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Toshio Yamagata graduated from Geophysics Institute of School of Science, the University of Tokyo in 1971. His professional career includes Associate Professor of Kyushu University, Professor and Dean of School of Science, the University of Tokyo. After retiring from the University of Tokyo in 2012, he served Japan Agency of Marine-Earth Science and Technology (JAMSTEC) as Director of Application Laboratory. He is currently affiliated with the same Laboratory of JAMSTEC as Project Principal Scientist, Kyoto University as Project Professor, Ocean Policy Research Institute of the Sasakawa Peace Foundation as Special Researcher, and Japan Marine Science Foundation as President. He is known as a discoverer of the Indian Ocean Dipole Mode influencing the world climate and has received many honors for his achievements in ocean and climate dynamics. Those are fellows of American Geophysical Union (AGU), American Meteorological Society (AMS), and Japan Geoscience Union (JpGU). He is elected as honorary member of the Oceanographic Society of Japan, foreign associate member of l'Academie de Marine of France and honorary professor/foreign academician of Nanjing University for Information Science and Technology (NUIST) of China. He has received many awards, particularly the Sverdrup Gold Medal from the AMS, the Prince Albert I Gold Medal from the International Association for the Physical Sciences of the Oceans (IAPSO), and the Medal with Purple Ribbon from the Emperor of Japan in 2004.

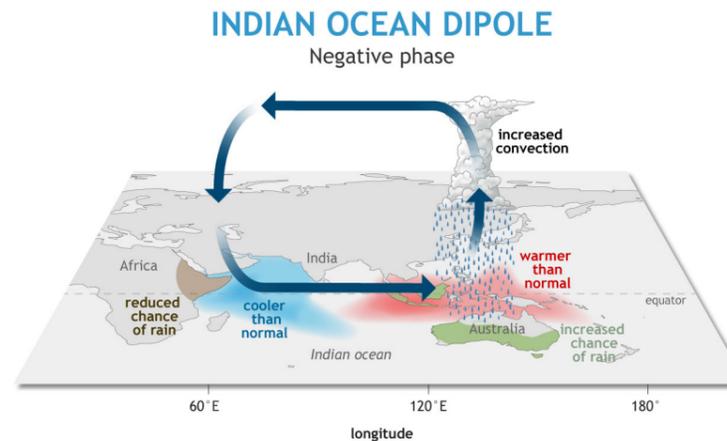


My hometown Utsunomiya City is located at about 100 kilometers north of Tokyo, and the strong winter winds, which we call Nantai-oroshi, would blow down in winter from the mountainous areas. The dust from the fields was so strong we could not open our eyes. In summer, thunderstorms came down with terrifying lightning bolts and heavy rain showers from the mountains fell in the afternoons. In the spring, however, beautiful flowers bloomed in the garden, and the arrival of fall was wonderful, as it brought the magnificent foliage of deciduous trees as well as the taste of fall with chestnuts and mushrooms. My parents were from farming families, so they loved field work and gardening very much. I naturally became interested in the weather and changing seasons.

At the University of Tokyo, I majored in geophysics as a field where research can be done while enjoying nature. I chose the field of geophysical fluid dynamics (GFD), which treats fluid phenomena that occur on a rotating, stratified planet. My work as a young researcher at that time includes the theory that explains why anticyclonic vortices keep longevity in the ocean and Jupiter.

In 1976, the Woods Hole Oceanographic Institution approved me to join the GFD summer program for three months as a fellow. This was an amazing opportunity to meet many giants in the field. In particular, the main lecturer was Dr. Dick Lindzen of Harvard University. I was impressed by his simple Albedo-feedback model for climate. I didn't understand it well at the time, but I think it may have shaped my deep psychology in becoming a climate researcher.

After turning 30, I gradually wanted to deal with real phenomena that occur in the atmosphere and the ocean to understand the meaning of the seasons, I daringly sent a letter with my articles to Dr. Kirk Bryan of Geophysical Fluid Dynamics Laboratory at Princeton University, and asked for the possibility of staying there a couple of years as a visiting scholar. He immediately accepted me. There I met Dr. George Philander, and decided to join him and delve deeper into the study of tropical climate variability like El Niño. This set the course of my life in climate science; I was in my early 30s.



Indian Ocean Dipole, Negative Phase; NOAA Climate.gov

In March, 2003, Mr. Hiroshi Terashima (Executive Director of Ocean Policy Research Foundation at the time) invited me to attend the event of the 3rd Water World Water Forum held in Kyoto. The session entitled "Dialogue between the Ocean and the Fresh Water" was organized by Ms. Masako Otsuka (Director of the International Ocean Institute, Japan at the time). I forgot the exact title of my talk but I think it must have been related to societal impacts of our newly discovered climate mode, Indian Ocean Dipole. After being introduced by them, I started to participate in the UNITAR's Sea and Human Security series.

My lab collaborator Dr. Swadhin Behera (currently Director of Application Lab, JAMSTEC) also joined the activities in Hiroshima. Since I had grown up in the northern part of the Kanto region, I was not very familiar with Hiroshima. However, since then, Hiroshima has become very close.



Professor Yamagata at UNITAR Sea and Human Security Series in 2007

Every time I participated in a UNITAR seminar as a lecturer, I was impressed by the rich international activities led by Dr. Nassrine Azimi (Director of UNITAR at the time) for peaceful sustainability of our world. I learned many things, even our country's history after the WWII. One discovery was about Ms. Beate Sirota Gordon's wonderful contribution to the draft Constitution of Japan; she incorporated the spirit of advanced gender equality.

During our various exchanges, Nassrine Azimi also informed me of the Green Legacy Hiroshima Initiative. Since we had started our Application Lab at Yokohama Campus of JAMSTEC, we decided to grow seeds from trees that survived the atomic bombing of Hiroshima in hopes of our laboratory aiming to contribute to the formation of a sustainable society through climate research and the long-term growth of trees aiming for a world without nuclear weapons.

The trees are growing well, and have already exceeded my height. We would like to do our best with friends all over the world to achieve the SDGs. Coronaviruses can strengthen but not weaken ties with people around the world.



May 29, 2012 on JAMSTEC Yokohama Campus;



Utsunomiya City in winter, located 100 kilometers north of Tokyo