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**United States Department of Agriculture
National Institute of Food and Agriculture
Division of Family & Consumer Sciences
Visiting Scholar White Paper**

**Internationalizing Extension Disaster Education –
The Bicol University Philippines Case Study**

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EXECUTIVE SUMMARY

The United States Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA) funds the Extension Disaster Education Network (EDEN) through the Food and Agriculture Defense Initiative (FADI) to improve the nation's ability to mitigate, prepare for, prevent, respond to, and recover from disasters. As such, EDEN provides the United States and its territories with both preparedness and post-crisis education and assistance to individuals, families, farm operators, small businesses, rural communities, and local leadership in the immediate aftermath of a disaster.

Prior to 2010, EDEN focused its work exclusively on domestic issues. In 2010, possibilities emerged for expansion of extension disaster education activities in Asian Pacific Rim countries. These possibilities raised important questions about advantages and disadvantages for internationalizing EDEN, as well as operational and functional questions on how to do so if it was deemed of strategic importance to the agriculture, natural resources, and other relevant USDA sectors.

The importance of international collaboration is evident, especially in the contexts of international agricultural, humanitarian aid, and development. Similarly, international collaboration is needed, but is underutilized for disaster preparedness and response. In view of the long partnership between the U.S. and the Philippines, including recent collaborations regarding extension disaster education, and considering the high-profile recent disasters that have befallen the Philippines, there are likely best management practices and lessons-learned that can be shared with and will benefit U.S. partners. In particular, investing in expansion of the U.S. EDEN organizational model and content to be replicated in the Philippines, and eventually

in other places, would contribute to developing a sense of ownership of the International Strategy for Disaster Reduction among those involved in disaster reduction worldwide and to generate a culture of prevention both in the U.S. and abroad. This white paper provides specific recommendations to address potential barriers to maximize success.

HISTORY & BACKGROUND

The NIFA Visiting Scholars Program, in existence since 2008 and developed by the Division of Family and Consumer Sciences (DFCS), advances collaboration between NIFA and Land-Grant University partners. The program provides an opportunity for Land-Grant University faculty and administrators to enhance their professional growth, while cultivating their interests at the federal level. At NIFA, DFCS Visiting Scholars:

- Learn about USDA and NIFA;
- Foster greater understanding of the Land-Grant University System and the partnership from the federal perspective;
- Work with NIFA colleagues to advance knowledge through a process of mutual learning;
- Enhance collaborations and professional development through strategic networking and valued projects;
- Connect to critical federal, national, and/or international partners to expand opportunities and resources; and
- Accomplish/advance key initiatives of NIFA and the Land-Grant University System.

To date, two DFCS Visiting Scholars (Dr. Keith Tidball of Cornell University, the author of this white paper, and Dr. Virginia Morgan White of Auburn University) hosted by USDA NIFA National Program Leader (NPL), Beverly Samuel, have focused their efforts on Internationalizing the Extension Disaster Education Network.

In 2012, DFCS, in collaboration with USDA NIFA Center for International Programs, developed a special announcement for the Visiting Scholar Program to explore an international opportunity for EDEN. The Center for International Programs has provided intellectual support and capacity for the consideration of adding a more explicit global component to EDEN. In particular, Drs. Hiram Larew, Michael McGirr, and Patricia Fulton provided important guidance in EDEN discussions, which resulted in the identification of opportunities to more fully engage the international extension community as reflected in the recommendations section of this document.

From a historical perspective, in 2010 USDA NIFA scientist, Dr. Caroline Crocoll, participated in the State Department/ USDA Foreign Agricultural Service (FAS) Embassy Science Fellows Program to bring the framework and programs of the U.S. Cooperative Extension Service to universities and government health agencies in the Philippines. The Embassy Science Fellows Program enables overseas posts to acquire scientific advisory capacity on issues important to their missions, while providing U.S. scientists with opportunities for valuable international experience. From March to May of 2010, Dr. Crocoll worked with several hundred faculty, students, and health workers across the Philippines to strategically build educational outreach

capacity; broaden awareness of the connection between nutrition, physical activity, and non-communicable diseases; and enhance disaster education, preparation, and response. Partnerships developed through Crocoll's efforts continue with ongoing communication, technical assistance, and collaboration between U.S. Embassy Manila, USDA NIFA, Cooperative Extension, and universities and health agencies in the Philippines.

