the same environment. For citizens’ group, activation of activities by information exchange, networks are expected as the comrade having a common purpose. For

Analyses of result		Main contents
Influence effects to an area 31(49.2%)	(1) Rise of interest of residents (awareness level)	TypeA (16) 1)Decrease of trash. 2)Participation of the symposium increased 3)Residents came to cooperate 4)Establishment of the purified water tank for family
	(2)Sprout of independence activities of residents (practice in areas)	TypeB(6) 1) Improvement of consciousness 2)Enforcement of trash discretion collection spread 3)Decrease of trash progressed 4)Participants of festivals increased
Development about cooperation with administration 14(22.2%)	(1) Information offer, supports of funds and materials	TypeA (5) 1)Easy to come to get cooperation 2)Enforcement of periodical patrol TypeB (3) 1)Easy to come to get cooperation 2)Distribution of flowers/ young plants / manure 3)Fund supports
	(2)Introduction of enterprise and settling of system	TypeA (5) 1)Introduction of a river model enterprise 2)Establishment of the red earth 3)Arrangement of the member of fixed-job worker TypeB(1)Establishment of landscape ordinance
Improvement effects of places 13(20.6%)	Improvement of living environment	TypeA (9) 1) Sweetfish returned 2)Reduction of bad smell / contamination TypeB (4) 1)Town and park became clean 2) The shade of trees made oases 3)Improvement of village everywhere
Community Improvement 5(7.9%)	Publication, Organization system, Future concept	TypeA (2) Development from purification activities of the river to community improvement TypeB (3) 1)Publication of “ aged trees/ huge trees” 2)Drafting of the future plan of the village

( ): the number of answers. Total answer number 63 (100%)

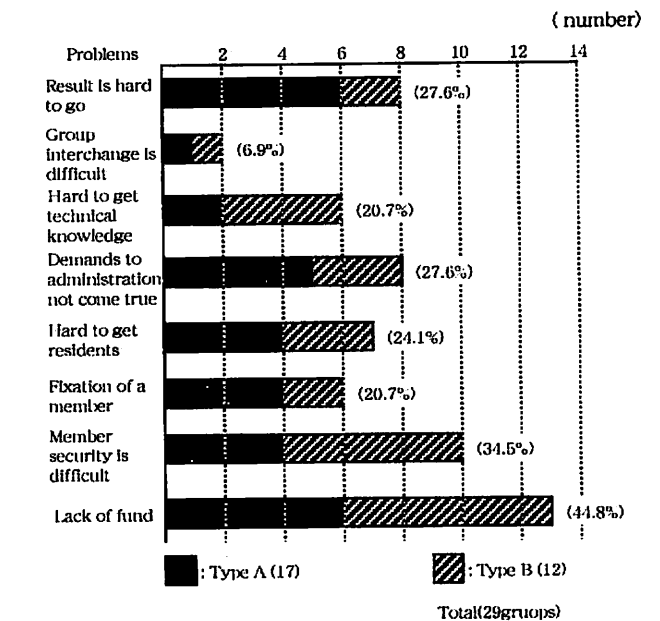


Fig. 1, Problems on Activities

professionals, technology advices about environmental conservation management and organization management are demanded. Furthermore, for establishments, morals from the situation to share the same environment are asked. Such demands are limited several, but reflect problems on activities as things mentioned above.

#### 4.2 Prospects of Partnership Construction

We take up activities of Tengan river and Genga river in two model cases and do them with getting suggestions in circumstances of partnership of future participation type activities.

The activities of Tengan river organized one new local organization as a result that residents group in the basin cooperated in common theme in "clear stream of Tengan river". And it fixed as independent activities of the residents who surveyed the environmental formation of the local whole. In addition to it, the partnership with administration and researchers, engineers, establishments were constructed.

Next, the activities of Genga river promoted local activation. In the concrete, the interest of the study of professional citizens' group agreed with activities of residents group of community society in common theme of "sweet-fish of original scenery" and made cooperation of wide areas. In addition, the activities established the study system by integrated administration of the large region and partnership with professionals of the outside of prefecture.

There are following points in common to these two cases, 1) setting activities aim in the specification theme to come from the joint ownership experience that reflected a local taste, 2) cooperation of living level of residents and citizens firmly having been established in the area, 3) after that, the role of

support of administration is made clear.

