

## **For the understanding of the “Seamless Earth”**

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Nearly a half of this SELIS (Sun-Earth-Life Interactive System) COE program has finished in this fiscal year. Great success has been being achieved in research as well as education through efforts of related faculty members, researchers and graduate students. Many cross-cutting seminars, science workshops, the COE lecture course “Chikyu-gaku” and more than ten international and domestic symposia were held within this school year. Particularly, the “Manabe Symposium” held in November for a whole week achieved a great success, for understanding the global-scale climate changes and variability including the “global warming issue” and “the glacial cycle issue”. As for scientific results, we could publish many excellent papers in many journals, including an article paper in Nature by Dr. Seki (Solar and Terrestrial Environmental Laboratory) of our program.

Now, in the midst of the ongoing COE program, I would like to emphasize the fundamental essence of spirit of our program, that is, the understanding of the “seamless Earth”. In the 20<sup>th</sup> century, science, particularly, the physics, chemistry and biology fields, progressed through segmentalization and individualization of nature. The earth science also followed the same way, by segmentalizing processes, regional processes on the earth, but this has resulted in blocking our true understanding of the whole earth, or our planet Earth. Now, I believe that this “seamless Earth” approach is really important for understanding our future, including solving the global change issues.

The goal of our COE program is really grand and great. The interim evaluation of the COE programs by the JSPS evaluation committee was held in May of 2006. our program got the level “b”, which means the second best, but I believe that this implies that our goal was so high that to achieve it is also very tough and hard. In fact, the comments of the committee for our program was very positive and constructive.

Of course, further progress is really needed in our program, not only in scientific research but also education for young generation, including graduate student, and even undergraduate students. In these days, it is said that many young students do not want to study natural sciences in Japan. We need to understand why? On the other hand, integration of natural sciences and humanities or “bunri-yugo” is strongly appreciated in environmental studies and education. It is really very difficult, since both current sciences and humanities are so much segmentalized as I have mentioned. I do believe that the spirit of our COE program, including the concept of the “seamless Earth” could greatly contribute to these issues.