In the Albay Province, Bicol University Extension Service Center Director, Dr. Leilani Pavilando, continued to promote knowledge, innovation and education as key to building a culture of safety and resiliency at all community levels. According to Pavilando, resiliency is the capacity of a community to bounce back after disaster. To enhance community resiliency, she states, people must put into practice early and effective action, so that they can respond to adversity in a healthy and productive manner. In collaboration with Crocoll, Pavilando explored Project Bicol EDEN as an avenue to promote resources for building resilient communities. According to a report written by White, prior to 2010, U.S. EDEN had no official international ties. The concept of Bicol EDEN was to be patterned after EDEN in the United States—a concept introduced to Bicol University faculty and students by Crocoll when she gave a series of lectures in Legazpi City, Philippines. Project Bicol EDEN could serve as a collaborative, multi-stakeholder effort by member institutions across the Bicol Region to share educational resources to reduce the impact of natural and human-made disasters.

In the U.S., EDEN continued conversations about expanding membership to include national or federal agencies with similar missions. The conclusion, reached after much discussion, was that EDEN should restrict membership to universities and colleges with an extension component. Delegates voted to form partnerships with agencies or organizations with similar missions.

That same year, Barry Brennan, University of Hawaii delegate to EDEN, co-authored and presented a white paper suggesting that land grant diagnosticians, Integrated Pest Management specialists, and others work with Animal and Plant Health Inspection Service (APHIS) to address pest problems on propagative material being exported to the U.S. A joint program would require that some extension educators work with producers in the country of plant origin. This suggestion was based on existing programs such as EDEN, the National Plant Diagnostic Network (NPDN), and the Greater Caribbean Safeguarding Initiative (GCSI), a successful program developed by APHIS—Plant Protection and Quarantine (PPQ). The white paper focused on (1) promoting trade by reducing pest pressures on producers, (2) reducing the work load on PPQ inspectors, and (3) protecting American agriculture. A presentation of the white paper at the 2010 EDEN meeting led to a meeting in Washington, D.C. that brought together representatives from land grant universities, NIFA, APHIS, National Plant Board, National Invasive Species Council, and others familiar with their agrosecurity-related programs.

Meanwhile, with the appointment of an EDEN International Collaboration Ad Hoc Committee, led by Peter Barcinas from Guam, in 2010 EDEN began to explore international opportunities. The initial focus of this group was to develop relationships with Pacific Rim members of the Asian Association of Agricultural Colleges and Universities to determine commonalities and shared interests on agricultural disaster education that could lead to partnerships. The ad hoc committee agreed that partnerships allow for the development of understanding and relationships, while maintaining some distinction between the parties. That point was further made at the 2011 EDEN Annual Meeting where four representatives from Bicol University were

hosted. Dr. Lauraya, President of Bicol University, led the delegation and later submitted a formal request on behalf of Bicol University Extension for membership in EDEN.

This request represented the first time a foreign university or entity had formally requested membership in EDEN. EDEN's charter and mission did not address the contingency for an international member category. As a result, the EDEN executive committee agreed to explore the implications of such a category, and subsequently initiated an international sub-committee. This subcommittee, chaired by Pat Skinner of LA State University, identified issues and engaged NIFA in discussion of the opportunities and challenges. The subcommittee explored approaches ("Partnership Agreement as a trial membership") and did some preliminary work on moving directly to international membership.

In 2012, White was the national EDEN chair and a participant in NIFA's DFCS Visiting Scholar Program. She concentrated on the possibility of expanding EDEN to international membership and called on the expertise of NIFA administrators. Her work focused on identifying a number of functional issues. One issue was that EDEN member institutions are U.S. land-grant extension services, 1862, 1890 and 1994 programs, and sea grant programs. The question raised was are there equivalent institutions in other countries? How might these international institutions be identified and determined eligible international members? A second issue was determining the advantages and disadvantages in adding an international membership category. This issue took into account how international members might serve EDEN's strategic goals while complimenting USDA NIFA efforts. A third issue dealt with the international activities within the EDEN framework specifically addressing operational, organizational, and structural concerns regarding the possibility of international membership. These include legitimate questions regarding the support that USDA NIFA might provide.

This white paper addresses these concerns by first describing the potential benefits of international collaborations in general, applying these benefits to the extension disaster education context, and then suggesting future directions for EDEN internationalization.

