WFC 2021 Side Event

Korea Forest Promotion Institute

Expanding sustainable forest product management and utilization through forest big data

Speaker

Jun SungKi

- KoFPI
- General Manager of Intelligence Information Division

Moderator

- TBD

STRATEGY 1

Big Data **Production**

Forest big data production/processing	• Building a "data dam" by expanding data collection in public–private sectors • Establishment of major forestry big data by fusion with other relevant industry fields
Big data standardization	• Converting forestry data to a common format to enable data scientists to process and analyze with various data • Indexing metadata in a data dictionary, based on national, KFS, and NIA standards
Big data quality management	• Building big data quality management framework to address the quality at all stages of big data life cycle • Personal, pseudonymous data is managed to expand the use of forest–personal data

STRATEGY 2

Big Data **Ecosystem**

Training forest data experts	• Education programs such as basic data theory, data application, advanced training practices were conducted to nurture forest data experts • From 2019 to present, more than 100 trainees have completed the course annually
Relevant agencies networking	• Establishing "Big–Square Union" with Traffic, Environment, Agrofood, Distribution/Consumption fields to vitalize forestry data and data markets • Participating public–private data council to expand data platform utilization
Forest big data exchange	• Running "Forest Big Data Exchange" website to provide about 700 data products, data visualization service, and data analysis service • From 2019 to present, about 4,000 users have downloaded about 20,000 data

STRATEGY 3

Big Data **Analytics and Utilization**

Best Practice 1	• Mobile signal analysis for selection of base station in the forest • Automatic identification of dead trees by using aerial photographs based on big data and AI technology
Best Practice 2	• Proving the health improvement effect of forest activities through combining "forest activity" and "diagnosis/medical" pseudonym data • Providing information of residential environment by developing Forest Nearest Index
Future Tasks	• Contributing carbon neutrality by constructing forest data such as carbon absorption, carbon accumulation, and local carbon emission • Identification and spread prediction of pine wilt disease by artificial intelligence