

# INNOVATIVE COMMUNITIES



People-centred Approaches  
to Environmental Management  
in the Asia-Pacific Region

Edited by Jerry Velasquez, Makiko Yashiro,  
Susan Yoshimura, and Izumi Ono

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## Introduction and overview

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*Jerry Velasquez, Makiko Yashiro, Susan Yoshimura and  
Izumi Ono*

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Since the United Nations Conference on Environment and Development (UNCED) in 1992 (also known as the Rio Earth Summit), the critical importance of innovation and change has been repeatedly highlighted within efforts to create a more sustainable society. These efforts have enjoyed a certain amount of success in that they have increased awareness of the principles of sustainability and helped to change the way that governments think and act. Many of the principles enshrined in the introduction to *Agenda 21*,<sup>1</sup> for example, are now reflected in government policy-making and in the actions of local authorities. Yet, despite all the efforts that have been made, environmental conditions across the globe are still deteriorating; prevailing consumption patterns are still unsustainable; and there are still no proper regulatory frameworks in place to prevent the free market's negative impact on the environment. Many more steps need to be taken if we are successfully to transform the sustainability principles and slogans that arose from the 1992 Rio Earth Summit into actual practice.

### The need for innovation and change

The environmental problems faced by the world are characterized by their complexity and uncertainty and the fact that they require dynamic approaches by society if they are to be successfully addressed. The issue of climate change, for example, needs to be understood from many

**Sustainable development is ...**

... a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs.

*(World Commission on Environment and Development 1987: 9)*

angles because it impacts on biodiversity, land degradation, natural disaster rates, agricultural production, and more. Understanding climate change requires the utilization of a wide range of knowledge and skills from different fields such as science, economics and politics.

The solution to most environmental problems must also reflect this complexity and must be implemented through the close coordination of the efforts of different stakeholders with a diversity of knowledge and skill sets. Such coordination often requires drastic changes to existing environmental management structures. Add to this a high level of scientific uncertainty and the constantly changing nature of global environmental problems and it becomes clear that society must be responsive, dynamic and willing to experiment with new and innovative approaches if sustainable development is to be achieved.

### The importance of the community level

It was already clear in 1992 that innovation and change for the creation of a sustainable society cannot be achieved without active involvement at the local community level. There is widespread acceptance that sustainable development requires community participation in practice as well as in principle. This is reflected in the text of *Agenda 21*, where the importance of local community action is mentioned in almost all of its 40 chapters.

Now there is even more evidence to suggest that the causes and pressures of any of today's environmental problems can be traced back, directly or indirectly, to the local level – and to the lifestyles, choices, values and behaviours of local communities. Adding to the evidence is the failure of conventional approaches to sustainability, such as top-down authoritarian approaches, and the clear necessity for a change in attitudes and behaviour right down at the individual and everyday level. As a result, the Plan of Implementation adopted at the 10-year follow-up to UNCED, the World Summit for Sustainable Development in Johannes-

burg in 2002, reaffirmed the crucial need to enhance and support actions at the local level in order to accelerate sustainable development.

This strengthened recognition of the necessity for innovation and change and the important role played by local communities has generated a number of innovative experiments at the local level. Communities have been implementing a wide range of innovative initiatives that can be characterized by certain key factors such as public participation, stakeholder partnerships and the utilization of local knowledge and resources. Yet, whereas some communities have been successful in implementing these innovations, others have faced great difficulties. Challenges have included problems in generating the political momentum necessary to experiment with, and eventually accept, new ideas. Strong political resistance is linked to the fact that innovation and change are often associated with the need for fundamental changes to political and governance structures. It is critically important, therefore, that we develop a better understanding of how communities can successfully bring about innovation and change to establish a sustainable society by identifying and examining the key elements that help foster community innovation at the local level.