INTERNATIONAL COLLABORATION IN AGRICULTURE & LIFE SCIENCES, EXTENSION, HUMAN ECOLOGY

It has been shown that international collaboration increases the impact of a country's scientific production (Lancho-Barrantes et al., 2012, Guerrero Bote et al., 2013). Specific to agriculture, a report on international agricultural collaboration in the form of humanitarian aid found that collaborative research, particularly in rice and wheat, has historically been extremely effective in reducing poverty and hunger in developing countries and have also yielded direct economic benefits to the U.S. that far outweigh the costs of these efforts¹ (Pardey et al., 1996).

Agricultural extension, on the other hand, continues to experience renewal processes where the focus includes a range of dimensions varying from institutional arrangements, privatization, decentralization, partnership, efficiency, and participation to the role of extension agents (Haug, 1999). The most important factors contributing to the ongoing changes in public extension systems appear to be globalization, the changing role of the state (re-structural adjustment

¹ CIMMYT wheat breeding achievements generated U.S. benefits as high as 190 times the total U.S. contribution to CIMMYT's wheat improvement budgets, while IRRI's work in rice has realized returns of as much as 17 times the U.S. investment in rice research through CGIAR. Pardey, P., Alston, J., Christian, J. & Fan, S. 1996. Hidden Harvest: U.S. Benefits from International Research Aid. *Food Policy Report*. Washington D.C.: International Food Policy Research Institute.

programs, decreases in public spending); the focus on decentralization and participatory approaches; the multilaterals/bilaterals focus on poverty reduction; the information communication technology revolution; and the influence of the new institutional economics in development thinking (pragmatic thinking to institutional design) (Chambers et al., 1989, Rivera, 1991, Farrington et al., 1993, Röling, 1994, Christoplos and Nitsch, 1996, Pretty, 1997, Picciotto and Anderson, 1997, Rivera, 1998). Notably missing from this list is the increasing attention being paid to climate change, most notably the increases in frequency, intensity, and duration of damaging events and disasters.

According to the International Federation of Red Cross and Red Crescent Societies (IFRC) (2003) natural disasters are on the rise, and they continue to target the world's poorest and least developed, and there must be greater investment in disaster reduction rather than high-profile response efforts. IFRC states that improved data on past disasters would help inform investment and policy decisions and thus help secure more appropriate levels and forms of disaster prevention, mitigation, and preparedness. Historical studies would also help inform the development of appropriate methodologies for the assessment of future disasters.

Despite a long history of disasters affecting agriculture, rangelands, and forestry, comprehensive documentation of these disasters at the national, regional, and international levels has been lacking. Therefore, it is important to develop mechanisms for more efficient assessment and documentation of natural disaster impacts in agriculture. A comprehensive assessment of impacts of natural disasters on agriculture requires a multi-sectorial and integral approach involving key organizations (Sivakumar et al., 2005). We agree with Sivakumar and colleagues in that priority should be given to supporting research with practical applications since research is needed to understand the physical and biological factors that contribute to disasters. Since the major impact of natural disasters is on poor farmers with limited means in developing countries, community-wide awareness and education programs on natural disasters should be a priority. Programs for improving prediction methods and dissemination of warnings should be expanded and intensified, and efforts are needed to determine the impact of disasters on natural resources. Extension models such as the U.S. EDEN should be further developed and tailored for international use.

THE BICOL UNIVERSITY PHILLIPINES CASE

During White's term as EDEN chair and NIFA'S DFCS Visiting Scholar in 2012, she presented the results of her study on expanding EDEN to international membership to the EDEN Executive Committee. The committee, in turn, recommended a three-year pilot membership be extended to Bicol University. The delegates approved the recommendation at the 2012 EDEN Annual Meeting. Historically, EDEN membership had been available only to institutions in the U.S. and its territories, providing outreach through Extension and offering non-formal education at the local level to help people reduce the impact of disasters. Bicol University is a public institution in Legazpi City, Philippines that conducts disaster education in its Extension programming. Bicol University Extension is similar to Extension in the United States.

Though there was the vote by EDEN delegates for acceptance of a three-year pilot membership for Bicol University as the first international EDEN member, many issues and questions remain

unresolved. However, the fledging membership has resulted in additional opportunities for initial collaboration and discussions with both Bicol University and others in the Philippines, as well as significant questions regarding the next steps and strategic direction of further internationalization of EDEN.

According to a press release by the Philippine Information Agency,² a memorandum of understanding (MOU) between and among a dozen government agencies and local government units was held during the launching of Bicol EDEN with more organizations signifying intentions to join. Agencies indicating interest included the Bureau of Fire Protection, Philippine Air Force, Philippine Army, Philippine National Police, and Albay Health Emergency Management (AHEM).

