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## Community Engagement for Sustainability: An Invitation and a Challenge to All Universities

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## ABSTRACT

Universities are responding impressively to the challenges associated with global warming and to the urgent need for sustainable use of the world's finite resources. This paper reviews a selection of sustainable development initiatives already taken by universities in North America and Europe and suggests that while many universities are committing themselves to sustainability goals, greater emphasis could be given to the several ways of sharing these goals with the local community; to ways of engaging the community in the process of sustainable development; to ways of empowering universities through various forms of community engagement.

Engagement for sustainability and collaboration for sustainability are promoted in this paper as campus - community responsibilities. A community project in the province of Phayao, Thailand for example, illustrates possible avenues of collaboration and engagement. And research projects completed or in progress by individuals and small staff teams from Rajabhat Universities in Thailand demonstrate some of the opportunities already taken to enhance engagement for sustainability. Finally, the paper illustrates how the Rajabhat Universities and Boromarajonani Colleges of Nursing are responding to a mandate from the King of Thailand to contribute sustainably to the local community.

## INTRODUCTION

The UNESCO decade "Education for Sustainable Development", 2005 – 2014, has stimulated an array of initiatives world-wide, the university sector being no exception. The Graz Declaration (2005) committed universities to sustainability goals and called on universities world-wide to "give sustainable development fundamental status" and more specifically, direct attention to learning and teaching, research and to "external social responsibility". In Thailand, Graz has special significance, given the strong support there for the Sufficiency Economy advocated by His Majesty the King and evidenced in many locations particularly in the north and north-east of the country (see for example, UNDP, 2008). Moreover, in Thailand an impressive number of conferences have been held, each highlighting further examples of sustainable development by universities. In November 2007 at BSRU for example, an international conference entitled "Innovation for Sustainable Development" attracted a wide range of papers and encouraged delegates to 'think globally and act locally' to achieve sustainability. This was followed in December with the 11<sup>th</sup> UNESCO-APEID conference in Bangkok entitled "Reinventing Higher Education". Again, the theme was 'sustainability'. Then in January, 2008 the second "Technology and Innovation for Sustainable Development" conference was held at Khon Kaen University. Now, in November 2008 at this fourth EDUCOM conference in Khon Kaen we focus, quite fittingly, on sustainability.

Conference presentations not least offer delegates practical achievements of universities and other organisations in the name of sustainability. As the Graz Declaration foreshadowed, universities can promote sustainability through the curriculum, through a wide range of research initiatives and through close contact with the university hinterland. Yet the underlying complexities of the term and its hidden imperatives are seldom explicated.

## **DEFINING SUSTAINABILITY FOR UNIVERSITIES**

From a university perspective, what is sustainable development and its close synonym, sustainability? Frequently the term is defined in the words of the Brundtland Report first published over 20 years ago:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (WCED Report, 1987, p87)

But how do we interpret ‘the needs of the present’ and how can we be sure that ‘development’ in this definition will not lead to the consumption of irreplaceable resources; fossil fuels and industrial minerals? Moreover, universities have a special role as facilitators of sustainable development; as centres of innovation, problem solving and technological change that take us into the realms of research and creative thinking. It follows that for universities a re-phrased Brundtland definition would be more appropriate not only reflecting Graz, but also emphasising an enhanced role for universities as innovators for sustainable development:

The development and use of new ideas, methods and products to achieve sustainable development, to promote the creative development and implementation of integrated and sustainability actions in relation to the three major university functions, learning and teaching, research, and internal and external social responsibility, these together to advantage future generations and their environments.

Graz commits universities to practise productive change through teaching, research and indeed the total functioning of the organisation without disadvantaging future generations and their several environments. But there is a tendency in the literature to focus more on the internal functions of each university and give rather less emphasis to community engagement for sustainability.

The United Nations and its various agencies have defined sustainable development as a community imperative through the metaphor of four interlocking pillars of sustainability: the natural, economic, social and political dimensions, matched by conservation, appropriate development, peace, equality and human rights and democracy (Figure 1). There is no attempt in Figure 1 to obfuscate or to diminish the complexities of sustainability. Rather, we are invited to assume that all areas of knowledge and all corners of human experience are relevant. And further, as in the diagram, all areas and all corners of knowledge and experience are inter-connected.

