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Sustainable Management of Invasive Pests in Africa  
Managing Wildlife in a Changing World  
Handbook of Phytonutrients in Indigenous Fruits and Vegetables  
ICIE 2015 3rd International Conference on Innovation and Entrepreneurship  
Recent Developments in Sustainable Infrastructure (ICRDSI-2020)—Structure and Construction Management  
Edible Insects in Sustainable Food Systems  
The 21st Century Public Manager  
Innovation for Development in Africa  
Wetland Science  
Sustainable Production and Consumption Systems  
Normative Spaces and Legal Dynamics in Africa  
Handbook of Research on Emerging Trends and Technologies in Library and Information Science  
Vision Infinity for Food Security  
Measuring Impacts and Enabling Investments in Energy-Smart Agrifood Chains  
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Exploring Consensual Leadership in Higher Education explores the idea that the nature of academic work is both creative and consensual. Higher education relationships, whether between managers, staff, learners or the public sphere, are at their most effective when rooted in partnership, teamwork, collaboration and collegiality. The term 'consensual' is used because it situates new leadership models as structures based on consent, reflecting tacit traditions in education alongside ideas of leadership in other settings, including emerging industries. The aim is to celebrate achievements, encourage engagement opportunities, and add to the problem-solving knowledge-base. However, issues and problems in participatory engagement are also considered, and the borderlines between consensus (collective assent and agreement) and 'dissensus' (widespread, serious, disagreement) are examined critically. The contributors offer a range of alternative perspectives on leadership, reflecting the diverse forms and ways of working practised in different national higher educational contexts and cultural settings. The volume incorporates a variety of approaches and points of view, including stories of leadership and change, innovation projects and case studies, key

interviews and insights, and collective team writing. Invasive species, generally, affect economically important crops, thus affecting the livelihoods of millions of people along crop value chains. Typically, invasive species have high migratory capabilities and, because of plant material exchanges made during trade, they cannot be contained by one country. Usually, African countries react after a pest has invaded and established itself in the country, making the cost of mitigating the pest even more expensive. This book presents a pan-African view of the impacts of invasive insect pests on agriculture and of how invasive species impact on productivity in Africa. It not only describes their importance, but also presents a diversity of research findings in the field, ranging from the use of early warning and monitoring systems for quarantine purposes, agricultural extension, all the way to control strategies. The IPM arsenal presented in this book includes the use of botanical bioactive compounds, semiochemicals, resistant varieties, biological control agents such as entomopathogens, endophytes, predators, and natural enemies. Aspects of technology transfer strategies, regional coordination, and farmers' perceptions have not been overlooked, because these affect the adoption of mitigation strategies. The book also presents measures that would help agricultural research services to estimate the damage and take actions for preparedness and readiness to face invasive insect pests. This starts with a basic knowledge

of taxonomy to enable concerned persons to describe the insects and the vast inventory of affected crops. Physiological and ecological aspects of invasive pests are strongly highlighted to strengthen Integrated Pest Management Strategies. The threat of invasive species will remain permanent; therefore, the book encourages knowledge exchange and collaboration between researchers and scientists on the continent, while encouraging the establishment of a platform or a fund for preparedness and rapid response. This book uncovers the many ways in which innovations and innovation system development policies have become crucial to development policy formation across Africa. As new instruments, actors and tools emerge in development cooperation, the role of innovation in the societal development of developing countries needs to be addressed fully. This book delves into subjects as diverse as the changing development policies between the Global North and South, the role of innovation in international aid and development policies, the role of public, private and non-governmental sectors, universities and other development actors, and the potential for inclusive innovation in local communities. In particular, the book asks who benefits from innovation-focussed development policies, and if and how practical innovation instruments include the global poor. Written in an accessible and engaging style, the book includes a range of discussion questions and further reading

suggestions to suit a range of readers, from students right through to policy makers and practitioners, or anyone else looking for an introduction to innovation policies and development in Africa. The series of Interdisciplinary Conferences on Production, Logistics and Traffic (ICPLT) address the research community as well as practitioners in these fields with special attention to links and interfaces between the three disciplines. The fourth ICPLT in particular deals with technology from intralogistics to automated trucking driving as well as the societal aspects of commercial transport. To contribute to a high-level and beneficial exchange between authorities in politics and municipalities with researchers and practitioners in production and logistics management the ICPLT has asked for contributions from the three disciplines to better understand innovative technologies, best practises and latest results. These contributions have been evaluated and selected based on a double-blind review process to become part of this book. It comprises 21 contributions examining trends and challenges for commercial transport as the essential link for production, logistics and society. Therefore, innovative technologies and strategies are presented and discussed to better understand the interdependencies, conflicts of interest and to develop feasible solutions. Topics · Simulation & Optimization in Production and Logistics · Freight Transport Demand Modelling · Intralogistics & Logistics Facilities ·