### What is a community?

There are several ways of defining the term “community”, including “a group of people living in the same locality and under the same government” or “a group of people having common interests”.<sup>2</sup> The first definition brings thoughts of a place of belonging, the other definition brings thoughts of common understanding. In this book we define a “community” as a combination of the above: a group of people who are involved in collective action in a specific geographical location. The main distinction is that our definition of communities does not always include all residents or only residents of a particular area. What links them together is their sharing of common local environmental issues and collective action towards solving these issues.

Although not all of the residents are covered in our description of a community, this definition allows all the local residents to participate if and when they become aware of these issues. In this regard, a “community” is something that can be scaled-up in its coverage of participants, depending on each local situation.

### What is community innovation?

Innovation, which is generally discussed in relation to the introduction of new technologies and approaches in the business sector, can be defined in



numerous different ways. It is not easy to develop a single definition and a detailed examination of the definition of the term itself is outside the scope of the discussion here. It is commonly agreed, however, that innovation as a concept implies something new and unconventional. When it is applied to communities, it implies the development of new cultures, a new ethos, changed behaviours and roles, as well as institutions.

Community innovation can be characterized as a collective human activity that often involves a change in the processes through which things are carried out, and requires a fundamental change in political and governance structures. An innovative community is therefore able to bring in new methods and ideas that can improve its environment and initiate changes through the imaginative ideas or artistic ability of its people.

What does it take for a community to be innovative? Why are some communities innovative and others not? Much has been discussed on the broader relevance and transferability of best practice approaches to community innovation. One of the key questions addressed in this study is whether the strategies and actions that work in one community will necessarily be equally successful in another. In this respect, it has been widely recognized that the effectiveness of tools and methodologies is influenced largely by local circumstances and is not, therefore, easily replicated or directly transferable. Furthermore, as Charles Landry notes in Chapter 3, community innovation is usually influenced by conditions such as time, location and culture. This means that approaches that might seem to be innovative for a certain community may not be innovative for other communities.

What is critical for all communities, however, is that they possess or develop certain preconditions, including a general atmosphere that enables people or organizations to plan and act innovatively with both creativity and imagination. A preliminary analysis of the case studies prepared for this book highlights a number of essential features that characterize the innovative potential of communities:

- a shared community recognition of a relatively urgent sustainable development need or challenge;
- established, flexible local governance structures that can be adapted to accommodate and sustain multi-stakeholder mechanisms;
- the availability of relevant local culture, knowledge and indigenous practices that can combine with new and introduced ideas and technologies to generate innovation;
- strong local community leadership and a pioneering spirit.

The multi-stakeholder partnership and participatory processes described in this book are vehicles for developing stakeholder coherence. In Chapter 4, for example, Nathaniel von Einsiedel mentions that, for in-

novation to take place, different roles and perspectives of multiple stakeholders are essential but, at the same time, diversity of opinions and interests could be a barrier to innovation. Similarly, Luc Bellon says in Chapter 5 that diversified and conflicting interests are, “simultaneously, the trigger of innovation and the biggest threat to innovative mechanisms”. It is therefore important to have an effective system in place in the community to ensure an active dialogue among stakeholders and to promote coherence, while maintaining the diversity of roles, interests and opinions of stakeholders.

It is also worth noting that this book does not specifically identify full ownership as a key component of community innovation. Although this is an important aspect of the effective implementation of solutions, the cases explored in this book show that ownership of issues and solutions affects only the pace at which innovation takes place. For example, in Chapter 5, which describes a case of sustainable hunting in Pakistan, Luc Bellon describes incremental innovation in the use of game guards, their allocation and roles. Most of the other cases, however, describe situations in which external facilitators created the initial input of ideas, funding and initiative, which were then taken on board by the host communities. In these cases, at the beginning, a certain amount of innovation is injected into the community, which then adopts the new ideas and makes them its own.

