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Articulating a Global Vision in Local Terms:
A Case Study of a Regional Centre of Expertise on
Education for Sustainable Development (RCE)
in the Greater Sendai Area of Japan

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TABLE OF CONTENTS

1 Introduction.............................................................................................................................1
  1.1 Articulating a Global Vision of ESD through RCEs..................................................1
  1.2 Purpose and Significance of the Study .................................................................2

2 Literature Review: The RCE Initiative in the Context of International Reforms in Education ..........................................................................................................................4
  2.1 Neo-institutionalist Theorization of Educational Expansion: World Culture Theory 5
  2.2 Conceptualising the Global and the Local in Transnational Diffusion of Education Models.........................................................................................................................7
    2.2.1 'Loose Coupling' between Global Education Initiatives and Local Action ......7
    2.2.2 The Globalisation of Educational Policy and the Politics of Policy Borrowing and Lending .......................................................................................................9
  2.3 Changing Roles of the Market, State and Civil Society ...........................................12
    2.3.1 The Diminished Role of the State in Promoting Public Education .................12
    2.3.2 Globalisation and Internationalization of Higher Education .......................15
    2.3.3 The Origin and Changing Concepts of Non-formal Education (NFE) ............18

3 Research Method .............................................................................................................27

4 Background......................................................................................................................28
  4.1 National Context Relevant to Promoting ESD and RCEs in Japan..........................28
  4.2 Greater Sendai Area in the Tohoku Region of Japan ...............................................31
    4.2.1 Geography ........................................................................................................31
    4.2.2 History: Socio-Economic Development ..........................................................32
  4.3 Seeds of RCE in the Greater Sendai Area ................................................................33
    4.3.1 City of Trees ....................................................................................................33
    4.3.2 The City of Sendai’s Environmental Policy .....................................................33
    4.3.3 Miyagi University of Education .......................................................................34
    4.3.4 Local Civil Society ..........................................................................................35

5 Core Competencies of Main Actors of the Greater Sendai RCE and Existing Partnerships in the Region ..............................................................................................36
  5.1 FEEL Sendai .............................................................................................................36
  5.2 Partnerships to Promote School EE ..........................................................................39
  5.3 Partnerships to Promote Community Development .................................................43

6 Towards the Greater Sendai RCE: Evolving Processes...................................................46
  6.1 Embarking on the RCE Initiative..............................................................................46
  6.2 Envisioning the Greater Sendai RCE........................................................................47

7 The Greater Sendai RCE in light of the Core Elements of RCEs....................................49
  7.1 Governance and Sustainability of RCE .................................................................49
    7.1.1 Methods of Operation and Decision-Making ..................................................49
    7.1.2 Long and Short Term Financial Arrangements ..............................................50
    7.1.3 Other Resources .............................................................................................51
  7.2 Collaboration.............................................................................................................51
    7.2.1 Existing Collaboration and Networking .........................................................51
    7.2.2 Enhancing Outreach/Service Function of MUE ..............................................51
LIST OF TABLES, FIGURES AND BOXES

List of Tables
Table 1 Interventions in the Area of Education to Achieve the Millennium Development Goals .........................................................................................................................13
Table 2 Coombs & Ahmed's (1974) Definitions of Formal, Nonformal, and Informal Education ........................................................................................................................................19
Table 3 Rogers’ (2004) Definitions of Formal, Non-Formal and Informal Education .................................................................................................................................19
Table 4 Carson and Car-Hill's (1991) Categorization of NFE Programmes .................................................................................................................................21
Table 5 City of Sendai’s Environmental Policy .................................................................................................................................34
Table 6 Members of Kesennuma Omose Elementary School Project Partnerships Promotion Committee (19 organisations, 28 individuals) ..................................................................................41
Table 7 Tentative Composition of the Steering Committee of the Greater Sendai RCE .........................................................................................50
Table 8 Main Participating Institutions/Organisations of the Greater Sendai RCE .........................................................................................52
Table 9 Eight Principles of "Slow Life City Declaration” (Kakegawa City, 2002) .........................................................................................66

List of Figures
Figure 1 Collaborative Links of an RCE .................................................................................................................................3
Figure 2 Mechanism for Carrying Blueprints of Development and Education .........................................................................................8
Figure 3 Heuristic Model of Policy Borrowing based on Steiner-Khamsi (2004) .........................................................................................11
Figure 4 Education Reform Cycle ........................................................................................................................................24
Figure 5 City of Sendai ........................................................................................................................................32
Figure 6 Greater Sendai Area ........................................................................................................................................32
Figure 7 Existing Collaboration and Networking in the Greater Sendai Area from the Perspective of Miyagi University of Education .........................................................................................53

List of Boxes
Box 1 Main Actor of the Greater Sendai RCE (1)—Local Municipal Government .........................................................................................38
Box 2 Main Actor of the Greater Sendai RCE (2)—Higher Education Institution .........................................................................................40
Box 3 Main Actor of the Greater Sendai RCE (3)—Local School .........................................................................................42
Box 4 Main Actor of the Greater Sendai RCE (4)—NGO .........................................................................................45
# LIST OF ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSO</td>
<td>Civil Society Organisation</td>
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<tr>
<td>DESD</td>
<td>Decade of Education for Sustainable Development</td>
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<td>EE</td>
<td>Environmental Education</td>
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<td>EFA</td>
<td>Education for All</td>
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<td>ESD</td>
<td>Education for Sustainable Development</td>
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<td>IAU</td>
<td>International Association of Universities</td>
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<td>ICT</td>
<td>Information and Communications Technology</td>
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<td>IIS</td>
<td>International Implementation Scheme</td>
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<td>MEXT</td>
<td>Ministry of Education, Culture, Sports, Science and Technology, Japan</td>
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<td>MUE</td>
<td>Miyagi University of Education</td>
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<td>NFE</td>
<td>Non-Formal Education</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<td>PIS</td>
<td>Period of Integrated Study</td>
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<td>RCE</td>
<td>Regional Centre of Expertise on Education for Sustainable Development</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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<td>UNESCO-ACEID</td>
<td>UNESCO Asia-Pacific Centre of Educational Innovation for Development</td>
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<tr>
<td>UNESCO-APEID</td>
<td>UNESCO Asia-Pacific Programme of Educational Innovation for Development</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<td>UNU</td>
<td>United Nations University</td>
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<td>UNU-IAS</td>
<td>United Nations University-Institute of Advanced Studies</td>
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Introduction

1.1 Articulating a Global Vision of ESD through RCEs

For all who achieve economic development profound cultural change is inevitable. But the rewards are considerable.

C.E. Ayres (1962)

There were times when economic development was synonymous with the loss of traditions and cultures. Such glory days of 'modernization theory' are long over—at least in mainstream international development discourse. The draft International Implementation Scheme of the UN Decade of Education for Sustainable Development (UNESCO, 2004) positions 'culture' as an "underlying dimension" of three key areas of sustainable development, that is, society, environment, and economy (P.4). These "three pillars" of sustainable development reaffirmed at the Johannesburg Summit give shape and content to learning for a sustainable future, and it is noteworthy that 'culture' is highlighted as "the basis and foundation" (p.13) of these interlinked areas.

As recognised by UNESCO (2004), Fien (2003), and many others, Education for Sustainable Development (ESD) is not value-neutral. Fien (2003) has pointed out that some even argued that ESD "ran the risk of indoctrination" (p.8). As UNESCO (2004) puts it succinctly, ESD is "fundamentally about values" (p.4). ESD is all about learning the "values, behaviour and lifestyles required for a sustainable future and for positive societal transformation" (p.4). For Fien (2003), the aim of ESD is to make us see, once again, development "as a set of rational and moral choices guided by a vision of the future to which we aspire" (p.20). When the US economist Clarence E. Ayres was writing forty years ago, he saw 'development' as a set of rational and moral choices guided by a vision of the single desirable future in which all societies are modernised like developed countries of the 'west.' Today such a vision of the uniform future is obsolete. Instead, there is a widespread consensus that a vision of a sustainable future should "find expression in varied socio-cultural contexts—where 'positive societal transformation' will be articulated in different ways" (UNESCO, 2004, p.23).

Emphasising the importance of 'cultural diversity', along with 'capacity development' and 'empowerment', at least rhetorically, the UN entities today have no choice but to preach 'sustainable development' as universally desirable without the ability to specify tangible and concrete benefits gained by espousing a vision of a sustainable future in specific locales,
precisely because they are not in a position to show how it should be articulated in different societies.¹ The UNU presents the concept of a Regional Centre of Expertise on Education for Sustainable Development (RCE) as a vehicle that may promote local involvement and contribute to the articulation of a global vision of ESD at the regional/local level. An RCE is expected to bring existing institutions together at the regional/local level to jointly promote ESD. Whereas looking at the constellation of local partnerships for a particular global education initiative (i.e., Education for All, girls education, human rights education, ESD, etc.) in its entirety is a formidable task, RCEs—which are primarily (but not exclusively) geographically bounded and limit (though not exclude) participating organisations—provide ideal cases to examine how local stakeholders come together and translate, articulate, and implement the prescriptive international educational norms (in this case ESD) in local terms.

On 29 June 2005, at the UNU-UNESCO Conference on Globalisation and Education for Sustainable Development, an initial group of seven RCEs were launched as pioneers of a larger number to be developed throughout the UN Decade of Education for Sustainable Development (DESD), 2005-2014. The seven RCEs launched are from Barcelona (Spain), Greater Sendai Area (Japan), Okayama (Japan), Pacific Island Countries (University of South Pacific, Fiji), Penang (Malaysia), Rhine-Meuse+ region (Netherlands, Belgium, and Germany) and Toronto (Canada). Focusing on one of these seven RCEs—the Greater Sendai RCE, this research investigates how a global vision of ESD is articulated in local terms through an RCE.

1.2 Purpose and Significance of the Study

This research explores the question of how global education initiatives are locally implemented through a qualitative case study of a demonstration project of an RCE, which is proposed by the UNU as a major tool to mobilise local stakeholders for ESD to achieve the objectives of the UN DESD. An RCE is not a centre in a traditional sense but a network of existing institutions mobilised to jointly promote ESD at the regional/local level. Figure 1 shows a diagram of collaborative links of an RCE.

¹ In the wake of the events of 11 September 2001, the UNESCO Universal Declaration on Cultural Diversity was adopted unanimously by the 185 Member States represented at the 31st session of the General Conference in 2001.
This paper is not so much concerned with the philosophy, content and pedagogy of ESD, as it is with the technical means by which an RCE as envisioned by UNU could be realised. The purpose of this study is fourfold. First, based on literature review and various meetings, workshops and conferences which I participated during my UNU-IAS Postdoctoral Fellowship, this paper situates the RCE initiative in the context of international reforms in education and the Japanese national context. Second, this study describes what is happening on the ground in particular schools and municipalities and the boards of education in the Greater Sendai Area and what kinds of activities and initiatives are carried out by a local higher education institution and local NGOs, in comparison with the RCE concept put forward by the UNU and ESD principles described in key documents such as Agenda 21 and the draft and finalised International Implementation Schemes (IIS) of DESD prepared by UNESCO (2004, 2005). Third, this paper also reports on what has happened to ideas of RCE since they arrived at the region, highlighting local interpretation and modification of the RCE framework. Finally, this study is action-oriented research to promote RCEs, and it documents and disseminates the processes of local stakeholders' developing an RCE jointly with the Education for Sustainable Development (EfSD) team of the UNU-IAS.

For theoretical guidance in investigating how a global vision of ESD is articulated in local terms through the evolving process of creating an RCE, I mainly turn to comparative education literature on the transnational flow of educational reforms which documents local modification and adaptation of imported educational policies, practices, and discourses.
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Steiner-Khamsi, 2004; Anderson-Levitt, 2003; Rogers, 2004). While emphasising local adaptation of global education models, this study is also informed by institutional theory in sociology or world culture theory, which sees "an increase in common educational principles, policies, and even practices among countries with varying national characteristics" (Chabbot & Ramirez, 2000, p. 173). It therefore adds to a larger ongoing debate between convergence theory (world culture theory) and divergence theory of education systems. In addition, as a case study of the very first RCE to be developed in the world, this study aims at making RCEs more relevant and effective in reorienting education towards sustainable development, disseminating experience regarding putting the RCE concept into practice in the Greater Sendai Area of Japan and informing budding efforts to create an RCE elsewhere.

2 Literature Review: The RCE Initiative in the Context of International Reforms in Education

Much has been written on the importance of ESD by environmental education experts, and documentation of 'ESD principles' such as Chapter 36 of Agenda 21 is readily available.2 Rather than reiterating the rationale and need for ESD from the perspective of sustainable development, this literature review situates ESD and the UNU’s (2004; UNU-IAS, 2005) RCE initiative in the context of post-World War II educational development and international reforms in education. The twentieth century was marked by expansion of mass schooling—both basic education and higher education—worldwide, and the expanded definition of education as a human right has entered the mainstream international development discourse. The expansion of educational opportunities worldwide even led to a grand international project to equalize educational opportunities for all—the "Education for All (EFA)" movement launched in 1990.

This chapter also highlights debates and issues in international educational development that have been major concerns of researchers in comparative education and the sociology of education as well as of practitioners working to achieve the goals of EFA. Of course, there is an explicit reference to EFA and a clear recognition of the importance of EFA in Chapter 36 of Agenda 21, the draft and finalised DESD International Implementation Schemes (UNESCO, 2004, 2005), and other major ESD initiatives including the UNU’s RCE initiative.

As ESD springs from a different root from EFA, however, it is important to understand concepts which were born within the world of development assistance and are being used in the discourse of ESD. How is 'education for development' different from 'education for sustainable development'? I try to answer this question by looking at various literature on globalisation and cross-cultural trends in the shaping and reshaping of education.

### 2.1 Neo-institutionalist Theorization of Educational Expansion: World Culture Theory

Witnessing educational expansion in both developed and developing countries in 1950s and 1960s, a group of sociologists at Stanford University (neo-insititutionalists) sought to explain why countries across the globe uniformly embraced expansion of formal schooling despite vast differences in structural features of nation-states. These neo-institutionalists, who came to be known also as "world culture theorists," point to the importance of the wider world in which nation-states are embedded and within which expanding education is "the just and proper thing to do" (Ramirez, 2003, p.242). There have been compelling neo-institutional analyses that indicated that educational expansion is grounded more in a world cultural blueprint than in internally differentiated political, economic and social factors. For example, cross-national multivariate regression analysis of panel data shows that much primary enrolment growth is unrelated to various measures of national 'modernisation' (Meyer, Ramirez, Rubinson, & Boli-Bennett, 1977; Meyer, Ramirez, & Soysal, 1992). As Ramirez (2003) puts it, "To be taken seriously as a nation state, countries had to expand schooling or at the very least embrace education expansion as a national goal" (p. 241). In the post-World War II period, neo-institutional sociologists argue, a world culture emphasising progress and justice constructed a rationalising discourse about a central role for education in individual and collective development (Chabbott & Ramirez, 2000; Ramirez, 2003).

According to neo-institutional theory, a world culture is activated through different processes that include (1) coercion, (2) imitation, and (3) conformity to norms or enactment. These processes can lead to institutional isomorphism. For example, suppose RCEs spread across the world as UNU envisions. Theoretically speaking, RCEs can be disseminated through coercive isomorphism (imposition by UNU), mimetic isomorphism (copying), or normative

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3 Isomorphism is "the tendency for collectivities engaged in similar enterprises to adopt similar social structures" (Chabbott & Ramirez, 2000, p.173).
isomorphism (conformity to international norms). In mimetic isomorphism, institutions imitate one another, because as soon as one institution is perceived as successful, others rush to adopt its methods. In the case of normative isomorphism, institutions come to resemble one another because each seeks to adhere to the same external standard of excellence.

From the world culture perspective, the worldwide adoption of the RCE concept will be best understood as the third type of isomorphism which "[involves] the enactment of a scripted progress-seeking or justice-caring identity" rather than an imitation of pilot RCEs by other RCEs. The RCE concept will spread worldwide to the degree it is perceived as the optimal way to achieve progress and justice. In other words, world culture theorists would not claim that RCE is necessarily the best way to promote ESD even in the face of the global spread of RCEs. By the same token, nor would they claim that there is necessarily an inherent quality in ESD facing the infusion of ESD at every level of formal education at every corner of the world. With its explanation of global educational isomorphism as enactment of identities, goals, and technologies for attaining these goals validated by the wider world culture, world culture theory radically departs from mainstream functionalist perspectives—including the perspectives of UNESCO (2004, 2005; Delors, 1996)—which assume the intrinsic value of education and learning.

Both neo-institutional thinking in sociology and critical thinking in comparative education do not view the apparent global convergence of educational models as "the triumph of optimal educational strategies" (Ramirez, 2003, p.252). Comparative education researchers have long warned against the danger of uprooting educational policies and practices and transplanting them without taking local contexts into consideration. While comparativists emphasize the cultural embeddedness of education systems, neo-institutional research tradition started with an attempt to challenge "the dominant comparative tradition, which imagines societal outcomes to be due to societal characteristics" (Ramirez, 2003, p.241). Neo-institutionalism, then, diverges from comparative education tradition in "postulating the existence and operation of a world culture that strongly influences nation-states and other actors by providing them with legitimated identities they can enact in the pursuit of legitimated goals" (Ramirez, 2003, p.252).
Neo-institutional sociologists acknowledge that there are actors with competing interests and interest-driven goals, and there are more powerful actors than others, but they "emphasize the degree to which actors, interests and goals are contingent on the wider world for their identities and purposes" (Ramirez, 2003, p.242). Why, then, this vast gap between broad faith in education manifested in the form of international education conferences and declarations on the one hand, and the general public's unfamiliarity with ESD (which necessitates awareness raising and advocacy of ESD on the part of the UNU-IAS) on the other? The usefulness of neo-institutional theory in guiding the UN efforts to promote ESD is limited in that we have not really felt the power of the "world culture of progress and justice" influencing collective and individual sense-making and action at the local level. The consequent section presents neo-institutional explanation of apparent local divergences from the world cultural frame of development.

2.2 Conceptualising the Global and the Local in Transnational Diffusion of Education Models

2.2.1 'Loose Coupling' between Global Education Initiatives and Local Action

As Chabbot & Ramirez (2000) illustrate, in the post-World War II period, a rationalising discourse about a central role for education in individual and collective development has been widely circulated through various activities of international organisations including international conferences. By the time of the 1990 Education for All Conference, international conferences came to generate standardised outcomes, including nonbinding declarations and frameworks for action, which serve as a basis for developing national frameworks of action. Chabbot and Ramirez (2000) argue that endorsing these declarations and frameworks is made "practically mandatory" by the power of world culture emphasising progress and justice (p.173). Figure 2 is a diagram which situates a "conference-declaration-national plan cycle" between "world cultural blueprints of development" at the top and "local/national action" at the bottom. This "conference-declaration-national plan cycle" led to a significant amount of "loose coupling" between on the one hand, prescriptive international education initiatives produced in response to the world culture (e.g., ESD) and, on the other hand, the implementation of these initiatives at the local (both national and sub-national) level (Chabbot & Ramirez, 2000, p.175).
Ramirez (2003) views this type of "loose coupling" between the global education model and local action as somewhat inevitable since what happens on the ground is the "local symbolic enactment of general abstract models" rather than a "straightforward copying" (p.252). As indicated earlier, world culture theory postulates the existence of a world culture that strongly influences nation-states and other actors and makes a case for "an increase in common educational principles, policies, and even practices among countries with varying national characteristics" (Chabbot & Ramirez, 2000, p.173). Despite its emphasis on global educational isomorphism, however, it radically departs from arguments that view globalisation as an irreversible and inexorable process of global cultural homogenization—for example, Ritzer's (1998) "McDonaldization" thesis. Ramirez (2003) dismisses the fear of McDonaldization by arguing that it "presupposes a more tightly wired and internally consistent system than is actually in place" (p.252).

![Figure 2](image)

**Figure 2  Mechanism for Carrying Blueprints of Development and Education**

Source: Adopted from Chabbot & Ramirez (2000), p.174, Figure 7.1.

It can be argued that the RCE initiative arose in part from a widespread recognition of "loose coupling" between highly idealistic international initiatives and the implementation of these
initiatives at the local level. How, then, can RCE be a mechanism to reduce the loose coupling between international educational norms (e.g., ESD) and implementation of these norms at the local level without disregarding the local context and damaging cultural diversity? World culture theory suggests that RCE will spread if RCE comes to be widely perceived as the validated technology to achieve legitimated goals of sustainable development, but it does not tell us much about RCE as a societal apparatus to link local concerns and priorities to the world cultural frame of progress and justice.

Writing five years ago, Ramirez and Chabbot (2000) highlighted the potential role of international, national, and local NGOs in monitoring the implementation of declarations and national plans of action at the national and sub-national levels and contributing to tighter coupling between international norms and local action (p.175). They also pointed out that Information and Communication Technology (ICT) would facilitate NGOs' efforts to monitor local action, for example, by drawing international attention when national governments fail to implement national plans (p.175). Both NGOs and ICT are given central roles in the RCE initiative. While identifying local factors that lead to tighter coupling between international norms and local action needs to wait for the results of a meta-analysis of case studies of RCEs, the basic idea underpinning the RCE initiative is that an RCE itself functions as a mechanism to link the global vision of ESD and local action.

2.2.2 The Globalisation of Educational Policy and the Politics of Policy Borrowing and Lending

Globalisation has been for some time now a theme of interest to educators, particularly in the field of comparative education. One of the central questions about globalisation is whether it is a homogenising process that creates a "global culture" or people creatively adapt and 'indigenize' global imports. Parallel to arguments that view globalisation as a process of global cultural homogenization, processes of local incorporation of global cultural flows and the interaction between global and local cultural elements are increasingly studied by anthropologists and sociologists as well as by comparative education researchers (see for example, Arnove & Torres, 1999). Despite apparent convergences in donor agency policy and international policy discourses, local responses to globalisation can and do vary. While globalisation poses similar problems around the world, paying attention to this divergence in the face of convergence is critical to an adequate understanding of education in an international context and a successful implementation of RCEs.
While apparent global convergences in education discourses highlight the international appeal of such ideas as "education as a human right" and "decentralization," the outcomes of adopting such dominant education policies have often been considerably different from what they assure. As pointed out earlier, while many educational models get to cross borders, we cannot assume that it is always 'best' models that travel across national boundaries. Comparative education research on 'educational transfer' questions the value of importing and exporting educational policies and practices and tests the effectiveness of adopting one county's policy in other countries with different historical and socio-cultural backgrounds. In contrast to world culture theorists, comparative education researchers of 'educational transfer' and anthropologists who study educational reforms (Anderson-Levitt, 2003) emphasises the power of actors and the notions of agency and interests.

