

SSPs

Shinichiro Fujimori, Toshihiko Masui, Kiyoshi Takahashi, Kainuma Mikiko, Yasuaki Hijioka and Naota Hanasaki

National Institute for Environmental Studies

SSPs (Shared Socio-economic Pathway) are one of the outcomes from new scenario process started around 2007. It will be shared by IAM (Integrated Assessment Modeling), Impact, Adaptation and Vulnerability (IAV) and CM (Climate Modeling). SSPs are sort of second generation of SRES which was one of the most world widely applied scenarios and contributed enormously climate change studies. SSPs provide the state of human society and that should incorporate drivers of emissions. As well as past numbers of scenario studies, SSPs consist of quantitative and qualitative information.

SRES captured the future possible worlds by two dimensions which indicate the global-regional and the development-environmental orientation. On the other hand, SSPs are conceived of as being defined along two axes as socio-economic challenges to mitigation and adaptations. Mitigation challenges are defined as two components: one is factors that tend to lead high reference emissions in the absence of climate policy, secondly factors that would tend to reduce the inherent mitigative capacity. Socio-economic challenges to adaptation are defined as three components. Firstly, exposure to climate change hazards, secondly factors sensitivities, secondly factors that affect the sensitivity of socio-economic or ecological systems to climate change and finally, factors adaptive capacity of systems to climate change. The SSPs will have scenario family as well as SRES as illustrated below.

Although SSPs themselves are baseline scenarios, the scenario including climate policy will be prepared. The strength of climate policy would be according to 4 RCPs. Then, 5 SSPs and 4 RCP forcing levels are combined and there will be a scenario matrix. It will be called as SPA (Shared Policy Assumptions).

AIM has been contributed to this scenario development and done first trial. In the presentation, the preliminary results will be shown.

