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# Policy Brief

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## Overview

Cambodian academic institutions' insufficient research capacity has been stalling the advancement of the nation's much-needed environmental planning and management. Drawing on the project "Multi-Sector Involvement for Research Capacity Development in Cambodia", which promoted small-scale research activities at the Royal University of Phnom Penh in 2009–2011, in this brief we suggest that research capacity development in Cambodia needs to take a multi-sector approach that builds on: 1) the recognition of the influence of non-governmental organizations on research; 2) the link between research and public policy; and 3) inter-university networking. The brief concludes by exploring the potential application of this approach to research capacity development in LDCs in a broader context.

Written by KEI OTSUKI and  
SHIMAKO TAKAHASHI

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## *Research Capacity Development for Environmental Management in Cambodia: Outlining a Multi-Sector Approach*

**R**ESearch CAPACITY DEVELOPMENT AT THE HIGHER education level in order to improve environmental planning and management has been considered invaluable in ensuring the sustainable development of developing countries.<sup>1</sup> In least developed countries (LDCs), such as Cambodia,<sup>2</sup> people are especially vulnerable to environmental changes and advanced knowledge is urgently needed to enhance their socio-ecological resilience;<sup>3</sup> however, governments lack both the financial and human resources needed to ensure adequate academic infrastructure for knowledge generation and dissemination. Furthermore, the international aid community has rarely placed emphasis on investing in higher education in developing countries; instead, producing basically skilled labourers through primary and secondary education was considered more effective in bringing return on investment and enhancing economic development.<sup>4</sup> Neither national nor international development agendas have so far resulted in a substantial commitment to research capacity development of academic institutions in LDCs.

Against this backdrop, researchers at Cambodian universities have been trying to develop research capacity by looking for financial, material and logistical support from non-governmental and from private, usually foreign, organizations. Non-governmental organization (NGO)-led environment and development projects have given Cambodian researchers and students significant research opportunities; these projects continue to be indispensable in terms of research capacity development. However, NGOs usually promote problem-solving and small-scale practical projects based on action-oriented field research meaning that the scope of NGO-related research projects tends to be limited to NGO concerns which are often detached from wider scientific goals. Linking problem-oriented field research to ongoing scientific debates is crucial in order to guarantee the systematic passing on of knowledge from one generation to the next.

The project entitled "Multi-Sector Involvement for Research Capacity Development in Cambodia" was co-developed by the United Nations University (UNU) and

the Royal University of Phnom Penh (RUPP) in Cambodia in order to explore ways to establish sustainable institutional mechanisms of knowledge generation and transfer. More specifically, the project aimed to equip RUPP researchers with financial and technical

for Asian Governance of Environment (MANAGE)<sup>5</sup>. The MANAGE project promoted the chemical analysis of environmental pollutants in 10 participating countries in Asia. Among these countries, Cambodia became UNU's new project counterpart because it was

“Linking problem-oriented field research to ongoing scientific debates is crucial in order to guarantee the systematic passing on of knowledge from one generation to the next.”

resources, and support to conduct research-related fieldwork within comprehensive and scientifically-credible research agendas.

This brief discusses lessons learnt during the project and proposes a workable “multi-sector approach” to research capacity development in Cambodia. The brief summarizes three principles of the approach as follows:

1. First, the implications of NGO influence on research and education need to be recognized;
2. Second, the gap between existing public environmental policy and research reality needs to be identified and filled to enable access to larger funding opportunities;
3. Each university's experience should be shared with other universities through international networks allowing the exchange of information and enhancement of the credibility of research and increased funding opportunities.

### **The Cambodia Project**

The Multi-Sector Involvement for Research Capacity Development in Cambodia Project (hereafter, the Cambodia Project) is an offshoot of a UNU research project entitled “Monitoring and Assessment Network

found that its weak level of environmental governance had caused the speeding up of environmental degradation such as air and water pollution and deforestation, and, therefore, the country was deemed most in need of engagement in such a project. Moreover, Cambodia continued to face difficulties resulting from the civil war (1970–1975) and the following Khmer Rouge regime (1975–1979), which destroyed academic infrastructure and the population's intellectuals. The country urgently needed support to restore disrupted research and education programmes, and produce highly-skilled experts in environmental management.