For example, case studies in a book titled *Local Meanings, Global Schooling: Anthropology and World Culture Theory* (Anderson-Levitt, 2003) directly challenge world culture theory by focusing on different meanings which different actors at different levels (e.g., government officials, administrators, teachers, parents and students) attach to global education models. In her edited volume examining the globalisation of educational policy, Steiner-Khamsi (2004) compiles cases focusing on transnational education policy borrowing and lending. Cases of policy borrowing explore the questions of why a particular policy was imported or borrowed from elsewhere and how these "externally induced reforms" (Steiner-Khamsi, 2004, p.5) were implemented at the local level. While neo-institutionalism is macro-sociological theorization which focuses on the power of the culture and the wider institutional environments within which actors operate, Steiner-Khamsi and her associates focus on the politics of educational borrowing and lending.

Figure 3 is a heuristic model of policy borrowing I developed based on Steiner-Khamsi’s (2004) arguments. This model is merely meant to show some possible ways in which a global education model like the RCE initiative can be locally implemented, and four categories in the far right column (rhetorical borrowing, failure to implement, local adaptation, justification for a politically contested domestic reform) are neither exhaustive nor mutually exclusive. This model is useful for considering possible ways in which local stakeholders use the RCE initiative to advance their immediate and practical objectives (as opposed to a long-term goal of achieving a sustainable future). It draws attention to an
important point that local RCE promoters (very often faculty members based at a local higher education institution) are neither passive recipients of the RCE concept nor saint-like figures who care more about the future of the Earth and the humankind than the future of their own academic institution, their region, or their country.

Figure 3  Heuristic Model of Policy Borrowing based on Steiner-Khamsi (2004)

The anthropological and comparative education work challenging 'world culture theory' takes a critical look at the power and interests of educational lenders (e.g., UNU) as well as those of educational borrowers (e.g., local stakeholders). From this perspective, the UNU can be seen not simply as an innocent carrier of world cultural blueprints of (sustainable) development but also as an actor with its own interests and agenda. As Steiner-Khamsi (2004) points out, "international organizations need to mark their presence and demonstrate to their own constituents and donor(s) that their projects have an impact" (p.205). The UNU Rector Hans van Ginkel often makes an analogy between the RCE initiative and UNESCO's cultural heritage list (see, for example, UNU-IAS, 2005, p.2; van Ginkel, 2004, p.62), and it seems obvious that the UNU is trying to make the RCE into its 'trademark' which "enhances the visibility of [the] organization within the donor community" (Steiner-Khamsi, 2004, p.205). The low visibility of the UNU—both among the UN community and the general public—poses a serious challenge to the raison d'être of the UNU as a global think to the UN
system. The UNU is not mentioned even once in Investing in Development: A Practical Guide to Achieve the Millennium Development Goals by UN Millennium Project (2005).

The RCE initiative significantly departs from 'trademarks'—often known as 'best practices'—of international organisations giving grants or loans for their education projects in that the UNU does not fund the local implementation of an RCE. At this initial stage of developing the first group of RCEs, the EfSD team of the UNU-IAS is expected not so much to supervise and evaluate the development of each RCE as to encourage and support local RCE promoters' efforts to put the RCE concept into practice. The UNU is not hiring local staff for implementing the RCE pilot projects in any of seven regions launched in June 2005. Indeed, the RCE initiative is very different from "prepackaged, modularized, and checklisted programs developed at the headquarters of international organizations and subsequently transferred to their field offices" (Steiner-Khamsi, 2004, p. 206). Observably, it is much more difficult to manage and evaluate RCE projects than to administer 'best practices'. While the somewhat 'laissez-faire' approach of the RCE initiative encourages the involvement of 'local experts' in articulating and implementing this global initiative, the lack of a management structure that serves the supervision and evaluation of RCEs can pose considerable challenges to the UNU in the long run.

2.3 Changing Roles of the Market, State and Civil Society

The previous sections focused on theorisation of the transnational diffusion of education policies, practices and discourses. This section looks at changing ideas on the roles of the market, state and civil society in delivering and managing primary, secondary, and tertiary education (commonly referred to as 'formal education' or 'formal schooling') as well as education activities that take place outside of schools (commonly referred to as 'non-formal education').

2.3.1 The Diminished Role of the State in Promoting Public Education

"What forces are driving the spread of mass schooling?" (emphasis in original, Fuller & Rubinson, 1992, p.ix). "What motivates state actors to expand and deepen the effects of mass schooling?" (Fuller, 1991, p.xvi). In search for the answer to these questions, neo-institutionalist research traditionally focused on governments and looked at education as a

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4 The case of the Greater Sendai RCE is exceptional in that UNU-IAS is assigning a postdoctoral researcher to document and disseminate its experiences.
nation-building project. Whereas Chabbot and Ramirez (2000) took notice of the role of international organisations and international development professionals in carrying world cultural blueprints of development (see Figure 2), the traditional emphasis of institutionalist research on education was on nation-states and state actors as carriers of these blueprints. Referring to the widespread official and public faith in the transformative power of education, Fuller and Rubinson (1992) wrote: "God is not dead but living in the bodies of education ministers" (p.ix).

Indeed, the role of the state in promoting public education has been decisive in educational expansion of the last century, but efforts to diminish the role of the sate seem to be rapidly changing education today. In diverse national contexts, there have been discussions about restructuritng of state social provision, including educational provision. Internationally, discussions about the changing relations between the state, civil society and the educational arena often focus on the decentralization of government or "shifts in the loci of power to geographically local contexts" (Popkewitz, 2000, p.173), as illustrated by a movement towards "community governance of education" (Popkewitz, 2000, p.173) or "site-based management" of schools (Anderson-Levitt, 2003, p.9). The RCE initiative can be situated in this movement towards "community governance of education". UN Millennium Project (2005) lists "local control and management" as one of twelve interventions in the area of education (pp.275-276; see Table 1 for the list of all twelve interventions).^5

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Interventions in the Area of Education to Achieve the Millennium Development Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area 4: Investments in Education at All Levels</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Primary and postprimary education</strong></td>
<td><strong>Demand-side incentives.</strong> Elimination of school fees, conditional cash transfers to parents, school feeding (and take-home food rations where needed), school health programmes such as deworming and iron supplementation, targeted subsidies to girls, and vulnerable populations such as ethnic groups or HIV/AIDS orphans, provision of school material such as textbooks and uniforms, and so on.</td>
</tr>
<tr>
<td></td>
<td><strong>Local control and management.</strong> Systems to involve parents in school management: parent committees, school-based management, financing, auditing and expenditure management systems that are consistent with more local control.</td>
</tr>
<tr>
<td></td>
<td><strong>Information/assessment.</strong> Provision of transparent information regarding resources, greater access to information through school report cards, better data systems, and better learning outcomes.</td>
</tr>
<tr>
<td></td>
<td><strong>Improving and evaluating learning outcomes.</strong> Learning evaluation systems that assess acquisition of skills and knowledge, and learning outcomes.</td>
</tr>
<tr>
<td></td>
<td><strong>Special packages to make schools safe for girls.</strong> Training teachers and administrators in gender sensitivity, hiring female teachers, and investing in gender-sensitive infrastructure such as latrine facilities.</td>
</tr>
</tbody>
</table>

^5 The UN Millennium Project is an independent advisory body commissioned by the UN Secretary-General to propose the best strategies for meeting the Millennium Development Goals (MDGs). The Project is directed by Jeffrey Sachs of Columbia University. Sachs serves as Special Advisor to the Secretary-General on MDGs.
Often parallel to discussions about diminishing the role of the state are discussions about enhancing the roles of the market and voluntary effort in social provision (Popkewitz, 2000; Torres & Antikainen, 2003; Anderson-Levitt, 2003). Whereas the movement towards community governance of education is consistent with the normative arguments to promote education as a human right and locally-relevant schooling, it is also in line with neo-classical economistic arguments for privatization of public education (e.g., school voucher), as most effectively advocated by the Nobel Prize winning economist Milton Friedman (1962/1982; also see Kane 2002). Along with the worldwide discursive celebration of education as a human right, the neo-liberal agenda is contributing to re-conceptualization of how formal education should be administered. For example, Jungck (2003) sees common themes such as "liberalization, reduced government spending, privatization, decentralised bureaucracies, and corporate managerialism" driving education reform policies in many Asia-Pacific countries (e.g., Thailand, South Korea, Japan, Hong Kong, Malaysia, Indonesia, Singapore, New Zealand, and Australia)" (p.29). It is well known that, since the 1980s, the World Bank and International Monetary Fund have promoted Structural Adjustment Programmes (SAPs) in low-income countries by providing loans conditional on the adoption of policies designed to reduce government intervention and promote market competition. Interestingly, Rogers (2005) argues that decentralization of education under the pressure of SAPs has not
necessarily led to localised schooling: "The desire to co-opt local communities into sharing the costs and responsibilities of school provision is leading to increased recognition of the necessity for some limited local variation in patterns of schooling" (p.250).

If, as many education researchers have pointed out (see, for example, Torres & Antikainen, 2003; Anderson-Levitt, 2003), same reforms are actually happening or being called for in various parts of the world, the shift away from state control and central regulation towards decentralization is a very important common issue to be considered in implementing the RCE concept. If the RCE initiative is to prove an appropriate way of empowering civil society as UNU envisions, implementation of the RCE concept should not be divorced from the context of ongoing international reforms in education. Given the central role of higher education in promoting RCEs, it is also important to understand the new directions higher education institutions are pursuing in response to cuts in public funding and increasing competition—both national and international.

### 2.3.2 Globalisation and Internationalization of Higher Education

An important development of the 1990s has been the internationalization of higher education driven by an emerging world market of education. The current globalising efforts to establish regionalised free trade zones, as evidenced in such organisations as the European Union, the North American Free Trade Agreement, and Asia-Pacific Economic Co-operation Zone, have led to increased competition not only among national governments but also among higher education institutions. Under World Trade Organisation's (WTO) General Agreement on Trade in Services (GATS), education is being liberalised and transformed into a multi-billion dollar industry. As Altbach (2001) points out, "[the] inclusion of higher education in multilateral treaties ... is an indication of the importance of higher education in the postindustrial world" (p.255). The global trend towards a knowledge-based economy is leading to the increased recognition of the necessity for enhancing the role of education in general, and the role of higher education in particular, as "a critical pillar of human development" (World Bank, 2002, p. ix).

Many authors point to the conceptual confusion between the terms globalisation and internationalization. Following Altbach (2001, 2002) and Steiner (2000), this section sees

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6 The sector of 'education services' includes primary, secondary, post-secondary and adult education services, as well as specialized training such as for sports. Education services are included in the new services negotiations, which began in January 2000. See <http://www.wto.org/english/tratop_e/serv_e/education_elanguage_e.htm>
'globalisation' as 'the context' in which higher education institutions are embedded and 'internationalisation' as "specific policies and initiatives of countries and individual academic institutions or systems to deal with global trends" (Altbach, 2002). For Steiner (2000), these policies and initiatives are "relations", "skills" and "competencies" to be developed to cope with the global environment. Ideally, these policies, relations and competencies should be developed to contribute to international co-operation and international understanding. In reality, however, internationalisation seems to be accelerating commodification of education. While public school reforms are influenced by the neo-liberal agenda, re-engineering higher education is much more directly influenced by market forces. In the face of the globalisation of economy, higher education institutions vie for resources, students and status.

One of the most important developments in higher education is the emergence of entrepreneurial universities. As one of entrepreneurial strategies, many universities are embarking on transnational education. The RCE initiative can be situated in the context of the rise of academic enterprise. The UNU Rector Hans van Ginkel (2004) draws a clear analogy between transnational corporations and higher education institutions:

…it will not be long before the stronger universities will establish new branches abroad. We can already detect this in a number of cases, where, in particular, universities from the United States or the United Kingdom establish such branch universities in other countries. The university will become, under the influence of this process, bigger, stronger, more competitive. It will behave increasingly like an international business: with shrinking distances, larger institutions, competition, selection and hierarchization. (p.57)

Higher education institutions, van Ginkel (2004) argues, should become "a public good…managed in energetic, entrepreneurial ways" (p.58). As the past President of the Board of the International Association of Universities (IAU) (2000-2004), van Ginkel is well versed in concerns of higher education leaders and practitioners around the world. In 2002, IAU held a conference on "Internationalisation of Higher Education" in Lyon, and 55 per cent of 270 participants in this conference were from Europe. This suggests that large voices heard at the IAU are those of European institutions, which are most advanced in terms of taking up entrepreneurial strategies. As IAU (2002) puts it, "[restructuring] Europe's higher education system to meet the challenge of internationalization is proceeding swiftly" (p.2). While transnational education and the Internet and virtual developments in learning do offer new possibilities for some types of higher education institutions, these same developments can pose a threat to other types of institutions.
There are two major concerns expressed over the rise of academic enterprise. Obviously, one concern is about how to assure ‘quality’ of education offered through these new developments. A number of authors highlight the multitude of issues that need to be addressed to develop high-quality transnational education and virtual universities (see UNESCO, 2003, for a selected bibliography on internationalization and globalisation in higher education). There seems to be a consensus that "[entrepreneurial] strategies … should not sacrifice academic standards nor set greater weight on revenue generation" (IAU, 2002, p.6). While some view GATS as a positive force, which encourages the influx of private and foreign education providers into countries where domestic capacity is inadequate, others take a more negative view, concerned that liberalization may compromise important elements of quality assurance. In September 2001, a UNESCO Experts Meeting pointed out the need for stronger international regulatory mechanisms to "govern the delivery and quality of qualifications awarded" (IAU, 2002, p.4). In addition to developing an international quality assurance (accreditation and qualifications) framework, the World Bank (2002) calls for "rules of conduct and appropriate safeguards designed to protect students from low-quality offerings and fraudulent providers, without allowing these mechanisms to constitute rigid entry barriers [into the global market]" (pp. xxx-xxxi).

Another concern is over equity. Intra-state and intra-institutional competition creates a situation where the rich and historically advantaged institutions become richer and stronger, and poor ones poorer and weaker. Liberalization may well permit private and foreign education providers to monopolise the 'best and brightest' students and lucrative and promising programmes, exacerbating the widely-acknowledged problems of 'brain drain' and 'digital divide'. Transnational education can be a threat to local education providers rather than being complementary to what they can offer. As van Ginkel (2004) puts it, "Only strong, responsible and responsive universities can fulfil properly their crucial role in developing education for sustainable development, in providing guidance and leadership in all education with regard to curriculum-development and teacher training, in introducing and disseminating 'state-of-the-art' knowledge" (p.58). The RCE concept does acknowledge that only strong universities have capacity to take up ESD, but it does not explicitly address the fate of poor and weak universities. While bridging the digital gap is an explicit aim of a Global Learning Space (GLS) proposed by the UNU, it is unclear how the network of RCEs (which are presumably promoted primarily by "strong, responsible and responsive
universities") would help weak, marginalised universities—especially those in developing countries—to overcome problems of inadequate institutional capacity and limited human capital. As a way of advancing internationalization of higher education "in a way that also ensures that the benefits of globalisation are evenly distributed", IAU (2002) proposes "establishments of higher education institutions launching long-term partnerships to support training programmes in centres of excellence, sited preferably in developing countries" (p.4). In this proposition, one may detect where the original RCE concept came from, especially given that RCE initially stood for "regional centers/clusters of excellence" (van Ginkel, 2004, p.61), not "expertise". There may be a need for thoughtful discussion of how the RCE initiative fits with the proposal made by IAU in 2002.

2.3.3 The Origin and Changing Concepts of Non-formal Education (NFE)

Throughout the world, the practice of what is labelled "non-formal education" is growing in number and expanding in scope (Rogers, 2004). The term non-formal education (NFE) was first popularised by Philip Coombs' (1968) seminal book *The World Educational Crisis*, in which he included a chapter entitled "Non-Formal Education: to catch up, keep up and get ahead". For nearly twenty years since the publication of this book, the distinction between "formal" and "non-formal" education served as an important instrument of education policy, planning, monitoring and evaluation in developing countries, and considerable resources were mobilised to promote NFE. Rogers (2004) examines why the terminology of NFE, which attracted significant donor support in the 1970s and 1980s, virtually disappeared from the mainstream discourse in the 1990s, and is now being revived in the context of lifelong learning.

Table 2 lists the often-quoted Coombs & Ahmed's (1974) definitions of formal, non-formal and informal education. Here Coombs contradicts his own belief that "education' inevitably implies some sense of intention and planning" (Rogers, 2004, p.75). Precisely because what Coombs calls "informal education" is not organised or designed and lacks intention and planning, it should not be called "education" but rather should be referred to as "informal learning". The RCE concept paper uncritically uses the term "informal education", but it should be changed to "informal learning". Table 3 lists Rogers' (2004) re-conceptualisation of formal, non-formal and informal education based on his thorough review of extensive literature on non-formal education between late 1960s and early 2000s. While Rogers' (2004)
definitions challenge the common usage of the terms formal, non-formal and informal education and may not be easily accepted, these definitions are meant to go beyond a "dualistic model" of formal and non-formal education which is neither fit to describe diverse educational activities today nor appropriate as tools of educational planning and analysis (Rogers, 2004, p.239). The inadequacy of an education model based on the distinction between formal and non-formal education will become clearer in sections that follow (2.3.3.1 through 2.3.3.3).

Table 2 Coombs & Ahmed's (1974) Definitions of Formal, Nonformal, and Informal Education

<table>
<thead>
<tr>
<th>Type of Education</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal education</td>
<td>&quot;Formal education as used here is, of course, the highly institutionalized,</td>
</tr>
<tr>
<td></td>
<td>chronologically graded and hierarchically structured 'education system', spanning lower primary school and the upper reached of the university&quot; (p.8)</td>
</tr>
<tr>
<td>Nonformal education</td>
<td>&quot;Nonformal education...is any organized, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children&quot;. (p.8)</td>
</tr>
<tr>
<td>Informal education</td>
<td>&quot;Informal education … is the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment—at home, at work, at play; from example and attitudes of family and friends; from travel, reading newspapers and books; or by listening to the radio or viewing films or television. Generally, informal education is unorganized and often unsystematic; yet it accounts for the great bulk of any person's total lifetime learning—including that of even a highly 'schooled' person&quot;. (p.8)</td>
</tr>
</tbody>
</table>

Table 3 Rogers' (2004) Definitions of Formal, Non-Formal and Informal Education

<table>
<thead>
<tr>
<th>Type of Education</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal education</td>
<td>That education which is highly decontexualised, not adapted to the individual student participants</td>
</tr>
<tr>
<td>Non-formal education</td>
<td>That education which is partially de-contextualised and partially contextualised (flexible schooling)</td>
</tr>
<tr>
<td>Informal education</td>
<td>That education which is highly contextualised, individualised and small-scale (participatory education)</td>
</tr>
</tbody>
</table>

Source: Adapted from Rogers, 2004, p.261

2.3.3.1 Disillusion with the Formal Education System and the Emergence of NFE

While educational expansion inspired neo-institutionalists to examine the symbolic aspects of schooling, the same phenomenon led many researchers to become very pessimistic about the functions of schooling. In Western Europe and North America, an important strand of educational research has focused on reproductive aspects—as opposed to transformative functions—of formal education (see, for example, Bernstein, 1970; Bowles & Gintis, 1976; Bourdieu & Passeron, 1970/1977; Willis, 1977; MacLeod, 1987). Reproduction theorists
viewed formal education system as a mechanism to maintain inequalities in education and society, rather than as a fair and effective mechanism to identify, train and reward talents. Education reformers who had witnessed the formal education system's failure to serve as a social equaliser embraced NFE as an ideal tool for redressing class-based inequalities in education.

Not only was NFE recognised as a remedy for the many identified ills of formal education system in developed countries, it came to be embraced also as a policy tool for social and economic development of developing countries (Rogers, 2004, p.67). In the 1970s, the "Basic Human Needs" approach with its emphasis on integrated rural development replaced the modernization approach of the 1960s which put weight on economic growth as a development goal and formal secondary and higher education as educational priorities (Chabbot & Ramirez, 2000, p.178). NFE appealed to the Basic Human Needs approach, for the formal education sector was regarded as inadequate for this new development paradigm. NFE emerged when "[formal] education with its urban and formal economic sector bias could not meet the needs of the new mass target groups for development interventions", namely, the rural poor (Rogers, 2004, p.67).

The emergence of NFE marked "a change of viewpoint of educators, politicians and academics" rather than a change in practice (La Belle & Ward 1994 as cited in Rogers, 2004, p.72). The term NFE "gave an appropriate name to a concept that had been used by various practitioners in the field of development aid years before" (Hausemann 1995 as cited in Rogers, 2004, p.72). Just as the labelling of ESD is aggregating many disjointed activities today, the labelling of NFE served to consolidate diverse educational activities into a single 'programme', gave legitimacy to those practices designated as NFE, and made those programmes "fashionable" throughout the 1970s and early 1980s (Rogers, 2004, p.86).

