

Session: Value Chain in Natural Resource Sector: How to Deal with Uncertainty and Multipurpose Uses?

Typical natural resource value chains such as forestry, agriculture, fisheries, and mining range from raw material sources through primary and secondary processing facilities, distributions channels to the markets (end customers). Uncertainty is a key issue across the value chain since it is inherent to nature itself and to the decision making context where uncertainty can rise due to social, economic, environmental or technological reasons. On the other hand, many stakeholders are involved in these value chains such as governments, industries, and communities with conflicting objectives and multipurpose uses for resources. Managers must deal with increasing environmental regulations and concerns and social impact of their decisions processes.

Optimizing value chain within such context becomes a challenging and complex task that requires new approaches and techniques. We invite researchers and practitioners to submit their recent work that address planning issues under uncertainty and multipurpose uses of natural resources. Researches dealing with stochastic programming, robust optimization, and multiobjective optimization in natural resource area including cases studies are welcome.

Below are the main topics (in the conference's web site) that are related to the session we have proposed:

1. Supply chain design and performance evaluation
2. Logistics, transportation, and distribution systems
3. Decision analysis and decision support systems

Here are some pertinent keywords for the session:

- Value chain optimization,
- Stochastic programming,
- Robust optimization,
- Uncertainty,
- Natural resources (forestry, mining, agriculture, and fisheries), and
- Multipurpose.

Finally, regarding the area of development: applied as well as fundamental contributions are welcome. Case studies within industry, governments and communities are very welcome to this session too.

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