In 2007, UNU established a partnership with the Department of Environmental Studies (DES) at RUPP. RUPP is the oldest and largest university in Cambodia; it was inaugurated in 1960 (as the Royal Khmer University), and it currently hosts over 10,000 students and about 300 academic staff members.<sup>6</sup> DES is a relatively new department which was created within the Faculty of Science in 2001; the department has around 15 young faculty members (mostly in their late twenties) who obtained master's degrees abroad.

When UNU started working with RUPP, DES faculty members were already involved in several NGO proj-



ects that enabled their students to participate in research fieldwork; staff viewed fieldwork as an essential component of the four-year undergraduate curriculum. Since the government (via the Ministry of Education, Youth and Sport) provides universities with only a minimal budget for teaching and there are no competitive research funds readily available in the country, projects led by NGOs constitute a valued opportunity for research involvement enabling the conducting of field-based research. However, NGO projects mostly offer merely in-kind and logistical support; therefore, there remained a lack of research funding to cover transportation and other costs necessary to carry out field-based research. UNU and DES, therefore, designed the Cambodia Project to enable DES faculty members to secure the necessary funds for the students' field-based research.

While designing the project, it was decided that faculty members' research skills should be enhanced to ensure more competent teaching and supervision. In general, Cambodian academics are young and, although they had been aware that they needed to apply for research funds outside of the NGO frameworks more aggressively, they had only minimal opportunity to learn about the preparation of different types of academic research proposal and funding application.

The Cambodia Project was therefore developed in such a way as to create opportunities for both students and faculty members through grants for field-based research, training programmes and workshops.

### Research Capacity Development

In 2009, the Mitsui Environment Fund<sup>7</sup> agreed to fully fund the Cambodia Project and established a partnership with the United Nations University Institute for Sustainability and Peace

(UNU-ISP). Under the agreement, three specific project objectives were outlined: 1) to support students and faculty members to become equipped with basic research skills such as statistical knowledge and the ability to conduct fieldwork while building partnerships with different entities; 2) to support students and faculty members to present their research results, disseminate environmental knowledge and generate discussions; and 3) to encourage faculty members to develop research project proposals.

The project began by focusing on the first two objectives. In 2009, DES invited lecturers from neighbouring countries, such as Thailand and Malaysia, to teach statistics. In 2010, the project funded 36 students to experience the entire research process of writing proposals, conducting field research and presenting final papers. The project also created opportunities for the 36 students to present their papers at a public knowledge dissemination workshop in which potential future research fund donors, research partners and faculty members from other departments participated.<sup>8</sup>

In 2011, the project moved on to implement training programmes teaching faculty members how to write research proposals specifically and improve scientific writing in general. A knowledge dissemination workshop in July 2011 was organized in such a way as to give both faculty members and students the opportunity to give presentations; over 200 people attended. The presentations covered a wide-range of case studies: a bio-digester project; pesticide residue in crops; arsenic contamination; sewer planning; air pollution; and the use of new non-timber forest products. Poster presentations on such topics as climate change adaptation, water quality assessment and greenhouse gas emissions were also given.

### About the Authors

*Kei Otsuki* is a Research Associate at the United Nations University Institute for Sustainability and Peace (UNU-ISP) in Tokyo, Japan.

*Shimako Takahashi* is a Visiting Research Fellow at UNU-ISP.

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### About this Policy Brief

This Policy Brief is based on a two and a half year project entitled “Multi-Sector Involvement for Research Capacity Development in Cambodia”, which was funded by the Mitsui Environment Fund between 2009 and 2011. The project aimed to build a research network within Cambodia, one of a few LDCs in Asia. The project brought together researchers from the United Nations University Institute for Sustainability and Peace (UNU-ISP) and young lecturers from the Royal University of Phnom Penh (RUPP) in Cambodia, as well as partners from NGOs, government agencies and international cooperation agencies. At the annual project knowledge dissemination workshops, the significance of improving research capacity to tackle environmental problems in Cambodia was actively discussed.