2.3.3.2 The Rise and Decline of the Discourse of NFE
Rogers (2004) summarises the appeal of NFE as follows:

NFE appealed to governments and some parents because of its relatively low costs, especially as governments came under increasing constraints in finances after the world financial crisis of 1973 followed by Structural Adjustment pressures. It brought more partners into the field of education, opening the doors to increased influence for NGOs and other civil society bodies. It fitted in with the growing calls for decentralization, the localization of control and
community involvement. NFE was very appealing to many interested parties. (p.87)

As Rogers (2004) points out, some definitions of NFE stressed the role of NGO, as opposed to the role of the state in formal education, and the emergence of NFE is coupled with the declining role of the state in promoting public education as discussed in 2.3.1. NFE was often defined as not having registered students, non-state or non-institutionalised provision of basic education or skills training, but in reality, many of the programmes designated as NFE were state-sponsored and even awarded certificates.

Indeed, NFE meant different things for different people. NFE was variously defined in terms of purpose, primary orientation (see Table 4), clientele, organisation and control, delivery methods, contents, approaches and methodologies:

Those involved in this debate constructed NFE to suit their purposes…. For some, all those educational programmes which displayed non-formal methodologies and approaches were NFE; for others all those educational programmes which had development goals rather than educational goals comprised NFE; for yet others, NFE consisted of all those programmes provided by no-statutory bodies. (Rogers, 2004, p.165)

Table 4 Carson and Car-Hill’s (1991) Categorization of NFE Programmes

<table>
<thead>
<tr>
<th>Category</th>
<th>Primary Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Para-formal</td>
<td>Alongside the formal system, basic, complementary, compensatory, remedial, second-chance, designed to strengthen formal (i.e. primary) education in one way or another</td>
</tr>
<tr>
<td>Professional</td>
<td>Professional/vocational/occupational training designed to provide (further) work-related skills which the formal systems of vocational education and training cannot provide</td>
</tr>
<tr>
<td>Personal</td>
<td>Personal development training, personal post-basic education and improvement</td>
</tr>
<tr>
<td>Popular</td>
<td>Popular and/ or progressive education aimed at social transformation</td>
</tr>
</tbody>
</table>

Source: Adopted from Rogers, 2004, pp.110-111

To give but one example of diversity of meanings attached to NFE, in South America, the term NFE covered "many different strands including vocational training (human resource development), popular education (Freirean conscientisation) and even training for resistance movements" (Rogers, 2004, p.126).

Despite the fashion of seeing NFE as the panacea for the world education crisis, the discourse of NFE was not always welcomed by donors and aid recipients alike. For one, according to Rogers (2004), "UNESCO was very reluctant to use the term, partly because its staff were
wedded to their existing discourse of functional literacy and the emerging discourse of lifelong education, and partly because they saw NFE as being anti-school” (p.89). NFE also came to be seen as inimical to developing countries. U.S. organisations such as Coomb's agency International Center for Educational Development (ICED), Ford Foundation, and USAID played a central role in promoting NFE, and there are "those in the Third World [who] often have not liked the term because it appears to be a North American invention whose use implies Third World dependency in the borrowing of educational theory and practice" (La Belle & Ward 1994, p. 4142 as cited in Rogers, 2004, p.88). NFE was seen as a Western imposition onto developing countries: "Western elites who first declared a crisis (the crisis of formal education), then fabricated a challenge (meeting minimum basic needs of the poor) and then gifted a solution (non-formal education) to the Third World" (Bhola, 1983, p.51 as cited in Rogers, 2004, p.89).

Many of the promises of NFE were not fulfilled, and the fad of NFE came to an end by late 1980s. After Coombs himself "abandoned" the concept of a NFE system in 1985, the debate waned sharply (Rogers, 2004, p.132). Coombs wrote: "NFE, contrary impressions notwithstanding, does not constitute a distinct and separate educational system, parallel to the formal education system" (Coombs 1985, p.23 as cited in Rogers, 2004, p.132). The lack of consensus on the definition of NFE made the evaluation of NFE programme difficult, for there was no consensus as to whether it should be conducted "through formalised learning tests (the educational syndrome) or through impact assessments (the development syndrome)" (Rogers, 2004, p.164). NFE largely failed to reach the rural poor, and even when it did reach those unreached by formal education, it was perceived as second-rate education, inferior to the formal education system. The bifurcation of education system into "urban and modernising formal education and rural and traditional-supporting nonformal education" (Rogers, 2004, p.101) came to be seen as unacceptable, and the distinction between "formal" and "non-formal" education ceased to be central in planning, implementing and evaluating educational programmes in developing countries.8

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7 This does not mean that UNESCO totally ignored NFE. According to Rogers (2004), UNESCO came to debate NFE in late 1970s and early 1980s, with the emphasis on the coordination, integration or merger between formal and non-formal education (p.89, p.122).

8 According to Rogers (2004), "UNESCO took the lead in the attack on NFE" (p.133), "[refusing] even to acknowledge the whole of the debate which had occupied most educational planners and policy-makers in relation to developing societies for the previous seventeen years" in its 1985 Report Reflections on the Future Development of Education (Rogers, 2004, p.134). In 1987, UNESCO reaffirmed its attack on NEF as an inferior partner of formal education: "The main danger is that two educational systems of different quality and prestige..."
The 1990 Jomtien EFA conference, sponsored by UNESCO, UNICEF, UNDP and the World Bank, reaffirmed the unacceptability of "a dual system of education with NFE as the inferior partner" (Rogers, 2004, p.154) and "confirmed the trends [of the decline of NFE] which had been going on for several years" (Rogers, 2004, p.143). At the EFA conference, terms like "supplementary alternative programmes" and "out-of-school equivalent education" largely replaced NFE (Rogers, 2004, p.143), and within the EFA community today, NFE, when used at all, is regarded not as constituting a separate education sector or a system but as a component of the unified education system. On the UNESCO website (www.unesco.org) today, "Non-formal education", along with gender equality, HIV/AIDS, ICT, life skills, microfinance, and poverty reduction, is subsumed under the broad theme of "literacy". The theme "literacy" is listed separately from primary education, secondary education, higher education, technical and vocational education, and science and technology education, and instead, grouped together with inclusive education, school health and HIV/AIDS, cultural and linguistic diversity in education, and teacher education. According to Rogers (2004), an NFE Division in UNESCO, Paris, works "to link basic education activities [non-formal basic education] with development goals rather than formal school equivalency" (Rogers, 2004, p.147). Clearly, in the mainstream UNESCO discourse today, NFE is treated as but one means to achieve EFA and MDGs, not as a separate education sector or an educational programme designed to strengthen formal schooling.

2.3.3.3 EFA and ESD in the Educational Reform Cycle

Worldwide school expansion led to major disillusion in formal education (see 2.3.3.1), and various strategies—including NFE—were employed to remedy the many identified ills of formal schooling. Rogers (2004) argues that the responses to the various diagnoses of the ills of formal education took a cyclic form as shown in Figure 4. First of all, there was an effort to expand the system to make it more equitable, and each successive reform phase rejected the solution that had been proposed and propositioned a further remedy.

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will develop, and thus contribute to perpetuating and increasing the existing socio-economic disparities" (UNESCO, 1987, p.13 as cited in Rogers, 2004, p. 154).
This cycle is not completely chronological because many educational reformers went through different reform phases at different times. It is also important to note that each reform phase varies depending on local contexts. This Education Reform Cycle came to a full circle back to the start with the EFA movement launched in 1990 "to expand and at the same time reform a system which most people recognise has many major problems but which all societies need in some form or other" (Rogers, 2004, p.67). Despite the many identified ills of schooling, the demand for formal education has continued to grow worldwide and "de-schooling" reforms (phase 7) have been largely discredited. The emphasis on "quality basic education" clearly shows that EFA aims at both the expansion and positive change of formal schooling.

ESD seems to have emerged at a point when the EFA movement led to another discontent — if not disillusion—among certain circles of the international community after ten years. While acknowledging the importance of EFA, UNESCO (2004) justifies the need for ESD by pointing out that EFA does not really address the underlying purpose of education:

While basic education is clearly intended to have a positive impact on the quality of life and on deprivation, the nature of this impact – and the content of education which might be most appropriate to achieve it – is a broader question. In other words, the role and provision of education are central, and this drives the EFA agenda forward; the underlying purpose of education is
either assumed or considered to be a matter for wider socio-political debate. (pp. 9-10)

Many of the arguments ESD advocates make today resonate with those of educational reformers in the 1960s and 1970s. At the dawn of the new Millennium, it is clear that expanding the formal education system (phase 1) alone is not the solution. The emphasis is now on changing school (phase 2) and supplementing and complementing formal schooling (phase 4) as well as on changing public attitudes in relation to education (phase 6). In the original Education Reform Cycle, public attitudes were seen as "a major barrier to educational reform" (Rogers, 2004, p.66). Today, it has become obsolete to blame people who use formal education to advance themselves. Instead of persuading people not to see education as a private good to increase their marketability in the job market or proposing to abolish formal schooling altogether (which has proven to be a very difficult task), ESD advocates speak of "re-orienting education" towards a sustainable future. There are efforts to embed ESD in the whole curriculum or infuse ESD in each discipline, not to introduce ESD as a separate subject, and the DESD IIS (UNESCO, 2005) neither attempts to challenge the legitimacy of formal schooling nor encourages reformers to develop an entirely new curriculum and methodologies to promote ESD. Significantly, there was a section that talked about the need for "reshaping" education system and criticised the existence of private schools for the wealthy in the draft DESD IIS (UNESCO, 2004, p.20), but this whole section was dropped in the version approved in September 2005 by UNESCO's Executive Board (see UNESCO, 2005). The reform agenda of the NFE discourse which posited NFE as a remedy for inequitable and/or ineffective formal schooling are totally absent from the discourse of ESD.

In the EFA community today, "the stress is placed on the unity of all educational activities rather than on the differences between the various educational programmes on offer" (Rogers, 2004, p.239, emphasis mine). While the draft DESD IIS (UNESCO, 2004) carefully avoided the terms "formal education sector" and "non-formal education sector," however, the following paragraph was inserted to the finalized DESD IIS (UNESCO, 2005):

In order to create ESD programmes that contain the four thrusts [of ESD in Chapter 36 of Agenda 21, that is, quality basic education, reorientation of

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education, public awareness, and training], all sectors of education community will have to work together in a cooperative manner. Formal education (i.e., primary, secondary, post secondary and higher education) will need to work closely with traditional partners from the non-formal education sector (e.g. nature centres, non-governmental organizations, public health educators and agricultural extension agents) and with new partners from the informal education sector (i.e. the media including television, radio and print such as newspapers and magazines). Because ESD is a life-long process each of these sectors touch the lives of citizens at different ages. (UNESCO, 2005, p.26, emphasis mine)

This paragraph clearly reflects what I call "ESD discourse". The characterization of the "non-formal education sector" as consisting of, for example, nature centres and NGOs reflects the condition of environmental education provision in developed countries where ensuring access to formal education is not a major concern and the 'NFE sector' is seen as the equal partner of 'formal education sector' in instilling sustainability values. The RCE concept, with its uncritical use of the distinction between "formal" and "non-formal" education sectors as well as the term "informal education sector", does not fit in the EFA community.

While the 'ESD discourse' significantly departs from both the NFE discourse of 1970s and 1980s and the current EFA discourse, it does reflect UNESCO's discourse of lifelong learning as evidenced by its reference to ESD as "a life-long process". Pointing to a recent resurgence of interests in NFE, including UNESCO's recent promotion of NFE through UNESCO Principal Regional Office for Asia and the Pacific (UNESCO PROAP, also known as UNESCO Bangkok), Rogers (2004) cites possible reasons for the return of NFE. First, he speculates that the lifelong learning discourse "with its sense of a unified education stretching throughout the whole of life (both lifelong and lifewide) has created the need for some kinds of distinction within this unity, and this has led to a revived use of the terminology of NFE but without the whole discourse" (Rogers, 2004, p.235). Second, he argues that "[the] pressure of Education for All (EFA) is leading many agencies to seek in NFE one means to complete tasks to which they are already committed" (Rogers, 2004, p.171).

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10 Rogers (2004) seems to be puzzled by UNESCO PROAP's seemingly sudden interest in NFE. He writes: "It is not clear why UNESCO PROAP used the language of NFE in [a four-country study (India, Nepal, the Philippines, and Thailand) of the Impact of Non-Formal Adult Education in the Asia-Pacific Region in 1997], for throughout Asia, PROAP with ACCU were setting up Community Learning Centres without using the discourse of NFE" (Rogers, 2004, p.204).
3 Research Method

This case study reports partial findings of an ongoing qualitative research on the Greater Sendai RCE, which was officially launched in June 2005, and is based primarily on data collected through participant observation and interviews between November 2004 and July 2005. Gaining entry into the research context did not pose a major problem since the UNU-IAS had already established contacts with key local stakeholders of the Greater Sendai RCE, and I interacted with them not as an outside researcher but as a collaborator of the RCE project. As a member of EfSD team of the UNU-IAS, I participated in the Preparatory and Steering Committees of the Greater Sendai RCE, made field trips to Tajiri Town and Kesennuma City in the Greater Sendai Area, attended local NGO events, and held formal and informal discussions with key RCE actors in the region (See Appendix 1). My mission reports and field notes from memory constitute an important part of qualitative data collected.

In addition to frequent e-mail exchanges and face-to-face discussions about ESD and RCE with key local promoters of the Greater Sendai RCE based at MUE and the Environment Bureau of the City of Sendai, group discussions were held with members of Fuyu-Mizu-Tanbo Project, which includes local farmers, school teachers and NGOs (see Box 4 in 5.3), as well as with teachers and administrators of Kesennuma Omose Elementary School (see Box 3 in 5.2). Formal interviews were conducted in Japanese with eight local stakeholders as listed in Appendix 2 and audio-taped (see Appendix 3 for the interview guide). In both formal and informal interviewing, informants were selected based on purposive sampling. To protect the rights of the interviewees, a Japanese translation of a research description (see Appendices 4 and 5) was prepared and distributed to them, and the purposes and procedures regarding this study was explained verbally to each of them before the actual interview took place. Any information that personally identifies the informants will not be disclosed in this paper, except in cases where the inclusion of proper names is necessary and desired by the informants themselves in order to describe the essence of activities taking place on the ground in the Greater Sendai Area.

To supplement discussions and interviews with local stakeholders, existing local documents regarding environmental education and environmental administration (teaching materials, policy papers, conference proceedings and presentations), various publications of Miyagi University of Education, the City of Sendai, and promotional materials by local NGOs such
as CD-ROMs and video tapes and other related literatures were examined in order to survey ESD-related activities promoted in the Region.

Much of what follows (Chapter 4 through 8) was first published as Chapter 4 of the UNU-IAS’ (2005) policy report Mobilising for Education for Sustainable Development: Towards a Global Learning Space based on Regional Centres of Expertise. The draft for the policy report was read by informants and other key local actors of the Greater Sendai RCE, and their feedback was reflected in the final draft. This served as a debriefing process, allowing informants to check how their views and activities were described in the draft. As the Greater Sendai RCE is the very first RCE to be developed in the world, and the nature of the study is exploratory, I provide a large amount of descriptive material that clarifies what the Greater Sendai RCE looks like, followed by a tentative analysis of why it looks like it does. It needs to be noted that this paper is not so much about critically examining the Greater Sendai RCE but about taking an inventory of RCE-like activities and ESD-related initiatives within the Greater Sendai Area to help build information about local or regional resources.

4 Background

4.1 National Context Relevant to Promoting ESD and RCEs in Japan

From the UN point of view, the significance of ESD is unquestionable and ESD must be infused at all levels of education. Japan can be safely described as one of the leading countries in promoting ESD. First, DESD was proposed at the 2002 Johannesburg Summit jointly with Japanese NGOs and the Government of Japan. The Government of Japan is thus promoting ESD through substantial financial assistance to the lead agency of the Decade UNESCO as well as UNU. Second, Japan has a non-profit networking organisation dedicated to promote DESD—ESD-J (Japan Council on the UN DESD)\(^\text{11}\). This consortium of NGOs and civil society organisations (CSOs) explicitly aims at developing innovative ways of collaborating among various stakeholders—the national government, local governments, NGOs, CSOs, the private sector, and citizens—to promote ESD, and it will serve to support and validate the RCE effort across the country throughout the Decade.

\(^{11}\) For more information on Japan Council on the UN DESD, see <http://www.esd-j.org/>.
In reality, however, the overwhelming majority of Japanese people do not even know what ESD is, or what 'sustainable development' means. Probably with exceptions of NGOs and CSOs working in ESD, there is no sense of urgency widely shared among Japanese organisations and individuals to instantly embrace ESD and start making tremendous efforts required to create an RCE. This section will introduce the ongoing reforms in education that are intended to change the relationships between the national government, local governments, civil society, and the educational community. In Japan, national universities and public elementary and secondary schools are currently undergoing substantial reforms, which may provide organisations with diverse and competing priorities (i.e., municipal governments, universities, and schools) with justification and impetus to engaging in joint efforts to create an RCE in the Japanese context.

In June 2001, the then Minister of Education, Culture, Sports, Science and Technology Atsuko Tōyama announced the "Structural Reforms Policies for National Universities". It set forth the government's policies toward university reforms, including transforming national universities into "independent administrative corporations". Having been transformed into independent administrative entities in April 2004, Japanese national universities became more flexible and efficient in human resources, budget, management, and research systems. At the same time, this means that national universities, like private universities, are now subjected to market forces and have to be financially solvent in order to continue to operate. Coupled with the challenge of the falling birthrate and a drastic decrease in the number of children, Japan's national universities are being forced to develop strategies for survival. Many higher education institutions—public as well as private—are increasingly aware of the importance of promoting lifelong education and partnerships with local civil society and the private sector, and finding a means of survival in enhancing outreach and service. This gives higher education institutions very good reason to participate in RCE.

Not only national universities but also primary and secondary schools—including highly centralised compulsory education (first through ninth grades)—are undergoing substantial reforms.\textsuperscript{12} The new curriculum standards went into effect for elementary and junior high

\textsuperscript{12} According to MEXT's annual school survey, while private universities and junior colleges enroll approximately 75 per cent of all university and junior college students in Japan, private elementary schools
schools in 2002 and for senior high schools in 2003, and the new Courses of Study introduced "Period of Integrated Study (PIS)" to promote interdisciplinary and comprehensive studies and to engage students in doing work away from textbooks, dealing with cross-cutting real-life problems. While Japanese school teachers work from well-scripted lesson plans detailing a sequence for each lesson according to the Courses of Study, Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) does not prescribe the content of PIS. PIS provides individual schools with flexibility and autonomy to devise a segment of nationally prescribed curriculum. In one sense, PIS symbolises efforts to undo the bureaucratic stranglehold on curriculum and school administration which is often viewed as having exerted excessive conformity pressures and stifled creativity, diversity and flexibility. PIS can also be viewed as a response to demands by civil society for disclosure of information and community participation in school education. Adjusting the content of PIS to regional/local characteristics and inviting guests teachers from local civil society have become standard—if not uniform—features of PIS. Furthermore, PIS often addresses topics related to ESD such as environmental education (EE), intercultural understanding, and ICT.

Significantly in Japan, primary and secondary schools are beginning to reach out to local civil society, just as higher education institutions have incentives to enhance links with the local communities including local schools. Although there have recently been moves to rethink PIS and revert to the curriculum emphasising basic subjects due to the fear—both real and imagined—of a decline of Japanese students' academic abilities, the ideals of PIS resonate with what UNU hopes to achieve through RCEs. Together with the Law for Enhancing Motivation on Environmental Conservation and Promotion of Environmental Education enacted in 2003, PIS gives justification to promoting EE in schools. While EE is not synonymous with ESD, the Japanese national context to promote school EE provides a lead

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13 In line with the new Courses of Study, public schools have all gone to a five-day school week, and the curriculum has been reduced by 30 per cent. The new curriculum standards mark a shift from cramming knowledge into learners to giving them "room to grow".

14 In December 2004, the OECD released the results of its second three-yearly survey on 15-year-olds. The survey was conducted in 41 countries and regions in 2003. The results showed Japan's drop from eighth in the ranking in 2000 to 14th in 2003 in reading skills, and from first in 2000 to sixth in 2003 in mathematical skills. The release of data on a national scale showing a drop in the scholastic ability of Japanese students has led many to question whether promoting "relaxed education" (yutori kyōiku) as antithetical to "cramming" or "rote learning" is a wise approach to reform Japanese education.
on promoting ESD in the formal education sector in Japan. In fact, Japan UNESCO Association expects ESD to be promoted in Japanese schools through PIS (Nagata, 2005, p.50). Moreover, the Ministry of the Environment, MEXT and other related ministries are working in partnership to facilitate citizens', NGOs' and corporations' voluntary efforts to promote EE in the non-formal setting, while some of the central government's control mechanisms are being reduced or abolished and 'local autonomy' is increasingly emphasised. By documenting a pioneering effort to create an RCE building on existing collaboration and networking with the national decentralization reforms in mind, Chapters 5, 6 and 7 will show concrete ways of collaborating to promote ESD in the regional (sub-national) context for the purpose of informing budding efforts to create RCEs elsewhere.

4.2 Greater Sendai Area in the Tohoku Region of Japan

4.2.1 Geography

The City of Sendai is located in the Tohoku (literally North East) region which consists of six prefectures in the north of Japan's largest island Honshū. Being a major rice-farming region, Tohoku is mostly rural with a few larger cities like Sendai. The rugged coastlines, vast mountain ranges, lakes and rivers offer scenic landscapes in the Tohoku region, which attract tourists together with ski resorts (in winter) and abundant hot springs.

Sendai is the capital city of Miyagi Prefecture, which aspires to becoming a prefecture founded on the principles of environmental conservation. The slogan of the City of Sendai is "Environmentally-Friendly City". Aoba Mountain overlooks the City of Sendai across the Hirose River. The plateau of Aoba Mountain, where the castle of the feudal Sendai Domain used to be situated, is joined to the spine of northern Honshū, the Ōu Mountain Range on its western side, and is guarded by thick forest to its west and cliffs on its southern and eastern sides. Aoba Mountain is designated as a National Natural Monument due to the diversity and rarity of its bio-system. Currently, the Greater Sendai Area covers the area within Miyagi Prefecture but may include cities, towns, and villages in neighbouring prefectures in the future.
4.2.2 History: Socio-Economic Development

Sendai has long served as the administrative and academic centre of the Tohoku region. Sendai’s roots date back to more than 400 years ago right before the start of the Edo period (1603-1867). In 1600, the leader of the Sendai clan, Datē Masamune, built a castle town on the site that is modern Sendai. In 1889, Sendai was officially designated as a "city", and the Meiji government established regional offices for various national administrative bodies.
(those of the military, justice, transport, and telecommunications) as well as the Tohoku Imperial University (present-day Tohoku University) in Sendai. After World War II, in its effort to rebuild the city, Sendai planted numerous trees and earned the nickname of the "City of Trees (Mori no Miyako)".

