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Ulya Uti Fasrini | Siva Devi Azahra | Agus Trihandoyo

# **Multi-Stakeholder Participation for Achieving Sustainable Development Goals (SDGs)**

## **By**

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**PENERBIT YAYASAN FATIH AL KHAIRIYYAH**

## **Multi-Stakeholder Participation for Achieving Sustainable Development Goals (SDGs)**

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## PREFACE

### Advisory Board of ADPI NTB



Assalamu'alaikum  
Wabarakatuh.

Warahmatullahi

Alhamdulillah wash-shalatu wassalamu 'ala  
Rasulillahi wa 'alaalihi wa shahbihi wa man  
walahu. Amma ba'du.

The Sustainable Development Goals (SDGs) initiated by the United Nations represent a global effort aimed at achieving welfare and sustainability for all humanity. These goals address major challenges such as poverty, inequality, climate change, as well as fostering peace and global partnerships. However, achieving the SDGs requires more than just government policies. Cross-sector collaboration and active participation from various stakeholders—governments, the private sector, civil society, academics, and local communities—are essential. This is why a multi-stakeholder approach is crucial to realizing comprehensive and sustainable change.

Multi-stakeholder participation involves not only dialogue among interested parties but also fostering synergies that can accelerate the achievement of these goals. Each chapter in this book focuses on practical approaches, case studies, and strategies that can be applied to encourage the involvement of all parties in realizing the SDGs. We hope this book will serve as an important reference for policymakers, practitioners, academics, and anyone interested in understanding and implementing multi-stakeholder collaboration as a pathway to sustainable development.

The Association of Indonesian Lecturers for Community Service (ADPI) is a professional organization whose members are spread across 34 provinces in Indonesia, with diverse expertise aligned with their respective academic fields at higher education institutions. ADPI has an extensive network with various universities in Indonesia, including both public and private institutions, local governments, as well as businesses and industries, to collaborate in conducting research and community service activities. These efforts reflect the commitment of university lecturers to advancing science and technology and addressing societal phenomena in Indonesia. ADPI serves as a unifying association for community service activities and the professional development of lecturers.

ADPI was established on October 27, 2017, and operates under the auspices of the Fatih Al Khairiyah Foundation with legal entity number AHU-0004391.AH.01.04.2019. Its vision is to become the largest association



in Southeast Asia in the field of training and professional development for lecturers, based on faith and devotion to God Almighty.

To date, ADPI's membership spans from Aceh to Papua, encompassing more than 2,000 lecturers from hundreds of higher education institutions in Indonesia, Malaysia, Thailand, the Philippines, Australia, Kosovo, Portugal, Tanzania, and Egypt. ADPI's central management office is located in Padang, West Sumatra, with regional management offices in every province in Indonesia. All ADPI members are lecturers from various academic disciplines relevant to the needs of society, the nation, and Indonesia. They are experts who understand the challenges faced by the nation and work to find solutions to those challenges. Lecturers in various universities actively contribute to the development of science and technology to ensure quality education.

This book presents a model of community engagement programs developed by lecturers who are members of ADPI. It compiles various approaches and themes related to multidisciplinary academic engagement with society across different fields, offering insights that serve as valuable references for academics, particularly university lecturers.

Titled *Multi-Stakeholder Participation for Achieving Sustainable Development Goals (SDGs)*, is dedicated to the world of education. It aims to inspire university lecturers to generate ideas and actively implement community service programs. We hope this book will foster collective awareness and encourage joint action to create a more sustainable, equitable, and harmonious future for all.

**Padang, Desember 2024**  
**Prof. Dr. Drs. Syech Idrus.,M.Si**  
**Professor at Sekolah Tinggi Pariwisata Mataram**

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# **Chapter 1**

## **Language Learning Strategy Training through Content Language Integrated Learning**

**By : Suciana Wijirahayu**



### **Introduction**

Traditional language learning often focuses solely on grammar drills and vocabulary memorization. While important, this approach can leave learners feeling disconnected from real-world language use. Content and Language Integrated Learning (CLIL) offers a refreshing alternative.

This chapter will explore how CLIL can be used to train learners in effective language learning strategies. We will discuss the core principles of CLIL and how it fosters a learning environment where students acquire language skills alongside engaging subject matter. Furthermore, we will unveil the benefits of integrating strategy training within a CLIL framework, empowering learners to become more autonomous and successful language users.

Harmer (2012:226) asserts that the difference between CLIL and teaching English is that students use language to learn, while we expect students to learn the

language and then use it to communicate. The focus of CLIL is Content, namely the field of study, Communicative using language effectively, Cognition, namely the ability to think and learning strategies, and Culture with cultural understanding.



*Figure 1. 1 Lesung (a Javanese cultural tool to precede rice)*

In the context the culture referred to under the field of study includes academic culture (scientific) and national culture and local wisdom (Wijirahayu, 2018). Literary works from Buya HAMKA are interesting sources of local wisdom and values (Wijirahayu & Muliya, 2022).

## **1. Content Language Integrated Learning (CLIL)**

CLIL goes beyond simply translating textbooks into another language. It is a dynamic approach to education where subject matter and language learning become interwoven. Here's a closer look at its core aspects:

- a. Dual Focus:** CLIL programs have a two-pronged approach. Students develop their knowledge and skills in a particular subject (science, history, etc.)

while simultaneously acquiring the target language. This creates a synergy where language becomes a tool for understanding the content, and using the language reinforces the content it self.

