

Towards a new type of science for successfully addressing the global challenges for humankind

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South-East Asia is a region blessed with an amazing nature and talented people. This makes it an ideal environment for Biomimetics research that is indeed facing a dual challenge: it has to learn from the natural environment and the requirements of people alike. The art is to build a bridge between the clever solutions jungle life has developed over millions of years in its struggle for survival and the problems human engineers are facing in their struggle to develop new tools and applications. Here nature proves to be the greatest teacher. Frequent scientific expeditions to the deep rainforest teach about sustainability, about elaborate materials, structures and processes. This is supported by the open mindedness, the positive attitude and the respect of people in South-East Asia towards nature that are a solid base for a more profound understanding of nature's creativity.

Most scientists of our time are still specialists; they are very good in a tiny little area of their field. With the huge quantitative output of the science industry and interdependencies getting increasingly complex, a new type of scientist is needed to connect, evaluate and ultimately understand the complex issues modern science and technology are facing. To progress further, Biomimetics requires interdisciplinary scientists, with a good general understanding of large-scale connections and structures, developments and trends, concepts and ideas. The successful addressing of global challenges needs people who can deal with interconnectedness and interdependence, across fields, across levels of education, across cultures.

Albert Einstein once said "We can't solve problems by using the same kind of thinking we used when we created them." Climate change, the increasing rich-



poor gap, health issues arising from increasingly resistant microorganisms, transnational organized crime and global ethics are just some examples of global challenges that require a more comprehensive approach and that cannot be addressed by individual researchers who publish their valuable findings in isolated journals.

The inherent wisdom in South-East Asia has an amazing potential; a successful combination with the “Western” approach to science might yield scientists and teachers who will focus on understanding, not on learning by heart. They will inspire their students to become more creative, and therefore provide them with the best basis to become the motors of change towards a better future for humanity.

The interaction between separate fields and mindsets has the potential to be mutually beneficial but will also need lots of efforts to overcome cultures differences and communication problems. The outcome of this process could be a new type of scientist who will have a deep understanding of the world around us, who has the resourcefulness to find new ways in arts, science and engineering and who develops a different approach to communicate the wonders of science and nature – contributing to a tree of knowledge that is accessible for all.