Today Sendai is the biggest city and the political and economic centre of the Tohoku Region. During the economic boom, many branch offices of major corporations were established in Sendai, making Sendai into a major business centre. In 1989, Sendai became the Tohoku Region's first "designated metropolitan city" (seirei shitei toshi), which entitled Sendai to act virtually independently of the Miyagi prefectural government and answer directly to the national government. In 1999, Sendai achieved another milestone when its population reached one million.

4.3 Seeds of RCE in the Greater Sendai Area

4.3.1 City of Trees
Sendai has a nickname of the "City of Trees". This nickname may originate in the Sendai Domain's policy to encourage its feudatories to plant trees such as Japanese persimmon, chestnut, and plum on their premises and create planting fences with bamboos, tea bushes and the like. These premises forests, known as "igune" in dialect, allegedly constituted a city filled with greenery together with forests of temples and shrines and Aoba Mountain. Igune played an important role as windbreak forests in protecting the residences against storm, fire, and crimes. At the same time, the residents utilised igune as fuel, livestock feed, fertiliser, construction materials, and food to sustain their daily lives. The woods adjacent to the plateau of Aoba Mountain were strictly protected against human encroachment during the Edo Period, and today they are protected as a botanical garden attached to Tohoku University, offering one of the rare examples of virgin woodland left on the island of Honshū.

4.3.2 The City of Sendai's Environmental Policy
As its nickname implicates, the City of Sendai has placed emphasis on measures to conserve the environment. As early as 1962, years before environmental pollution came to be

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15 A city can apply for the status of a "designated city" if it has a population of 500,000 or more, but most designated cities have a population of over one million. There are currently 14 designated cities in Japan (in order of population): Yokohama, Osaka, Nagoya, Sapporo, Kobe, Kyoto, Fukuoka, Kawasaki, Hiroshima, Saitama, Kitakyushu, Sendai, Chiba and Shizuoka.
recognised as a social problem in Japan, the Sendai City Assembly resolved the "Declaration for a Healthy City", which aims at building "a city where all citizens can enjoy a healthy and cultural life". For more than 40 years since this resolution, the City of Sendai has strived to improve the health and welfare of its residents as one of its major urban policies. Nevertheless, Sendai is far from being untouched by environmental pollution. From the late 1970s to the early 1980s, the City of Sendai suffered dust pollution caused by studded winter tires, which led people to refer to Sendai as the "Sendai desert". Those tires provided drivers with good traction on frozen road surfaces, but the studs abraded the asphalt roads and caused detrimental effect on the living environment. In the campaign to eliminate studded tires, in addition to appealing to tire makers to develop 'studless' winter tires, Sendai's citizens, the media, and local government jointly encouraged 'green purchasing' of 'studless' tires and contributed to increasing the size of the market. At the World Summit on Sustainable Development in 2002, the City of Sendai participated in the municipality session and introduced its green purchasing measures. In October 2004, the First International Conference on Green Purchasing was held in Sendai jointly by the City of Sendai and the Green Purchasing Network, which consists of Japanese industry, governments and NGOs.

**Table 5  The City of Sendai's Environmental Policy**

<table>
<thead>
<tr>
<th>Year</th>
<th>Environmental Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>The City of Sendai Basic Environmental Ordinance</td>
</tr>
<tr>
<td>1997</td>
<td>City of Trees Environmental Plan (Local Agenda 21)</td>
</tr>
<tr>
<td>1998</td>
<td>Sendai Environmental Initiative Action Plan</td>
</tr>
<tr>
<td>1999</td>
<td>Acquisition of an ISO 14001 Certificate</td>
</tr>
<tr>
<td>2001</td>
<td>Guidelines of Green Purchasing in the City of Sendai</td>
</tr>
</tbody>
</table>

**4.3.3 Miyagi University of Education**

Miyagi University of Education (MUE), which started as a national teacher training institution in 1965, established the Environmental Education Centre (EEC) in 1997 and has promoted EE in the region through education, research and outreach. While located in Sendai, EEC has carried out programmes not only in the urban Sendai but also in remote and rural communities such as Kesennuma City, which lies approximately 80 kilometers northeast of Sendai and is famous for its fishing port, and Tajiri Town, which lies approximately 50 kilometers north of Sendai and famous for abundant rice production, in close collaboration with local people. Kabukuri-numa, a freshwater lake located in the Town of Tajiri, lies eight
kilometers from Izunuma/Uchinuma, which is designated as the Ramsar site,\textsuperscript{16} and both Kabukuri-numa and Izunuma/Uchinuma are famous wild goose habitat sites in Miyagi prefecture. In addition to supporting and implementing locally-based EE, EEC hosts a UNESCO/Japan Seminar on EE in the Asia-Pacific Region every other year. MUE and Tokyo Gakugei University serve as UNESCO-APEID (Asia-Pacific Programmeme of Educational Innovation for Development) Associated Centres focusing on EE, and these two institutions alternates the responsibility of holding this annual seminar.\textsuperscript{17}

### 4.3.4 Local Civil Society

Parallel to EEC, Takaaki Koganezawa of MUE has also been instrumental in bringing actors together towards promoting ESD in the Tohoku region. With grants from \textit{Japan Fund for Global Environment}, Koganezawa launched Tohoku Global Seminar in April 2003 to raise awareness about and promote DESD, develop human resources who can contribute to DESD, and promote networking among citizens, NGOs, public administration, and businesses. Tohoku Global Seminar has been held about four times a year, inviting speakers from the UNU-IAS, the central and local governments, local NGOs, and local schools. This has created a forum for various stakeholders to come together and share ESD-related information, experiences, activities and visions.

Koganezawa also coordinates an NGO called "Igune School in Sendai". \textit{Igune} has been disappearing with urbanization, but \textit{igune} forests are still scattered about in the suburbs of Sendai. Recently there have been efforts to restore appreciation for nature and traditional knowledge about a sustainable way of life through \textit{igune}. "Igune School in Sendai" is one of such efforts. \textit{Igune} exploration tours are being organised by NGOs to teach children about the importance of planting trees and preserving them and encourage children as well as adults to become aware of this life-supporting infrastructure. At a full-day programme organised by "Igune School in Sendai," for example, school children have their first taste of building a fire

\textsuperscript{16} The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 144 Contracting Parties to the Convention, with 1421 wetland sites, totaling 123.9 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance. See <http://www.ramsar.org> for details.

\textsuperscript{17} In 1973 UNESCO established, with the financial support of Japan, the Asia-Pacific Centre of Educational Innovation for Development (ACEID) in response to requests by member states in the Asia-Pacific region. Simultaneously with the establishment of ACEID in Bangkok, Asia-Pacific Programmeme of Educational Innovation for Development (APEID) was initiated. ACEID was given the responsibility for its implementation. Seminars are held to report various practices and exchange opinions about support activities for school education, such as teacher training by experts in the field of EE. MUE was designated as a UNESCO-APEID (Asia-Pacific Programmeme of Educational Innovation for Development) Associated Centre in 2003.
at the furnace, learn to make bean curd and popular local sweets (which they enjoy afterwards during the programme) in a traditional way, and experience bamboo work. These igune-related activities serve to passing on the traditional knowledge about igune household woods as well as offering a place where children can experience nature and a site of relaxation for local residents.

Not only does Sendai have strong city administration, a leading teacher training institution, and pioneering ESD-related activities, it is also a birthplace of a famous citizens' movement to support the mission of the UN. It may be a well-kept secret that the non-governmental UNESCO movement was initiated in 1947 by "Sendai UNESCO Co-operative Association" when the scars of defeat in World Ward II were still glaringly obvious in Japan. Voluntary, community-based activities by Japanese citizens who embraced the founding principles of UNESCO quickly spread to other parts of Japan, and the National Federation of UNESCO Associations in Japan (NFUAJ) was formed as early as 1948. Today there are about 300 UNESCO Associations across Japan. For example, Kesnnuma UNESCO Association carries out international exchange activities (notably with Kangwon-do UNESCO Association in Korea which became its sister UNESCO Association in 1971) and organises an annual summer seaside camp for youth. It also participates in NFUAJ's major activities, including the literacy education initiative World 'Terakoya' Movement. NFUAJ initiated the World 'Terakoya' Movement as one of its core activities in the International Year of Literacy in 1990. Small-sized education facilities called 'Terakoya' are offered in developing countries to empower adults who have been unable to learn and children who cannot go to school.

5 Core Competencies of Main Actors of the Greater Sendai RCE and Existing Partnerships in the Region

5.1 FEEL Sendai
In the same spirit of promoting a movement to ban studded winter tires, the City of Sendai has promoted not only green purchasing but also EE. The City of Sendai launched "Committee for the Promotion of Environmental Learning and Partnerships" in June 2002 and drew up "Environmental Education and Learning Plan—Collaboratively Creating Sendai and the New Environmental Age" in August 2002 in order to raise its one million citizens' awareness and lead to environmentally-friendly action for achieving a sustainable society. In May 2004, "Forum for Environmental Education and Learning in Sendai, City of Trees"
(nicknamed "FEEL Sendai") was launched as an entity that coordinates partnerships between and among NGOs, schools, universities, public administration, businesses and others. FEEL Sendai aims at increasing public involvement in environmental administration since every citizen is an "interested party" when it comes to the environment. Currently FEEL Sendai consists of 16 members and strives to be "an engine which promotes environmental education and learning".

FEEL Sendai organises various awareness raising activities and social education programmes for the citizens of Sendai. "Citizen's Forum" is an open study session organised a few times a year to explore the method, nature and roles of EE and to support development and spread of EE mainly through the presentation of case studies of EE carried out by diverse actors such as NGOs, schools, and corporations. While "Citizen's Forum" serves as a forum primarily for those who are already engaged in EE to exchange information, learn from one another and network, "Environmental Forum Sendai" and "Sendai Eco Challenge" aim at motivating the broader public to be interested in environmental issues and to take actions to achieve sustainable society. "Sendai Eco Challenge" aims at motivating people to conserve energy and recycle at their homes by having them do self-check lists of their lifestyles, based on which the participants are divided into beginner, intermediate, and expert levels. "Environmental Forum Sendai" is an awareness-raising event planned and run by environmental NGOs and citizens on a voluntary basis. "Environmental Forum Sendai" has been held annually since 2001 and achieved a great success. For example, in 2003, Environmental Forum Sendai attracted 10,000 participants. It holds much promise for promoting ESD in the Greater Sendai Area that those NGOs and citizens involved in the planning and running of "Environmental Forum Sendai" are equipped with capacities to communicate what ESD is to the general public effectively.

Furthermore, to provide an opportunity for NGOs and CSOs to publicize their activities and spread their innovative undertakings in addressing environmental problems to a wider audience, FEEL Sendai invites NGOs and CSOs to participate in the "Social Experiments on the Environment" competition. After documentary elimination of proposals submitted, those proposals selected through a final public screening are adopted by the City of Sendai as sponsored projects. For example, in 2004, a proposal by the local NGO ACT53 Sendai to install trash separation stations at the venue of Tanabata Festival was carried out. Also in 2004, the Sendai Stadium Waste Reduction Plan, organised by Miyagi Environmental Life
Outreach Network (MELON), was implemented. Since the Tanabata Festival attracts tourists from all over Japan and the Sendai Stadium draws a huge crowd of the professional soccer league J-League fans, these projects achieved a wide impact on a regional scale.

In addition to these advocacy and awareness raising activities, FEEL Sendai coordinates a multifaceted capacity development programme called "Mori Mori Environment Rescue Team Programme" (Mori Mori). Through development of EE programmes, Mori Mori aims at developing human resources, serving as a catalyst for engaging more actors in EE and ESD and encouraging partnerships to promote EE and ESD, and promoting regional development (see Box 1). All of FEEL Sendai’s activities—Citizen's Forum, Sendai Environment Forum, Sendai Eco Challenge, Social Experiment on the Environment, and Mori Mori Environment Rescue Team Programme—are disseminated through FEEL Sendai’s homepage (http://www.feel-sendai.jp) and public forums so that anybody can access information on these activities easily.

**Box 1 Main Actor of the Greater Sendai RCE (1)—Local Municipal Government**

**Collaborative Capacity Development Projects Coordinated by the Environment Bureau of the City of Sendai: Mori Mori Environment Rescue Team Programme**

Utilising the City's rich natural environment—its forests, rivers, seashores, and foothills—and other distinctive local resources, FEEL Sendai promotes the development and implementation of EE programmes. "Mori Mori Environment Rescue Team Programme" (hereafter Mori Mori) was initiated in 2003 to enable Sendai citizens to engage in EE anytime and anyplace in the City and to build their capacities to contribute to creating an environmental city. Mori Mori mainly targets children who will be responsible for the next generation and teachers who instruct these children. Using the City's natural environment as fieldwork sites for carrying out experiential EE, the Environment Bureau of the City of Sendai has developed EE programmes in collaboration with EEC of MUE (see Box 2) and local environmental NGOs. From FY2005, FEEL Sendai will coordinate Mori Mori projects as its main collaborative undertaking, assuming part of the responsibilities formerly carried out by the Environment Bureau.

First, FEELL Sendai commissions the development of environmental learning programmes to EEC and environmental NGOs. In 2003, Mori Mori developed six hands-on EE programmes based on a broad theme of water. Rivers penetrate the City of Sendai, providing the abundant nature that can serve as good fieldwork sites such as forests and foothills where the rivers originate, watersides, and the branching bay. Three different NGOs developed programmes utilising rivers as fieldwork sites, dealing with the issue of waterfront safety, biodiversity in the river, and how garbage travels in the river to the sea, respectively. The local NGO Igune School in Sendai, which hosts the Secretariat of Tohoku Global Seminar, developed a programme on farm irrigation that

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18 Following the 1992 Rio Summit, MELON was formed to act as a regional agent to carry sustainability messages to the people of Miyagi prefecture. In 2000, MELON was appointed as a Miyagi Centre for Climate Change Actions (MCCA) by the Governor of Miyagi. See <http://www.melon.or.jp/melon/> for details.
supports *Igune* (see 4.3.1). EEC of MUE created programmes focusing on rainwater, while Miyagi Consumer Cooperative (Co-op) developed a programme on acid precipitation through observation of damages from acid rain in the City.

Once the programmes are developed, FEEL Sendai implements these *Mori Mori* programmes so that elementary and junior high school students, teachers, and other citizens can actually experience them. Each participant in the programmes goes home with an "Environmental Rescue Worker Certificate" as testimony to the transformation of the individual participant into a "rescue worker" who is committed to saving the Earth and the humankind, that is, to creating a sustainable future. The Certificate addresses the importance of transforming not only one's own behaviours and lifestyles but also making efforts to change those of one's family, friends, and community. As part of the implementation of the *Mori Mori* programmes, FEEL Sendai also holds workshops to train EE instructors and create a forum for networking and exchanging information. Finally, FEEL Sendai creates practitioner manuals of these programmes and disseminates them to all schools in the City—130 elementary schools and 73 junior high schools.

Not only does *Mori Mori* develop human resources who can make a full use of these experiential programmes, it builds capacities of local NGOs to document and communicate their activities to a wider audience. *Mori Mori* is also a good example of promoting collaboration with a local higher education institution. *Mori Mori* benefits from the expertise and practical know-how in EE offered by EEC, and at the same time, it provides undergraduate and graduate students with opportunities to participate in the development of practical EE programmes.

While *Mori Mori* is based on a broad partnership with local civil society and rooted in Sendai's abundant nature, it also endeavours to cultivate global thinking on the issue of sustainable development by offering locally relevant education programmes. It is hoped that *Mori Mori* becomes an entry point for thinking about global issues.

### 5.2 Partnerships to Promote School EE

Along with the City of Sendai, which has historically emphasised environmental administration and is equipped with strong administrative capacities, MUE is a core institution that leads efforts to create an RCE in the Greater Sendai Area. MUE offers undergraduate and postgraduate courses in teacher training, special education, and life-long education. MUE, through activities of its Environmental Education Centre (EEC), promotes EE through the traditional roles of education, research, and service (see Box 2).

As a major institution that produces teachers for local schools, MUE is in a perfect position to link the Sendai City Board of Education and the Miyagi Prefectural Board of Education. Under the tripartite collaboration between MUE, the Sendai City Board of Education, and the Miyagi Prefectural Board of Education, EEC benefits from the expertise of Sendai Science Museum and Miyagi Prefectural Education Training Centre. EEC currently hosts nine curators from the Museum and one supervisor of school education from the Miyagi Prefectural Education Training Centre as visiting faculty members. Under this collaboration,
since 2002, they have also co-organised large-scale conferences on themes such as education reform and special education and achieved steady success. For example, a full-day conference on education reform held in February 2003 attracted more than 1,000 participants.

Box 2 Main Actor of the Greater Sendai RCE (2)—Higher Education Institution

| Education, Research and Outreach Activities of Environmental Education Centre (EEC) of Miyagi University of Education (MUE) |

EEC assists in the development, dissemination, implementation, and evaluation of EE programmes focusing on elementary and secondary school teachers and students. EEC's activities are based on three pillars: (1) Field Museum Plan, (2) Friendship Project, and (3) School Supporting System.

EE research projects are carried out under "Field Museum Plan", investigating how to utilise local fields such as rice fields and wetland of Tajiri, the Hirose River (Sendai), Kinkazan Island, and the forests and the sea of Sizugawa for EE (see Figure 6). The research findings are applied to a teacher training programme EEC carries out. One of the core EEC activities is a pre-service teacher training programme called "Friendship Project", a national measure which aims at providing future teachers with opportunities to interact with school children in a setting outside of the school site. EEC has carried out "Friendship Projects" at the Aoba Mountain, the Hirose River, Kabukuri-numa and the adjacent rice fields of Tajiri, and Kinkazan Island.

EEC collaborates with Tajiri Board of Education (TBE) to implement "Friendship Project" in Tajiri. While EEC prepares teaching materials and trains MUE students for the Project, TBE puts out a call for elementary school students and volunteers to participate in the Project, arranges for transportation for local school children and MUE students, and takes care of other logistical matters. After the project is carried out, an evaluation meeting is held, and TBE often provides EEC with useful comments about how to improve the Project. As a collaborative endeavour, Friendship Project in Tajiri serves much more than a core function of training future teachers. First, it contributes to sound upbringing of local schoolchildren through the on-site EE programme. Second, EEC faculty members' expertise benefits local teachers and supervisors of education at TBE. Third, participation of not only school children but also their family members (including their grandparents) in the Project serves to enhancing intergenerational exchanges and understanding in Tajiri. Last but not least, carrying out the Project in Tajiri has made local people proud of what they simply regarded as rice fields that look like any other rice field and has made them appreciative of the value of their rich environment. Overall, the Tajiri project has served to revitalising the local community and making people aware of the quality of the nature surrounding them.

Building on the achievements of its research and teacher-training programmes, EEC is developing a "School Supporting System". EEC aims to support EE at public schools through cross-academic subject (interdisciplinary) EE curriculum development and the creation of "EE Support Techno Core". EE Support Techno Core aims at supporting school EE by delivering effective programmes and teaching materials online or via express courier service. Kazuyuki Mikami (EEC Director, 2001-2004) distributed 4,000 CD copies of biological databases to schools all over Japan with the establishment of EEC in 1997, laying the foundation for development of EE Support Techno Core. He has also distributed 3,000 samples of microorganisms as living EE materials to schools across Japan.

Furthermore, MUE is creating an online database on EE practices (http://dbee.miyakyo-u.ac.jp) as
part of MEXT's international education co-operation project. As a UNESCO-APEID Associated
Centre focusing on EE, MUE is expected to contribute to reorienting existing education for a
sustainable future at the local (sub-national and national) as well as global levels. This database is
being constructed in co-operation with Miyagi Prefectural Board of Education, the Sendai City
Board of Education, and local schools at all levels. More than 400 cases have been collected so far, and the database in Japanese are selectively translated into English, and both the Japanese and
English databases are available online.

MUE is supporting the implementation of EE at a model school in collaboration with the
local board of education, the Environment Bureau of the City of Sendai, and other regional
partners. Kesennuma Omose Elementary School is currently designated as a model distant
school. Kesennuma City is one of the most remotely located municipalities in Miyagi
Prefecture with about 60 thousand inhabitants. Some part of Kesennuma is the designated
area of Rikucyu-Kaigan National Park, and tourism is one of the important industries in the
city in addition to fishery. By organising "Kesennuma Omose Elementary School (OES)
Project Partnerships Promotion Committee" (see Table 6), OES has developed and
implemented what it calls a "global inquiry-based environmental education programme"
across the entire school grades (1st through 6th grade) in collaboration with MUE and other
research institutes and the local community (Oikawa, 2004a, 2004b).