Policy & Human Factors · Production & Maintenance · Supply Chain Management · Sustainable Logistics & Energy Target Groups · Representatives of public authorities, municipalities & politics · Actors of sectoral, transport & spatial planning · Actors of production & logistics · Researchers in the disciplines production, logistics, transport & spatial planning This text provides an important overview of the contributions of edible insects to ecological sustainability, livelihoods, nutrition and health, food culture and food systems around the world. While insect farming for both food and feed is rapidly increasing in popularity around the world, the role that wild insect species have played in the lives and societies of millions of people worldwide cannot be ignored. In order to represent this diversity, this work draws upon research conducted in a wide range of geographical locations and features a variety of different insect species. Edible insects in Sustainable Food Systems comprehensively covers the basic principles of entomology and population dynamics; edible insects and culture; nutrition and health; gastronomy; insects as animal feed; factors influencing preferences and acceptability of insects; environmental impacts and conservation; considerations for insect farming and policy and legislation. The book contains practical information for researchers, NGOs and international organizations, decision-makers, entrepreneurs and students. The International Conference on Phytochemistry,

Textile, & Renewable Energy Technologies for Sustainable Development (ICPTRE 2020) was hosted by the World bank funded Africa Centre of Excellence in Phytochemicals, Textile and Renewable Energy (ACEII-PTRE) based at Moi University in conjunction with Donghua University, China and the Sino-Africa International Symposium on Textiles and Apparel (SAISTA). The theme of the conference was Advancing Science, Technology and Innovation for Industrial Growth. The research relationships between universities and industry have enabled the two entities to flourish and, in the past, have been credited for accelerated sustainable development and uplifting of millions out poverty. ICPTRE 2020 therefore provided a platform for academic researchers drawn from across the world to meet key industry professionals and actively share knowledge while advancing the role of research in industrial development, particularly, in the developing nations. The conference also provided exhibitors with an opportunity to interact with professionals and showcase their business, products, technologies and equipment. During the course of the conference, industrial exhibitions, research papers and presentations in the fields of phytochemistry, textiles, renewable energy, industry, science, technology, innovations and much more were presented. This book provides deep insights about women in higher education and their contributions to society. Using Kenya as a case study, it places women in higher

education at the center of the socioeconomic, political and cultural discourse both within and outside the higher education institution. It is notable that even with the progress made, both in Kenya and globally, gender considerations in social, economic, political and cultural spheres is still minimal. In higher education, gender imbalance is still distinct in varied areas such as career advancement, leadership, mentorship, and scholarship opportunities. In society, women's efforts still seem to go unnoticed. The aim of these chapters, therefore, is to share women's research in higher education and in society especially innovative policy and practice concepts, all aimed at contributing to social transformation. This book examines the development of innovative modern methodologies towards augmenting conventional plant breeding for the production of new crop varieties, under the increasingly limiting environmental and cultivation factors, to achieve sustainable agricultural production and enhanced food security. Two volumes of Advances in Plant Breeding Strategies were published in 2015 and 2016, respectively; Volume 1: Breeding, Biotechnology and Molecular Tools and Volume 2: Agronomic, Abiotic and Biotic Stress Traits. This is Volume 3: Fruits, which is focused on advances in breeding strategies for the improvement of individual fruit crops. It consists of 23 chapters grouped into three parts, according to distribution classification of fruit trees: Part I, Temperate Fruits, Part II, Subtropical Fruits,

and Part III, Tropical Fruits. Each chapter comprehensively reviews the modern literature on the subject and reflects the authors' own experience. This book is an attempt to acknowledge the discipline 'wetland science' and to consolidate research findings, reviews and synthesis articles on different aspects of the wetlands in South Asia. The book presents 30 chapters by an international mix of experts in the field, who highlight and discuss diverse issues concerning wetlands in South Asia as case studies. The chapters are divided into different themes that represent broad issues of concern in a systematic manner keeping in mind students, researchers and general readers at large. The book introduces readers to the basics and theory of wetland science, supplemented by case studies and examples from the region. It also offers a valuable resource for graduate students and researchers in allied fields such as environmental studies, limnology, wildlife biology, aquatic biology, marine biology, and landscape ecology. To date the interdisciplinary field 'wetland science' is still rarely treated as a distinct discipline in its own right. Further, courses on wetland science aren't taught at any of the world's most prestigious universities; instead, the topics falling under this discipline are generally handled under the disciplines 'ecology' or under the extremely broad heading of 'environmental studies'. It is high time that 'Wetland Science' be acknowledged as an interdisciplinary sub-discipline, which calls for

