Introduction

Kitakyushu which has overcome serious environmental pollution is a city aiming to take the initiative to create sustainable society. After establishment of government-managed Yahata ironwork in 1901, the city grew rapidly as heavy industrial area, and it acts as an engine for the Japanese rapid economic growth as one of the top 4 industry in Japan. However, rapid economic growth caused serious environmental pollution. “The seven colored smoke” symbolized the situation of air of that period. Many factories were established around Dokai-bay and the sea would be named “The Sea of Death”, where even bacteria couldn’t survive, and was said as the worst water pollution area in Japan (City of Kitakyushu 2010). Currently, the skies become clear again, and more than 100 species of marine live in the bay. This miraculous environmental recovery, which OECD(1985) applauded as “Gray city to green city”, is the beginning of the way toward sustainable society in Kitakyushu. The city provides environmental technologies and advices based on experience with fighting pollution to developing countries, and UNEP awarded “Global 500 Award” for these international environmental cooperation efforts in 1990. In 1992, Kitakyushu was awarded “UN Local Government Honours” at the Earth Summit. In 2004, Kitakyushu made grand design titled “Towards the creation of a ‘World Capital of Sustainable Development’”, which outlined basic principles to initiative in creating sustainable society. OECD nominated the city as a green growth model in 2010.

The one of the most important characteristics of Kitakyushu’s approach is outstanding activities by citizens. Women’s club established by local housewives played important role to begin dealing with the pollution problem in 1960s. Based on their ardent desire “Aozora ga Hoshii (We Want Our Sky Back)”, they conducted survey on industrial sites, meetings with academia and petition with results of hand-made studies of soot and dust. Their enthusiastic activities lead to partnerships with industry, academia, government and citizens to fight against pollution, to achieve rebirth of environment. Companies made great effort to include energy conservation and to install equipments for pollution control, and local government also implemented environmental monitoring, building environmental infrastructures and strengthening regulations. As a consequence of this historical background, the grand design emphasizes that sustainable development in Kitakyushu should be conducted “by all sectors of society and in all aspect of living, learning, working and playing in Kitakyushu” and it also declares importance of “Intensifying the environmental power of the city through the laughter
and strength of the people” as the 1st principle (City of Kitakyushu 2004).

The history of Kitakyushu toward green city effects features of ESD in Kitakyushu which is managed by citizens, and which aims to raise awareness of sustainability not only for children but all citizens. The paper describes ESD in local communities of Kitakyushu, which is managed by local NGOs and neighborhood communities.

**Figures-1. Miraculous Environmental Recovery from the Sky Hidden by Smoke and from the Sea of Death**

*ESD programs managed by citizens and NGOs*

RCE Kitakyushu is organized by the “Kitakhushu ESD Council” that is composed by schools, higher educations, research institutes, NGOs, companies and government, and was established in 2006. The council has facilitated outreach activities of each affiliate, by creating network among them and by giving new meaning as ESD. For example, “Satoyama wo Kangaeru Kai (Association of Satoyama Caring)” carries out the annual Forest Forum program with many volunteers and NGOs, to foster network between aged persons with dementia and young persons in the nature. “Kitakyushu Interpretation Study Group” makes “Cloth Picture
Theater” education material, that enables children to learn function and fragility of ecosystem by enjoying, touching and playing with soft toys and costumes. “Kitakyushu Citizens’ Associations of Global Warming” and “RISE Kitakyushu” work together to inform importance of the three R’s for creating recycling-oriented society through making “Paper Roses” with old newspapers and Japanese writing paper (called Hanshi). “Senior Net Kitakyushu (SNQ)”, which is an association of seniors to support self-realizing with widely utilizing experiences of member, provide learning from experiencing of planting and harvesting rice for elementary school students. “Akikan Kikin (Can Recycling Fund)” NGO promotes can recycling campaign in schools and companies, and volunteer group “environmental learning supporters” provides various lectures in schools and the Kitakyushu Environmental Museum.

Extensive involvement by women is also important advantage of Kitakyushu RCE. Kitakyushu for Asia Womens Forum (KWAN) undertook secretariat function of the Kitakyushu ESD Council at first (Misumi 2013). One of the most active and experienced facilitate “Wakamatsu Cosmos Association” was established in 1992 by volunteer housewives who joined cosmos flowers planting project, and they has continued plantings more than 20 years. After COP3 Kyoto conference took place in 1997, they began to promote original “environmental household budget” for keeping record environment load of each household. Furthermore, they appeal to have “eco-friendly shopping bag” instead of plastic bags, by presenting their original bag made by thrown plastic umbrellas. As well, many women play critical role as core members of the council or many affiliates.

