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Altri autori (Persone)	MildorfTomas HabyarimanaEphrem BerreArne J FernandesJose A Zinke-WehlmannChristian
Disciplina	634.9 577.3
Soggetti	Forests and forestry Agriculture - Economic aspects Big data Power resources Environmental economics Forestry Agricultural Economics Big Data Resource and Environmental Economics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Part I – Technological Foundation: Big Data Technologies for BioIndustries: Big Data Technologies in DataBio -- Standards and EO data platforms -- Data Types: Sensor Data -- Remote sensing -- Crowdsourced Data -- Genomics Data -- Data Integration and Modelling: Linked Data and Metadata -- Linked Data usages in Databio -- Data Pipelines: Modeling and Evaluation of models -- Analytics and

visualization: Data Analytics and Machine Learning -- Real-time Data Processing -- Privacy Preserving Analytics, Processing and Data Management -- Data Visualisation -- Part II – Applications in Agriculture: Introduction Smart Agriculture -- Smart farming for sustainable agricultural production -- Genomics Biomass pilots -- Yield Prediction in Sorghum (*Sorghum bicolor* (L.) Moench) and Cultivated Potato (*Solanum tuberosum* L.) -- Delineation of management zones using satellite imageries -- Farm Weather Insurance Assessment -- Copernicus Data and CAP Subsidies Control -- Future vision, Summary and Outlook -- Part III Applications in Forestry: Introduction – state of the art of technology and market potential for Big Data in forestry -- Finnish Forest Data based Metsään.fi-services -- Forest variable estimation and change monitoring solutions based on remote sensing Big Data -- Monitoring Forest Health: Big Data applied to diseases and plagues control -- Forest damage monitoring for the bark beetle -- Conclusions and Outlook - Summary of Big Data in forestry -- Part IV Applications in Fishery: The potential of Big data for improving pelagic fisheries sustainability -- Tuna fisheries fuel consumption reduction and safer operations -- Sustainable and added value small pelagic fisheries pilots -- Conclusion and future vision -- Part V – Summary and Outlook: Summary of experiences of the potential and Exploitation of Big Data and AI in Bioeconomy -- Glossary - Terminology, acronyms, abbreviations.

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#### Sommario/riassunto

This edited open access book presents the comprehensive outcome of The European DataBio Project, which examined new data-driven methods to shape a bioeconomy. These methods are used to develop new and sustainable ways to use forest, farm and fishery resources. As a European initiative, the goal is to use these new findings to support decision-makers and producers – meaning farmers, land and forest owners and fishermen. With their 27 pilot projects from 17 countries, the authors examine important sectors and highlight examples where modern data-driven methods were used to increase sustainability. How can farmers, foresters or fishermen use these insights in their daily lives? The authors answer this and other questions for our readers. The first four parts of this book give an overview of the big data technologies relevant for optimal raw material gathering. The next three parts put these technologies into perspective, by showing useable applications from farming, forestry and fishery. The final part of this book gives a summary and a view on the future. With its broad outlook and variety of topics, this book is an enrichment for students and scientists in bioeconomy, biodiversity and renewable resources.

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