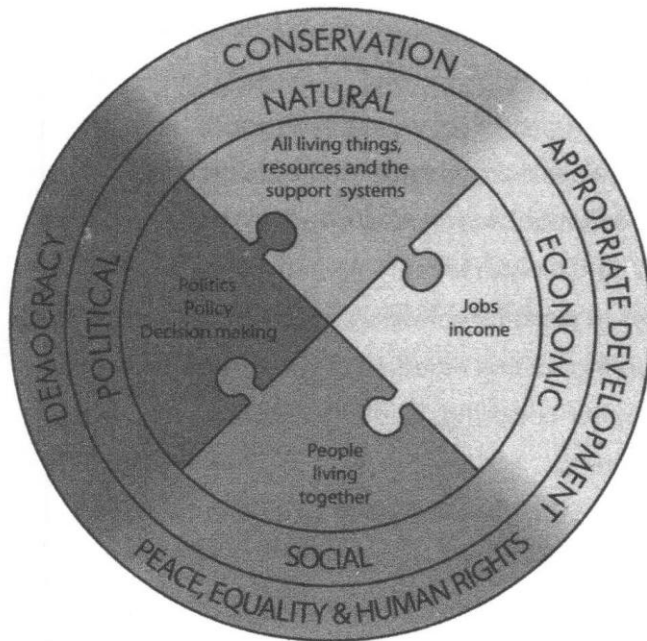


Figure 1: Defining Sustainability. Four interlocking pillars

## UNIVERSITY POLICY AND PRACTICE: SELECTED JOURNAL ARTICLES

**Publications targeting university sustainable development policy and practice.** From 2000, two striking findings emerge from journal literature: 1. very few refereed articles directed at SD policy and practice have been published and 2. the papers selected here reflect a desire for substantial change in universities to accommodate sustainability more effectively. In short, it is a given that full and adequate implementation of sustainable development policies and practices will require substantial changes in all universities.

**Janet Moore, 2005.** In a pivotal paper, Janet Moore proposed seven recommendations for universities wishing to enhance sustainability both in the classroom and in other daily activities. (Moore, 2005) All seven had been honed from a sequence of workshops and consultations at UBC in a process labelled ‘value focused thinking’ and from dialogue with ‘a large number of stakeholders’ (Figure 2). The seven avenues for change were clearly built on the assumption that the university is itself an interactive community and to achieve sustainability, collaboration across all sectors will be expected. That is to say, reaching solutions to sustainability problems demands inter-disciplinary thinking and integration of all relevant university activities. Interestingly, Moore gave little attention to the community outside the university, the university hinterland, presuming perhaps that a refocused university would necessarily interact productively with its hinterland. She re-defined sustainability for universities by ‘infusing’ sustainability in all decision making, by promoting and practising collaboration, by cross discipline problem solving and by emphasising personal and social sustainability in the university community especially amongst university staff. She also emphasised ‘pedagogical transformation’ to ensure delivery of sustainable development content, values and problem solving for sustainability to all students.

1. Infuse sustainability in all decisions
2. Promote and practice collaboration
3. Promote and practice transdisciplinarity
4. Focus on personal and social sustainability
5. Integrate planning, decision making and evaluation

## 6. Integrate research, service and teaching

## 7. Create space for pedagogical transformation

*Figure 2: Seven recommendations for creating sustainability at the university level.  
Adapted from Moore, 2005.*

Embedded, but largely silent in Moore's recommendations is the notion of engagement of the university with its community. Universities are important community entities each closely tied to its immediate neighbourhood. Just as it is difficult to envisage a university without students, so it is with a university divorced from its local community. In its symbiotic relationship with the community each university provides employment opportunities and other forms of economic and social stimulus which in turn enable it to function as a productive teaching and research entity, a platform and a stimulus for sustainable development.

**Rebeka Lukman and Peter Glavic, 2007.** More recently, Lukman and Glavic (2007) endeavoured to solve a fundamental question: 'What are the key elements of a sustainable university?' They recognised the importance of engagement, noting that 'universities are acting as agents in promoting (sustainability) principles within society' and quoting Cortese (1992) agreed that 'universities bear profound responsibilities for increasing awareness, knowledge, technology and tools to create an environmentally sustainable future'.

But universities are pulled in opposing directions. On one hand is the search for and acknowledgement of environmental laws and priorities and on the other, the achievement of social and economic advancement for communities through research, innovation and technological development. Somehow, these opposing directions need to be reconciled. It follows that education for sustainable development should reflect the vision, mission and goals of the university as a sustainable organisation (Cortese, 2003). To achieve sustainability goals, a 'sustainability office has to be established' to coordinate and communicate best sustainable education practice across all sectors of the university. A 'sustainability council' with membership from within and beyond the university will strengthen the office both within the university and its hinterland. Lukman and Glavic claimed that implementation of these practices at the University of Maribor in Slovenia, supported by the Student Council, was beginning to effect positive change.