In April of 2014, Tidball, USDA NIFA DFCS Visiting Scholar from Cornell, met with leaders of Cornell College of Agriculture and Life Sciences International Programs (CALS IP) and organized an informational meeting to present ideas about formalizing, expanding, and leveraging international EDEN efforts. This meeting included four university presidents from the Philippines and the vice president of the Development Academy of the Philippines.

Fay Lea Patria M. Lauraya
Bicol University (SUC President IV)

Serafin L. Ngohayon
Ifugao State University (President)

Gloria M. Retes
Southern Leyte State University (President)

Jose L. Bacusmo
Visayas State University (President)

Gloria Jumamil-Mercado
Development Academy of the Philippines (Senior Vice President & Dean)

The academic leaders expressed interest in thinking through a wider membership model of EDEN for the Philippines, among many universities (mirroring the U.S. model of many state delegates). Discussion turned toward the myriad ways this could be mutually beneficial for the U.S. and Philippines, and the opportunities to link regions in extension disaster education in both preparedness and response. The leadership of Bicol University expressed interest in providing greater regional and national leadership in this expansion effort.

² <http://archives.pia.gov.ph/?m=1&t=1&id=56807&y=2011&mo=09>



Map indicates locations of Philippine Universities indicating interest in the development of EDEN in the Philippines.

Expanding the Bicol University EDEN approach throughout the Philippines

As a result of this work, Dr. Catalino Blanche, USDA NIFA NPL, worked closely with Dr. Josyline C. Javelosa, Agriculture Attaché at the Embassy of the Philippines in Washington, D.C., to develop draft language to organize efforts for Philippines EDEN, modeled after the U.S. example. In the draft, the authors states that:

The need to address the resiliency of the country's rural poor and vulnerable groups to disasters and climate change impacts is of primary importance... Access to information about disaster preparedness, actions to be done after a disaster strikes, accessing disaster assistance, and helping disaster victims are very crucial to lessen the impact to the lives of the people, their livelihoods and food security of the country. In addition, timely and immediate support to losses to crops, livestock, and fishing grounds should be dealt expediently.

The draft proposal points out the importance of getting the Philippine Extension Service in a better position to quickly address the aftermath of disasters.

The extension staff, who are always at the front line and the direct extension service providers in every community to its clients such as farmers and fisherfolks, rural women, youth, and all other sectors, must have easy access to needed information that are accurate and useful.

The draft document identified an entity for extension disaster education technical assistance and training.

The Agricultural Training Institute (ATI) of the Department of Agriculture being the lead and focal agency for extension in the country needs to come-up with an innovative strategy to deal with disasters and excrement events occurrence. The Institute implemented capacity building, and dissemination of information materials to its clients through its Regional Training Centers throughout the country. However, ATI's effort to have a disaster-resilient programs are still inadequate. The need to access and share information on disaster mitigation and preparedness is urgent. Hence, collaboration with EDEN is a valuable support for an efficient extension services.

DISCUSSION

Benefits to the U.S. in Internationalizing Extension Disaster Education?

In the field of disaster reduction in recent years, calls for reviewing and re-committing appropriate forms of local, national, and regional platforms for hazard mitigation and disaster reduction have increased. Enhanced partnerships and networking are required to ensure cooperation, complementarity of action, synergy, and solidarity between governments, the private sector, civil society, academia, and international agencies, especially in agriculture and natural resources. In the case described in this white paper, collaboration with state, regional, and national entities in the Philippine context will help U.S. agencies and stakeholders build on and amend existing structures in the field of disaster reduction. This will be achieved by involving as many partners as possible to develop a sense of ownership of the International Strategy for Disaster Reduction among those involved in disaster reduction worldwide and to generate a culture of prevention. Given the recent high-profile disasters that have befallen the Philippines, there are likely many best management practices and lessons-learned that can be shared with and will benefit U.S. partners. These may include, but are not limited to procedural, curricular, or pedagogic lessons directly relevant to the U.S. EDEN efforts. In particular, investing in expansion of the U.S. EDEN organizational model and content to be replicated in the Philippines would contribute to the development of the following:

- Establishing internationally and professionally agreed indicators, standards, and methodologies for the analysis and assessment of the environmental and socio-economic impacts of disasters on societies, especially in the agriculture sector. This would include the quantification of the agricultural impact of actual and projected disasters in order to provide the basis for determining insurability, vulnerability indicators, and up-front economic investment in prevention;