an attempt to consolidate its various subtopics and present them comprehensively. Thus, this book also serves as a reference base on wetlands and facilitates further discussions on specific issues involved in safeguarding a sustainable future for the wetland habitats of this region. Hydrology is a key influence on water security, environmental sustainability, agricultural production, energy, and transport, especially in unique environments such as arid regions and the tropics, where degradation issues on water and land can threaten the livelihoods of poor communities. With implications in urbanization, landscape architecture, and sanitation, enhancing the practice of water use, management, and planning is imperative for the sustainable development of these regions. Hydrology and Water Resources Management in Arid, Semi-Arid, and Tropical Regions is an essential research publication that seeks to improve scientific understanding and sharing of data in hydrology and integrated water resources management of arid, semi-arid, and tropical regions in order to enhance water governance and alleviate reduction in the vulnerability of water resources systems to global changes. Featuring a wide range of topics such as hydrometeorology, sustainable development, and climate change, this book is ideal for researchers, technology developers, academicians, policymakers, government officials, and students. Nanotechnology Applications for Food Safety and Quality

Monitoring brings together nanotechnology science-based research for food safety and quality monitoring. With the advancement in knowledge about behavior of nano-engineered materials in food and its toxicity, the application of nanotechnology is expected to reach unprecedented levels in achieving food safety. Currently, there is no practical resource of nanotechnology as a tool specifically for monitoring safety and quality. This is a practical, concise, applications-based reference that is essential for food industry researchers and scientists to monitor the safety and quality of food to ensure quality food supplies. Demonstrates how nanotechnology can improve food safety and quality Shows how nanotechnology sensors can be used for food pesticides, pathogens and microbes Discusses the benefits and risks of nanotechnology applications for food safety The 'WISE-UP to climate' project aims to demonstrate the value of natural infrastructure as a 'nature-based solution' for climate change adaptation and sustainable development. Within the Tana River Basin, both natural and built infrastructure provide livelihood benefits for people. Understanding the interrelationships between the two types of infrastructure is a prerequisite for sustainable water resources development and management. This is particularly true as pressures on water resources intensify and the impacts of climate change increase. This report provides an overview of the biophysical characteristics, ecosystem services and links to

livelihoods within the basin. African legal realities reflect an intertwining of transnational, regional, and local normative frameworks, institutions, and practices that challenge the idea of the sovereign territorial state. This book analyses the novel constellations of governance actors and conditions under which they interact and compete. The work follows a spatial approach as the emphasis on normative spaces opens avenues to better understand power relations, processes of institutionalization, and the production of legitimacy and normativities themselves. Selected case studies from thirteen African countries deliver new empirical data and grounded insights from, and into, particular normative spaces. The individual chapters explore the interrelationships between various normative orders, diverse actors, and their influences. The encounters between different normative understandings and actors open up space and multiple forums for negotiating values. The authors analyse how different doctrines, institutions, and practices are constructed, contested, negotiated, and adapted in translation processes and thereby continuously reshape Africa's multidimensional normative spaces. The volume delivers nuanced views of jurisprudence in Africa and presents an excellent resource for scholars and students of anthropology, legal geography, legal studies, sociology, political sciences, international relations, African studies, and anyone wishing to gain a better understanding of how legal

constellations are shaped by unreflected assumptions about the state and the rule of law. This book includes selected papers from the International Conference on Recent Developments in Sustainable Infrastructure (ICRDSI-2020) and consists of themes pertaining to structural engineering and construction technology and management. In recent decades, community colleges and universities have struggled with less funding, increased competition, and shrinking enrollment. Borderless online degrees offer opportunities to make higher education more accessible and to make foreign study without having to travel abroad an option. Lower cost, high retention, and reduced time to graduate are all key selling points for these degrees. *Global Demand for Borderless Online Degrees* is an essential research publication that provides the benefits, risks, and solutions for entering the borderless online degree market and discusses novel online approaches that are cost-effective for higher education institutions and affordable for customers at home and abroad. This book describes innovative pedagogy in fused learning classrooms that builds relationship and promotes retention and student satisfaction. Featuring a wide range of topics such as community college, accreditation, and international education, this book is ideal for university presidents, provosts, rectors, chancellors, international educators, administrators, academicians, policymakers, researchers, and students. These proceedings

