

For too long, we humans dared to control and claim the fate of the earth and all that live in it. The uncensored path to obtaining modernization and development, driven by the perceived human needs and desires, has been inconsiderate of all other living creatures on earth. Fortunately, we are becoming more aware of the impact vast destruction of nature has on our lives and future generations, and, as a result, we are beginning to witness and engage in systematic efforts worldwide through global initiatives such as the United Nations (UN) Sustainable Development Goals (SDG) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

*Potential of Scenarios and Models.* Today, in a globalized and rapidly developing world, it is immensely important to understand multi-dimensional and cross-regional and scale impacts of policy interventions, alternative resource management, science and technology, public education and behavioral change that contribute positively to biodiversity conservation and restoration. With the launch of UN SDG in 2015, the global community has been working together to achieve sustainable development by promoting cross-sectoral collaboration with nature conservation as a universal element. The UN Convention on Biological Diversity (CBD) is currently developing a new strategic framework for post-2020, which is expected to synergize with the UN SDG, IPBES and other biodiversity relevant conventions for optimal results. One of the greatest potentials of IPBES in envisaged inter-disciplinary and cross-sectoral collaborations of UN SDG and UN CBD is the science and evidence integration for effective biodiversity conservation. Here, scenarios and models can not only inform and support the implementation of these ambitious global goals but also be the channels for stakeholder engagement (scenarios) and tools for monitoring the progress and forecasting the trajectories towards the new goals (observed and modeled results). However, as found in the IPBES methodological assessment published in 2016, the use of scenarios and models has had limited success in biodiversity, unlike some other fields, partly due to the complexity and uncertainties associated with biodiversity and its impact on societies, diversity of information as well as cross-sectoral collaboration required for decisions and implementations, and lack of harmonized and consistent data to accurately understand the status and trends of biodiversity change.

*Past Research and Practical Experiences.* In 2006, I began my career in Washington, D.C. after obtaining a bachelor's degree in anthropology and sociology and a master's degree in international education policy. Until 2012, I gained a wide range of experiences in projection models and data analyses for policy and financial planning in the social sector in partnerships with national development agencies, international organizations, and private foundations. During this time, I conducted policy-oriented research from local to global scale, measuring countries' progress towards the UN Education for All (EFA) goals and Millennium Development Goals (MDG) and forecasting resource and financial needs in the education sector, as well as human capital into the laborforce, based on different scenarios. For this, multiple sources of information were surveyed and synthesized including international databases, country sector plans, research publications, and administrative and household survey datasets. My work also involved developing visualization tools with time-series and disaggregated data (past and present) and projections (future) to support intervention decisions and resource allocations and writing technical and analytical reports and briefs on modeling methods and results tailored to different uses. Understanding the importance, I dedicated time to information presentation, capacity building, publicity and communication for the application and utilization of available resources.

From 2012 to 2014, I worked as a research consultant and practitioner, gaining more hands-on field experience in organizational reform, community development, stakeholder engagement, and project coordination with private foundations, government institutions, and international organizations. In 2012, as a consultant to UNESCO's *Global Monitoring Report*, I learned the critical importance of the system-wide, cross-sectoral coordination in national development through witnessing the skills mismatch between education and the laborforce in many countries around the world. In 2013, I was trained in community and consensus building, integrative and interdisciplinary education, and nature-centered, experience-based learning at an alternative school in a rural village of Korea. During this time, I also supported the organizational reform of a long-standing foundation that preserves a near-extinction survived Korean canine breed *Sapsaree* where the government funding mechanism requires continued engagement and buy-in of local communities and government agencies across the regional scale. Then coming back to research in 2014, I conducted case studies on exemplar e-Census systems around the globe to improve the e-questionnaire of *Korean Census 2015* at the national statistics office. Here, I gained insights into the processes required to improve national statistical data and ways to promote public behavioral change by disseminating statistical information.