**Table 6 Members of Kesennuma Omose Elementary School Project Partnerships Promotion
Committee (19 organisations, 28 individuals)**

<table>
<thead>
<tr>
<th>Specialised knowledge</th>
<th>Local Government (Public Sector)</th>
<th>Local Industry Organisations (Private Sector)</th>
<th>Educational Organisations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• MUE</td>
<td>• Miyagi Prefectural Kesennuama Civil Engineering Office</td>
<td>• Kesennuama Office of Tohoku Electric Power Co., Inc.</td>
<td>• Kesennuama Greenmantes (local volunteer group)</td>
</tr>
<tr>
<td>• Sendai Science Museum</td>
<td>• Environmental and Health Division, Kesennuama City</td>
<td>• Kesennuama Society of Architects &amp; Building Engineers</td>
<td>• Kesennuama Omose Junior High School</td>
</tr>
<tr>
<td>• Shizugawa Nature Centre</td>
<td>• Planning and Policy Division, Kesennuama City</td>
<td>• Tuna Fisheries Cooperative of North Miyagi Prefecture</td>
<td>• Kesennuama High School</td>
</tr>
<tr>
<td>• Rias Ark Museum of Art</td>
<td>• Kesennuama Small International Embassy</td>
<td>• Regional Fishermen of Oyster Farms</td>
<td>• PTA of Omose Elementary School</td>
</tr>
<tr>
<td>• Kesennuama UNESCO Association</td>
<td>• Kesennuama City Board of Education</td>
<td></td>
<td>• Omose Elementary School Council</td>
</tr>
</tbody>
</table>

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19 Sizugawa Town, which lies approximately 40 kilometers south of Kesennuma City, invited Dr Yokohama, Professor Emeritus of Tsukuba University and former Director of Shimoda Marine Research Centre of Tsukuba University, to serve as the Director of Sizugawa Nature Centre in 1999, offering him a post equivalent in rank to the deputy mayor. With Dr Yokohama's appointment as the Director, Shizugawa Nature Centre started EE centred on seashore experiential programmes for elementary and secondary school students such as making “pressed seaweeds” and rocky shore observation outings. As an expert on marine ecosystem, Dr Yokohama collaborates with Kesennuma Omose Elementary School in various capacities, including participating in the school's EE programme for fifth graders as an advisor (see Box 3).
Along with other specialised knowledge institutions, local government, and local industry organisations, MUE provides guidance on the development of the EE programme at OES, assists the implementation of the programme, and dispatches guest teachers to OES. Since the EE programme of OES has been developed by forging dynamic partnerships with local civil society, learning processes of individual students at OES are closely linked to regional development processes (see Box 3).

MUE's collaboration with local schools may constitute an important part of its research activities, for it allows MUE to collect data on the school sites, implement a pilot curriculum, and evaluate it. Outcomes of the research conducted by MUE in collaboration with local schools will contribute to the contents of the EE database and teaching materials MUE is developing. Indeed, research and outreach/service are mutually complimentary for MUE. To further enhance educational outreach and public service, MUE is also developing a regional EE network. MUE launched the email list "EE Tohoku Consortium" (eec-tohoku-request@miyakyo-u.ac.jp), a community consortium which aims at developing a system to support school EE at the regional level. This consortium was initially organised by members of the Japanese Society of Environmental Education in the Tohoku Region in order to respond to the local schools' requests for assistance to carrying out EE programmes. So far 100 people have been added to this list.

**Box 3 Main Actor of the Greater Sendai RCE (3)—Local School**

**Partnerships to Promote School EE in Kesennuma City**

An ongoing experiment of the vertical alignment of EE curriculum from primary through high school in Kesen numa City started with voluntary actions of one teacher at Kesennuma Omose Elementary School (OES)—Mr Yukihiko Oikawa. As an alumnus of MUE and a former student of Koganezawa, Mr Oikawa—together with the school principal Mr Kikuchi and the superintendent of the Kesennuma City Board of Education Mr Abe—has been instrumental in integrating the expertise of MUE with the best of educational practice of the community and regional partners.

A systematic EE programme at OES—called "global inquiry-based environmental education programme"—aims at fostering an appreciation of nature and an understanding of ecosystems and environmental issues in children by utilising the aquatic environment and regional characteristics of Kesennuma as a fishing port. For example, third graders create "BUGS Cyber Maps" based on the observations of dragonflies and other waterside life and consider the quality of the environment for these insects. Fourth graders learn about the ecological food chain and the conditions necessary to preserve the rich environment by gathering, observing and cultivating indigenous fish of the Omose River. A programme for fifth graders is centred
around the broad theme of the sea. Students deepen their understanding of the sea through observation and cultivation of shoreline marine life, visits to Sizugawa Nature Centre, and learning about the relationships between healthy forests and rich marine life. They also consider the connections between human life and the ocean environment by making field trips to observe long-line tuna fishing boats and oyster farms and learning about the main industry of the City fishery. Sixth graders consider how Kesennuma's city, forest, river, and ocean can coexist and what Kesennuma City should look like in the future. The students contribute their ideas to planning and creating a miniature model of the entire city titled "Waterfront City of the Future". Various regional partners offer guidance and advice to students in these learning processes (see Table 6).

In addition to establishing partnerships with MUE and local civil society, OES has secured additional resources to develop and run the "global inquiry-based environmental education programme" by taking advantage of external funding. OES participated in the Fulbright Memorial Fund's Master Teacher Programme (MTP)\(^\text{20}\) and Miyagi Prefectural Board of Education's School Revitalization Proposal Model Project. MTP was launched by the Fulbright Memorial Fund in 1999. It aims to bring elementary, junior high and high schools in the United States and Japan together in a collaborative exchange and education process utilising Information and Communication Technology (ICT). US and Japanese schools form teams to collaborate on a long-term (one academic year at shortest) environmental project. Through MTP, OES worked with Lincoln Elementary School, which collaborates with the University of Wisconsin in teaching EE, for three years between 2002 and 2005. This collaboration between OES and Lincoln Elementary School led to forging partnership between MUE and the University of Wisconsin. From FY 2005, OES, Omose Junior High School, and Kesennuma High School together will participate in MTP and work with their counterparts in Texas, thereby strengthening the vertical links in the formal education sector and enhancing their links with schools abroad.

Omose's case is significant in that the local board of education fully supports innovative ways of collaborating among various stakeholders—local and global—to promote EE. The Kesennuma City Board of Education has an institutional mechanism to support and spread the pioneering, experimental case of EE at OES to different levels of education as well as to other elementary schools in the City. In Kesennuma City, an in-service teacher training programme called "Education Researcher Programme" is carried out by the Board of Education. These researchers consist of elementary and junior high school teachers, and they conduct research on cutting-edge education topics and present the results of their studies to schools across the City.

5.3 Partnerships to Promote Community Development

Kesennuma City is also promoting on-site environmental learning, utilising the City's rich nature—its forest, river, ocean, and island. There are experiential programmes on Ōshima Island, which host school trips from the City of Sendai and Iwate Prefecture and serve as a means to revitalise the community. There is also a plan to utilise National Park Resort Village on the island as a centre of EE. Another example is a famous tree-planting campaign which aims at growing healthy forests as a water source to nurture marine life. In Kesennuma,

\(^{20}\) See <http://www.fulbrightmemorialfund.jp/>. 
fishermen plant trees every year under the catchphrase of "The Forest is the Sweetheart of the Sea". Fishermen have been cooperating with residents in mountainous districts in planting trees at an annual festival of the same name for more than 10 years, and the Governor of Miyagi Prefecture himself attends this festival. This campaign has made residents along the river more conscious of their impacts on the water and added richness to marine life.

In addition to supporting EE in the formal and non-formal sectors, Kesennuma City is taking a unique approach to community development consistent with sustainability principles. In March 2003, Kesennuma City declared itself Japan's first "Slow Food City". This means that the City is committed to promoting fresh, locally produced food. The declaration states that the City will "create a more unique and attractive community sustained by rich variety of local food while conserving nature and culture". With the spirit of "slow food movement", which was initiated in Italy in 1986 in response to the opening of a major fast food chain, Kesennuma intends to work on community building through raising awareness of local people and collaborating with local businesses.

Another interesting example of an innovative approach to community development can be found in the Town of Tajiri, where the famous wild goose habitat site Kabukuri-numa is located (See Box 4). Unlike in the case of Kesennuma, this partnership for community revitalization is led primarily by local NGOs. With the leadership of the Japanese Association for Wild Geese Protection (JAWGP), a diverse array of local stakeholders—NGOs, farmers, local and national government authorities, researchers—came to be dedicated to managing Kabukuri-numa to maintain its ecological functions. Overcoming the initial antagonisms between those who called for the protection of wild geese and rice farmers who viewed wild geese primarily as harmful birds, Tajiri Town is aspiring to demonstrate a case of mutually beneficial coexistence between wild geese and farmers and to pursue the preservation and

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21 Kesennuma's Slow Food Declaration includes the following principles:

- We will protect the local natural environment—the sea, mountains and rivers that bless us with food—so that we may leave it in good condition for the next generation;
- We will cherish, use, and provide traditional foodstuffs, recipes, and fine quality foods and drinks that have been nurtured in the local climate and culture;
- We will protect and train producers who can provide safe, reliable, high quality foodstuffs;
- We will share the joy of food, the importance of a sense of taste, and the true richness of the spirit with others, including our children;
- We will respect the diversity of foods beyond the boundaries of region, country and beliefs, strive to deepen mutual understanding through communication, and eventually contribute to world peace.
Box 4 Main Actor of the Greater Sendai RCE (4)—NGO  

<table>
<thead>
<tr>
<th>Partnerships to Promote Environmental Conservation and Community Revitalization Led by a Local NGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tajiri Town may exemplify mutually respectful co-operation among NGOs, local citizens and educators, and authorities at all levels towards a sustainable future. In 1996, the Japanese Association for Wild Geese Protection (JAWGP) learned that Kabukuri-numa would be dredged as a floodwater reservoir. In order to communicate the alternative of preserving the ecosystem of Kabukuri Mash and enabling it to function as a floodwater storage area, JAWGP started nature observation outings and meetings with the local, prefectural and national government authorities and legislators as well as with local schoolchildren and teachers, farmers and other stakeholders. Consequently, various local stakeholders became involved and came to be dedicated to conserving the site.</td>
</tr>
</tbody>
</table>

A programme to utilise "Fuyu-Mizu-Tanbo" or winter-flooded rice fields started in 1998. Fuyu-Mizu-Tanbo is considered a viable strategy to address different environmental, ecological and agricultural challenges. In this programme, farmers convert to organic methods to lighten pollution loads and leave their fields flooded over the winter for the benefit of wintering water-birds. In December 2004, Tajiri Town started a programme to subsidise cooperating rice-growers, and ten rice-growers who own rice fields in the area adjacent to Kabukuri-numa called Shinpō District participated in the programme. In the 2004-2005 season, the flooded rice fields in Shinpō District totalled 20 hectares. Researchers have joined Fuyu-Mizu-Tanbo Project, which was launched in April 2004, to scientifically examine whether winter flooding of rice lands has positive effects on soil and water conservation, agricultural practices, and habitat for wetland wildlife. Fuyu-Mizu-Tanbo Project includes the local, prefectural and national government authorities, school teachers and college students, researchers, rice farmers and other stakeholders. |

JAWGP worked with Tajiri Town to facilitate the transfer of the official managing authority of Kabukuri-numa from the River Management Department of Miyagi Prefecture to a local public corporation, which allowed a roundtable committee that includes all stakeholders to manage the site under a local ordinance. More than 30,000 wild geese are now being recorded wintering at Kabukuri-numa. In July 2004, Tajiri Town was designated by the Ministry of the Environment (MOE) as one of thirteen model districts to promote eco-tourism in Japan, and pilot tours are organised to watch large flocks of wild geese and other migratory birds taking to the wing at dawn, flying to their daytime feeding areas. There are also tours to watch thousands of wild geese coming back to the site for sleep. In September 2004, MOE designated Kabukuri-numa and adjacent rice fields as one of the 54 wetlands that meet the criteria for inclusion in the List of Wetlands of International Importance ("Ramsar List"). |

As a Ramsar candidate site, Kabukuri-numa and the adjacent rice fields will be designated by MOE as a "wildlife sanctuary", a prerequisite to planned registration as a Ramsar site at the 9th Conference of the Contracting Parties (COP9) to the Ramsar Convention on Wetlands, which will be held in Uganda in November 2005. If Kabukuri-numa is designated as a Ramsar site, the Kabukuri-Izunuma Wetland Area will increase a potential of attracting tourists as an internationally-recognised wetland area. Today 45,000 white-fronted geese (designated as a protected species in Japan)—90 per cent of those which stopover in Japan—winter at Kabukuri-numa and Izunuma. Rather than building its economy on tourism, however, Tajiri Town will use restoration of biodiversity—in natural wetlands and rice paddies—and sustainable agriculture simultaneously.
the brand name of Ramsar to support its main industry of rice production and achieve a twin goal of development of the region and environmental conservation. Rice harvest from Fuyu-Mizu-Tanbo rice paddies is already selling at a much higher price than regular rice grown by more conventional methods with agricultural chemicals, and the demand for safe organic rice—especially Fuyu-Mizu-Tanbo rice which gives people hope for sustainable society—is expected to continue to be high. By branding the Fuyu-Mizu-Tanbo rice also as Ramsar rice, Tajiri Town will pursue environmental preservation and economic development simultaneously.

6 Towards the Greater Sendai RCE: Evolving Processes

6.1 Embarking on the RCE Initiative

In February 2004, MUE held the Seventh UNESCO/Japan Seminar on Environmental Education in Asia-Pacific Region, "Environmental Education for a Sustainable Society: Principles and Practice of Environmental Education for School Children" in Kesennuma, jointly with MEXT and Japan National Commission for UNESCO. The UNU Rector Hans van Ginkel was invited to give a keynote speech. On this occasion, the Rector visited Sendai and met the Mayor of Sendai. The Rector explained his idea on RCE and asked the Mayor to collaborate with UNU to realise RCE in the area. From April 2004 stakeholders in the area together with the UNU-IAS have held several meetings to discuss how to establish an RCE in the Greater Sendai Area. In November 2004, the UNU-IAS visited the office of the MUE President to brief the progress to develop RCE in the Greater Sendai Area and to request the President to consider support of the whole university to promote RCE activities. The President expressed his strong support for promoting an RCE, based on his belief that MUE’s contribution to the community must be enhanced.

As described earlier, many organisations in the Greater Sendai Area had well-established connections to UNESCO before the RCE initiative materialised in 2004. For example, the non-governmental UNESCO movement originated in Sendai in 1947, and the EEC of MUE was designated as the UNESCO-APEID Associated Centre focusing on EE in 2003. Furthermore, after attending the Johannesburg Summit, Takaaki Koganezawa of MUE decided to organise Tohoku Global Seminar, which has served as a forum for the key EE and ESD actors in Tohoku and other regions in Japan to come together and discuss ideas to promote DESD. Indeed, time is ripe for the Greater Sendai Area to embark on the RCE initiative.
It is no exaggeration to say that voluntary actions for a better society—be it for world peace, environmental conservation, educational reform, or sustainable development—and personal connections developed over time through the shared vision for a better future became the basis of the Greater Sendai RCE. Therefore, the proposed RCE does not begin by establishing connections to UNU and UNESCO or recruiting partners or forming working relations with local, regional and national authorities. Rather, since April 2004, various stakeholders in the region—including the central and local governments, a higher education institution, NGOs, local schools—together with the UNU-IAS have discussed how to promote the Greater Sendai RCE by building on their existing activities and initiatives through a series of stakeholder meetings (April 2004, November 2004, January 2005, May 2005, June 2005, and August 2005). To date the stakeholder meetings have involved representatives from MUE, the City of Sendai, Kesennuma City, Kabukuri-Izunuma wetland area, Miyagi Prefecture, MOE, local NGOs, and the UNU-IAS. These representatives include school administrators and teachers. At this stage, aside from the UNU-IAS, all participating actors are in Miyagi Prefecture, but other groups and sites in the region will be added as appropriate in the future.

### 6.2 Envisioning the Greater Sendai RCE

The Basic Plan of the Greater Sendai RCE is being prepared by local stakeholders. The Plan will overview the period of DESD and describe objectives, vision and goals of the RCE as well as activities. At the stakeholder meeting held in November 2004, the UNU-IAS presented the following "global vision" of ESD embraced by UNESCO (2004) and asked for their reactions to it.

> The vision of education for sustainable development is a world where everyone has the opportunity to benefit from quality education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation. (UNESCO, 2004, p.4)

UNESCO (2004) states that the global vision of ESD "will find expression in varied socio-cultural contexts". While there is much emphasis on the importance of vision building in UNESCO's (2004) draft DESD IIS as well as in the UNU-IAS' (2005) report on RCEs, discussions the UNU-IAS held with the local stakeholders have pointed to the difficulty of coming up with a short, single statement of what the RCE in the Greater Sendai Area needs to become in order to address challenges of sustainable development. This difficulty is partly due to geographic diversity of the area which makes priorities for one sub-area irrelevant for another. For example, fishery is central to the regional development of Kesennuma City,
while it does not have a place in Tajiri Town's vision of ESD which addresses the protection of wild geese and sustainable agriculture.

The difficulty of building a vision of the Greater Sendai RCE can also be attributed to the pre-existence of highly articulated regional/local visions such as Basic Plans of Cities, Towns, and Villages, Long-term Development Plans of Prefectures, and Municipal Environmental Plans (Local Agenda 21s). In addition, there are regional visions of education separate from regional policies with regard to sustainability. Since Japanese municipalities have strong administrative capacities and have already developed visions to address sustainability issues and education problems specific to their locales, it would be inappropriate to ignore these existing visions and build a vision of RCE from scratch. At the same time, these existing visions are insufficient to serve as a vision of the RCE. Since Sendai's Local Agenda 21 was drawn up as the Environmental Plan of the City, it focuses primarily on environmental aspects of sustainable development. Moreover, because the Greater Sendai Area covers geographical areas outside the administrative borders of the City, revising Sendai's Local Agenda 21 is not sufficient to integrate environmental, economic and social goals of the Greater Sendai Area.

It has also been pointed out that a vision of ESD needs to be built first, separately from a vision of RCE. While achieving universal basic education or alleviating poverty may appear to be irrelevant in the Japanese national context, ESD could address different kinds of educational issues (such as bullying and school refusal syndrome) and other issues of regional and national concerns (such as the aging population, food safety, economic stagnation) and could revitalise Japanese society and lead local (national and sub-national) institutions and communities to a more sustainable future. The local stakeholders in the Greater Sendai Area reached a consensus that there can be more than one vision of ESD. Rather than contriving a highly abstract and far-fetched vision at this initial stage, each sub-area or participating organisation will come up with its own vision of ESD that it can relate to. While there was a shared understanding that it is important to develop a new vision to guide activities of the RCE and that the RCE requires a long-term perspective on what is needed for sustainable development and how to achieve it, the Greater Sendai RCE was launched without a single, unified vision.
Each sub-area of the Greater Sendai Area will develop ESD based on its distinctive regional characteristics. The RCE will essentially be a mechanism to allow each participating actor to learn from each other. MUE will play a leading role and act as a coordinator of diverse locales in the Greater Sendai Area. Each actor will benefit from the diverse expertise, background and experience of one another. It has also been discussed that the launch of the Greater Sendai RCE should not discourage those organisations which are located in the region but have not been involved in the process of creating the RCE at this stage from participating in the RCE in the future. The launch will inevitably cast spotlights on the activities of MUE, the City of Sendai, the City of Kesennuma, and the Town of Tajiri, while virtually ignoring activities carried out by other higher education institutions and other municipalities in the region. In order to make the RCE an inclusive and expansive endeavour, the local stakeholders agreed, it is important to have a clear understanding that activities highlighted in this paper are not necessarily best practices or model cases but examples of possible RCE activities.

7 The Greater Sendai RCE in light of the Core Elements of RCEs

This chapter looks at the Greater Sendai RCE in terms of core elements of an RCE as identified in the UNU-IAS' (2005) policy report. While the "research and development" component of an RCE is critical, as the Basic Plan of the Greater Sendai RCE is still being developed and I can only repeat existing research activities of MUE here, this chapter focuses on three out of four core elements of an RCE: governance, scope of collaboration and transformative education.

7.1 Governance and Sustainability of RCE

7.1.1 Methods of Operation and Decision-Making

This section describes the formal actors involved in decision-making and implementing the decisions of the Greater Sendai RCE and the formal structures set in place to arrive at and implement these decisions. The Steering Committee will be organised by key stakeholders in the area to act as a decision-making body on policy and management of the RCE. The Committee is scheduled to be launched on 24 June 2005. The tentative composition of the Steering Committee is shown in Table 7.
### Table 7 Tentative Composition of the Steering Committee of the Greater Sendai RCE

<table>
<thead>
<tr>
<th>Geographic Scope</th>
<th>Organisation(s) representing the Greater Sendai Area as a whole and each sub-area</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Greater Sendai Area as a whole</td>
<td><strong>UNU-RCE Promotion Committee of Miyagi University of Education</strong>&lt;br&gt;<strong>Environmental Policy Division of Miyagi Prefecture</strong>&lt;br&gt;<strong>Environment Bureau of Sendai City</strong>&lt;br&gt;<strong>Tohoku Office of the Ministry of the Environment</strong>&lt;br&gt;<strong>UNU-IAS</strong>&lt;br&gt;<strong>Tohoku Global Seminar</strong>&lt;br&gt;<strong>Kahoku Shimpo</strong> (local newspaper)&lt;br&gt;<strong>Tohoku Office of Japan International Co-operation Agency (JICA)</strong></td>
</tr>
<tr>
<td>Sub-area within the Greater Sendai Area</td>
<td><strong>Sendai City</strong>&lt;br&gt;<strong>Forum for Environmental Education and Learning in Sendai, City of Trees</strong> (“FEEL Sendai”)&lt;br&gt;<strong>Kesennuma City</strong>&lt;br&gt;<strong>Kesennuma Omose Elementary School</strong>&lt;br&gt;<strong>Kesennuma City Board of Education</strong>&lt;br&gt;<strong>City of Kesennuma</strong> (Environment and Health Division)&lt;br&gt;<strong>Kabukuri-Izunuma Wetland Area</strong>&lt;br&gt;<strong>Tajiri Town Office</strong>&lt;br&gt;<strong>Tajiri High School</strong>&lt;br&gt;<strong>Japanese Association for Wild Geese Protection (JAWGP)</strong></td>
</tr>
</tbody>
</table>
organisations' resources secured for their current activities will be used efficiently to set the RCE in motion. This arrangement also rules out the possibility of main actors' quitting RCE as soon as the external funding runs out. MUE will allocate its budget for cross-academic subject/inter-disciplinary projects to carry out RCE-related activities in the immediate future. In order to access external resources to expand their activities, RCE stakeholders both individually and collectively will apply for grants of MEXT, Japan Fund for Global Environment and other funds. As RCE stakeholders create synergies between existing projects in the Greater Sendai Area, they will be able to improve the opportunity of gaining major grants.