represent the work of researchers participating in the 3rd International Conference on Innovation and Entrepreneurship - ICIE 2015, which is being co-hosted by The University of KwaZulu Natal, Durban and the Ethekwini Municipality, Durban, South Africa on the 19-20 March 2015. The ICIE Conference constitutes a valuable platform for individuals to present their research findings, display their work in progress and discuss conceptual advances in many different branches of innovation and entrepreneurship in business and management. At the same time, it provides an important opportunity for researchers and managers to come together with peers, share knowledge and exchange ideas. ICIE builds on the now well established European Conference on Innovation and Entrepreneurship, and allows universities outside the European Boundaries the opportunity to host an academic conference on these important topics. In addition to the presentations of research the conference will feature a knowledge cafe, led by Dr Shawren Singh looking at this topic *How can academics focus research efforts to better serve the business and public sector communities?*. The second day will open with a panel discussion looking at *Smart cities: Opportunities for Entrepreneurship and Economic growth*. Following an initial submission of 85 abstracts that have undergone a double blind peer review process, 26 research papers, 3 PhD research papers, 2 work-in-progress papers are published in these Conference Proceedings,

representing research results from the Czech Republic, Denmark, Italy, Kazakhstan, Kenya, Lithuania, Nigeria, Poland, Saudi Arabia, South Africa, Sweden, The Netherlands, UK, USA and Zambia. The effects of inadequate diets on the population include malnutrition, non-communicable diseases and obesity. 'Hidden hunger', also known as micronutrient deficiencies, leads to various health-related disorders and diseases. Indigenous plants, in the form of indigenous fruits and leafy vegetables are gaining interest as a source of nutrients and bioactive phytochemicals, satisfying both food demand and health needs. Moreover, with the impact of climate change, and the importance of sustainability of food systems, it is essential that we investigate new, forgotten and alternative crops that can thrive in harsh conditions, require low fertilizer input, and are easily harvestable. This is an essential resource for academic researchers and industry professionals in the fields of horticulture, agriculture, crop science, human health and nutrition. With the perpetual advancements of technology, library and information science professionals are tasked with understanding these technologies and providing accurate and comprehensive information to other potential users. These professionals must develop best practices for understanding these technologies in order to best serve other users. The Handbook of Research on Emerging Trends and Technologies in Library and Information Science is a critical research book that

examines advancing technologies and new innovations and their influences on library and information sciences for improved best practices. Featuring an array of topics such as digital libraries, distance education, and information literacy, this publication is essential for librarians, knowledge managers, information retrieval specialists, library and information science professionals, information scientists, researchers, web librarians, academicians, educators, IT specialists, and managers. Information Communication Technology (ICT) Integration to Educational Curricula serves as a standard textbook in graduate and senior level undergraduate classes in colleges and universities to contribute to the existing mass communication and ICT literature. The textbook offers a multi-discipline perspective to students of mass communication and information technology and avails them an opportunity to have a valid research tool with great details to pursue their research and class assignments. It provides an essential platform for appropriate literature in mass communication, political communication, and ICT details with relevance to its integration in Africa educational curricula. The book can also serve as a supplemental text for courses in mass media effects, politics, and political communications. It includes contributions by scholars and professionals of African extraction with varied research interests on diverse issues relevant to ICT and its significant impact to curricula development and application to Africa

as the new African educational system. The chapters cover a wide array of mass communication, diffusion of innovation, and ICT issues of diverse importance that will guide students, government agencies, and professionals in following the imminent and evolving changes resulting from the integration of technology to educational curricula. Higher education is characterized by ubiquitous digital technologies and e-learning that are inevitably influencing the development of core competencies and professional skills requirements. There is a need to focus on the synergy between responsive curriculum implementation and e-learning delivery in the context of effective pedagogical practices and optimal integration of digital technologies. Similarly, we need to reexamine higher education practices towards innovative pedagogies and effective e-learning design. Competence-Based Curriculum and E-Learning in Higher Education brings together researchers in the field of education and professionals who design and deliver online learning in higher education to share paradigms, perspectives, insights, contextualized experiences, challenges, and best practices. Covering topics such as mobile learning activities, student interaction promotion, and social media technologies, this major reference work is a comprehensive resource for instructional designers, faculty, administrators and educators of higher education, students in teaching programs, IT