These presentations demonstrated that the Cambodia Project had substantially increased research opportunities for the students and their supervisors by covering field research and presentation costs for the students. Yet, faculty members continued to obtain logistical and in-kind support from NGOs acting to solve physical problems on the ground. The wide variety of case study topics presented clearly showed that research themes had been influenced by such NGOs’ support. As researchers from developed countries were also participating in many of the NGO projects, the NGOs were able to effectively involve the DES researchers in their ongoing, applied research activities. As a result, research themes were still largely determined by NGO project frameworks.

At this point, a question arises: What were the implications of NGO involvement in terms of overall research capacity development for environmental planning and management in the Cambodia project? The answer to this question leads us to introduce the “multi-sector approach” which connects NGOs, and the public and scientific sectors, as discussed below.

### Linking Local to Global

The influence of NGOs on both research activities and policy-making has generally increased over the last two decades. After the 1992 Rio Summit, private businesses increasingly became involved in corporate social responsibility (CSR) activities, while governments pushed forward privatization policies on many fronts under a neo-liberal political environment. NGOs were considered effective at intermediating public–private partnerships and, in many developing countries, such partnerships started to direct environmental research and policy formulation.

NGO involvement in research and policy has been welcomed in Cambodia.

Currently, over 400 environment-related NGOs are active in Cambodia and the government recognizes that “NGOs continue to play a major role in supporting the provision of basic social services” in all Cambodian provinces, as well as being involved in environmental assessment associated with such services as sanitation, water quality and environmental education.<sup>9</sup> However, NGO-led practitioner research and academic research are different in various aspects, and awareness of the difference is important in order to ensure meaningful collaboration based on mutual learning between the NGO and scientific sectors.<sup>10</sup> During the Cambodia Project, it was apparent that field-based research experience needed to be objectively understood with reference to the ongoing scientific debates of environmental (as well as development) studies.

For example, few scientific observations and analyses exploring links between environmental management and climate change have been conducted by Cambodian researchers in Cambodia. In other words, small-scale field-based research results are seldom viewed as constituting local knowledge in relation to regional or global knowledge on environmental change. The focus on the local–global relationship has already been developed in various fields of environmental science, and this widens opportunities in terms of broader networking and collaboration because it entails a mechanism of coordinating between various research institutions.

It could be said that the influence of NGOs on academic research in Cambodia needs to be more concretely framed as an enabling force to link local problem-oriented research to global scientific and policy agendas. But, how can researchers in Cambodia in general actually explore this linkage? Where can they find the space to connect their ongoing field research to the broader





research agenda when they do not have sufficient access to basic academic infrastructure such as the Internet and libraries?

trust fund. In the NAPA case, access to funding was available and the UN Global Environment Facility's (GEF) LDC budget<sup>14</sup> enabled support of the

“Public policy space in Cambodia should be viewed as a space where local problem-oriented research is linked to global scientific and policy agendas.”

### Policy Space

One possibility is a public policy space, largely influenced by the international agenda in LDCs. For example, the Cambodian Ministry of Environment launched the National Adaptation Programme of Action (NAPA) in 2006 in response to a UN call for LDCs to be supported to promote adaptive management of climate change.<sup>11</sup> UN agencies such as the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Environment Programme (UNEP) encouraged LDC governments to “address their urgent and immediate adaptation needs”<sup>12</sup> and NAPA was consequently devised “to provide a framework to guide the coordination and implementation of adaptation initiatives through a participatory approach, and to build synergies with other relevant environment and development programmes”.<sup>13</sup> In short, the national programme readily sought to link existing NGO projects and ongoing field research programmes to the international agenda on climate change adaptation underpinned by global science.