7.1.3 Other Resources

As the case of Kesennuma Omose Elementary School demonstrates, schools can develop locally-relevant ESD by taking advantage of the expertise and resources offered by local research and other knowledge institutes. The City of Sendai is a home to close to twenty higher education institutions, a science museum, an observatory, botanical gardens, which can enhance the local knowledge base of the Greater Sendai RCE.

7.2 Collaboration

7.2.1 Existing Collaboration and Networking

Three sub-areas that constitute the Greater Sendai Area have their own cross-sectoral networking and partnerships. In addition, overarching networks that cover all three areas such as Tohoku Global Seminar and MUE's Environmental Education Tohoku Consortium have been established. Table 8 lists main participating organisations, and Figure 7 shows exiting collaboration and networking in the Greater Sendai RCE from the perspective of MUE. There is a need to establish a mechanism to promote RCE activities in areas other than Sendai, Kesennuma, and Kabukuri-Izunuma Wetland Area.

7.2.2 Enhancing Outreach/Service Function of MUE

MUE's collaboration with Omose Elementary School has achieved significant results, but NGOs have not been included in this collaboration. MUE will work more closely with NGOs in Kesennuma City. On the other hand, in Tajiri, NGOs are very active and collaboration between the central and local governments and local NGOs is noteworthy, but MUE has not been actively involved in promoting EE in the area. MUE will carry out EE programmes in addition to the Friendship Project in Tajiri. In the City of Sendai, partnerships between MUE
and NGOs are well established, but MUE needs to facilitate partnerships between 'formal' and 'non-formal' education sectors (in a sense used in the 'ESD discourse' in 2.3.3.3) by working more closely with the local boards of education and the Environment Bureau of the City of Sendai. MUE will influence the Miyagi Prefectural Board of Education and the Sendai City Board of Education to be active for promoting RCE activities at school levels by enhancing the tripartite collaboration between the three organisations.

Table 8  Main Participating Institutions/Organisations of the Greater Sendai RCE

<table>
<thead>
<tr>
<th>Sub-area</th>
<th>Main Participants</th>
</tr>
</thead>
</table>
| Overarching Organisations| Miyagi University of Education  
Tohoku Global Seminar (Secretariat: Igune School in Sendai)  
Environmental Policy Planning Division of Miyagi Prefecture  
UNU-IAS |
| Sendai City               | "Forum for Environmental Education and Learning in Sendai, City of Trees" ("FEEL Sendai") (Secretariat: Environment Bureau of the City of Sendai)  
The City of Sendai |
| Kesennuma City            | Kesennuma City Hall  
Kesennuma City Board of Education  
Omose Elementary School (OES)  
OES Project Partnerships Promotion Committee (see Table 6)  
Omose Junior High School  
Kesennuma High School |
| Kabukuri-Izunuma Wetland Area | Tajiri Municipal Government (Tajiri Town Office)  
Tajiri Board of Education  
Tajiri High School  
Farmer's co-operative  
Fuyumizu Tanbo Project  
NGOs (e.g., JAWGP, Numakko Club) |

Since it is not always easy for faculty members to travel to remote municipalities such as Kesennuma and Tajiri, ICT will be further utilised to enhance MUE's outreach activities. Through experience of working with local schools, MUE feels that video conferencing is not particularly effective for those who have never met. Therefore, MUE will continue to emphasise site visits and the establishment of connections with students and school teachers via face-to-face communication.
7.2.3 Expanding the Scope of Collaboration

Currently MUE is taking the lead in developing the Greater Sendai RCE, and no other higher education institution is involved in the process of developing the RCE. In addition to MUE, there are one national, one prefectural, and eleven private universities as well as six junior colleges and two technical colleges in Miyagi Prefecture. While MUE is undoubtedly in an ideal position to take leadership in the RCE, the expertise of MUE is limited in the sense that it is a teacher-training institution and it does not have research capacities in certain areas.
relevant to addressing major sustainability issues. There is a clear need to engage other higher education institutions in the RCE in the near future. With its emphasis on positive aspects of collaboration and partnerships, the RCE concept largely ignores the fact that higher education institutions often compete to obtain grants from foundations, different levels of government, and other sources to fund their research and other activities. The banner of RCE may put MUE in an advantageous position in this competition. Unmistakably, there is a hierarchy of higher education institutions in the Greater Sendai Area in terms of prestige, resources, and research capacities. It is easy to state that the RCE will expand over the DESD to include a variety of partners, but the challenge is not so much to develop interest from other higher education institutions to join the RCE as to make strategic decisions about future partners. There is a need to discuss the timing and method of going beyond the initial partner group and expanding the scope of collaboration.

### 7.3 Transformative Education

#### 7.3.1 Public Awareness

Developing public understanding and awareness is one of the four major goals of ESD described by Chapter 36 of Agenda 21 as well as a crucial aspect of promoting RCE and mobilising more actors for ESD. As an important undertaking which aims at raising public awareness and improving educational practices, MUE holds "UNESCO-Asia Pacific Region Environmental Education Seminar" every other year. The next seminar is scheduled to be held in the City of Sendai in November 2005. The broad theme of the seminar will be ESD. In addition to holding ESD-related conferences, seminars and workshops, to raise awareness of the local people about ESD, DESD and RCE, MUE created a brochure explaining these concepts in Japanese. It is desirable to establish a web site of the Greater Sendai RCE and make key information available online. Local stakeholders need to discuss how to share costs for promotional publications and managing the web site.

On 25 June 2005, a seminar commemorating the inauguration of the Steering Committee of the Greater Sendai RCE was held as part of the First Tohoku Global Seminar of 2005, inviting local media. Media and advertising agencies are the key to creating a broad public awareness and a sense of ownership over the Greater Sendai RCE to ensure that RCE achieves a wide impact on a regional scale. Tohoku Global Seminar will continue to play an
important role in raising public awareness about RCE, ESD, and DESD. It has already started working with the major local newspaper *Kahoku Shimpo*, and this collaboration is expected to be enhanced. Responsible media organisations committed to creating an informed public are essential for the successful implementation of DESD.

As the biggest consuming region and the business centre in Tohoku, Sendai will emphasise educating its citizens and businesses about sustainable production and consumption through green purchasing and activities of FEEL Sendai. By linking Sendai's social education and awareness raising activities with the "slow food" movement of Kesennuma and Fuyu-Mizu-Tanbo Project of Tajiri Town (see Box 4), the Greater Sendai RCE may be able to address the issues of health, food safety, regional development, and sustainable production and consumption effectively. Between April 2005 and March 2006, Tohoku Global Seminar will be held in sub-areas of the Greater Sendai Area (e.g. Kesennuma and Tajiri), not just in Sendai, in an effort to connect diverse activities and initiatives in the Region more tightly.

### 7.3.2 Education System

#### 7.3.2.1 Reorienting School Education

The Draft Asia-Pacific Regional Strategy for DESD (UNESCO Bangkok, 2005) highlights the role of APEID in the reorientation of existing programmes, and the MUE projects to develop a cross-academic subject (interdisciplinary) EE curriculum, EE Techno Core, and the database of environmental education will contribute to reorienting school education towards sustainable development.

From FY 2005, Omose Elementary School (OES), Omose Junior High School, and Kesenuma High School together will participate in the Fulbright Memorial Fund's Master Teacher Programme, thereby strengthening the vertical links in the 'formal education sector'. In addition to enhancing collaboration between different levels of formal education, participation in RCE is expected to facilitate relations between MUE, local schools, and local actors relevant for ESD. It will be arrogant for UNU to claim that the Greater Sendai RCE will facilitate communication between Mr Oikawa and MUE or between Mr Oikawa and other local stakeholders. For example, over ten years the Environment and Health Division of Kesennuma City Government and OES have jointly conducted water quality inspection of the Omose River through bio-assessment of aquatic life of the River. The Environment and Health Division gives advice and guidance on the "Waterfront City of the Future" project of
sixth graders at OES, not simply because it is a member of the OES Project Partnerships Promotion Committee but because it has a long established relationship with OES (see Box 3). Personal and professional relationships Mr Oikawa has cultivated with the faculty and staff of MUE and local stakeholders are irreplaceable and cannot be duplicated easily. However, the RCE can facilitate relations between 'formal' and 'non-formal' education as well as different levels of school education by creating an institutional mechanism of collaboration and legitimating and disseminating innovative undertakings at Omose to other schools in the Greater Sendai Area.

7.3.2.2 Reorienting the University Curriculum
MUE can address issues in ESD by linking EE and ESD. This will be achieved partly by a curricular reform. By 2007, MUE will regroup interdisciplinary subjects (e.g., EE, human rights and welfare education, education for international understanding, special need education) as sub-major subjects to train human resources who can contribute to ESD. MUE also hopes to enhance the basics of EE in undergraduate courses.

7.3.2.3 Campus Operation towards Sustainable Development: Eco-Campus and Barrier-Free Campus Initiative
At MUE, there is an emerging 'Eco-Campus' initiative aiming at preventing global warming, saving energy and resources, and promoting reuse and recycling. In addition, a 'Barrier-Free Campus' initiative aims at making the campus sensitive to the needs of the physically challenged.

7.3.3 Training System
7.3.3.1 Strengthening Pre-service and In-service Teacher Training
The successful implementation of ESD will unavoidably depend on the quality, commitment and expertise of the teacher. The quality of training that the teachers themselves undergo becomes critical. There is a need for capacity development at levels closest to schools and teachers. In order to strengthen pre-service and in-service teacher training towards sustainable development, MUE will

- strengthen a supportive structure for lifelong learners;
- enhance Friendship Project (see Box 2); and
develop University extension courses on the satellite campus in Kesennuma City, which provides teachers with opportunities for co-learning with local people and local NGOs. This workshop will be offered as a graduate credit course in EE for teachers in their tenth year in the profession.

7.3.3.2 Corporate Training

RCE needs to encourage values and skills within a company in alignment with sustainability principles. Increasingly, large corporations are embracing sustainability and corporate social responsibility (CSR) goals at the strategic level. In 2003, the City of Sendai started administering ISO14001-based Michinoku Environmental Management System (EMS) certification for small and medium-sized corporations, but it has not become the widespread environmental management standard in the region. While corporations will need to be equipped with an integrated set of corporate values and people with the knowledge and skills to tackle complex social and environmental challenges, there have not been substantial discussions about the state of corporate education and training on sustainability and CSR among the main actors of the Greater Sendai RCE.

The City of Sendai will continue to promote green purchasing in order to advance responsible corporate citizenship, but there may be a need to involve local businesses in ESD more explicitly not only as supporters or providers of EE in schools and in the 'non-formal' setting but also as promoters of corporate training in sustainable development. As MUE is a teacher-training institution, it neither has a strong link to local business communities nor offers training for business people. While there are important EE activities carried out by corporate groups widely recognised by main actors of the Greater Sendai RCE, such as energy education delivered by Tohoku Electric Power Co., Inc., it has not been realistic to include corporate groups systematically in the process of developing the RCE so far. As a first step to enhance corporate training, discussions need to take place as to how to involve other higher education institutions in the Area which train current and future business leaders and managers.

22 The reference to Michinoku Environmental Management System was deleted from the UNU-IAS' (2005) policy report based on the City of Sendai’s request. The City of Sendai felt that it was premature to include this initiative in the report since it was largely unknown and not influential in the region.
8 Challenges of Promoting ESD

8.1 From EE to ESD

Those currently involved in the Greater Sendai RCE are primarily stakeholders in EE. Given the holistic and crosscutting nature of ESD, moving from EE to ESD is a key challenge for the successful implementation of RCE in the Greater Sendai Area. Stakeholders in EE do not necessarily overlap with stakeholders in other important components of ESD such as human rights, gender equality, peace, and poverty reduction. At the initial stage of launching the RCE, it is difficult for each participating organisation to address all fifteen strategic perspectives of ESD listed in UNESCO's (2004) draft DESD IIS. While one obvious solution lies in forming a working coalition with stakeholders in non-EE components of ESD regarding RCE activities, identifying potential regional partners and inviting them to join the RCE at this stage will significantly delay the process of launching the RCE Steering Committee. It is not feasible to engage stakeholders in all ESD-related areas at the outset. Based on a clear recognition that EE is not synonymous with ESD, therefore, the current key actors of the Greater Sendai Area have held substantial discussions about how to expand the scope of their current activities.

One of the strengths of the Greater Sendai RCE is its internal diversity in terms of geography and industries. For example, Tajiri, a major rice producing area, will address biodiversity and sustainable agriculture, while Kesennuma, a major fishery harbour and a "slow food" city, will link learning activities inside and outside of schools to regional development. Both Tajiri and Kesennuma address an important issue of food safety, and the RCE can link the food safety movement by food producers with the movement to educate urban consumers in Sendai. The RCE may organically link unique community revitalization initiatives in Kesennuma and Tajiri and show concrete examples of relating learning processes of individual students to sustainable regional development. With the involvement of diverse areas, the Greater Sendai RCE can also address the strong role rural communities can play in ESD as well as that of urban communities.

23 Fifteen strategic perspectives of ESD consist of seven socio-cultural perspectives (human rights, peace and human security, gender equality, cultural diversity and intercultural understanding, health, HIV/AIDS, governance), five environmental perspectives (natural resources, climate change, rural transformation, sustainable urbanisation, disaster prevention and mitigation), and three economic perspectives (poverty reduction, corporate responsibility and accountability, market economy).
Whereas a general consensus has been established that the Greater Sendai RCE as a whole will cover strategic perspectives of ESD, this is a compromise to start operating as the RCE and should be regarded as a preliminary step towards becoming a full-fledged RCE as envisioned by UNU. How to address all three spheres of sustainable development through RCE activities is an important question that deserves further discussion and is a major challenge for realising the potential of the Greater Sendai RCE. The specific challenge to the City of Sendai lies in developing an institutional framework to promote ESD by coordinating different bureaus and sections that have jurisdiction over different components of ESD. Smaller administrative units of Tajiri Town and Kesennuma City have fewer hurdles to overcome in order to address multiple environmental, socio-cultural, and economic issues. For example, the Town of Tajiri has a single administrative unit called the "Division of Agricultural Policy Planning, Commerce and Industry, and Tourism".

Due to the all-embracing and cross-sectional nature of ESD, the question of supervisory authority of ESD is a common challenge for public administration at all levels. ESD-J (Japan Council on the UN DESD) requested the Japanese Government to establish the DESD Promotion Headquarters in the Cabinet Office and develop a national framework for promoting DESD. This clearly indicates that ESD is an expansive undertaking that cannot be entrusted to a single ministry. At the national level, ESD neither belongs entirely in the competence of MEXT nor comes exclusively under the jurisdiction of the Ministry of the Environment, which has promoted EE. At the prefectural and municipal government level, ESD needs to be undertaken both by the Board of Education, which is responsible for implementing primary and secondary education curricula, and the Environment Bureau, which promotes EE in collaboration with local NGOs.

8.2 Promoting ESD in School Education

8.2.1 Structure of Education Administration in Japan

In Japan education is a national, prefectural, and municipal responsibility. MEXT provides guidance and advice to prefectural governments on how education should be done. Recent reforms have handed over more power to prefectural governments, but MEXT’s guidance and advice are still diligently observed with the worry that straying from them might result in
budget cuts and other sanctions. Every prefectural government has its own Prefectural Board of Education that directs prefectural schools and private schools. This Prefectural Board of Education has a wide range of responsibilities including, but not limited to, choosing textbooks to use, hiring teachers, and along with the governor, drafting the budget. Both the MEXT and the prefectural government give guidance and advice to municipal governments which have their own municipal boards of education. Since Sendai is a designated city, the Sendai City Board of Education has more autonomous rights (including authority over personnel issues) than the boards of education of other ordinary cities, towns and villages in Miyagi Prefecture.

Given this structure of education administration, it is crucial that MEXT encourages schools to incorporate ESD as integral parts of educational objectives and school curricula. A piece of paper from MEXT to the prefectural and municipal boards of education indicating its endorsement of ESD would make the life of those teachers trying to implement ESD at school in collaboration with local civil society much easier. At present, NGOs and other groups tend to go directly to an individual school, rather than go through the inflexible local board of education, to carry out innovative educational programmes.

8.2.2 Promoting Interdisciplinary and Comprehensive Studies and Collaboration between Schools and Local Civil Society

While the newly introduced "Period of Integrated Study" (PIS) provides an appropriate framework for promoting ESD in schools (see 4.1), many teachers are perplexed as to how to teach PIS. Traditionally teachers have not been trained to teach cross-cutting, real-life problems away from textbooks, and pre-service and in-service teacher training needs to address this issue. For some PIS is becoming a negative symbol of the seemingly failed policy of "relaxed education". Since the New Courses of Study were introduced to elementary and junior high schools in 2002 and to senior high schools in 2003, it is too early to judge whether they work or not. Discussions surrounding PIS, however, do illustrate the very difficulty of implementing interdisciplinary and comprehensive studies in elementary and secondary schools as well as of forging dynamic partnerships between schools and local civil society.
As the case of Kesennuma may exemplify (see Box 3), there are many encouraging examples of collaboration between 'formal' and 'non-formal' education sectors. In Tajiri, the local NGO Numakko Club offers EE in local elementary schools with financial assistance from the local municipal government. This provides a good example where NGO is trusted not only by individual schools but also by the local board of education. Nevertheless, there are also many cases of lack of collaboration between schools and NGOs. Given the strong presence of environmental NGOs in the Greater Sendai Area, it is impossible for schools to implement all programmes suggested by environmental NGOs in terms of time availability, safety, and financial resources. It becomes problematic when NGOs are perceived by schools as undertaking their own projects at schools, rather than supporting lessons and help teachers achieve educational objectives. Despite their good intentions, NGOs which lack understanding of how schools work could be perceived as intrusive by school administrators and teachers. As many NGOs lack information on how schools operate and many teachers do not know how NGOs work, the Greater Sendai RCE should aim at offering more opportunities for teachers and NGOs to have dialogues and deepen mutual understanding. Activities of Tohoku Global Seminar and FEEL Sendai have contributed to providing such opportunities, and it is anticipated that the RCE will create a space for co-learning and co-operation among diverse stakeholders in ESD by building on these activities.

9 Discussions and Agendas for Future Research

The previous chapter addressed challenges of promoting ESD (not necessarily in the framework of the RCE) in the Greater Sendai Area and more generally in Japan. This final chapter of the paper outlines a series of theoretical, policy and practical challenges for the future of the RCE initiative and the Greater Sendai RCE. It is expected that the RCE results in new activities and programmes, strategic integration, and policy articulation, but it is too early to assess the outcomes of the Greater Sendai RCE. First, I will discuss a potential synergy between the RCE initiative and Japan's "Slow Life" movement as a strategic means to promote ESD in the Japanese context. Second, I will consider the role of an RCE as a 'knowledge broker' and address challenges of making a network of RCEs into a "Global Learning Space for Sustainable Development" proposed by the UNU. The first part focuses on strategies to create a local ownership of the RCE project and to mobilise more actors for RCE, and the second part sketches challenges of building partnerships to promote ESD across sectoral, disciplinary and spatial boundaries.
9.1 Mobilising for ESD: RCE as Identity Enactment of the Region

9.1.1 Imagining the "Greater Sendai Area"

RCE could take various forms and they will need to take different forms in different societies. RCE is based on a notion of local ownership, yet mobilisation processes in Japanese pilot cases have been so far a 'top-down' process intended to meet the needs of the UNU to implement DESD. This is not to suggest that the UNU is imposing the RCE model onto the Greater Sendai people in any way; the Greater Sendai RCE does build on existing collaboration, networking and various activities undertaken on the ground by diverse actors in the region. In a sense, these actors had already been 'mobilised' to 'make a difference' before the arrival of the RCE concept in the region, but none of them were undertaking these activities to achieve sustainable development in "the Greater Sendai Area" per se. The entity called "the Greater Sendai Area" did not exist—it existed neither on the map nor in the mind of local people.

In its effort to create an RCE in the Greater Sendai Area, EfSD team of the UNU-IAS has reiterated the importance of creating an RCE which will not be constrained by existing administrative and political boundaries. If an RCE only covers the geographic area which is under the jurisdiction of the City of Sendai, it is highly likely that the RCE will be no different from an existing official project of the City of Sendai. Despite concerns voiced by core local actors about the difficulty of having a motley blend of diverse actors and sub-regions within a single region called "the Greater Sendai Area," EfSD team of the UNU-IAS emphasised the necessity of creating this new region precisely to encourage "local stakeholders" to embark on a novel kind of multi-sectoral, multi-disciplinary partnerships to promote sustainable development across administrative and knowledge boundaries.

To speak of "the Greater Sendai RCE" is to gloss over the markedly different features of the diverse sub-regions and various groups and actors that make up the region. Yet despite the very distinct cultural, political and economic practices of the marine environment of Kesennuma, the Kabukuri-Izunuma wetland area, and the urban area of Sendai, a unified region needs to be "imagined" by the local stakeholders. Benedict Anderson (1983/1991) theorised the nation as an "imagined community", underscoring that nobody can be familiar with all the members of a nation and therefore people need to "imagine" a nation through, for example, nationalist representations of the past. In developing the Greater Sendai RCE, how
"local traditions" and "local cultures" are represented carries much weight. Strategically, it is critical that such representations are rooted in attempts to cope with present-day local conditions and that they are linked to attempts to build a vision for a sustainable future.