managers, librarians, researchers, and academicians. Truly global in scope and ambition, the 21st Century Public Manager addresses key trends, challenges, and opportunities facing public managers across contexts and regimes. This accessible textbook aims to inspire public managers in rethinking their roles, skills, and values as they enter a VUCA world-one characterized by volatility, uncertainty, complexity, and ambiguity. It is written for aspiring and current public managers in graduate schools and executive education programs. Higher Education Leadership and Management have become increasingly important throughout the years due to the complexities that have to be addressed by universities worldwide. This can be seen not only in professionalisation in fields such as faculty management or in areas of quality assurance and internationalisation, but also in the need for exchange and training in academic leadership, such as that of deans or study deans, or of university leadership in general. The Dialogue on Innovative Higher Education Strategies (DIES) is addressing this need in emerging countries by building platforms of exchange and offering training courses. Not only is the programme supporting capacity building of human resources, but it is also specifically focusing on inducing change within the universities, such as introducing new instruments or tools in the area of quality assurance and internationalisation, and addressing specific challenges or setting up

new structures in the form of projects in the frame of the training. The 'National Multiplication Trainings' Programme under DIES is further addressing the sustainability and multiplication of the DIES Programme, that is, alumni are enabled to implement capacity building in higher education leadership and management in their national context. The articles within this volume of the "Potsdamer Beiträge zur Hochschulforschung" (Potsdam Contributions to Higher Education Research) analyse and share the experiences of such training programmes held in Colombia, Democratic Republic of Congo, Guinea, Malaysia, Kenya, and Uganda. They all revolve around the best ways to address the needs and challenges in higher education leadership and management, and in building capacities in these areas. Derived from the renowned multi-volume International Encyclopaedia of Laws, this practical guide to cyber law - the law affecting information and communication technology (ICT) - in Kenya covers every aspect of the subject, including intellectual property rights in the ICT sector, relevant competition rules, drafting and negotiating ICT-related contracts, electronic transactions, privacy issues, and computer crime. Lawyers who handle transnational matters will appreciate the detailed explanation of specific characteristics of practice and procedure. Following a general introduction, the book assembles its information and guidance in seven main areas of practice: the regulatory

framework of the electronic communications market; software protection, legal protection of databases or chips, and other intellectual property matters; contracts with regard to software licensing and network services, with special attention to case law in this area; rules with regard to electronic evidence, regulation of electronic signatures, electronic banking, and electronic commerce; specific laws and regulations with respect to the liability of network operators and service providers and related product liability; protection of individual persons in the context of the processing of personal data and confidentiality; and the application of substantive criminal law in the area of ICT. Its succinct yet scholarly nature, as well as the practical quality of the information it provides, make this book a valuable time-saving tool for business and legal professionals alike. Lawyers representing parties with interests in Kenya will welcome this very useful guide, and academics and researchers will appreciate its value in the study of comparative law in this relatively new and challenging field. Omics in Horticulture Crops presents a comprehensive view of germplasm diversity, genetic evolution, genomics, proteomics and transcriptomics of fruit crops (temperate, tropical and subtropical fruits, fruit nuts, berries), vegetables, tuberous crops, ornamental and floricultural crops and medicinal aromatic plants. Information covering phenomics, genetic diversity, phylogenetic studies, genome sequencing, and

genome barcoding through the utilization of molecular markers plays an imperative role in the characterization and effective utilization of diverse germplasm are included in the book. This is a valuable reference for researchers and academics seeking to improve cultivar productivity through enhanced genetic diversity while also retaining optimal traits and protecting the growing environment. Highlights perspectives, progress and promises of -omics application Provides a systematic overview of origin, progenitor and domestication process as well as genetic insights Includes full range of horticultural crops Key features: Presents a brief history of past classifications, a summary of present classification, and speculation on how the classification may evolve in the future Includes keys for the identification of families and subfamilies of the Pentatomoidea and for the tribes in the Pentatomidae Explains transmission of plant pathogens and concepts of pathology and heteropteran feeding for the non-specialist Provides an extensive literature review of transmission by stink bugs of viral, bacterial, fungal, and protozoan organisms that cause diseases of plants Discusses the diversity of microbial symbionts in the Pentatomidae and related species, showing how microorganisms underpin the evolution of this insect group Reviews semiochemicals (pheromones, kairomones, allomones) of the Pentatomoidea and their vital role in the life histories of pest and beneficial species and their exploitation by natural enemies of true bugs Covers past,