These features are the key ingredients that need to be considered in defining what drives a community to become innovative. Yet, it is still important to recognize that innovation is unique to each community and its particular circumstances. Even though there are a number of features that can help to establish, or signify, an enabling innovative environment, it is still up to each community to convert these features into locale-specific procedures and working methodologies that will achieve a specific result. The precursors might exist in many communities, but to be innovative a community still has to work out the best way to take advantage of them and put them into practice.

### What is an innovative community?

In this book we use the term “innovative community” to refer to a group of people who are able to bring about change and innovation in order to establish a sustainable society. They are willing to take unconventional approaches, often by making dramatic changes in people’s attitudes, perceptions, mindsets, roles and behaviours, as well as developing new ethos, cultures, institutions and governance structures.

## About the book

*Innovative Communities* is designed to provide readers with a better understanding of how selected communities in the Asia-Pacific region fostered their creativeness and adopted innovative methodologies to address pressing environmental issues and promote sustainability. In addition to the careful examination of the systems, processes and methodologies applied by the communities, an effort is also made to analyse the factors and conditions that nurtured their innovative capacities.

The primary purpose of the book is to build upon our preliminary understanding of the concept of innovative communities by providing a comprehensive analysis of a series of case studies collected from the Asia-Pacific region. The objective underpinning the book, and also the collaborative research project upon which it is based, is the identification of critical elements that facilitate sustainable community innovation. Through an analysis of each case study, the book intends to clarify the crucial importance of local community-level innovation.

Through analysis and discussion from many different angles, the book also provides readers with tips on how communities can foster innovation and make changes that lead to a sustainable society. In doing so, the book intends to assist communities, community-based organizations, decision makers who are involved in community-based environmental initiatives and also those who provide support to communities at various levels of governance from the local to the global.

The book is divided into two parts. The first part is made up of three conceptual chapters written by experts in the field of community development, urban planning and local environmental management. These chapters are aimed at providing an introduction to the conceptual and theoretical background of sustainable community development and innovation. Chapters 2 and 3 give an overview of societal trends and recent discussions regarding communities and sustainable development. They explore the implications of innovativeness in creating a sustainable society as well as some of the critical issues to be considered in discussing community innovation. Although Chapter 4 focuses exclusively on Asia from a local government policy perspective, it draws out a number of lessons about how to overcome key barriers and to scale up or mainstream community innovation.

The second part of the book comprises nine case-study chapters written by community leaders, local government officials, journalists, representatives of non-governmental organizations (NGOs) and academics. These chapters highlight a number of innovative community-based environmental initiatives in the Asia-Pacific region and cover a wide range of issues, including natural resource management, ecotourism, forest man-

agement, solid waste management and water management. The communities targeted in the case studies vary significantly in their size, economy, politics, culture, environment and many other respects. What they have in common, however, is that they have applied innovative methodologies and made changes to their communities that resulted in an improvement both in their environmental conditions and in the extent of local empowerment.

The insights gained through the theoretical and conceptual chapters, along with the lessons learned from the case studies, will be used to identify the key elements that help communities to develop an enabling environment in which innovation can flourish and take hold. The aim is to demonstrate how the initiatives undertaken at the community level succeeded not only in addressing environmental problems but also in strengthening and empowering the communities. At a broader level, the intention is to explain the ways in which the concept of innovativeness fits into the overall processes of societal development at the community level. This is achieved by highlighting the ways in which the innovativeness of the communities themselves can assist these processes.

### *The conceptual chapters*

In Chapter 2, Diane Warburton and Susan Yoshimura provide a conceptual background for our understanding of the terms “community” and “sustainable development”, both of which are critical when considering community innovation. They highlight some of the key challenges of bringing together the social, economic and environmental aspects of sustainable development and emphasize the need for innovative approaches to the translation of the principle of sustainable development into action.