On of the most frequently asked questions about the RCE initiative is about concrete benefits it gives to the region. True, building a sustainable future is important, but what should we expect as the outcomes of this grand endeavor proposed by the UNU? What social benefits can be derived from launching an RCE? Is it in the interest of local people? In articulating the RCE concept in their own words, core actors of both the Greater Sendai RCE and the RCE Okayama interpreted the objectives of the RCE initiative in terms of 'community revitalization' or 'community building' (machi-zukuri, which literally means town building, or chiiki-zukuri, which literally means region building in Japanese) rather than in the language of sustainable development. Community revitalization has been for some time now a theme of interest to Japanese provincial cities and towns. Central in the "imagining" of these communities has been the discovery of "local culture" to be revitalised. In the case of the Greater Sendai Area, local NGOs' activities to restore appreciation for nature and traditional knowledge about a sustainable way of life through "igune" exemplify local efforts to promote "local culture" (see 4.3). In addition to the description of igune-related activities, the following account of a "Tohoku tradition" was included in the UNU-IAS' (2005) report, in response to a specific request by one of the core actors of the Greater Sendai RCE:

**Local Wisdom: Caring for Others, Consideration for All Living Things**

The most valued principle still alive in Japanese society is harmony. The concept of "omoiyari" is closely linked to the concept of harmony and relates to the sense of empathy and compassion encouraged and practiced in Japanese society. Literally "omoiyari" means "to imagine another's feelings" or "to be thoughtful". Significantly, "omoiyari" is extended not only to other human beings but to everything living around such as birds and plants. In the Tohoku region, there is a practice of harvesting persimmons only from the middle branches of the tree, leaving those at the top branches for birds and those at the bottom branches for travellers. There is also a practice of collecting buds of aralia (taranome)—edible plants found in a mountainous forest area—by making sure to leave at least one bud for the plant itself so that it does not blight and another bud for the next person that comes to pick up this Japanese delicacy. If 'environmental stewardship' is an approach to the earth and its resources that addresses the need for human beings to exercise caring dominion over creation and beneficial human management of the earth, these Tohoku practices attend to the human call for consideration for all living things.
While *Igune* is but one example of how Japanese people *utilise* nature in a sustainable way, the harvesting practices described above exemplify local wisdom based on the Japanese concept of harmony with nature. Following the country's defeat in World War II, Japan experienced a remarkable growth in its economy, and older people often lament that Japanese people have lost appreciation and respect for nature and that such local wisdom as described here has been lost. It is hoped that ESD and RCE serve to restore cultural knowledge and practices about a sustainable way of life. (p. 34)

I intentionally constructed this narrative to invoke the image of Tohoku people as the inheritors of valuable "distinctively Japanese" cultural knowledge and as possessors of "authentic knowledge about a sustainable way of life" which provides an important alternative to 'western' approaches to nature. Presenting one's region as "advanced" in the area of sustainable development is a common strategy taken by RCEs to justify their suitability as an RCE and is not unique to the case of the Greater Sendai RCE. For example, the authors of the case study of Toronto RCE (UNU-IAS, 2005) present Toronto as "a recognised leader in both sustainable development efforts, and education for sustainable development programmes" (p.52). What may be distinctive in the case of the Greater Sendai RCE in comparison with RCEs in 'western' societies (Toronto, Rhine-Meuse+, Ban RCElona) is a claim of the existence of 'traditional local culture' based on the underlying profound understandings and deep appreciation of nature.

This strategy to emphasise 'Tohoku culture in harmony with nature' and 'traditional knowledge' is closely linked to a symbolic position which Tohoku region has traditionally occupied in the history of modern Japan and public discourses about Japan's modernization and development. Tohoku has been positioned as the periphery of Japan geographically, economically, politically and demographically. Problems of depopulation and economic decline caused by out-migration have been particularly pronounced in the Tohoku region. Rapid depopulation has led to problems in the provision of education and other social services in many of the small villages and townships in the Tohoku region. While academic rewriting of the Tohoku history is underway from perspectives which emphasise cultural and regional diversity within Japan (as opposed to mainstream views which emphasise cultural homogeneity of Japan), the image of "backward Tohoku" is still widely held among the general public (Kawanishi, 2001). Kawanishi (2001) argues that the modern Japanese state positioned Tohoku as a periphery of Japan and emphasised "backwardness" of Tohoku, in contrast to "modernity" of central Tokyo. The recent reevaluation of traditional local culture
is, in a sense, a strategy to both deliberately appropriate and challenge the constructed, stereotyped image of Tohoku as backward, traditional and rural.

9.1.2 Japan's Emerging "Slow Life" Movement
The core actors of the Greater Sendai RCE are not alone in constructing a new image of Tohoku culture which resonates with values of sustainability. Local authorities are also appropriating the stereotyped image of Tohoku to reinvent the identity of Tohoku in a new, positive way. In 2001, for example, Iwate Prefecture, which is located north of Miyagi, issued a "Gambaranai (Take-It-Easy) Declaration" to launch a movement away from dominant values of economic efficiency towards a more natural, relaxed lifestyle, and has placed national newspaper advertisements for the Declaration five times so far (January 2001, October 2001, November 2002, February 2004, February 2005).\(^{24}\) We can reach a more adequate understanding of Iwate's campaign if we take into account the role which folklores of Iwate played in building the foundations of Japanese ethnology. About one hundred years ago, Yanagida Kunio, a Japanese forerunner folklorist and ethnologist, visited Tono in the present-day Iwate prefecture, compiled local stories and published them. Like a modernist anthropologist studied culture in 'primitive' societies, Yanagida found "lost Japan" in remote Iwate during the Meiji period when there existed no conception of ethnology in Japan.

Similar efforts to reinvent an image of Japan's countryside are undertaken by municipalities across Japan. For example, Shizuoka Prefecture's Kakegawa City, which adopted Japan's first "City Declaration of Lifelong Learning" in 1979, declared itself a "Slow Life City" in 2002, outlining eight principles for city-planning and the lifestyle for the twenty-first century (see Table 9). The emerging "Slow Life" movement to pursue 'quality' of life, rather than economic efficiency, is spreading nationwide. In June 2002, a preparatory committee of the coalition of slow life cities and townships "Slow Town Federation" was launched, consisting of heads of twelve municipalities. In November of the same year, "Slow Town Federation" was established with heads of 54 municipalities across Japan. As of May 2005, membership decreased to 35 municipalities, but it is assumed that the decrease is partly due to ongoing rapid consolidation of municipalities in Japan.\(^{25}\)

\(^{24}\) See <http://www.pref.iwate.jp/info/ganbaranai/framepage.html>. In Japanese, "gambaru" means "work hard", and "gambaranai" is the negation of "gambaru."

\(^{25}\) See <http://slowtown.jp>
Table 9 Eight Principles of "Slow Life City Declaration" (Kakegawa City, 2002)

- SLOW PACE: We value the culture of walking, to be fit and to reduce traffic accidents.
- SLOW WEAR: We respect and cherish our beautiful traditional costumes, including woven and dyed fabrics, Japanese kimonos and Japanese night robes (yukata).
- SLOW FOOD: We enjoy Japanese food culture, such as Japanese dishes and tea ceremony, and safe local ingredients.
- SLOW HOUSE: We respect houses built with wood, bamboo, and paper, lasting over one hundred or two hundred years, and are careful to make things durably, and ultimately, to conserve our environment.
- SLOW INDUSTRY: We take care of our forests, through our agriculture and forestry, conduct sustainable farming with human labor, and ultimately spread urban farms and green tourism.
- SLOW EDUCATION: We pay less attention to academic achievement, and create a society in which people can enjoy arts, hobbies, and sports throughout our lifetimes, and where all generations can communicate well with each other.
- SLOW AGING: We aim to age with grace and be self-reliant throughout our lifetimes.
- SLOW LIFE: Based on the philosophy of life stated above, we live our lives with nature and the seasons, saving our resources and energy.

Source: Kakegawa Declares Itself a "Slow Life City", Japan for Sustainability, Information Centre database
<http://www.japanfs.org/db/index.html>

Inspired by the "Slow Food" movement initiated in Italy in 1986, Japan's "Slow Life" movement is providing a useful representation of Japanese provincial cities and towns as "Slow Cities" and "Slow Towns", allowing people to conceptualise the countryside in a positive way. Provincial cities and towns, coming to the realization that they could never catch up with Tokyo in terms of economic development, have started inventing their identities as "Slow Cities", rather than as "less developed cities in Japan". There is a common perception generally among most Japanese people that Japan has achieved economic development at the expense of the loss of traditional culture. There is a kind of nostalgia for the past manifested in the re-evaluation of the countryside. The DESD IIS (UNESCO, 2005) states that "quality education" is informed by, among other things, "the past (e.g., indigenous and traditional knowledge)" (Annex II, p.3). It also identifies "processes of public participation for integrating indigenous, traditional, and local knowledge and culture into ESD programmes" as one of the processes to help communities create locally relevant and culturally appropriate ESD programmes (Annex I, p.14). The 'imagining' of Japan's countryside as sustainable "Slow Cities" may well prove an appropriate way of reinventing the identity of many local regions and mobilising more actors for ESD at the local or regional level.

The emerging "Slow Life" movement has been promoted by a diverse array of actors, notably the monthly 'eco fashion' magazine SOTOKOTO, first launched in 1999. SOTOKOTO is allegedly the first magazine of its kind in the world and enjoys a monthly circulation of 140,000 (smaller than that of major women's fashion magazines but larger than that of most
men's fashion magazines in Japan).26 Calling itself a promoter of "Slow Life" and "LOHAS (Lifestyle of Health and Sustainability)", SOTOKOTO has contributed to mainstreaming these concepts to the fashion-conscious young generation. In the 2003 edition of the Environmental White Paper, the Ministry of the Environment listed "simple life", "slow food", and "LOHAS" as three key concepts that represent a new lifestyle which produces a lead for constructing a sustainable society (Chapter 1, Section 5, 1-(2)). The Ministry of the Environment's recognition of simple life, slow food, and LOHAS as the key to mobilising Japanese people for sustainable development clearly indicates that Japan's "Slow Life" movement has gained the kind of legitimacy that should not be ignored in our efforts to mobilise for ESD in the Japanese context.

Creating a synergy between ESD mobilisation processes and the Slow Life movement, however, requires precautions and careful thinking. It is important to be aware of concerns expressed about the "Slow Life" movement. First of all, some are skeptical of the ulterior motive for promoting "Slow Life". One of the concerns expressed over local municipalities' campaigns for "Slow Life" is that these campaigns are not necessarily promoting sustainability principles but aiming more narrowly at revitalising regional industries. Second, there is also a danger that ESD is equated with "Slow Education," which "[pays] less attention to academic achievement" and aims at producing people who "enjoy arts, hobbies, and sports" (see Table 9). ESD needs to be promoted not as education that does not care about academic achievement but as 'quality education'. Third, the "Slow Life" movement often has nationalistic undertones. The nostalgia for the past and love for one's home province can be easily mobilised to support patriotic sentiment and a new nationalism to counter the power of global capitalism, rather than to support education as a human right or education for intercultural understanding.

### 9.1.3 Constructing an Identity of the Region and Building a Vision for a Sustainable Future

In order to mobilise more actors for ESD and RCE, there are two levels which should be taken into consideration. First, the UNU needs to mobilise those actors who will be major local promoters of the RCE initiative and will play the central role in establishing and managing local partnerships. Second, these core actors need to raise public awareness about the RCE and create a sense of ownership of this project among local residents of the region.

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26 See The Japan Magazine Publishers Association <www.j-magazine.or.jp>.
Since 2003, the UNU and the UNU-IAS have presented the evolving idea of RCE in various international conferences and meetings. The idea has been well received by a wide range of actors in the sustainable development community, and the past two years of RCE mobilisation processes have proven that it is not difficult to find higher education institutions willing to become local promoters of the RCE initiative.

Earlier in this paper, I suggested that educational reforms which are integral part of decentralization reforms may provide universities with an incentive to engaging in efforts to promote an RCE (see 2.3 and 4.1). Given substantial time, resources and efforts required to put into this initiative, MUE does use the RCE not simply to pursue long-term sustainability goals but to promote its own institutional agenda and immediate goals. MUE is allegedly the only national university in Japan that officially opposed the government's policy of transforming national universities into "independent administrative corporations". This indicates that, as a small national teacher-training institution without a countrywide prestige, MUE knew that it was going to be put in a difficult position as a result of university reforms. MUE thus has an incentive to be a major promoter of the RCE initiative to create its new identity as a pioneer in ESD and a higher education institution which has strong ties to local communities. Nevertheless, while changing fiscal realities and the increased competition for resources are definitely providing higher education institutions around the globe with incentives to engage in RCE efforts, it is too simplistic to explain away a higher education institution's motives to become a promoter of the RCE in terms of self-interested calculation.

In the case of the Greater Sendai RCE, local stakeholders regarded embarking on the RCE initiative as a worthwhile endeavour not so much because it might lead to a sustainable future but because it might well encourage regional people to have or regain a sense of pride in the region. Discussions about decentralization in Japan have centred around the issue of restoring official and public confidence in local regions (chihō) and reinvigorating chihō. The slogan "chihō no jidai (age of local governments)", which was proposed in 1979 by the then Governor of the City of Yokohama, quickly became the buzzword in talking about decentralization in the Japanese context. The term which the local stakeholders in the Greater Sendai Area used in order to explain the goals of the RCE, "machi-zukuri", is commonly employed to denote regional development or town planning in the administrative language, and it connotes not only giving a boost to regional economy but also reinvigorating people who have lost hope in their region. Aging of population is casting a dark shadow over
provincial cities and towns in Japan, and environmental educators often lament that rich nature does not have much significance for local people.

The UNU's presenting traditions such as "igune" or "Fuyu-Mizu-Tanbo (winter-flooded rice fields)" as local knowledge about a sustainable way of life gives people a sense of pride in their local culture. At the same time, it also encourages local people to accept the RCE initiative not as an externally induced reform but as their own initiative to revitalise their culture. The major difficulty lies in organically linking efforts to construct an identity of the region which is grounded in local realities with efforts to build a vision of a sustainable future of the region. The enactment of a regional identity needs to be linked to the enactment of a "progress-seeking", "justice-caring" identity of the region (see 2.1). When ESD is carried out by "progress-seeking", "justice-caring" individuals or groups informed by the global ESD discourse, ESD does not seem to resonate strongly with local people's real concerns.

For example, Toyonaka City (Nitta, 2005; Enoi, 2005), Nishinomiya City (Yoshizumi & Miyaguchi, 2005), and Kyoyama District of Okayama City (Ikeda, 2005) have often been introduced as 'ESD pioneers' of Japan. A network called "ESD Toyonaka" has been launched with Toyonaka Association for Intercultural Activities and Communication and the specified nonprofit corporation Toyonaka Citizens Environmental Conference AGENDA21 playing the central role as core institutions (Nitta, 2005). The Learning and Ecological Activities Foundation for Children (LEAF) initiative based in Nishinomiya has been adopted as the model of Japanese ESD by the Japanese Ministry of the Environment (Yoshizumi & Miyaguchi, 2005). Okayama Kyoyama ESD Environment Project Japan (nicknamed Okayama KEEP) is regarded as a model ESD project based on local partnerships which involve different levels of schools and a community learning centre in the Kyoyama School District as well as local NGOs, local communities and other stakeholders (Ikeda, 2005).

While promoters of ESD Toyonaka, LEAF, and Okayama KEEP characterise their undertakings as 'rooted' in the region, there does not seem to be any large-scale demand for such endeavours at the local level. Undoubtedly, these ESD activities are all 'successful' to the extent that they take partnership approaches to ESD and explicitly try to align their activities with ESD principles. Nevertheless, they do not seem to reflect a felt need of the

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27 See <www.kc-d.net/pages/keep/ESDJ/ESDJ-outline-English.html> for details of KEEP activities in English.
region to reinvent its identity. Rather, they seem to have been born out of a need to implement ESD. An article on ESD in Toyonaka is entitled "Ashimoto no kadai ni kiduki mirai e no manabi wo tomo ni hajimeru [Become Aware of Local Problems and Start Learning for a Future Together]" (Enoi, 2005), while Ikeda (2005) defines ESD as "education for having a sense of crisis on the future of the Earth and our regional community and for living and acting so as not to make it unsustainable" (p.54, my translation). Japanese advocates of ESD often invoke the message of "Think Globally, Act Locally", urging the not-yet-enlightened general public to become more 'aware' of global issues such as climate change and assuming a direct link between raised awareness and engagement in ESD.

In reality, however, there are numerous grassroots activities which have many of the characteristics of ESD as defined by UNESCO (2004, 2005), but usually such activity is not perceived as ESD unless the stated objective and purpose of the activity is explicitly ESD as in the case of Toyonaka, Nishinomiya, or Kyoyama. Japanese advocates of "Slow Life" are acting locally to promote the kind of lifestyle in alignment with values of sustainable development, but they are not necessarily being mobilised to promote ESD in Japan. Nitta (2005) emphasises that ESD should be linked to Local Agenda 21, a programme that provides a framework for implementing sustainable development at the local level (p.65). Aside from the case of Toyonaka, however, Local Agenda 21s do not seem to be actively associated with the identified ESD efforts at the local level. ESD, then, is often promoted separately from existing efforts towards a sustainable future. While preceding partial accounts of what is happening on the ground in the Great Sendai Area show that the RCE does serve to coordinate disjointed activities into a concerted endeavour to promote ESD, it cannot be denied that coordination based on the pre-existing networks excludes many of the potential stakeholders in the region.

Most Japanese people are not likely to be excited about ESD because they will not see ESD as promoted today as an answer to the many social ills of contemporary society. NFE enjoyed huge popularity because people saw it as a solution for the perceived problems of formal education system (see 2.3.3). While global issues such as climate change, ozone depletion, deforestation, and desertification are deemed highly relevant to promoting ESD,

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28 Chapter 28 of Agenda 21 "Local Authorities’ Initiatives in Support of Agenda 21” identifies local authorities as "the level of governance closest to the people", and calls upon local authorities to consult with their communities and develop and implement Local Agenda 21.
social and cultural phenomena which are favourite topics of tabloid TV shows are likely to be deemed irrelevant to promoting ESD. If ESD is about environmental sustainability as well as about economic, social and cultural well-being, and if ESD is truly for people of all ages, not just for school-aged children, however, understanding, for example, Japanese older women's collective psyche underpinning the phenomenal popularity of a Korean actor may be as important as documenting environmental education activities undertaken by higher education institutions and schools.

I argue that, for RCEs located in Japan, where the merits and demerits of rapid economic development are strongly felt, creating a sustainable future is closely linked to creating an alternative future which resonates with 'good old days' before Japan rose to an economic superpower—hopeful days when everybody believed in a bright future of Japan. Nostalgia for the past is manifested not only in the 'Slow Life' movement but also in a current revival boom called "Showa boom", which looks back to the 30s of the Showa Era (1950s and 1960s), and the recent Korean boom, which was ignited by the Korean TV romantic drama series *Winter Sonata* in 2002. Japanese middle-aged and older women's fascination with Korean TV dramas and movies are often attributed to their nostalgia for a pure, bygone Japan. Be it nostalgia for an authentic Japanese culture, longing for innocence, or reminiscence for days of rapid economic growth, Japan's recent fascination with the past provides clues about what Japanese people feel is missing from today's Japanese society.

This observation suggests that it is impossible to envision a sustainable future in a way that has a broad resonance with the public without a nuanced understanding of multifaceted histories, multilayered cultural forces, and complex local contexts within which the RCE is embedded. While the point just made seems self-evident, efforts to enhance a sense of local ownership of the RCE seem to be focusing on 'advocacy and awareness raising' about ESD and RCEs, that is, informing the not-yet-enlightened general public of the global agenda. We need to go beyond 'preaching' that ESD is needed and that partnerships are important. Otherwise, ESD will be subjected to the same criticisms as have been levelled against NFE. If we replace "nonformal education" with ESD in the following quote, for example, it reads like an accurate description of some of the problems faced by ESD today:

Most of the social and political advantages attributed to nonformal education are more in the nature of a manifesto—a formal declaration of the principles, pious intentions, and perhaps possibilities for such

If a Japanese vision of a sustainable future can be articulated as a vision of a "nostalgic future", a vision of ESD may also be articulated along similar lines (Ministry of the Environment, 2003).²⁹  We are already witnessing such articulation in activities undertaken by local NGOs actively involved in the Greater Sendai RCE. Given the broad appeal of the 'Slow Life' movement in Japan, where the biggest fast food chain in the world McDonald's is advertising its 'fast food' as safe and delicious 'slow food', I argue that enacting the identity of the 'Greater Sendai Area' (or more broadly the Tohoku Region) as a sustainable 'slow' region may prove an appropriate way of mobilising more actors for the Greater Sendai RCE.³⁰  Since the City of Sendai is a "regional core city" (Yoshihara, 2003), it may not be too enthusiastic about the characterization of Sendai as a 'slow' city. Rather than the UN language which many find difficult to relate to, however, the concepts of 'nostalgic future' and 'slow life' may encourage local residents of the Greater Sendai Area to see engagement in ESD "as a set of rational and moral choices guided by a vision of the future to which [they] aspire" (Fien, 2003, p.20).

9.2 Refining the RCE Concept: RCE as a Mechanism to Enable Multi-Sectoral, Transdisciplinary and Global Partnerships

This paper did not devote space to arguing that on many levels ESD is needed. At the Johannesburg World Summit on Sustainable Development in 2002, there was a multinational plea for partnerships that would allow a diverse array of actors to jointly take action towards the common goal of sustainable development. RCEs could serve as collective and experimental contexts within civil society for exploring approaches to ESD that support collective action and reflection directed towards a sustainable future. In this final section, I will sketch in what areas the RCE concept needs refinement based on the Review of Literature and my preliminary observation of the development processes of an initial group of RCEs.

³⁰ See McDonald's Japan's Web site at <http://www.mcdonalds.co.jp/quality/quality_f.html>.  The 2004 documentary film "Super Size Me" by Morgan Spurlock seems to have led McDonald's to emphasise the message that its food is healthy and safe. While the main issue regarding consuming fast food in the United States appears to be unhealthy diet and obesity, the central concern in Japan seems to be food safety, especially the safety of beef for hamburgers.
9.2.1 RCE as a Centre of Combined Expertise

There have been many discussions about developing a "local or regional knowledge base" as one of the key goals of an RCE. In addition to making a wealth of data on ESD as practiced in the framework of RCE available, an RCE is expected to advise and support various organisations in how they can contribute to ESD more effectively and provide technical support in the area of education and training. In other words, an RCE is expected to develop regional capacity to supply consultancy services in ESD—technical and academic support in implementing 'culturally appropriate and locally relevant' ESD. In the case of the Greater Sendai RCE, MUE, in collaboration with other partners, may lead the process of ensuring availability and use at the regional level of technical information, best practices, lessons learnt, and other resources to improve the effectiveness of the RCE.