current, and future control options for insects, with a focus on stink bugs and related heteropterans The Superfamily Pentatomoidea (stink bugs and their relatives) is comprised of 18 families with over 8,000 species, the largest of which is the family Pentatomidae (about 5,000 species). These species primarily are phytophagous, and many cause tremendous economic damage to crops worldwide. Within this superfamily are six invasive species, two that occur worldwide and four that are recent invaders in North America. Once established in new geographic regions, these species have increased their numbers and geographic distributions dramatically, causing economic damage totaling billions of dollars. Invasive Stink Bugs and Related Species (Pentatomoidea): Biology, Higher Systematics, Semiochemistry, and Management is the first book that presents comprehensive coverage of the biology of invasive pentatomoids and related true bug species and addresses issues of rapidly growing economic and environmental concerns. Containing the contributions of more than 60 stink bug specialists from 15 countries, this book provides a better understanding of the biology and economic importance of these invasive species, why they became invasive, and how their continued geographical expansion is likely to affect numerous agricultural systems and natural environments. Including over 3,500 references, this authoritative work serves as an access point to the primary literature on their life histories,

higher systematics, diapause and seasonal cycles, pathogens, symbionts, semiochemistry, and pest management control strategies for pentatomoid bugs. This publication i) illustrates how costs and benefits of energy interventions including their impacts along the agrifood value chain can be measured at country level, ii) applies the analysis to 11 country case studies, iii) identifies barriers, possible solutions, business models and success factors for the adoption of energy technologies, and iv) draws general recommendations for investors and decision makers. This report summarizes the analysis and main findings stemming from the FAO project "Investing in Energy Sustainable Technologies for the Agrifood Sector" (INVESTA). FAO has been working together with GIZ and partners of the international initiative Powering Agriculture: An Energy Grand Challenge for Development (PAEGC) since 2014. PAEGC, also partnered by the German Federal Ministry for Economic Cooperation and Development (BMZ), supports the development and deployment of clean energy innovations that increase agriculture productivity and stimulate low carbon economic growth in the agriculture sector of developing countries to help end extreme poverty and extreme hunger. The conference proceeding of ICMACS 2021 presents most recent scientific and technological advances in the fields of engineering mathematics and computational science to strengthen the links in the scientific community. It is a collection of high-quality,



peer-reviewed research papers presented at the Second International Conference on Mathematical Modeling and Computational Science (ICMMCS 2021), held online during October 29–30, 2021. The topics covered in the book are mathematical logic and foundations, numerical analysis, neural networks, fuzzy set theory, coding theory, higher algebra, number theory, graph theory and combinatorics, computation in complex networks, calculus, differential equations and integration, application of soft computing, knowledge engineering, machine learning, artificial intelligence, big data and data analytics, high-performance computing, network and device security, Internet of Things (IoT). This book presents papers from the 10th Applied Research Conference in Africa (ARCA), showcasing the latest research on education and inclusive, safe, resilient, and sustainable communities. The conference is focused on applied research discussion and its dissemination, developing understanding about the role of research and researchers in the development of the continent. Education is a key driver to transform lives, build peace, eradicate poverty and drive sustainable development in Africa. Researchers face large challenges to making a meaningful contribution to the development of Africa. It is a continent where research can at times be not viewed directly related to development. The aim of the Applied Research Conference in Africa is to provide a platform for capacity building and

networking among researchers in Africa. The proceedings is focussed on applied research, its discussion and dissemination and will be of interest to researchers, professors, graduate students, policymakers and professionals in industry. The declining trends of wildlife habitats and species populations are obvious consequences of the socio-economic, political, ecological, and technological changes occurring globally. Along with human population growth, there is a growing wave of wildlife diseases, invasive alien species, human-wildlife conflicts, climate change, poaching, infrastructure development, and economic options that are ecologically damaging. These changes have implications on the management of wildlife resources. *Managing Wildlife in a Changing World* draws experiences from different parts of the world on status, challenges, and efforts of reversing the current negative trends on wildlife habitats and species in the face of these changes. This book is useful for academicians, researchers, policy makers, conservation practitioners, students, and other interested readers. Combining and integrating cross-institutional data remains a challenge for both researchers and those involved in patient care. Patient-generated data can contribute precious information to healthcare professionals by enabling monitoring under normal life conditions and also helping patients play a more active role in their own care. This book presents the proceedings of MEDINFO 2019, the 17th World Congress on Medical and