#### 5. Conclusion

We arrange conclusions provided in correspondence with the purpose of this paper in the following.

##### (1) Tendency of and Characteristics of Participation Type Activities

Participation type activities start intensively after middle part in 1980's, and there are an independent start of residents and an administrative leadership case. As character of activities, there are natural environmental conservation activities and living environment improvement activities, which of community organization of traditional community and of new citizens' organization. As for the activities contents, there were many activities of communication of information type to demand understanding cooperation to activities, and were a few activities direct acted on the field for conservation. However, it was special activities of practice continued it in some residents groups, and local environmental management will be done as the role of residents.

##### (2) Activities Problems and Prospects

As the results of activities, development about cooperation of persons concerned with activities was bigger than improvement effects for environment. As problems of activities, there were serious lack of funds and efficient staff and management technology of the field of subtropical zone islands. As one viewpoint to tackle these assignments, residents playing the key role of activities are points whether can make how good relation in common theme.

##### (3) Notice Points on Support Policy

It is important that residents share understanding of a conservation of islands environment circulatory system with administration as correspondence to Okinawa Islands where are easy to receive influence of development acts. Therefore, the supports to promote local participation in planning in the process of management from the plan stage of enterprises are necessary. On upbringing of activities, support such as an incentive and aim setting of activities, organization management of activities funds, the creation of the opportunity of interchange are important. In addition, in Okinawa where community society stays, community council is the central figure of local environmental management, the way of support that laid the reevaluation of "common ownership property" in a viewpoint is important.

##### (4) Suggestion for Further Research

The continuous analysis study is necessary about actual condition of participation type activities from the local taste of Okinawa, and every activities type, the limit of environmental management by residents and

Table 5 Demands of Support Cooperation to Each Partner

Each partner	Number(%)	Contents
Administration , Research organization	23 (51.1%)	TypeA (17) Setting of the place of discussion at a plan stage. Information disclosure. Attitude of an enterprise by a basin unit. Enforcement of environmental education. Enforcement of environmental education. TypeB (6) Fund support to the community council. Personnel training to environmental problem tackling. Material support such as the making of soap machine. Special product processing institution.
Local residents	10 (22.2%)	TypeA (6) Activities participation of basin residents. Appropriate processing of home drainage. Life improvement cooperation. TypeB (4) Improvement of residents consciousness. Network of a woman group.
Citizen activities group	2 (4.4%)	TypeA (1) Interchange society with river groups. TypeB (1) Interchange between groups in every prefecture.
Establishment	3 (6.7%)	TypeA (3) Continuous support from a basin establishment. Information disclosure of drainage processing. Thoroughness collection of the empty cans and bottles.
Professional	7 (15.6%)	TypeA (3) Lesson by environmental professionals. Proposal of organization management. TypeB (4) Lessons such as a farm village. environmental design or recycling.
Total	45(100%)	

grasp of possibility are important.

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### Note:

- 1) Administrative inside document such as "Community improvement group Okinawa conference list", (Okinawa plan development Div. local promotion section) , "Environmental improvement activities survey list" (Okinawa agriculture and forestry engineering works part)
- 2) Because there were activities over a wide area from Okinawa Mainland to a remote island area, we carried out local survey and interview surveys at three or four a month from sep., 1996 to Feb., 1997. In addition, we confirmed interchange party by an every prefecture level about activities in holding again in March, 1998, but there was hardly the big change.
- 3) Okinawa pref. proposes it toward No. 42 whole country citizens' sport festival of 1987, and it is the representative tree-planting campaign that the city, towns and villages cooperate, and it promoted and an environmental beautification campaign.
- 4) Surface soil is easy to flow out thinly so that Okinawa Island is high temperature and humid, and rivers are steep briefly, and a lot of typhoon and rainfall have compact topography structure. Therefore influence of a development act in land area (the forest or farmland) is easy to be shown in rivers and the shore.
- 5) we point at sacred places and o open space ground which traditional community owns. A lot of common ownership open spaces are left currently in Okinawa.
- 6) There is a group of N01, 3, 10, 13, 17 of table 1.  
It is two activities in Genga river of N01 and N013 that is representative, and there are practice of upbringing and discharge of fry, measures to community improvement from purification activities of river, the study of artificial fertilization and incubation of sweetfishes for several years.
- 7) If there is a group making a network by interchange positively, dependence feeling to administration is big, and there is the group of the situation of start of the activities early days.

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