Another phrase that has been used to describe the main function of RCE is "knowledge broker". RCE is interpreted by some RCE promoters to operate as a "knowledge broker" to link "knowledge providers" to those who require that knowledge. For example, school teachers may require the expertise of university professors, scientists at science museums or botanical gardens or local NGOs to implement effective ESD programmes. Since ESD should be comprehensive and multi-disciplinary, the role of RCE is to link those in need of expertise to a network of "knowledge providers". The UNU (2004) defines the role of RCEs along the same lines in the RCE concept paper:

The mission of RCEs is to bring into positive contacts, in various ways, the scientists and educators in both institutions of formal and non-formal education. In this capacity, the scientists, including experts in research institutions and museums, would become providers of state-of-the-knowledge [sic] to inform innovative study programmes and help to address local concerns. Educators, in a broad sense, will become main actors in a process to develop and disseminate state-of-the-art knowledge relevant to SD [sustainable development]. They will work with other actors in the society, e.g. representatives of local governments, NGOs, etc. (p.4)

This formulation of RCE is somewhat problematic in that it equates "knowledge" with "scientific knowledge" possessed by experts in research institutions, leaving educators at the receiving end of "knowledge". While the RCE concept does acknowledge that educators contribute to a process of developing the "state-of-the-art knowledge relevant to SD", the RCE concept does not leave much room for "knowledge receivers" to contribute to creating partnerships between the combined expertise of educators and scientists. Toronto RCE's plan to put the RCE concept into practice vividly exposes the underlying assumption about the
divide between "knowledge providers" and "knowledge receivers". The authors of the case study of Toronto RCE characterise educators as "ESD messengers", while calling the local government, the private sector, research institutions and NGOs as the "sources of locally relevant sustainability information" (UNU-IAS, 2005, p. 68).

One of the areas the RCE concept needs elaboration, then, is how to create "equitable learning partnerships between the combined expertise of communities, professions and governments" (Keen, Brown & Dyball, 2005, p.6, emphasis mine). Right now, there is no emphasis on creating "equitable partnerships" between scientists and educators. Writing on the role of RCE, the authors of the case study of Rhine Meuse + RCE write:

…the classical concept of knowledge generation in universities and research centres and subsequent dissemination of knowledge to society is too limited for the generation of knowledge relevant for sustainable development in our present society. All actors in society can – or even have to – contribute to the participatory process of context embedded knowledge generation for sustainable development. By formulating our activities in this way we do not mean to say that the generation of scientific knowledge according to an agreed upon scientific methodology would not be relevant for sustainable development. On the contrary, it remains very important and belongs to the core business of some of the RCE partners. However, the focus of the local RCE is on knowledge generation embedded in the regional societal context. (UNU-IAS, 2005, p.75).

The previous section of this chapter (9.1.3) highlighted the difficulty of taking local contexts fully into account in promoting ESD. While the need for "knowledge generation embedded in the regional societal context" is commonly recognised, how to ensure such knowledge generation is one of the key questions each RCE must address. Part of an RCE's mission is to provide an institutional setting where different groups who do not ordinarily interact can work together for shared objectives, thus creating pathways for social change. While the space does not permit the review of literature on learning for social change in this paper, I argue that the RCE concept will benefit from a 'social learning' perspective which emphasises community engagement. Social learning can be defined as follows:

Social learning is the collective action and reflection that occurs among different individuals and groups as they work to improve the management of human and environmental interrelations. Social learning for improved human interrelations with the environment must ultimately include us all, because we are all part of the same system and each of us will inevitably experience the consequences of these change processes. (Keen, Brown & Dyball, 2005, p.4)
Each emerging RCE needs to give careful consideration to the composition, nature and powers of its Steering Committee if it is to prove an appropriate way of "[resolving] conflicts, [learning] collaboratively and [taking] collective decisions towards concerted action" (Keen, Brown & Dyball, 2005, p.6). RCEs should serve not only as a "knowledge broker" or a "regional knowledge management system" but also as "learning platforms" that enable individuals and groups concerned with the future of the region to share information, learn collaboratively and make decisions collectively towards sustainable regional development.

**9.2.2 Towards a Global Learning Space for Sustainable Development**

The issue of inter-RCE networking is as important as intra-RCE networking. RCEs are expected to enable knowledge sharing across not only disciplinary and sectoral boundaries but also spatial boundaries. The UNU Rector Hans van Ginkel has envisioned the network of RCEs as constituting the "Global Learning Space for Sustainable Development":

RCEs might be identified in a comparable way to the monuments on the cultural heritage list. This would have the advantage that local/ regional conditions can be fully taken into account….RCEs together and their mutual relations would form the Global Learning Space for Sustainable Development—the major outcome of DESD. (UNU-IAS, 2005, p.2)

On 28 June 2005, the Asia-Pacific Regional Launch of DESD was held in Nagoya, Japan, in conjunction with the UNU-UNESCO International Conference on ESD. The Conference brought together key actors in creating the first group of RCEs from different parts of the world for the first time. A workshop on "Local and Regional Initiatives on Education for Sustainable Development" held on 29 June 2005 focused on RCEs. Informal and formal meetings on RCEs scheduled around this Conference gave the stakeholders in the Greater Sendai RCE to exchange information and network with stakeholders in other emerging RCEs.

In addition to face-to-face communication at RCE workshops to be held regularly, advanced and affordable ICTs, which require neither expensive equipment nor intensive training, are the key to creating a Global Learning Space. While the challenge of overcoming technical difficulties specifically related to ICTs may be left to ICT experts, the challenge of bridging the digital divide needs to be explicitly addressed by UNU-IAS as the RCE Service Centre and by each RCE. One of the common concerns expressed over the RCE initiative is that many of the initial RCEs were launched in relatively big cities in 'developed' countries such
as Barcelona, Toronto, and Sendai. In our ongoing discussions about creating a "Global Learning Space for Sustainable Development" by networking RCEs around the world, we (the UNU together with local promoters of RCEs) should give more attention to weak higher education institutions and municipalities which have no capacity to engage in RCE efforts. Since the UNU does not administer RCEs as its funded projects, it is hard to imagine how the network of RCEs—which are promoted primarily by "strong, responsible and responsive universities" (van Ginkel, 2004, p.58) and highly-motivated municipalities—could be a genuinely inclusive network for promoting ESD.
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## APPENDICES

### Appendix 1: Timeline of Data Collection

**Missions to the Greater Sendai Area and Participation in ESD-Related Events**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Location</th>
<th>Activities</th>
</tr>
</thead>
</table>
| 29-30 November 2004     | Mission to Sendai       | 29 November 2004: Visit to the Office of the President of Miyagi University of Education (MUE)  
                         |                         | · Participation in the Second RCE Preparatory Committee (ESD stakeholder meeting) at the Sendai City Hall  
                         |                         | 30 November 2004: Visit to Environmental Education Centre, MUE  
                         |                         | · Meeting with the Education Bureau, City of Sendai |
| 28-29 January 2005      | Mission to Sendai       | 28 January 2005: Participation in the Third RCE Preparatory Committee at the Sendai City Hall  
                         |                         | 29 January 2005: Participation in Tohoku Global Seminar                     |
| 14-17 February 2005     | Mission to Tajiri, Sendai, and Kesennuma | 14 February 2005: Participation in a Fuyu-Mizu-Tanbo Project meeting in Tajiri  
                         |                         | 15 February 2005: Interviews with key actors at MUE and the City of Sendai  
                         |                         | 16 February 2005: Interviews with Kesennuma UNESCO Association and Kesennuma City Board of Education in Kesennuma  
                         |                         | 17 February 2005: Participation in the full-day workshop "Public Presentation on international Education of Environment 2005" at Kesennuma Omose Elementary School |
| 25 May 2005             | Mission to Sendai       | 25 May 2005: Visit to the Office of the President of MUE  
                         |                         | · Meetings with key actors at MUE and the City of Sendai  
                         |                         | · Participation in the Second RCE Steering Committee                     |
| 24-25 June 2005         | Mission to Sendai       | 24 June 2005: Participation in the First RCE Steering Committee              |
|                         |                         | 25 June 2005: Participation in Tohoku Global Seminar (commemorating the launch of the Greater Sendai RCE Steering Committee) |
|                         |                         | 28 June 2005: Participation in the Asian and Pacific Regional Launch of DESD |
|                         |                         | 28-29 June 2005: Participation in the UNU-UNESCO Conference on Globalization and ESD |
| 3 August 2005           | Mission to Sendai       | 3 August 2005: Visit to the office of Office of the President of MUE  
                         |                         | · Meetings with key actors at MUE and the City of Sendai  
                         |                         | · Participation in the Second RCE Steering Committee                     |
| 8 August 2005           | Mission to Tajiri       | 8 August 2005: Participation in the public symposium "Environmental Regeneration through Paddy Fields"  
                         |                         | · Field visits to winter-flooded rice fields (Fuyu-Mizu-Tanbo) and Kabukuri-numa |
## Appendix 2: List of Interviewees (In-depth interviews)

<table>
<thead>
<tr>
<th>ID Number</th>
<th>Date of Interview</th>
<th>Interview Site</th>
<th>Gender</th>
<th>Title and/or Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30 November 2004</td>
<td>Sendai</td>
<td>Male</td>
<td>Education Bureau of the City of Sendai</td>
</tr>
<tr>
<td>2</td>
<td>30 November 2004</td>
<td>Sendai</td>
<td>Male</td>
<td>Local university professor</td>
</tr>
<tr>
<td>3</td>
<td>15 February 2005</td>
<td>Sendai</td>
<td>Male</td>
<td>Local university professor</td>
</tr>
<tr>
<td>4</td>
<td>15 February 2005</td>
<td>Sendai</td>
<td>Male</td>
<td>Environmental Counsellor Association</td>
</tr>
<tr>
<td>5</td>
<td>15 February 2005</td>
<td>Sendai</td>
<td>Male</td>
<td>Local NGO—Miyagi Environmental Life outreach Network (MELON)</td>
</tr>
<tr>
<td>6</td>
<td>16 February 2005</td>
<td>Kesennuma</td>
<td>Female</td>
<td>Kesennuma UNESCO Association</td>
</tr>
<tr>
<td>7</td>
<td>16 February 2005</td>
<td>Kesennuma</td>
<td>Male</td>
<td>Kesennuma City Board of Education</td>
</tr>
<tr>
<td>8</td>
<td>25 February 2005</td>
<td>Tokyo</td>
<td>Male</td>
<td>Teacher, Kesennuma Omose Elementary School</td>
</tr>
</tbody>
</table>

### Notes:

- The Interview Guide (Appendix 3) was not used for the interview with ID Number 6, for the Education Bureau of the City of Sendai was not included in Preparatory Committee of the Greater Sendai RCE and could not be regarded as a core actor promoting the RCE.

- ID Numbers 4 and 5 were selected by the Environment Bureau of the City of Sendai.

- Interviews with ID Numbers 6 and 7 were arranged by ID Number 8.
Appendix 3: Interview Guide

「持続可能な開発のための教育の地域の拠点（「地域の拠点」）」
(Regional Centers of Expertise on Education for Sustainable Development: RCE)

個別インタビュー質問事項

1. まず、現在のご自分の活動の中で、「地域の拠点」と関連するものを挙げてください。どういったきっかけで、それらの活動に携わられるようになったのですか？なぜその他の活動を「地域の拠点」関連活動として挙げられるのか、その理由もお聞かせください。
First, could you tell me about your current activities that are related to RCEs proposed by UNU? How did you come to engage in those activities? Why did you list those activities as RCE-related activities?

By becoming a major actor implementing RCE in Sendai, what concrete benefits do you expect for (1) your region, (2) your organization, and (3) yourself?

3. 個人的には、仙台の「地域の拠点」に、何を期待されますか？どのような役割、機能を果たして欲しいですか？
What do you expect of RCE in Sendai? What kinds of roles and functions do you hope RCE to perform?

4. 仙台の「地域の拠点」に、地域の人々は、何を期待していると思いますか？地域の人々には、どのような役割、機能を果たして欲しいという希望があるとお考えですか？
What do you think local people expect of RCE in Sendai? What kinds of roles and functions do you think local people hope the RCE to perform?

5. 仙台で「地域の拠点」を具体的に実践していくのに、個人的に、また「地域の拠点」活動の実施(運営)主体として、どのように貢献したいとは考えますか？
How would you like to contribute to putting RCE into practice specifically in Sendai, both as an individual and a member of your organization/institution?

6. 仙台で「地域の拠点」を具体的に実践していくには、どのようなトピック・テーマを取り上げるべきだとお考えですか？現在ご自身ではどのようなトピックを取り上げてらっしゃいますか？
In putting RCE into practice specifically in Sendai, what topics and themes do you think should be addressed? What topics and themes are you currently addressing in your activities?

7. 「持続可能な開発」の「環境」「社会・文化」「経済」の3つの側面に、RCE活動を通じて包括的に取り組んでいくために、ご自身はどのような取組みをしたいと思いますか？
What sorts of actions do you want to take to address all three spheres of sustainable development (environment, society and culture, and economy) through RCE activities?

8. RCE活動を進めていく上で、クリアしなければならないハードルは何ですか？
What are the potential challenges and hurdles to overcome in order to promote RCE activities?
9.仙台における「地域の拠点」の実施・運営主体として、誰（どのような団体、個人）が中核的・指導的役割を果たすのが適切だと思いますか？その理由をもお聞かせください。
Who [which organization(s) or individual(s)] do you think would be appropriate to play a leading role in implementing/operating RCE in Sendai? Why?

10.仙台で「地域の拠点」活動には、誰（どのような団体、個人）が参加するべきだと思いますか？その理由をもお聞かせください。
Who [which organization(s) or individual(s)] do you think should participate in RCE activities in Sendai? Why?

11.国連大学では「地域の拠点」を長期的に地域に貢献できる持続可能なネットワークにしていくことが重要だと考えています。そのためには「地域の拠点」活動の連携(coordination)を円滑化・促進し、持続させるための基盤や資源や体制といったものが必要になってきます。様々な基盤（例えば社会、財政、人的、情報通信基盤など）、支援体制(support systems)、表彰制度を含めたインセンティブ制度(incentive schemes)などが考えられます。「地域の拠点」を仙台で具体的に実践していくには、何が必要だとお考えですか？

【1】まず2005年に予定されている「地域の拠点」立ち上げのためには、何が必要だとお考えですか？最低限何があれば望ましいですか？

【2】中長期的に（5-10年）には、「地域の拠点」の活動の範囲を広げて、より活発な拠点にしていくためには、何が必要だとお考えですか？

In order to put RCE into practice specifically in Sendai, what kinds of infrastructure, resources (e.g., social, financial, human resources, IT), support systems and/or incentive schemes do you think are necessary? For the start-up of the model project scheduled in 2005? For expanding the scope of the RCE and making it more active and dynamic in 5-10 years?

12. UNESCOは、「持続可能な開発のための教育の10年国際実施計画(案)」において、持続可能な開発のための教育のビジョン作りを重視しています。国連大学でも「地域の拠点」を長期に渡り地域に貢献できる持続可能なものにしていくためには、地域主導のビジョン作り、構想作りが重要であると考えています。地域のビジョン作りについて、どのようにお考えですか？

The draft DESD International Implementation Scheme prepared by UNESCO emphasizes the importance of building a vision of ESD. The UNU believes that regional vision building is critical in making the RCE sustainable. What do you think of the idea of vision building in the region?

13.仙台広域圈におけるRCEの取組みについてより良く知るために、どなたにお話を伺ったらよろしいですか？
Whom else should I speak to?
Appendix 4: Informed Consent – Research Description (English)

United Nations University-Institute of Advanced Studies
Informed Consent
RESEARCH DESCRIPTION
In-depth Interview (Local Stakeholders)

DESCRIPTION OF THE RESEARCH: In order to contribute to achieving the implementation objectives of the United Nations Decade of Education for Sustainable Development (2005-2014), the United Nations University (UNU) is proposing Regional Centers of Expertise on Education for Sustainable Development (RCEs). The purpose of this study is to examine how a global education initiative of ‘Education for Sustainable Development’ is articulated and implemented in local terms through a case study of candidates for RCEs. The title of the study is Articulating a Global Education Initiative in Local Terms: A Case Study of Regional Centers of Expertise on Education for Sustainable Development (RCEs) in Japan. This study is also part of collaborations between the UNU-IAS and local stakeholders to document pilot RCE projects.

An in-depth interview will be conducted to learn your current RCE-related activities, your views on the significance of RCE, your expectations for RCE, and your ideas about the shape and modalities of locally relevant, community-based RCE. You will be asked to answer my questions in a face-to-face interview or in a telephone interview, and your interview will be audio-taped. Audio-tapes will be used for data recording only, and the tapes can be destroyed at the interviewee’s request after the relevant portions of the tapes are transcribed for data storage and analysis.

RISKS AND BENEFITS: Not only a case study of model RCE projects identify possibilities and challenges of RCEs, it will also allow UNU to disseminate and make effective use of your RCE-related experience and knowledge in our efforts to develop RCEs worldwide. Documentation of your ongoing efforts to put RCE into practice will help others to learn about your experience, and at the same time, will help you improve RCE-related activities.

Your possible perception of invasion of privacy is a minimal risk. Some of the questions will ask about your own lifestyle and behavior, although the questions will be restricted to the subjects of perceptions, identity, language, communication, cultural beliefs or practices and social behavior. The interview will be performed in a professional and respectful matter, without any pressure applied by the investigator. Every effort will be made to assure that you understand your option to “pass” on any specific question that troubles you.

PAYMENTS: You will receive no payment for your participation.

TIME INVOLVEMENT: Your participation will take approximately 30 minutes to one hour.

HOW WILL RESULTS BE USED: The proposed study would fulfill part of the requirements for a postdoctoral fellowship at the United Nations University-Institute of Advanced Studies. Data collected will be the basis for my paper published under the UNU-IAS Working Paper Series. Part of the results of the study will be published in academic journals and/or presented at educational conferences. Any specific details that might serve to identify individuals or groups will be removed or altered, to the best of the ability of the investigator.
Appendix 5: Informed Consent-Research Description (Japanese)

個人インタビューの目的： 国連の「持続可能な開発のための教育の 10 年」（2005 年—2014 年）の実施
目的の達成に寄与するために、国連大学では「持続可能な開発のための教育の地域の拠点（Regional
Centers of Expertise on Education for Sustainable Development、以下 RCE）」を促進しています。本調査
は「持続可能な開発のための教育（Education for Sustainable Development、以下 ESD）」という世界的な
教育イニシアチブが、地域レベルでどのように具実的に実施されるのかを、RCE のモデルプロジェクト
の事例研究を通じて明らかにすることを目的とします。なお、本調査は、地域の関係者と国連大学高等
研究所との協同作業で行った RCE 関連活動の文書化の一環と位置づけられます。本調査のデータ
収集のため、関係者の個別インタビュー、質問紙調査、RCE 関連活動の参与観察、資料分析などを行
います。

今回お願いする個人インタビューでは、RCE に関連する活動に携わっていただいている地域の方々にお話を
伺い、RCE 関連活動へのこれまでの取り組み、RCE の意義や RCE に対する期待、地域に根差した
RCE のあり方も含めてお聞きします。インタビューは、直接会いして、あるいは電話で行い
ます。インタビューは正確な記録のため録音されますが、データ分析のため必要部分を文字に起こした
後、データ分析以外の目的に使用されることはありません。

個人インタビューに応じることの利益とリスク： モデルプロジェクトの事例研究は、RCE の可能性と問題
点を明らかにすることに加え、これから RCE を日本全国や全世界に展開していくにあたり、RCE の知識・
経験を共有することが有益なものと認識しております。調査協力者におかげまして、本調査の結果をまと
めさせていただくことで、調査協力者の RCE のパイオニアとしての経験を広く世界に広めさせていただく
とともに、自らの RCE の活動を考える上で参考にしていただければと思います。

本調査の質問事項は、調査協力者の ESD と RCE に対する考え、見解、意見、対応の仕方などに関する
ものに限られており、私生活や個人情報に関するものは含みません。リスクとして敏かに挙げるとすれば
プライバシーや侵害される可能性もないと感じられるですが、そのリスクは非常に小さいと言えます。
調査協力者は、答えたくない質問はパスすることができ、インタビューーーが回答を強制することはありません。

報酬：治療ですが本調査にご協力頂いても金銭的報酬をご用意することができません。

個人インタビューにかかる時間： 約30分—1時間

調査結果の使用：本調査結果には、大きく分けて 2 通りの使用法があります。1 点目は、RCE の経験を
広く共有し有効活用すること。まず調査結果が、国連大学高等研究所が作成する日本語及び英語の
RCE 関連活動の報告書等にまとめられ、国連大学高等研究所のホームページ上で一般公開される予
定です。長期を視野に入れた RCE の性格上、段階に応じて文書化を図り遂行更新していくかたち
をとります。また、調査結果は、学術論文としてもまとめられ、持続可能な開発関連の研究者の間で共有
される知識となり、開発分野や教育分野の理論と実践の進歩に貢献します。具体的には国連大学高等
研究所のワーキング・ペーパー・シリーズの論文、国連大学出版の RCE の事例研究を扱う編集本の章
（いずれも英文）、その他学会誌の論文などとして発表される予定です。なお報告書や論文は、ご承認い
ただいた関係者各位に事前配布し、内容をご確認いただきたま、承認をいただいた上での公表になります。
2 点目は、RCE 関係者間で RCE 実施・運用の円滑化のために内部資料として有効活用すること。この
際、調査結果は、国連大学高等研究所が一般公開向けに作成する報告書や学術論文では公表しない
個人名や詳細を含むことが多く、部外者として扱われます。