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<th>Forest Forum (Association of Satoyama Carin g)</th>
<th>Cloth Picture Theater (Kitakyushu Interpretation Study Group)</th>
<th>Rice Planting Experience for C hildren (Senior-Net Kitakyushu)</th>
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<th>3R Art Paper Rose (Association of Global Warmin g Issue in Kitakyushu, RISE Kit akyushu)</th>
<th>Environmental Learning Progra ms by Volunteer Citizens (Environmental Learning Supp orters)</th>
<th>Campaign to Recycle Can (Can Recycling Fund)</th>
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(Source: Kitakyushu ESD Council)

Figures-2. ESD projects by Citizens and NGOs in Kitakyushu
ESD in Neighborhood Communities

Kitakyushu ESD Council started “Neighborhood ESD Center Project” in 2010, to promote ESD in neighborhood communities by utilizing “Neighborhood Center”. Community centers which located in each 130 elementary school district, was considered to be typical neighborhood centers. The council runs five model projects at Tobata-Ward, Kiyomi in Moji-Ward, “Green Corridor” in Wakamatsu-Ward, Ainoshima in Kokurakita-Ward and at Wakanozo in Kokuraminami-Ward. (Suga and Tamura 2013)

Four projects except Wakazono are designed and managed by each leader who was selected from the Kitakyushu ESD Council. “ESD in Tobata” project provides series of lectures every two months at Tobata Library, which located on centers of Tobata-Ward and is in walkable distance from almost all of the Ward. Program of Tobata is designed to incorporate participatory approach. Participants receive “ESD Card” to write spontaneous activities for sustainable development, and they can check result of challenges in next lecture. After lecture about making compost from garbage and carton case, participants made gardens with utilizing the system. At annual ESD festival, members introduce handmade goods by persons with disabilities to audiences. Program design mainly depends on each leader. Project at Kiyomi provides lectures and excursions to learn neighborhood history. “Green Corridor” in Wakamatsu-Ward, “Wakamatsu Cosmos Association” which is mentioned before, runs continuous planting project called “Green Corridor”. The Council supports projects with introducing lecturers and giving a small budget.

Project at Wakazono in Kokuraminami-Ward differs from other four projects, that is because neighborhood association “Machizukuri Council” manage it. “Machizukuri Council” consists of Neighborhood Community Association, Residential Association, Senior Citizens’ Club, Council of Social Welfare and other neighborhood communities. Core members of neighborhood communities organized “Wakazono ESD Committee”, and the committee plans various ESD program through discussion in monthly meeting. Information about programs such as lectures and excursion is widely informed to each individual and household by utilizing networks of neighborhood communities, so each program attract nearly 100 people. The committee also tackles collaboration with schools and universities. The training camp program was for Wakazono Elementary School students to experience conservative living like cleaning clothes without using washing machine and synthetic detergents. The fish club of Kitakyushu High Schools contributed to the camp by making quiz about aquatic creatures. Federation of Children in Wakazono, members of “Ainoshima Project” and the University of Kitakyushu collaborated for “Ainoshima Adventure Project” which is on-site learning program like coast cleaning and others. Awareness of aging and weakening of neighborhood communities and their activities triggered ESD project in Wakazono neighborhood. A few core members of the communities attended study tour for Kyoyama ESD activities in Okayama RCE, and they found that ESD could enhance intergenerational exchanges and activities in communities.
Kitakyushu RCE started “ESD Coordinators Developing Project” in 2012, to enhance abilities to manage ESD activities in neighborhood communities. Experiences of “Neighborhood ESD Center Project” reveal that leaders play important role for designing and managing various programs, and engaging with neighborhood community. The project aims to develop ESD coordinators who can manage ESD program in neighborhood, and gives lectures about activities in other areas and regions, and experimental learning of field survey and workshop. 46 participants including many directors of community center participated in 2012, and the course also will be run after 2013.

(source: Kitakyushu ESD Council)

Figures-3. Neighborhood ESD Center Project

Conclusion: Achievements and Challenges of ESD in Local Communities

In Kitakyushu, various local communities as local NGOs and neighborhood communities provide a variety of ESD programs for citizens, so that not only students but also adult could participate various kinds of ESD program according to one’s interest. Through these activities, not only audiences of events but also affiliates of Kitakyushu ESD Council have enhanced awareness of importance of sustainable development. ESD in local communities attracts many older persons and women, however, current economic conditions make it much more difficult for young workers to involve in local communities. On this account, the Kitakyushu ESD Council delivered trial ESD lecture for “Kitakyushu Interdependent Business Consortium for
Sustainable Development (KICS)” in September 2013, with awareness of importance to enhance networks and commitments between companies.

Developing comprehensive ESD program for citizens by sharing information between NGOs and neighborhood communities is challenge for future. The Kiakyushu ESD Council has encouraged each NGO and member to develop program based on their mandate and interest, and this has succeeded to produce rich programs in local communities. For the next step, developing comprehensive frameworks is needed to strengthen relationships among various programs. Universities and research institutes would play key role to categorize each program in local communities. Commitment from universities toward ESD in Kitakyushu was on individual level and was not organized. At present, 10 universities in Kitakyushu began “Kitakyushu Manabito ESD Station” projects in 2010, by subsidies of “Program for Promoting Inter-University Collaborative Education” by Ministry of Education, Culture, Sports, Science and Technology. The station aims to become a hub of ESD in the region, and it provide extension course called “Manabito Koza”, and problem solving trainings in community called “Manabito Project”. Strengthening relationship among universities and local communities would enhance ESD for all sectors in the society by further utilizing accumulated experiences in the region.

References