Placing ongoing field-based research within a national programme framework can be useful for researchers to ensure sustainability of research because programmes like NAPA often include a funding mechanism that enables researchers to access an international

relevant environment and development programmes that “build upon existing coping strategies implemented by local communities in order to enhance their adaptation capacity”.<sup>15</sup> Ongoing field-based research results and the demonstration of local knowledge within thus can be understood as studies on existing strategies, which contribute to the construction of new programmes for enhancing adaptation capacity. Such placement of research within national funding may effectively link field research experience to global scientific and policy debates.

Nevertheless, until now, researchers in Cambodia have not been familiar with bureaucratic (international) governmental funding procedures; furthermore, the Cambodian government is reluctant to actively reach out to universities. This is where international support for research capacity development becomes vital in order to set up a collaborative institutional and financial mechanism between universities and government departments (in this case, the Ministry of Environment).

### University Networks

Academic researchers and government departments in Cambodia rarely look to collaborate because there is a lack of information on both sides on how to do so. This means that it is important to learn from other countries' experiences

of collaboration by participating in international university networks.

Networks that incorporate a research capacity development goal are fundamentally different to the usual scientific community networks which

strategies to minimize climate change-related risks, often in collaboration with public authorities, the participating universities explore ways to enhance resilience in developing country societies. Such academic platforms can create

“Networks through which researchers and policymakers can address LDCs’ basic academic needs and actively collaborate with highly-qualified researchers from developed country universities need to be created.”

are mostly directed by universities in the developed world with high research capacity. Scientific conferences and events held by the developed scientific community are usually too expensive for researchers from the developing world to fully participate in and these conferences often do not discuss capacity development for disadvantaged universities such as RUPP where even basic academic infrastructure does not exist. Networks through which researchers and policymakers can address LDCs’ basic academic needs and actively collaborate with highly-qualified researchers from developed country universities need to be created.

As one potential network encouraging research capacity development in LDCs, the University Network for Climate and Ecosystem Changes Adaptation Research (UN-CECAR) was launched in 2009 as a joint initiative between UNU-ISP and the Integrated Research System for Sustainability Science (IR3S) at The University of Tokyo, Japan.<sup>16</sup> The network aims to build an academic platform for universities in the Asia-Pacific region and Africa to improve the quality of their research and education programmes, particularly in the field of climate change adaptation. By sharing case studies on local coping

opportunities for researchers in LDCs to develop sustainable research agendas based on local case studies with reference to the international climate debate.

It is still too early to tell whether such an inter-university network has been effective in supporting universities like RUPP to establish concrete connections with national environmental policy or the international scientific agenda; however, the network has been successful in serving as an entry point for Cambodian universities to join international academic networks. Meanwhile, individual researchers in Cambodia need to keep searching for available research opportunities while simultaneously striving to learn about different possibilities that exist outside of the immediate field research and project frameworks. The multi-sector approach, which envisages collaboration between the NGO, private, public and scientific sectors, has at least started to help them identify these new possibilities.

### Conclusion

Drawing on the Cambodia Project, this brief has introduced a multi-sector approach to research support and has suggested that this is a pragmatic way to realize research capacity development because it allows underdeveloped



universities in LDCs to connect their ongoing small-scale research experience to wider policy and scientific agendas. For this approach to be sustainable, however, more institutional support will be necessary to ensure basic academic infrastructure and financial sustainability for researchers in LDCs to improve research and teaching skills. Enhanced research capacity will allow researchers in LDCs to analyse local knowledge more strategically such as in terms of global perspectives, thereby contributing to encouraging the public to engage in the management of their own environment.

While this brief has focused on Cambodia, LDCs in general are in need of similar institutional support for research capacity development. The following recommendations are for the international community to effectively address this need:

1. Funding for forwarding the international environmental agenda (similar to the NAPA case) should clearly benefit research capacity development of academic institutions in LDCs.
2. Funding should be given to ensure the establishment of basic infrastructure within universities with high potential in LDCs (like RUPP, which has an increasing number of young scholars who returned to Cambodia from more developed countries with advanced degrees).
3. New international policy proposals need to be directed towards strengthening university networks, making knowledge exchange, in itself, an effective topic for institutional support in various developing region contexts.