Health Informatics, held in Lyon, France, from 25 to 30 August 2019. The theme of this year's conference was 'Health and Wellbeing: E-Networks for All', stressing the increasing importance of networks in healthcare on the one hand, and the patient-centered perspective on the other. Over 1100 manuscripts were submitted to the conference and, after a thorough review process by at least three reviewers and assessment by a scientific program committee member, 285 papers and 296 posters were accepted, together with 47 podium abstracts, 7 demonstrations, 45 panels, 21 workshops and 9 tutorials. All accepted paper and poster contributions are included in these proceedings. The papers are grouped under four thematic tracks: interpreting health and biomedical data, supporting care delivery, enabling precision medicine and public health, and the human element in medical informatics. The posters are divided into the same four groups. The book presents an overview of state-of-the-art informatics projects from multiple regions of the world; it will be of interest to anyone working in the field of medical informatics. Tillage agriculture has led to widespread soil and ecosystem degradation globally, and more particularly in the developing regions. This is especially so in Africa where traditional agricultural practices have become unsustainable due to severe exploitation of natural resources with negative impacts on the environment and food system. In addition, agricultural land use in Africa today

faces major challenges including increased costs, climate change and a need to transform to more sustainable production intensification systems. Conservation Agriculture has emerged as a major alternative sustainable climate smart agriculture approach in Africa and has spread to many African countries in the past decade as more development and research, including in sustainable mechanization, has enabled its extension and uptake. It is key to transforming Africa's agriculture and food system given its ability to restore soil health, biodiversity and productivity of millions of smallholder farms as well as larger-scale farms. This book is aimed at all agricultural stakeholders in the public, private and civil sectors in Africa engaged in supporting the transformation of conventional tillage agriculture to Conservation Agriculture. The book will be of interest to: researchers, academics, students, development stakeholders, public and private sector investors and policy makers as well as institutional libraries across the world. A new perspective on the global food security situation and highlights the need for seeking a common vision and implementing global planning to define the manner in which the human species will manage its food security. The basic question of 'is there enough food' is examined in general and then in some detail. The history of food production is reviewed in the hope that lessons can be learned from the past. But even after ten thousand years of experience we are not able to feed adequately about a third of our

total population, despite what statistics can be made to tell us. Intensive agriculture has stripped out the nutrients that support plant growth and marginalised extensive tracts of land. The global solution to feed the growing population has been and continues to be - produce more food. Even during the last 30 years, about 95 percent of global research investments have focused mainly on increasing productivity. However about a third of the food produced, sufficient to feed over two billion hungry people, is lost or wasted in the food value chain. Climate change is another confounding factor that impinges on our discussions. Pests of all kinds continue to destroy food before and after it is harvested, even though the technology to protect it is available. A huge amount of food is wasted in value chains, particularly at the domestic level. Global food production systems are exposed to unprecedented biosecurity risks posed by invasive harmful organisms and this trend is likely to further exacerbate as current approach to biosecurity is based on the notional premise that lines on maps and the legislation that goes with them is sufficient to halt epidemics. Solutions include extending the number of cultivated plant and animal species to include those that can prosper in what are currently considered to be extreme environments. This book examines how disruptive technologies and innovation underpin the attainment of a broader development agenda in Africa. Contributors show how distinctive forms of

technological innovation can impact critical development processes. For example, disruptive technologies can deepen the ongoing democratic and governance waves in Africa, specifically in the area of contested elections. Similarly, innovations in agriculture, the environment and energy promote changes in value chain agriculture, and the use of sensors to manage e-waste and sustainable energy conservation are also transforming established practices. Furthermore, the role of disruptive technologies and innovation in education, health, financial services and the nature of paid work cannot be ignored. Individually and collectively, the authors discuss and highlight the mechanisms and initiatives that can contribute to the realization of the development goals of African countries, especially in a period where disruptive technologies are rapidly changing how things are done. As a result, this book, which represents one of the most recent systematic efforts to bring together dialogue on disruptive technologies in Africa, will be of particular use and benefit to a wide and an eclectic audience. The main focus of this book is to help better understand the multidimensionality and complexity of population displacement and the role that reconstruction and recovery knowledge and practice play in this regard. According to the UN Refugee Agency (UNHCR), the total number of people forcibly displaced due to wars and conflicts, disasters, and climate change worldwide, exceeded 66 million in 2016. Many