According to Warburton and Yoshimura, citizen involvement in decision-making and action is a crucial factor in promoting innovation and change. In addition, they argue that it is important to promote community involvement as both an end and a means. What is needed is an open community where people can participate in decision-making processes, experiment with new approaches, and own the process of change and innovation. It is also important to conduct an assessment of the nature of community involvement in order to better understand the effectiveness of community involvement mechanisms and achieve continuous improvement. In this regard, Warburton and Yoshimura introduce the frameworks for analysing community involvement that have been developed by Arnstein, Oakley and Warburton and examine their effectiveness. According to the authors, because communities are unique culturally, politically and in many other ways, it is important to adapt non-hierarchical participatory approaches and focus on examining the

suitability of different styles of participation for different communities. The process of community involvement should be designed in such a way that it fits well with the unique conditions of each community.

Warburton and Yoshimura also discuss the barriers to promoting community participation, such as the lack of interest and willingness to change in governmental institutions, the lack of awareness of the benefits of community involvement among officials and politicians, as well as the lack of strategic planning by public authorities. Finally, the authors touch upon the vital role of learning and capacity-building in enhancing the level of skills that institutions, groups and individuals are able to apply to achieving sustainable development.

In Chapter 3, Charles Landry suggests that the world is experiencing a drastic transformation in its economic, political, societal and environmental conditions. This makes it essential for communities to respond to their environmental problems in “unconventional” ways, in many cases by adopting new and innovative approaches with imagination and creativity.

Landry argues that, although a large number of innovative initiatives are implemented at the individual and project levels, it is difficult to find truly creative and innovative communities. This is partly owing to the complexity of interests, cultures, insights, perspectives and power configurations that make up communities. In order for communities to become innovative, therefore, there needs to be a system of forums in place where such diverse factors can be coordinated through open-minded discussion and communication, allowing people to think and act in innovative ways. Unsupportive governments and an unwillingness by private sector actors to incorporate sustainability principles into their policies and practices also make it difficult for innovation to be mainstreamed. This is compounded by the limited capabilities of existing measurement scales of economic growth, progress and well-being.

Landry emphasizes that community innovation is a cultural process and that the development of innovative capacity requires communities to utilize their intangible assets, such as cultural knowledge. In order to achieve innovation, communities need to produce, recognize and codify cultural knowledge by understanding and describing possibilities for innovation better. They need to generate a local ethos that directs innovative thinking and the initiatives of communities, developing innovative projects based on the ethical framework and providing opportunities for continuous learning. In order to develop the momentum for innovation and to mainstream it within the community, it is important to have embedding strategies, which foster a sense of ownership among community stakeholders.

Different types of creativity and innovativeness are necessary to deal with the complexity and diversity of communities. Creative solutions and

innovation can be generated by any stakeholders, including public, private or voluntary sectors, as well as individuals. The key challenge at the community level is to develop an innovative milieu based on preconditions that are culturally determined and should be unique to each community. It is critical that communities identify and understand their distinctive features and utilize them in achieving innovation to promote sustainability.

In Chapter 4, Nathaniel von Einsiedel provides an overview of the environmental challenges encountered by selected cities in Asia and illustrates how these cities used innovative approaches in an effort to overcome them. He also reviews the obstacles cities confronted when implementing innovative policies and, based on their experiences, suggests ways in which these can be overcome.

Many cities in Asia face a series of environmental problems, including land encroachment, water supply and sanitation, solid waste disposal, traffic congestion and air pollution. All these problems have had negative effects on human health, social structure and economic activities in urban areas. In order to improve the situation, many urban communities in Asia have tried to carry out innovative environmental initiatives that have required local governments to adopt new policies and processes. These cities are now experiencing difficulties in adopting, replicating and scaling up innovative approaches for environmental management owing to tension among stakeholders, a resistance to change and social complexity.

Von Einsiedel notes that the key to the successful implementation of innovative environmental policies is the promotion of coherence among stakeholders. In this respect, he highlights the effectiveness of promoting multi-stakeholder participation and partnership in local government decision-making and implementation processes. He presents a number of practical tools and mechanisms that can facilitate effective participatory environmental planning. He also emphasizes the importance of local “champions” who play key roles in planning processes. In addition, von Einsiedel highlights the need to understand the factors that affect decisions at the policy level, including possible negative reactions to change, and the need to secure support not only in the decision-making process but also in the implementation process.