- Developing and applying standard forms of statistical recording of risk factors, disaster occurrences, and their consequences to enable the development of a cohesive agricultural disaster database for monitoring purposes, consistent comparisons, and comprehensive risk assessments to be integrated within development plans;
- Promoting research and its application, developing indigenous capabilities, and supporting the transfer of knowledge and the exchange of information and experiences among countries with a view to better understand the characteristics of natural hazards and the causes of natural disasters;
- Stimulating the application of research on socio-economic determinants of vulnerability; on resilience and coping strategies in public policies and practices; and on the improvement of the early warning in respect of natural disasters;
- Establishing national, sub-regional/regional, and global database and information exchange facilities dedicated to disaster reduction, supported by agreed communication standards and protocols, adequate mechanisms for the control of scientific quality, and social and cultural appropriateness;
- Increasing opportunities for scientific and technical contributions to public decision making for risk management and disaster prevention drawing from the widest possible range of expertise.

Benefits to the Philippines in Internationalizing Extension Disaster Education

As described in the draft proposal shared by the Philippines Embassy, the Philippines is continuously being challenged by natural hazards of various forms (e.g. typhoons, floods, landslides, droughts, volcanic eruptions, and earthquakes). The Philippines experienced the largest number of natural hazards in the 20th century of all the nations in the world and ranks ninth in terms of vulnerability to the impacts of climate among ten countries. These natural disasters do not only put the lives of the people in danger, but also disrupt the agriculture and food systems of the country.

The draft proposal states that the need to address the resiliency of the country's rural poor and other groups vulnerable to disasters and climate change impacts is of primary importance. Efforts to increase access to information disasters preparedness, actions to be done after a disaster strikes, accessing disaster assistance, and helping disaster victims would be possible under the proposed expansion of EDEN. This would lessen the impact of hazards to the lives of the people, their livelihoods, and the food security of the country. In addition, timely and immediate support for losses of crops, livestock, and fishing grounds could be done more expediently.

Affiliation versus Membership

There exist multiple possible configurations for partnerships within an internationalizing extension disaster education framework. These range from foreign entities becoming "members" of the USDA NIFA-funded EDEN to foreign entities becoming affiliates of U.S. EDEN, for example "Philippines ATI Extension Disaster Education Network – an affiliate of U.S. EDEN." There are advantages and disadvantages to both approaches. The advantage of the membership option is that it requires relatively little additional organizational structure to initiate. The disadvantages, however, are significant. First, membership in a USDA funded network of U.S.

land grant institutions by a foreign entity is, at the very least, complicated and possibly unallowable by federal rules. Second, there are unavoidable security concerns that need to be addressed by USDA FAS, and USDA Office of Homeland Security and Emergency Coordination (OHSEC) in the event of partnership with foreign entities. In practice, what this means is that foreign partners interested in collaboration with USDA programs such as EDEN do not become “members,” but rather affiliate with the program via an international affiliation process. The benefits of an affiliation approach, rather than a membership approach, is that it will allow for homeland security and intellectual property concerns raised to be addressed and dealt with appropriately in the case of EDEN.

For the sake of discussion, the following represents a suggested affiliation process for foreign entities proposing partnership with U.S. EDEN. It is a suggestion only and represents a starting point for further development.

Affiliate Organization status provides recognition to foreign government organizations and/or foreign government sanctioned organizations dedicated to extension disaster education and modeled after the U.S. EDEN. These organizations must meet extension disaster education criteria. Affiliates will be eligible for inclusion in an international database of extension disaster education maintained by U.S. EDEN that is designed for information sharing and mentoring purposes. Affiliate Organization status must be renewed every three years.

Affiliate Selection Criteria

Affiliate organizations must meet the following extension disaster education program criteria:

- Programming is developmentally and language appropriate;
- Programming includes scope and sequence to establish partnerships and plans to assist communities, through education, in emergency/disaster preparations and recovery;
- Programming is based upon and distributes evidence-based, credible resource materials before, during, and after a disaster.
- Programming disseminates educational materials relating to disaster preparedness *and* recovery in order to reduce the impact on individuals and communities.
- Programming enhances the essential elements of disaster preparedness and response.

Affiliate Selection Process

The selection process will need to be determined with legal guidance by U.S. EDEN and federal partners. This process should be designed to protect the principles of extension disaster education and the connection of the principles to the integrity of EDEN's mission.