**H. V. Weenen, 2000.** In his article published in the International Journal of Sustainability in Higher Education, Weenen (2000) claimed that 'sustainable development is the biggest challenge to universities in the twenty-first century'. He documented some of the divergent practices employed by universities seeking to integrate sustainability into their activities, and claimed that 'inevitably management, research, education, communication and operation of any university with a genuine interest in sustainable development will have to change'. Weenen's paper highlights the importance of ecological education and ecological experience as underpinnings to an appreciation of sustainability. Finally, he argued that sustainable development must accommodate four L I F E principles (Figure 3).

- Limits** in our use of resources and through conservation a new commitment to quality of life
- Interdependence.** Recognition of ecological balance and natural processes; and integration of production processes with the surrounding ecosystem
- Fundamentals.** Sustainable development must become a prime objective. We must target depletion
- Equity** between industrialised countries and developing countries

*Figure 3: Weenen's L I F E Principles*

## **COMMUNITY ENGAGEMENT FOR SUSTAINABILITY**

As has already been noted, Graz recommended that universities examine ways of practising ‘external social responsibility’ calling for ‘closer interaction with other stakeholders in communities to better respond to their needs and requirements’: a call for engagement between university and community generating a close productive linkage mutually beneficial to both parties. Productive engagement for sustainability will occur within or between universities. And increasingly, universities will be exploring and promoting sustainability projects with the local community, perhaps by collaborating with community industries, NGOs, local and provincial governments, or with non-formal groups - farmers, fishermen, doctors. In this regard, universities may give priority to community sustainability by funding doctoral research. Engagement will also be achieved when students take new ideas and technologies promoted and practised in the university to the wider community. It also follows that local community members may effect change in the university through various forms of engagement, for example by serving as community representatives on university advisory committees.

These and similar linkages have potential to enhance sustainability for the university. All of us at this conference will recall situations of university engagement with the community that benefited both parties. How did they happen? What were the motives? What encouragement was needed? Answers to these questions will perhaps reveal no prominent rationale for sustainability. But with leadership directed towards sustainable development and a university priority favouring community engagement, substantial changes could emerge, changes benefiting both university and its local community.

In a keynote address at the Innovation for Sustainable Development conference held at Bansomdejchaopraya Rajabhat University, four dimensions of sustainability were recognised (Renner, 2007). By explicating each of the four dimensions we arrive at sixteen opportunities for community engagement (Figure 4) and no doubt further examples could be added, a useful checklist for university researchers and planners; particularly those engaged in the practice of community sustainability. Given that the four dimensions target in turn the questions of what, how, why and rationale, an item from each dimension could comprise a sustainability package for community engagement.

### **Dimensions of Sustainability**

#### **1. Care and concern for the environment**

- **Responding to a diminishing of natural resources**
- **Controlling pollution**
- **Supporting ecosystem management**
- **Encouraging environmental protection**

#### **2. Partnership and collaboration to achieve sustainability**

- **Working in teams**
- **Planning for long-term development**
- **Committing to environmental goals**
- **Building on achievements**
- **Sharing and communicating SD to others**

#### **3. Stewardship for sustainability**

- **Avoiding waste**
- **Recycling and re-use of materials**
- **Using clean technologies for production**
- **Monitoring any degrading of the local environment**

#### **4. Management to achieve sustainability**

- **Searching for ‘clean’ solutions to environmental problems**



- Using multidisciplinary approaches including environmental management strategies
- Managing for community long-term benefit

Figure 4: Dimensions of Sustainability (adapted from Renner, 2007)

### THREE AVENUES FOR COMMUNITY ENGAGEMENT BY UNIVERSITIES IN THAILAND

It is now pertinent to give some practical substance to the theoretical models described in this paper, using examples of sustainability-in-action, targeting some of the opportunities available to universities. What follows is but a small sample taken from a wide range of projects already completed or current in Thailand, demonstrating the importance of engagement by universities with the local community.

#### 1. Sustainable Agriculture Project in Phayao, Thailand

Phayao is about 700 Kilometres north of Bangkok, a province surrounded by mountains and within easy access of Chiang Rai. It is a small province (6335 square kilometres) with a rich history and considerable agricultural potential. Unfortunately, exploitative practices by land owners and land lords have not only severely diminished the mountain forests, but have led many farmers into chronic debt. In extreme cases, farmers have been driven off the land and their families forced to migrate to substandard environments. Problems of poverty and crime have led NGOs in Phayao to search for solutions. What follows briefly documents a community project designed to address an entrenched agricultural problem addressed through an agricultural sustainability project involving local government, two NGOs and strong support from the local population. Here it seems is a project well suited to university engagement for sustainability.