### *Case-study chapters*

The nine case studies, from eight countries in the Asia-Pacific region, deal with a variety of environmental issues, ranging from natural resource management and ecotourism to solid waste management. The case studies were selected on the basis of two criteria: they involve a strong combination of environmental management and community

building; and they involve communities that have succeeded in adopting innovative methodologies in addressing their environmental problems.

Within each case, the authors were asked to: examine how the community operates; describe the innovative features of the case; explore in detail the processes and methodologies used that led to the success of the solution; outline the actors who played the key roles in implementing the initiative; and describe any internal and external support provided. They were also asked to highlight any factors that acted as a barrier to communities in their efforts to adopt innovative approaches, along with any other critical elements that helped to create an enabling environment for community innovation.

In Chapter 5, Luc Bellon reviews the innovative wildlife conservation initiatives conducted by the Pashtun community in Torghar, in the northern Balochistan Province of Pakistan. According to Bellon, the notion of innovation consists of two distinct features. One is radical and revolutionary and involves making drastic changes to the existing system. The other is incremental and involves constant minor improvement and adaptation. It is the combination of the two features that ensures effective change.

Bellon argues that, despite prevailing perceptions to the contrary, change and innovation are often integrated into existing social dynamics within traditional rural communities such as Torghar. He describes how the community in Torghar planned and implemented a number of wildlife conservation activities that required drastic changes in and by the community, including the prohibition of hunting, and how these affected the community's social, economic and cultural systems.

Bellon also reviews some of the challenges faced by the community within the processes of innovation, such as the conflicting interests of different social groups. He uses his case study to illustrate how a sense of collective responsibility for the holistic management of mountain biodiversity was generated. Based on a careful examination of the initiatives in Torghar, Bellon argues that innovation emerges through "a complex social process" in which the different interests of social groups conflict and negotiate with each other. In this sense, innovation is seen as an unstable process that requires constant adaptation and occurs when there are needs and appropriate conditions in place in the community.

In Chapter 6, J. Marc Foggin reviews the conservation initiatives implemented by the Suojia community on the Tibetan plateau. He introduces the complexities of the decisions and policies that affect the environmental conditions of the Suojia community and discusses some of the government policies, such as the sedentarization of pastoralists, that have had a negative impact on the local environment.

Foggin focuses primarily on the conservation work conducted by the

Upper Yangtze Organization (UYO), one of the first civil society organizations established in the region. Being founded and led by local community leaders, UYO has successfully implemented a number of sustainable land management and nature conservation initiatives. These were achieved by involving local people and through networking actively with a range of external actors such as the local government and domestic and international NGOs.

Foggin analyses several community features, such as strong leadership, the pioneering spirit of community leaders, active internal and external communication and networking, effective consensus-building mechanisms and local ownership, that have enabled the community to adopt innovative approaches. He also demonstrates the vulnerability of community-based initiatives to sudden policy changes and undemocratic decision-making at the higher levels. This reinforces the importance of democratic community empowerment and the need for greater community input into decisions that affect their lives.

In Chapter 7, Walter Jamieson and Pawinee Sunalai review a sustainable tourism initiative implemented in the community of Klong Khwang in Thailand. With growing recognition of the importance of public involvement in local planning processes in Thailand, the community-driven tourism development has been attracting increasing attention. There is also a growing awareness within the tourism sector of the need to incorporate the principles of sustainable development into tourism activities.

Jamieson and Sunalai show how the community in Klong Khwang has successfully incorporated the principles of sustainable development into its tourism initiatives, with substantial technical support provided by the Canadian Universities Consortium Urban Environmental Management Project (CUC UEM). Based on their experience of working with the Klong Khwang community as CUC UEM members, Jamieson and Sunalai review and describe in detail the approaches and activities that the community adopted to implement sustainable tourism. They analyse the factors that enabled the community to adopt an innovative approach to sustainable tourism. They conclude that the combination of external forces, such as technical assistance from academic institutions, local governments and NGOs, with internal forces such as community leadership and the active participation of locals is critical for the community to be innovative.