*Engagement with IPBES.* In 2015, I joined IPBES as a technical expert at the Korean National Institute of Ecology to support the operation of IPBES Knowledge and Data Task Force. In this position, I coordinated the Indicators Task Group to facilitate review selection and resource provision of a standardized set of indicators for the IPBES assessments. This task required expert consultation, scientific community engagement, institutional collaboration, resource mobilization as well as data pre-processing and visualization. Understanding the close connectedness in the mandates of the Knowledge and Data and Scenarios and Models deliverables of IPBES, I attentively followed through the activities of the Scenarios and Models Expert Group since mid-2015 and promoted cross-deliverable collaboration. Since May 2017, I have been working as a researcher at iDiv German Centre for Integrative Biodiversity Research pursuing a Ph.D. on the topic of IPBES Nature Futures scenarios while engaging in the Group on Earth Observations Biodiversity Observation Network (GEO BON) as a member of the Secretariat and the Implementation Committee. During this time, I delved into three streams of work on IPBES scenarios: 1) stakeholder survey analysis on the uses and needs of scenarios and models, 2) visioning the future of nature through stakeholder consultations and analyses, 3) model intercomparison and synthesis on the past, present and future trends of biodiversity and ecosystem services mobilizing scientific communities. Working with scientists and partner institutes of the Knowledge and Data and Scenarios and Models expert groups and their deliverables in the last 4 years, I became familiarized with the landscape of biodiversity data and informatics, a diverse suite of scenarios development and modeling methods, institutions and initiatives interweaving biodiversity modeling with scenarios-based forecasting, and mechanisms of science policy interfaces in which biodiversity conservation can be optimized.

*Nature Futures Scenarios and Potential Contributions.* IPBES aims to assess the status and trends of biodiversity and its impact on human societies with best available information and identify critical knowledge and data gaps to catalyze the generation of new knowledge. To establish the processes and mechanisms with greater buy-in and utilization of results, the Nature Futures scenarios is envisaged to integrate diverse methodological approaches, including stakeholder engagement, expert consultation, quantitative modeling, and qualitative analysis, incorporating multiple systems of knowledge and indigenous and local traditions. To develop such integrative scenarios with positive outlooks on nature and realizable pathways, review and synthesis of existing evidence on the impact of biodiversity on human societies that cover all elements of the IPBES conceptual framework, and models that can forecast different trajectories into the future would be useful. During my Ph.D., I have begun and will 1) review the use of scenarios in conservation to identify mechanisms to improve their potential, 2) analyze impacts of conservation policies on biodiversity change across regional scale using indicators, and 3) synthesize evidence of interventions that have shown to be effective in biodiversity conservation.

After several years in international development and biodiversity conservation, I became equipped to map the landscape of global developments and synthesize diverse forms of knowledge to identify emerging issues and potential approaches. I have become familiarized and networked with the IPBES platform and broader science-policy-practice interfaces of sustainable development. With resources available in IPBES – extensive syntheses completed by the scientists, a global suite of policy support tools, individuals and institutes in relevant positions with expertise – it is a privilege to formally take part in the IPBES scenarios development. With guidance and support from the experts and opportunities to participate in training and mentorship, I am thrilled to make further scientific contributions to the development of consensus-based, stakeholder engaged, scientifically solid, and policy effective scenarios for the eventual realization of Nature Futures.

Upon few centuries of uncensored industrialization and development, we are at an opportune era of human history in addressing the challenges posed by the conflicting interest of economic development and nature conservation through multi-scale (international conventions and initiatives, national governments, local communities, citizens) coordination approaches and public education on the importance of and ways to sustain biodiversity and healthy ecosystems for the wellbeing of human societies now and into the future. The IPBES science-policy interface has a unique and valuable set of knowledge and experiences to offer to sustainable development, and it will continue to do so with optimal success when the potential of scenarios and models is realized through decision making and behavioral change. With collective and persistent efforts such as the UN SDG, UN CBD, and IPBES, I believe strongly that the most clever species ever to have lived on earth will be able to prove its capacity to restore its only home planet Earth.