RECOMMENDATIONS & CONCLUSIONS

There are clear benefits to both the U.S. and the Philippines, positive progress that have already been made with a pilot EDEN program at Bicol University in the Philippines. There are promising possibilities of further expansion of this trial program as evidenced by the meeting of multiple university leaders in the Philippines and the subsequent draft proposal developed by the Agriculture Attaché of the Embassy of the Philippines, thus a recommendation to pursue further development of an affiliate Philippines EDEN is timely. As the frequency and severity of extreme weather events intensify, other nations will also become interested in the U.S. EDEN model. Therefore, it is timely to consider strategic interests of U.S. EDEN (and USDA, more broadly) in such strategic global partnerships. Specific recommendations are necessary to address potential barriers and to maximize success, including:

1. Developing and seeking funding collaboratively for an international exchange program of technical assistance for the development of a Philippine affiliate EDEN in partnership with USDA, interested university partners, and the Philippine Agriculture Training Institute³.
2. Determining legal instruments and authorities, such as MOUs, technical assistance agreements, and others that are already in existence, which can be revised or updated to reflect new collaborative activity between the U.S. and the Philippines⁴.
3. Developing an international affiliate criteria and an application process for international extension disaster education partnerships between other countries and the U.S. EDEN. This affiliate structure would ensure that other nations' EDEN efforts would not be subject to U.S. EDEN oversight, and would therefore not be members of U.S. EDEN.
4. Reaching out to organizations such as the Association for International Agricultural and Extension Education⁵, the Global Forum for Rural Advisory Services,⁶ and the Food and Agriculture Organization of the United Nations' (FAO) Research and Extension Unit⁷ to

³ Possible funding mechanisms include USDA FAS Visiting Scientists program <http://www.fas.usda.gov/programs/visiting-scientists-program> ; the USDA FAS Scientific Cooperation Research Program <http://www.fas.usda.gov/programs/scientific-cooperation-research-program> ; and others.

⁴ At the time of this writing, an MOU between USDA and the Philippines Department of Agriculture was in the final stages of drafting and agency circulation before signing. Efforts were made to have language included in this MOU to "enhance collaboration on climate change mitigation and adaptation, and disaster preparedness and response through extension disaster education, training, technical exchanges, and research collaboration."

⁵ <https://www.iaaee.org/>

⁶ <http://www.g-fras.org/en/>

⁷ <http://www.fao.org/about/what-we-do/so5/en/>

brief them on international EDEN activities and plans, as well as to solicit their valuable perspectives and experiential knowledge.

5. Developing a regional-specific strategic structure, especially regarding organization that reflects unique landscapes and associated hazards and societal conditions. Proposals that are being developed regarding organization of U.S. EDEN regionally (potentially to work in consort with USDA Regional Climate Hubs, Regional Rural Development Centers or other USDA regional frameworks) under the national framework should take into consideration the eventual adoption or replication of these models by other partner nations.
6. Increasing integration of EDEN's and USDA work into U.S. strategies for disaster reduction.⁸ USDA and the agriculture sector are underrepresented in recent and current U.S. National Science and Technology Council (NSTC) Subcommittee on Disaster Reduction (SDR) reports.

In conclusion, the exploration of internationalizing U.S. EDEN has yielded positive outcomes and recommendations that can potentially strengthen the program as well as foster the development of a Philippine affiliate of EDEN. This white paper has described the benefits of doing this, and as such, concludes with a recommendation to invest in helping partner nations develop EDEN programs of their own, with U.S. assistance. It is not advised to subjugate these new EDEN entities under the U.S. EDEN rubric, or to encourage their membership in a U.S. EDEN network. That approach unnecessarily burdens the U.S. network with institutional and governance issues that reflect differing foreign higher educational models, as well as may preclude the positive benefits of learning from affiliated and independent networks. The membership approach also introduces some administrative challenges. As outlined earlier, and affiliate approach is the most desirable. In the event that additional partner nations adopt the EDEN model, it would be advisable to work with FAO and others to centralize international coordination of foreign affiliated extension disaster education programs.

⁸ The U.S. National Science and Technology Council's (NSTC) interagency Subcommittee on Disaster Reduction (SDR) serves as the national platform for the International Strategy for Disaster Reduction. The subcommittee represents the expertise of more than twenty federal agencies with disaster reduction missions and facilitates national strategies for effective use of science and technology to reduce disasters. The SDR provides coordination for science and technology activities in support of disaster risk reduction and provides advice to the White House Office of Science and Technology Policy. The SDR also coordinates with non-governmental entities such as the National Research Council's Disasters Roundtable, and interacts with many other organizations at national, state and local levels, as well as international partners.

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