In Chapter 8, Sundjaya introduces the ecotourism initiatives undertaken by the community of Lembanato on the Togean Islands of eastern Indonesia. Surrounded by a beautiful environment with rich biodiversity, the community has developed a unique tradition and culture that is based on a close relationship between people and nature. The rich traditional culture and knowledge of Lembanato have been deteriorating, mainly be-



cause of the intrusion of external culture. Sundjaya describes the community's ecotourism initiatives, illustrating the efforts that have been made by a variety of stakeholders to use local traditional knowledge and culture to integrate the tourism business and the conservation of mangrove forests.

This case study shows how even the most successful innovative ecotourism initiatives can be vulnerable to external factors such as political, economic and social instabilities at the national, regional and international levels. Sundjaya stresses the need for the community to conduct comprehensive assessments and become aware of external factors and threats. He also highlights the importance of the continued financial and technical assistance provided by external organizations, the establishment of transparent systems in the community to ensure the equal distribution of income, and the involvement of customary institution or community leaders in the planning process.

In Chapter 9, Victor Asio and Marlito Jose Bande highlight the innovative rural communities of Cienda and San Vicente in Baybay on Leyte Island in the Philippines. In order to control illegal logging and promote sustainable forest management, these communities have successfully implemented various forest management initiatives. With external assistance, the communities have successfully adopted a "rainforestation" approach that has enabled them to protect their forests and generate an income for local people. Asio and Bande illustrate some of the key factors that helped the community adopt an innovative approach, including environmental awareness, strong local commitment and a sense of volunteerism, the utilization of local knowledge, and the strong leadership of some community members. In particular, they highlight the criticality of financial and technical support from NGOs, academic institutions and international organizations. Such support is crucial for communities that are initiating and implementing innovative activities, although too much dependence on financial assistance from external organizations can harm the sustainability of initiatives.

In Chapter 10, Teruhiko Yoshimura and Rika Kato review the city-wide solid waste management initiative implemented in Nagoya City, Japan. This initiative is characterized by the strong leadership shown by the local government, as well as the active participation of community-based organizations throughout the implementation process. Owing to a sudden shortage of waste disposal sites, Nagoya faced an urgent need to reduce the amount of solid waste generated in the city. As a result, in February 1999, the city launched a new policy that required citizens to make efforts to reduce waste by radically changing their waste management practices. Yoshimura and Kato closely examine the approaches taken by the local government as well as the structure of the different

community-based groups, such as the neighbourhood association, municipal health commissioners, ward administration commissioners and NGOs, and the distinctive roles played by them.

Yoshimura and Kato also introduce the concept of *Machi-zukuri*, an urban planning approach adopted in Japan, which focuses on promoting the role of communities as key players in community development processes, and apply the concept to examine to what extent the Nagoya City's initiatives were "community-centred". Analysing the innovative features of approaches taken by the local government and citizens, the authors conclude that it was the combination of top-down management by the local government in providing an effective system for recycling and bottom-up incremental efforts by citizens that enabled Nagoya City to achieve remarkable results.

In Chapter 11, Andrew Farncombe, Francis Gentoral and Evan Anthony Arias review a solid waste management initiative implemented in the province of Guimaras in the Philippines. This initiative was established and implemented under the strong leadership of the provincial government of Guimaras as part of a trend toward decentralization of responsibility for the delivery of basic services, including waste management. A key feature of this initiative, which receives external technical assistance, is the multi-stakeholder mechanism that enabled NGOs, civil society groups and the private sector to participate in the planning and implementation of waste management activities. Farncombe et al. describe the initiative in detail and explain how the mechanism has effectively harmonized the views and activities of different actors. They also highlight the role of external institutions and the infusion of external knowledge in the formulation and implementation of innovative initiatives.