Institutional support can be made through, for example, bilateral cooperation with government ministries, direct intervention in universities or partnerships with NGOs at various levels

which consciously encourage research capacity development for qualified researchers and their universities in LDCs. International development experts need to take into account countries' academic environments and multi-sector conditions, and identify suitable

institutional channels of support. This implies that the multi-sector approach needs to incorporate international research institutes, such as UNU, as possible actors to promote research capacity development in LDCs as outlined in this brief.

### Notes

1. For example, since 2008, UNU Institute for Sustainability and Peace has been conducting the project "Education for Sustainable Development in Africa" to support African universities.  
See: <http://isp.unu.edu/research/projects/esda/index.html>
2. To classify LDCs we refer to the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) "DAC List of ODA Recipients".  
Available at: <http://www.oecd.org/dataoecd/32/40/43540882.pdf>
3. The Fourth United Nations Conference on the Least Developed Countries held in 2011 clearly addresses this issue. See: <http://www.un.org/wcm/content/site/ldc/lang/en/home/Background/preparations/pid/15700>
4. David Bloom and Henry Rosovsky (2001) "Higher Education and International Development", *Current Science* 81(3): 252–256.
5. UNU-ISP "Monitoring and Assessment Network for Asian Governance of Environment (MANAGE)".  
Available at: <http://isp.unu.edu/research/projects/manage/index.html>
6. Royal University of Phnom Penh "About RUPP".  
Available at: [http://www.rupp.edu.kh/about\\_rupp.php](http://www.rupp.edu.kh/about_rupp.php)
7. Mitsui Environment Fund.  
Available at: <http://www.mitsui.com/jp/en/csr/contribution/fund/index.html>
8. UNU-ISP MANAGE, Workshop on Dissemination of Environmental Research Findings. Available at: <http://isp.unu.edu/research/projects/manage/events/workshop2010/index.html>
9. Other LDCs are in a similar situation to Cambodia (Cambodian Rehabilitation and Development Board (CRDB) and Council for the Development of Cambodia (CDC) "General NGO Information". Available at: [http://www.cdc-crdb.gov.kh/cdc/ngo\\_statement/general\\_ngo\\_information.htm](http://www.cdc-crdb.gov.kh/cdc/ngo_statement/general_ngo_information.htm)). See for example, the Bangladeshi government's NGO Affairs Bureau (<http://www.ngoab.gov.bd/>) and the Tanzanian government's NGO policy ([http://www.bot-tz.org/MFI/Library/NGO\\_Policy\\_2002\\_English.pdf](http://www.bot-tz.org/MFI/Library/NGO_Policy_2002_English.pdf)).
10. Laura Roper (2002) "Achieving Successful Academic-Practitioner Research Collaborations", *Development in Practice* 12 (3&4): 338–345.
11. Ministry of Environment, Royal Government of Cambodia, Climate Change Department.  
Available at: <http://www.camclimate.org.kh/index.php?page=front&lang=en>
12. National Adaptation Programme of Action.  
Available at: <http://www.napa-pana.org/>
13. Ministry of Environment, Royal Government of Cambodia (2006) *National Adaptation Programme of Action to Climate Change (NAPA)*, p. i.
14. Global Environment Facility "Accessing Funds under LDCF".  
Available at: [http://www.thegef.org/gef/LDCF\\_Funds](http://www.thegef.org/gef/LDCF_Funds)
15. Ministry of Environment (2006), p. 2.
16. University Network for Climate and Ecosystems Change Adaptation Research (UN-CECAR). Available at: <http://cecar.unu.edu/>



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United Nations University and  
Institute for Sustainability and  
Peace  
53-70, Jingumae 5-chome  
Shibuya-ku, Tokyo 150-8925  
Japan