

Koli Forum

Koli Theses 2021

The seventh international Koli Forum event, titled “Forests for Future Generations”, was organized on October 13-14, 2021. During the event, the participants formulated the Koli Theses as follows.

The role and engagement of the next generation in the future bioeconomy need to be highlighted.

Future and young professionals must be included in the decision-making processes to ensure that their voices are heard. It is important to also communicate and raise awareness regarding the various education and career opportunities within the bioeconomy sector.

The role of forests in climate change mitigation and adaptation needs to be globally acknowledged.

Forests interact with atmosphere, land, aquatic systems, and the hydrological cycle. Forests minimize the impacts of extreme weather conditions and balance the local climatic conditions even in cities. Therefore, taking care of our forests is crucial. The role of forests in climate change mitigation and adaptation must be well acknowledged and developed in our society, and nature-based solutions and best forest management practices need to be embraced.

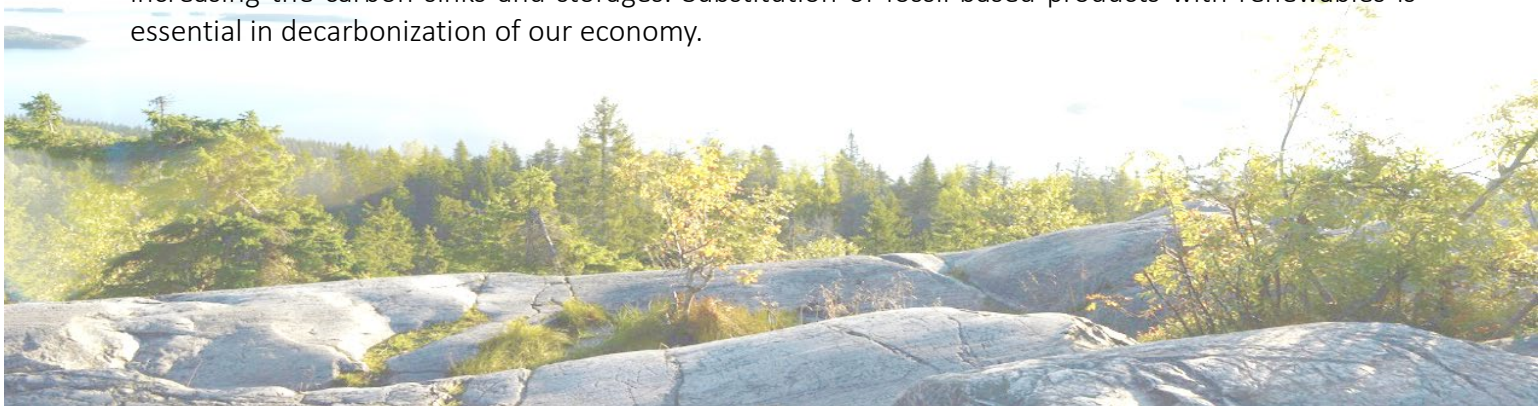
Forest loss must end. To secure the future of our planet and life on Earth, it is crucial to reverse forest loss into forest growth. We must, by applying knowledge on the future climatological conditions, boost greening of all suitable land areas with correct choice of tree species and best forest management practices for different conditions.

Forest, including both the trees and the soils, are important sinks and storages of carbon as well as sources for rich biodiversity and provide other ecosystem values. Forest must be managed to secure forest health to provide and preserve these ecosystem values and enable socio-economic growth and wellbeing.

Forest management must be adapted to future weather and climate induced risks. Correct choice of species, development of novel technologies and management approaches are urgently needed as the forests planted now and decades ago already grow in new climatic zones with heat stress, highly varying extremely dry and wet conditions, and severe weather.

Transition towards more sustainable economy and decarbonization is needed.

We need to utilize the current momentum to rapidly transform from fossil-based economy towards more sustainable and climate friendly economy. Both carbon sinks and carbon storages are needed more than ever. Growing, healthy forests, and long-lived wood-based products are key elements for increasing the carbon sinks and storages. Substitution of fossil-based products with renewables is essential in decarbonization of our economy.



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Sustainable market-based and public risk funding and investments are needed for the commercialization and increased production of new, innovative and sustainable wood-based products.

Public funding and investments are needed for R&D that aims to develop these new and sustainable wood-based products or production technologies. Moreover, public funding is required for education and the expansion of know-how regarding wood-based products.

Quality and accessibility of forest information needs to be improved.

There is potential for radical improvement in the adaptation of advanced digital technologies and forest monitoring solutions. Advanced technologies need to be utilized in order to improve the efficiency of policy measures linked to the challenging topics such as biodiversity and climate. Forest resources need to be monitored in a reliable and transparent way to successfully tackle these challenges. Multiple data sources need to be utilized to improve the accuracy of information. To enable this, public and private systems should be standardized to allow comparing and combining information from various sources and applications.

Decisions should always be based on scientifically proven, measurable, quantified, accurate and site-specific facts. Nevertheless, in the increasingly complex decision-making environment, more advanced techniques and mechanisms are needed to utilize uncertain and non-verified information as well. Empowering professionals to make educated decisions is crucial. Moreover, more data regarding the impacts of forestry and forest operations is needed.

Data accessibility and openness need to be improved. Attractive, understandable and visual data can improve the public image of forests and their utilization and increase the acceptability and credibility of forest use. Visualization of forest data and gamification could be important tools for engaging the younger generations, increasing awareness in an enjoyable and motivational way, and supporting decision making.

Bio-based products bring new opportunities and benefits.

Bio-based products (for example in the fields of construction, packaging, and textiles) can bring significant benefits on climate, economy, employment, and well-being. Bio-based raw materials, like cellulose, have unique properties over other materials and those properties should be exploited to the fullest. Targeting for impacts on all aspects of sustainability when developing new products will ensure maximal benefit and buy-in for the bioeconomy. The raw materials for bio-based products must come from sustainable sources.

In order to reap the full potential and replace as much fossil carbon as possible with our limited biomass resources, new products should embrace the principles of circularity. Recycling systems need to be efficient, and opportunities for extending the lifetime and reusability of products should be sought for.