In Chapter 12, Amit Chanan illustrates the integrative catchment management system introduced in the Hawkesbury-Nepean basin near Sydney, Australia. Nearly 200 years of uncontrolled development, in conjunction with intensive dam construction on the upper reaches, have severely damaged the environment of the Hawkesbury-Nepean catchment. In response to increasing awareness of the need to manage the river and its catchment properly, the Hawkesbury-Nepean Catchment Management Trust was established by the New South Wales state government. This unique organizational structure succeeded in promoting partnerships among different stakeholders and ensured the active participation of local communities and other interest groups in the management of the catchment area.

Chanan examines the innovative organizational features of the Trust and illustrates how these contributed to the improvement of the environment and led to the empowerment of the community as an advocate,

watchdog and educator. The state government's closure of the Trust, despite its obvious successes, reaffirms the difficulties that communities experience in achieving a balance between the need for independence and the need for government support and cooperation to achieve common goals. More importantly, this case study demonstrates the need for a democratization of governance structures. This is critically important if communities are to be fully involved in the decision-making that directly affects them and gain control over the sustainability of their innovative initiatives.

In Chapter 13, Darryl Romesh D'Monte reviews the community-based water management initiatives implemented in the Alwar district of Rajasthan, India. Facing serious deforestation and droughts, the communities in Alwar, with the facilitation of a local NGO, implemented an innovative initiative by using the traditional water-harvesting structure called *johad*. According to D'Monte, the full utilization of traditional knowledge and local labour forces within the initiative resulted not only in the improvement of environmental conditions and local financial well-being, but also in the enhanced self-confidence of the local community.

The success of these initiatives can also be attributed to the catalytic role played by the local NGO, which focused on promoting self-help attitudes among the local people. Also key was the active involvement of traditional village self-governing bodies, such as village assemblies, through which people in the communities participated in the planning and implementation processes. By analytically reviewing the barriers they faced, and the steps taken by the communities in an effort to overcome them, D'Monte highlights the critical role of external organizations in conjunction with the utilization of indigenous self-governing mechanisms and local traditional knowledge and technologies.

## Conclusion

The intention of this book is not to suggest a package of best-practice approaches that can be replicated under certain conditions but, rather, to draw out the key lessons from each case study in order to identify the main elements that constitute an enabling environment for community innovation. The existence, or deliberate creation, of such an environment fosters creativity at the community level and enables the adoption of innovative approaches to environmental and sustainable development challenges. Following the conceptual and case-study chapters, a final concluding chapter will combine the theoretical insights provided in the earlier chapters with the lessons drawn from the case studies to highlight what appear to be the critical preconditions for community innovation.

## Notes

1. *Agenda 21* is a comprehensive plan of action for a sustainable future that was developed at the 1992 Rio Earth Summit.
2. *The American Heritage® Dictionary of the English Language*, 4th edn, copyright © 2004, 2000 by Houghton Mifflin Company.

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# Innovative Communities: People-centred Approaches to Environmental Management in the Asia-Pacific Region

Edited by Jerry Velasquez, Makiko Yashiro, Susan Yoshimura and Izumi Ono

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This book introduces the concept of community innovation and illustrates its role and impact in promoting sustainability. It includes nine case studies from the Asia-Pacific region where communities are adopting innovative methods to address complex and unpredictable environmental problems and promote sustainable development. This often requires new cultures, institutions and governance structures, as well as changes in people's perceptions, attitudes, roles and behaviours.

The authors examine environmental initiatives within the region, including natural resource management, eco-tourism, forest management, solid waste management, and water management. The book offers a rich balance of perspectives from experts in community development, urban planning and local environmental management, as well as community leaders, local government officials, journalists, non-governmental organization representatives and academics. It provides theoretical and practical insights for communities and those who provide support to communities at the local, regional and global levels of governance.

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