**Phayao Project Phase 1.** Sustainable agriculture through value adding, 2005 – 2008.  
(Tambon Ban Tham, Tambon Ban Pin, Tambon Nong Lom)

The task here was to develop food and herb processing for local and national markets to avoid wastage of farm products during the harvest seasons and to enable these processed products to be available throughout the year. In previous years, leftover fresh products were thrown away after daily selling. By providing equipment for food processing and preserving new sustainable markets could be created. Further, success with existing products would lead to diversification of farming and to collection of a wider range of forest foods for processing and marketing.

Items purchased:

- One large refrigerator
- Five solar driers
- Stainless steel shelving
- One bakery oven
- Four stainless steel tables
- Four electric fans
- Kitchen utensils
- One powder mixer
- Two compressing sausage machines

Equally important has been the training of village teams to prepare marketable products:

- Training on the production of herbal shampoo and dish cleanser
- Training on the processing of local fruits to dried fruits (longan, banana, Mango)
- Training on making of fruit juice (lychee, longan)
- Training on the making of drinks for health (lemongrass, tamarind, Passion fruit)
- Training for making crispies (pumpkin, sweet corn)
- Training for making Thai sweets and jams

Training on the processing of local food products (pork skin, sausage, Bamboo shoot)

In addition:

- Training for proper packaging and marketing
- Training on cooperative management
- Training for methods of sustainable agriculture
- Leadership training

This exercise in innovative management has been active for three years. It will now continue to function without any further project funding. Innovative management skills covering village teams from ten villages have been successfully implemented. Farm products, once strictly seasonal, are now available year round. Farmers have now seen the significance of producing a wider range of products and agricultural diversification is expected to continue (Final Report, 2005).

**Phayao Project Phase 2.** Sustainable agriculture through dependable water supplies, 2009 - 2010. Farmlands in Tambon Ban Tham, Tambon Ban Pin, Tambon Nong Lom and Charoensap Village (42 families) Note: same tambon as for Phase 1.

Project planning has begun for water resource provision and management to ensure that agricultural production can continue through the dry season and the villagers in Charoensap Village will have sufficient and regular safe water. The intention is in 2009, to conduct workshops covering water resource management for each tambon and the importance of regarding water as a shared environmental resource. Also, to implement the construction of a highland waterworks system in Tambon Nong Lom and to construct reservoirs and smaller water ponds and water tanks near groups of farms to ensure adequate supplies of irrigation water in the dry season (Project Proposal, 2007).

Already, the three tambon have become models of innovation for sustainable development (refer to Phase 1). Neighbouring tambon in Phayao are learning from this pilot project and are looking for ways of avoiding total dependence on seasonal rain. A dry season can be as long as eight months and a succession of dry seasons can impose severe hardship, both on farmers and villagers.

## **2. Training Programs for Thai Nurses in Mental Health Nursing and HIV/AIDS Prevention and Holistic Care.**

An excellent example of engagement for sustainability involving higher education and the community is a capacity building project in Thailand for Mental Health and HIV/Aids Prevention and Holistic Care. In partnership with the Thai Ministry of Public Health, Colleges of Nursing, Tertiary hospitals and local communities, Edith Cowan University supported the development, implementation and delivery of two training programs during 2006-2007 for 32 Thai nurse educators in Mental Health Nursing and HIV/AIDS prevention and holistic care for people living with HIV/AIDS. This project received funding support from an AusAID Public Sector Linkages Program Grant, Edith Cowan University (ECU) and the Thai Ministry of Public Health.

The project involved the development of curricula as well as training of Thai nurse educators in both Australia and Thailand in order to increase nursing knowledge and skills as broadly as possible across Thailand. While the ECU staff facilitated and assisted in the development, the Thai Nurse Educators were actively involved in the curriculum design and planning for future courses. An outcome of the program was the development of a sustainable training centre in Thailand and the development of training courses which were accredited by the Nursing Council of Thailand for 5 years. Training programs are now being delivered by the Thai Nurse Educators starting in 2007 for nurses throughout Thailand and surrounding countries. This project initiated through engagement and collaboration, with financial support from Thai and Australian Government, has resulted in long term improvements to nursing practice throughout Thailand with direct benefit to the local communities.(Public Sector Linkages Program: Activity Completion Report,2007)



