

The Rationale for and the challenge of embedding sustainability into higher education institutions

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Embedding sustainability into higher education institutions offers many challenges arising from many different sources. In this discussion, I shall touch on some of these challenges and their origins, as viewed from the perspective of the United States. I will then discuss implications for Tri Viet University.

BACKGROUND AND RATIOANALE

The first and perhaps most important of these challenges is quite fundamental: what is “sustainability”? The global higher education sustainability movement arguably started with the 1990 meeting of 22 university leaders in Talloires, France. This group issued a Declaration that outlined in some detail the rationale behind their movement. This rationale described what problems had to be addressed, and critical elements of the solution:

We, the presidents, rectors, and vice chancellors of universities from all regions of the world are deeply concerned about the unprecedented scale and speed of environmental pollution and degradation, and the depletion of natural resources.

Local, regional, and global air and water pollution; accumulation and distribution of toxic wastes; destruction and depletion of forests, soil, and water; depletion of the ozone layer and emission of “green house” gases threaten the survival of humans and thousands of other living species, the integrity of the earth and its biodiversity, the security of nations, and the heritage of future generations. These environmental changes are caused by inequitable and unsustainable production and consumption patterns that aggravate poverty in many regions of the world.

We believe that urgent actions are needed to address these fundamental problems and reverse the trends. Stabilization of human population, adoption of environmentally sound industrial and agricultural technologies, reforestation, and ecological restoration are crucial elements in creating an equitable and sustainable future for all humankind in harmony with nature.

Universities have a major role in the education, research, policy formation, and information exchange necessary to make these goals possible. Thus, university leaders must initiate and support mobilization of internal and external resources so that their institutions respond to this urgent challenge.

Only three years later, the Kyoto Conference of the International Association of Universities issued a Declaration on Sustainable Development whose first point provided a much simpler definition:

To urge universities world-wide to seek, establish and disseminate a clearer understanding of Sustainable Development - "development which meets the needs of the present without compromising the needs of future generations" - and encourage more appropriate sustainable development principles and practices at the local, national and global levels, in ways consistent with their missions.

This move in the Kyoto Declaration to studied ambiguity regarding the definition and rationale of sustainability is in stark contrast to the detailed, somewhat passionate description found in the Talloires Declaration. Why the change in tone and content? My guess is that the quite articulate and detailed description in the Talloires Declaration of the problems (and their origins) that must be addressed to have "sustainability" was apparently sufficiently detailed that almost everyone could find some aspect that they didn't agree with, or was politically unpopular in their country, etc. In any case, the much more ambiguous Kyoto definition, or something very close, can be found in most of the mission statements of the hundreds of associations and societies that now support the advancement of sustainability. Thus, sustainability has become a contextually defined object that can vary from nation to nation, organization to organization, institution to institution. This is not "wrong", but rather is a realistic recognition that different institutions face constraints as they seek to pursue a path to sustainability. It does make it particularly challenging, however, to measure global progress in an unambiguous way.

Another issue with the rationale of the Talloires declaration is to be found in its last paragraph describing why Universities must play a lead role. The world faces many enormous challenges, e.g. war, political unrest, disease, infant mortality, unstable financial institutions. In all of these "*Universities have a major role in the education, research, policy formation, and information exchange*" that will be important in meeting the challenges. Why pick sustainability as the appropriate focus for universities? I would suggest that sustainability was chosen as an attractive target for universities primarily because it is the only one of these major challenges where we can help to model solutions through our extensive built space and operations- and that our role in education, research, policy formation, and information exchange is important, but only a secondary consideration. In fact, as I will argue below, it is our built

space and operations that have been the greatest focus in higher education's institutional embrace of sustainability and the area in which the greatest advances have been made.

IMPLEMENTATION IN THE UNITED STATES

There are now many associations that seek to help advance the sustainability efforts (broadly defined) of higher education. For example, in the United States, there is the Association for Advancement of Sustainability in Higher Education (AASHE) and its associated group the American College and University President's Climate Commitment (ACUPCC). AASHE seeks to provide an infrastructure of resources and professional development to support its member institutions (roughly 500 listed on website). AASHE defines sustainability:

in an inclusive way, encompassing human and ecological health, social justice, secure livelihoods, and a better world for all generations.

Thus, AASHE's definition of sustainability encompasses certain elements that other organizations might not include. Nevertheless, one can get some idea of progress by looking at their yearly Digest, which contains reports of new projects of a variety of sizes and importance. As a very rough indicator of the emphasis of sustainability activities, the 2009 Digest has 80 pages of education and research related projects, and 155 pages of operations and facilities related projects.

The ACUPCC, on the other hand, focuses on climate change and global warming –related to sustainability but not exactly the same. The ACUPCC members (675 to date) have signed a commitment to create a plan within two years of signing for achieving institutional “climate neutrality”, and taking a few immediate “tangible steps” - all of which relate to facilities and operations. However, one component the climate neutrality plan is to be steps to make sustainability a “*part of the curriculum and other educational experience for all the students*”. The ACUPCC also publishes an Annual Report describing members' sustainability projects.

These and numerous other annual reports paint a picture of great activity, but they do so by mixing projects of greatly varying size, creativity, and importance. Thus it is difficult to get a measure from these reports of where important innovations are taking place, and how big the truly meaningful component of the higher education effort in sustainability really is.

