

(海外)・国内) 出張報告書 (学生用)

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学年	D4
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目的	Prince Mahidol Award Conference 2013, A World United Against Infectious Diseases: Cross-sectoral solutions (attended and served as a rapporteur)

活動内容

The PMAC2013 provided a platform to further cross-sectoral collaboration among the human, animal, and environmental sectors to promote the One Health initiative globally. Members of the WHO, FAO, and OIE were all present, as well as government officials, university professors, private enterprises, and researchers at various public and private organizations. A total of 966 members from 73 countries attended the conference, and discussed matters related to prevention of infectious diseases and future pandemics.

Including myself, 300 members attended the field trips, learning about disease control at the local community level. I visited Lop Buri in northern Thailand, and learned about control of *Aedes* spp. mosquitoes in the prevention of Dengue fever. At the community level, village members took care to remove all bodies of water where mosquitoes could hatch. This involved adding guppies to all water pots, weekly inspection of houses by volunteers for stagnant water, and removal of all bottles, cans, and tires by elementary school children for recycling. At the provincial level, a unique digital network was set up for alarming officials of Dengue fever cases diagnosed by medical personnel. Once a diagnosis was made, a warning could be rapidly sent to local officials of the area, so that pin-point searches for and extermination of mosquitoes could take place.

I acted as rapporteur for the conference session 2.2, Ecosystems, Wildlife and One Health, recording the proceedings of the panel discussion, summarizing the key points of the session into three slides, and writing a 1,000 word summary of

the important points of the discussion. The slides and summaries from all sessions were then assimilated by the lead rapporteur team, and presented on the final day of the conference by Dr. Jonna Mazet of the University of California-Davis. The summary that I provided is the following.

Title Ecosystems, Wildlife and One Health

Summary:

Although One Health was a concept originally brought forward by ecologists, the concept has been embraced mainly by the medical field--particularly by those involved in zoonotic disease research and management. Consequently, ecologists, wildlife biologists, and environmental scientists have been poorly integrated into the promotion of the One Health initiative. In fact, two of our six distinguished panelists claimed to have been entirely unaware of the term "One Health" prior to the organization of this conference. However, the ideas and goals included in the One Health concept have been long-standing concerns for ecologists, and the, "repackaging with a new label," (Dr. David Coates, Secretariat of the Convention on Biological Diversity, Canada) that is the "One Health" term does not change the original goals of ecologists and environmental scientists in preserving healthy natural ecosystems.

The most important resources to humans are breathable air, fresh water, and food. All three of these resources are services that are provided by ecosystems, and although food is now mainly produced by agriculture, fresh water, which is a product of natural water cycling, is absolutely essential to agriculture. Furthermore, natural ecosystems are complex, and involve not only water cycling and nutrient cycling, but also a broad array of flora and fauna. Healthy ecosystems provide a wide range of services to humans other than the said resources, and they are also intrinsically more resilient to insults such as natural disasters. The number one cause of loss of biodiversity, and therefore the loss of healthy, natural ecosystems is fragmentation and human development. Along with human development and expansion also comes the introduction of non-native species, which also are a major cause of species diversity loss.

The failure to appropriately integrate ecologists and environmental scientists into the One Health concept has probably been due to lack of communication and a difference in values and priorities among the leaders of each field. As Dr. Scott Newman (FAO) said, placing the majority of funds for rabies control into dog vaccination would be a cost-effective preventative measure, but many medical responders feel that the funds are needed for human prophylaxis. An audience member also commented that sharing of data and sample collection is also not coordinated, and has resulted in enormous waste of valuable samples from both the medical and the ecology fields. Dr. William Karesh (EcoHealth Alliance) believes this is a problem at the

leader and organizational levels, because the people on the ground and in the field understand the need for and value of cooperation, and simply do whatever is necessary.

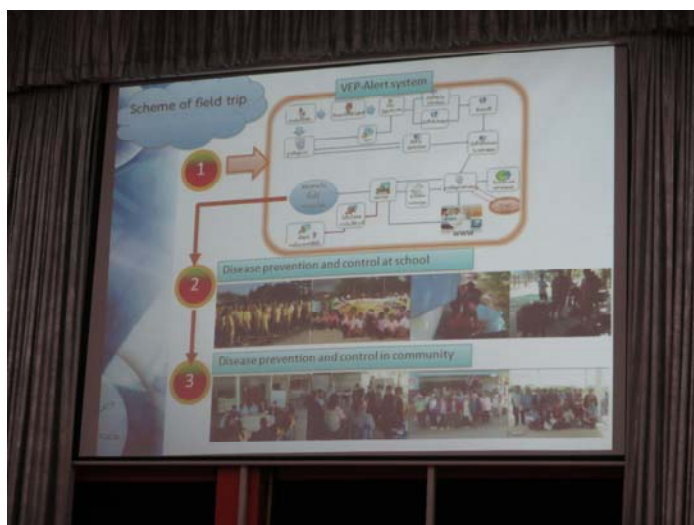
Clearly the greatest threat to natural ecosystems and biodiversity is habitat loss due to human expansion and development. Most of the problems that humans face, such as air pollution, contamination and loss of water sources, emerging infectious diseases, etc., are merely the symptoms of the greater problem that is human expansion and short-term resource consumption. The One Health approach must address, therefore, these “large picture” issues, in part, by requiring environmental assessments using a One Health approach for all development projects.

In order to make changes, people need an entirely new mindset. The current culture of consumption needs to be curbed. Children should be educated about the importance of maintaining One Health for the world by including ecosystem health. Developing countries should be encouraged not to emulate the industrial nature of developed nations, but to find alternative, sustainable approaches to better lives. In order to make these happen, we as scientists need to provide the data and models to show that the One Health approach is cost-effective and feasible, and we need to bring to the tables of politicians, not ideals and scientific data, but practical solutions to problems.

“There is only one health to begin with, and to break apart human health and animal health and ecosystem health is a very anthropogenic way of thinking.” Dr. William Karesh



Acting as rapporteur.



Field trip--topics covered.



Dennis Carroll acting as moderator for plenary session.