### 3. Engagement for Sustainability by the Rajabhat Universities

The Rajabhat Universities in Thailand have been given a mandate to provide educational programs at all degree levels with a focus on service to the local community. While the universities have their grounding in teacher education and training they have now diversified to offer degree programs from bachelor to doctoral level in disciplines such as education, science and technology, agriculture and industry, industrial arts, humanities, social sciences and management science across the country and even in surrounding countries. In addition, the Rajabhat Universities provide a comprehensive range of pre and in-service training programs to meet the needs of the professional workforce and the general public and conduct research related to rural development and sustainability. In order to achieve this, there has over the last 10 years a focus on upgrading of skills of the Rajabhat staff and the development of a strong applied research culture. ECU along with other Australian universities has been working in partnership with the Rajabhat universities to provide research development of staff. A case study of a successful research preparation program is provided by Cross and Wuthisen based on a model of empowering staff to undertake applied staff for sustainability within the local community. (Cross 2002 ).

Key elements to the model include the engagement of Rajabhat staff with the local community to identify suitable research topics and to gain local knowledge. As outputs of the applied research, Rajabhat staff not only disseminate their findings to the global community but work closely with the local community for sustainable change and improvement. Given the nature of the research there is a focus on an interdisciplinary approach which was reflected by the research preparation programs delivered by ECU. Rajabhat staff from across academic disciplines worked and shared their ideas and expertise to clarify the research problem and suitable approaches for undertaking the research. Over a period of 10 years more than 300 Rajabhat staff and staff from other educational institutions have completed the research preparation program leading to a wealth of research variously benefiting local communities. Many of the staff have now completed their Doctoral studies and are now in the process of engaging their communities for capacity building and sustainable change.

Examples of doctoral projects by Thai Rajabhat staff that have resulted in community engagement for sustainability include the following:

- The Development of a Community Information Database System in the Northeast of Thailand: Community Empowerment through Community Learning Centres. – Dr Chumnong Wongchachom.
- Effectiveness of Freshwater Protected Areas for the management and sustainability of artisanal fisheries and biodiversity in freshwater ecosystem in South East Asia. – Dr Chongdee Srinoparatwatana.
- Water Conservation Behaviours of Families on the Bangpakong River Bank – Dr Kuakul Sathapornvajana
- Effectiveness of Parental Training on Parenting in Chachoengsao Thailand – Dr Anchalee Tunsiri.
- Development of Sustainable Tourism by Diminishing Environmental Impact – Dr Attama Boonpalit.
- Biotechnology of Soil Algae and Soil Conditioning – Dr Sumitra Moopayak

All of the above and many other Rajabhat University research projects target an environmental, sustainable or community problem and have involved close contact with individuals and community groups all of whom have assisted with the examination and dissection of the problem and the implementation of outcomes of the research. Thus, through engagement, universities have strengthened their links with the local community and have brought the community closer to the university.

As an example Dr Chumnong Wongchachom completed his Doctor of Philosophy dissertation in 2006 from ECU in Western Australia. (Wongchachom 2006). Through questionnaire and interview of local experts in Thailand he identified the information needs and local knowledge for the Impeng Community Network in Thailand. Data obtained was analysed and classified into retrievable forms of knowledge. He then developed, trialled and installed a model community information database system (CIDS). Following further evaluation and feedback from the community CIDS was further refined and implemented to the wider community. Feedback indicates that CIDS has enhanced community development and empowerment through effective problem solving for sustainable development.

## **CONCLUDING COMMENT**

This paper has focussed on three significant challenges currently facing all universities. The first is to articulate and give practical substance to the UNESCO decade of education for sustainable development and the associated Graz Declaration by rethinking university priorities. The second is to foster stronger partnerships with local community groups in response to local community needs. And thirdly, the challenge is to enhance at a practical level, sustainability projects with the local community.

These challenges should not be minimised or taken lightly. When addressing the challenge of implementing the UN Millennium Development Goals, retiring UN Secretary-General Kofi Annan offered this comment: 'We cannot win overnight. Success will require sustained action across the entire decade - - - - so we must start now'. So it is with universities and sustainable development: an opportunity and a challenge for us to use our resources, our skills and our talent, to engage even more with our communities. Our experience in Thailand, supported in this paper by specific achievements of individuals and university teams, confirms that partnership with the community can be challenging and rewarding for both the university and its local community. The opportunity is now for productive change signalling greater community engagement for sustainability.

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