

**Parallel Session D: Domain/cross-domain meetings,  
Convection permitting models**  
**D5: Introduction and application of ESGF in CORDEX-EA domain**

**Establishment of ESGF data node in the APEC Climate Center for providing  
CORDEX-EA data**

*Jeongmin Han, APEC Climate Center, South Korea*

*Choi Jaewon, Jeongmin Han, APEC Climate Center, South Korea*

Climate-related study is one of the most overwhelming field which affected by the Big Data era, as climate data continues to grow exponentially. Especially, it is very challenging to manage such ever-increasing data sets, including model simulations, observations, reanalysis products and satellite data.

The Earth System Grid Federation(ESGF), which is multi-agency, international collaboration of people and institutions working together, had been launched and overcome unprecedented limitations as mentioned previously. The APEC Climate Center was established to provide customized climate information for APEC region and is giving efforts to manage a data node for providing CORDEX-EA data more systematically after being certified from the ESGF which is composed of four types of node ; Data node, Index node, Identity Provider node and Compute node. In order to ensure a stable operation and satisfy requirements of the ESGF Tier-2 nodes, the date node has been equipped with service system of high availability, early stage service storage as well as backup storage. In addition, various security equipment has been associated with the system to provide more reliable service.

In conclusion, it is essential to collect data through several nations in order to provide more rich CORDEX-EA data to users, policy makers or stakeholders. Additionally, an index node of the ESGF representing the Asia region should be considered to improve metadata transfer environment between data and index node, and to promote mutual technical exchanges.

**Keywords:** CORDEX-EA, ESGF, data node, APCC