of these displaced populations may never be able to go back and rebuild their houses, communities, and businesses. This text brings together recovery and reconstruction professionals, researchers, and policy makers to examine how displaced populations can rebuild their lives in new locations and recover from disasters that have impacted their livelihoods, and communities. This book provides readers with an understanding of how disaster recovery and reconstruction knowledge and practice can contribute to the recovery and reconstruction of displaced and refugee populations. This book will appeal to students, researchers, and professionals working in the field. This book deals with the relationship between geomorphology and society. This topic has had rather scant treatment in the literature except to some extent under the label “applied geomorphology”. In this text the authors aim to bring together conceptual issues and case studies of how geomorphology influences society and, indeed, how society is in turn influenced by geomorphology. In an age in which the influence of human activities on global environments has become so paramount that it is increasingly common to refer to it geologically as the “anthropocene”, the book aims to reflect on the geomorphological significance of widespread and diverse forms of human impact in a range of environmental settings. This book presents selected papers from the 5th International Conference on

Inventive Systems and Control (ICISC 2021), held on 7–8 January 2021 at JCT College of Engineering and Technology, Coimbatore, India. The book includes an analysis of the class of intelligent systems and control techniques that utilises various artificial intelligence technologies, where there are no mathematical models and systems available to make them remain controlled. Inspired by various existing intelligent techniques, the primary goal is to present the emerging innovative models to tackle the challenges faced by the existing computing and communication technologies. The proceedings of ICISC 2021 aim at presenting the state-of-the-art research developments, trends, and solutions for the challenges faced by the intelligent systems and control community with the real-world applications. The included research articles feature the novel and unpublished research works on intelligent system representation and control. This book opens up a critical dimension to the field of industrial ecology. The book discusses the post COVID-19 trends in the field of industrial ecology and evolving practices adopted by firms for betterment of environment and society. The authors identify valuable lessons to be learned and present conceptual frameworks to guide future industrial ecology applications. Transforming industrial systems into closed-loop industrial ecosystems dramatically reduces the negative impact of industrial activities on the environment. Therefore, this book is important not only for

operation management scholars but also those who are interested in ensuring an environmentally sustainable future. Traditional and indigenous food systems have existed for centuries and were in balance with local food supplies, globally. However, between the mid 20th and early 21st century the green revolution dramatically altered food production, which in turn affected the inclusivity of traditional production systems within food systems and subsequently, traditional dietary intakes. This change was accompanied by lifestyle changes and spurred a global nutrition transition. Today the world faces a global syndemic of obesity, undernutrition, and climate change. A new call to action to create food systems that nourish people and sustain the planet is needed. Traditional and indigenous food systems have long been recognized as systems that can both support good human nutrition as well as maintain a balance with nature. There is a large market demand for new drugs. The existing chronic or common ailments without cures, development of new diseases with unknown causes, and the widespread existence of antibiotic-resistant pathogens, have driven this field of research further by looking at all potential sources of natural products. To date, microbes have made a significant contribution to the health and well-being of people globally. The discoveries of useful metabolites produced by microbes have resulted in a significant proportion of pharmaceutical products in today’s market.

Therefore, the investigation and identification of bioactive compound(s) producing microbes is always of great interest to researchers. Actinobacteria are one of the most important and efficient groups of natural metabolite producers. Among the numerous genera, Streptomyces have been recognized as prolific producers of useful natural compounds, as they provide more than half of the naturally-occurring antibiotics isolated to-date and continue to emerge as the primary source of new bioactive compounds. Certainly, these potentials have attracted ample research interest and a wide range of biological activities have been subsequently screened by

researchers with the utilization of different In vitro and In vivo model of experiments. Literature evidence has shown that a significant number of interesting compounds produced by Actinobacteria were exhibiting either strong anticancer or neuroprotective activity. The further in depth studies have then established the modulation of apoptotic pathway was involved in those observed bioactivities. These findings indirectly prove the biopharmaceutical potential possessed by Actinobacteria and at the same time substantiate the importance of diverse pharmaceutical evaluations on Actinobacteria. In fact, many novel compounds discovered from

Actinobacteria with strong potential in clinical applications have been developed into new drugs by pharmaceutical companies. Together with the advancement in science and technology, it is predicted that there would be an expedition in discoveries of new bioactive compounds producing Actinobacteria from various sources, including soil and marine sources. In light of these current needs, and great interest in the scope of this research, this book seeks to contribute on the investigation of different biological active compound(s) producing actinobacteria which are exhibiting antimicrobial, antioxidant, neuroprotective, anticancer activities and similar.