After speaking with many directors of sustainability in universities around the US, a relatively consistent picture emerges, however. Almost uniformly, the major focus is on increasing the sustainability aspects of facilities and operations. This is reflected in the fact that most people with titles that relate to sustainability, e.g. Director of Sustainability, are located in non-academic, operational parts of the university. This is an aspect of sustainability where measurements can be made and targets can be set, e.g. for greenhouse gas emissions, recycling of waste. It is a reality of the world that people will respond best to challenges that have measurable outcomes and targets. Facilities and operations are also parts of the university that are much more responsive to presidential directives than is the academic component. On the other hand, trustees and regents of universities generally have been clear that these moves to sustainability should be undertaken only when they will result in lower cost to their institutions over time. That is, fiscal responsibility and, indeed, fiscal sustainability generally play the defining roles in trustee decisions regarding sustainability expenditures. There has been considerable (and increasing) outreach by colleges to surrounding communities on sustainability issues, again in areas of facilities and operations. Here, the idea that higher education can provide leadership for the broader community in attacking issues of sustainability is increasingly becoming a reality.

How faculty research has been impacted by an increased institutional focus on sustainability is very difficult to evaluate. Obviously, much of what is known about sustainability came out of the research of universities around the world that has been ongoing for decades. So question is not whether universities do research in this area, but rather, has the increased institutional focus increased that research. As opposed to staff, who can be told by their president to focus on sustainability, faculty are motivated primarily by their own interests and the availability of funds needed to do their research. Thus, whether the faculty are actively engaged in research related to sustainability is primarily a function of government and corporate interest and support. The past few years have seen very significant increases in government research funding in areas related to sustainability and climate change. However this does not translate directly into a metric of faculty research activity because faculty are very adept at redefining projects to fit their own interests. Thus many faculty supported by programs not specifically related to sustainability, e.g. nanostructures, are redirecting their research towards nanostructures that may be of importance to sustainability. The other side of this flexibility is that many faculty have begun to use a sustainability context to describe their ongoing work, which has enabled them to obtaining sustainability funding without actually changing the direction of their research. All of this means it is very difficult to quantify the extent to which sustainability research

activity in universities has increased as a result of increased institutional emphasis on sustainability. However, it is clear that only a relatively small fraction of the total research at the typical university is focused on sustainability. It is also certain that if government and corporate support of research in this area decreases, so will the amount of research being done, no matter how strong the institutional focus on sustainability might be.

Students have been one of the driving forces for sustainability on most campuses in the US. Student interest in the area currently is very high, and student groups having a focus on sustainability are growing rapidly. This puts pressure on facilities and operations to provide more sustainable dormitories, dining, etc, and on the faculty to provide courses and majors relating to sustainability. Every college and university seems to have several new majors that include the word sustainability, although many are primarily a repackaging of existing courses. However, there clearly are numerous new courses relating to sustainability to be found in most institutions. Similarly to the case of research, however, only a small fraction of students are actually majoring in areas relating to sustainability. Whether student interest in sustainability is permanent or a passing fad obviously is unknowable. If it turns out to be simply a fad, the courses likely will disappear as rapidly as they have come.

In brief, then, most of the activity on higher education sustainability in the US has been in facilities and operations. The focus has been on making changes that provide economic benefits to the institutions over time. Much of the outreach to the community in sustainability has been in the area of facilities and operations. Some gradual evolution has occurred in research emphasis, but sustainability remains, overall, a relatively small fraction of the research portfolio of most universities. There has been considerable growth in college majors and courses that involve sustainability in response to increasing student interest, but the fraction of students enrolling in these majors remains relatively small. Thus the institutional commitment to sustainability is, in general, focused on the obvious area of facilities and operations, and commitment in other areas of the university ranges from modest to moderate for most institutions.

IMPLICATIONS FOR TRI VIET UNIVERSITY

What lessons might all of this provide for Tri Viet University? By focusing on sustainability at the outset, several problems mentioned above will be avoided. In particular, faculty will be chosen because of their commitment to research and teaching focused on aspects of sustainability. Similarly, students will be

attracted who also have a commitment to learning about, practicing, and eventually working in areas related to sustainability. All construction of facilities will be built using sustainable principles, and operations will be designed similarly. Thus, sustainability can be built in as a core concept that pervades all parts of the institution, and provides the common language and philosophy that defines the institution.

Universities are not the only source of new knowledge and new practices in sustainability (or any other field, for that matter). Thus for Tri Viet to maximize its impact it must develop close ties with other areas of knowledge and practice creation. Some of these areas are government, corporations that are involved in some aspect of sustainability, and individuals and groups who are working to bring sustainability to some area of their lives and activities. These ties must enable flows of information and ideas in both ways, so that all parties will be enriched by the interactions. In particular, Tri Viet should strive to become the hub that brings these parties together to address specific problems and issues.

It has been said that the most effective means of knowledge transfer is to move a knowledgeable individual from one place to another. Thus, Tri Viet should consider ways to involve knowledgeable individuals from outside the university in both teaching and research activities of the university, and conversely, ways to place its own faculty for periods in corporate, government, and community settings.

Students should play a central role in transferring information. Some of their courses should be structured so that they work in organizations and communities both to learn and teach. Properly designed courses can make this both an exceptional learning experience for the students, and useful and informative for the outside parties. I will speak at greater detail on this aspect in breakout session 3B.

This close connection with the various sectors involved in sustainability will help to emphasize in Tri Viet's development the understanding that contributions to sustainability can range from large to small, from the highly technical to the very basic. Thus at one end, one can think of the highly technical, very expensive issue of massive solar arrays for energy production, while at the other end is the individual farmer using sustainable approaches on a family farm. Sometimes these different components can be in conflict, as recently happened in California. There, the building of the world's largest solar array is taking land from a number of small farmers who had been dedicated to sustainable farming. Thus,

finding ways to accommodate conflicting “goods” should be another role that Tri Viet embraces as it becomes a hub of sustainability in Vietnam and the world.