- b. **Subject Matter as Context:** Instead of isolated vocabulary lists, CLIL uses the subject matter as a springboard for language acquisition. For example, learning about the solar system in English might involve creating presentations explaining the planets, their characteristics, and their movements. This provides a natural context for students to learn and practice vocabulary related to space, while also deepening their understanding of astronomy.
- c. **Integration Levels:** CLIL can be implemented at various levels. A mild form might involve occasional use of the target language in a content-based class. More intensive programs might use the target language as the primary medium of instruction. The specific approach depends on students' language proficiency and the learning objectives.



*Figure 1. 2 Jamu a Javanese herbal medicine*

- d. **Benefits for Learners:** Research suggests CLIL offers a multitude of advantages. Students develop stronger subject-area knowledge, enhanced critical thinking skills, and a deeper understanding of the target language's nuances. Additionally, CLIL fosters intercultural awareness and prepares students for a globalized world.
- e. **Challenges and Considerations:** While effective, CLIL implementation requires careful planning and skilled teachers. Teachers need strong content knowledge in the subject area and proficiency in the target language. Balancing language acquisition with subject matter mastery is key. Additionally, finding appropriate learning materials and scaffolding instruction for learners with varying language skills are important considerations.

Overall, CLIL presents a stimulating and effective approach to language learning. By integrating language with engaging content, it empowers students to become not just proficient in a new language, but also well-rounded learners with a deeper understanding of the world around them.

## **2. CLIL: A Catalyst for Language Learning Strategies**

Content and Language Integrated Learning (CLIL) offers a fertile ground for fostering the development of language learning strategies in students. Here is how CLIL acts as a catalyst for this growth.

- a. **Meaningful Context:** CLIL provides a rich context for language use. Instead of rote memorization, students encounter vocabulary and grammar structures in a



meaningful way, while exploring a subject they find interesting. This intrinsic motivation to understand the content naturally encourages them to employ strategies to overcome language challenges.



*Figure 1. 3 A story about the origin of Irian island*

- b. **Exposure and Practice:** Through CLIL, students receive consistent exposure to the target language across different subject areas. This repeated exposure allows them to experiment with different strategies for comprehension and production. For instance, they might use context clues to decipher new vocabulary in science experiments, or practice summarizing key points in history class presentations.
- c. **Metacognitive Awareness:** CLIL, by its nature, encourages students to think about their own learning process. As they navigate new content and grapple with unfamiliar language, they become more aware of their strengths and weaknesses in language acquisition. This metacognitive awareness empowers



them to consciously select and utilize appropriate strategies to address their specific learning needs.

- d. **Strategy Integration:** CLIL lessons can be designed to explicitly introduce and practice language learning strategies. Teachers can model strategies like using cognates, paraphrasing, or creating graphic organizers to enhance understanding. Students can then actively integrate these strategies into their own learning as they engage with the content.
- e. **Collaborative Learning:** CLIL often incorporates collaborative activities like group projects or discussions. This social interaction provides a platform for students to share and learn from each other's strategies. By working together on tasks, they can observe effective strategies used by peers and refine their own repertoire.

In conclusion, CLIL goes beyond simply teaching content through another language. It creates a dynamic environment where language learning strategies become an essential tool for students to navigate the complexities of both the subject matter and the target language. By fostering a strategic approach to language acquisition, CLIL empowers students to become more autonomous and successful language learners.

### **3. CLIL: A Multimodal, Multi-Disciplinary Springboard for Language Learning Strategies**

Building upon the foundation we've established, let's delve deeper into how CLIL embraces a multimodal and multi-disciplinary approach to foster language learning strategies.

**a. Multimodal Learning:**

**Beyond Textbooks:** CLIL transcends traditional text-based learning. It incorporates a variety of modalities like images, videos, simulations, and interactive activities. For instance, a geography lesson might involve analyzing satellite images, creating travel brochures, or watching documentaries about different cultures. This multisensory approach caters to diverse learning styles and provides students with richer contexts to encounter and practice language.

**Engaging with Different Media:** CLIL encourages students to interact with the target language through various media formats. This could involve analyzing infographics in science class, creating podcasts in history, or participating in online discussions related to literature. By engaging with diverse media, students develop the flexibility to adapt their language skills to different communication contexts and utilize strategies specific to each medium.

**b. Multi-Disciplinary Integration**

**Language Across the Curriculum:** CLIL doesn't confine language learning to a single subject. It encourages teachers from different disciplines to collaborate and integrate language learning objectives into their lesson plans. For example, a science experiment might involve writing a lab report in English, while an art class might incorporate vocabulary related to famous artists and their works. This cross-curricular approach reinforces language skills and demonstrates their relevance across various disciplines.

**Strategy Transfer:** As students encounter language learning strategies in multiple subject areas, they develop the ability to transfer them across disciplines. For instance, the graphic organizer used to understand the life cycle of a plant in biology can be adapted to analyze the historical timeline of a particular event. This transferability empowers students to become more strategic and autonomous learners.

**c. Technology Integration**

**Digital Tools and Resources:** CLIL can leverage technology to enhance student engagement and provide access to a wider range of learning materials. Interactive language learning apps, online simulations, and collaborative platforms can all play a role in reinforcing language learning strategies. For example, a language learning app might provide personalized practice exercises based on the specific vocabulary and grammar structures encountered in a science lesson.

**d. Overall, a multimodal and multi-disciplinary CLIL approach fosters a dynamic learning environment.**

Students develop a richer understanding of content through diverse representations. Language learning strategies become integral tools for navigating different subject areas and media formats. Students gain a deeper appreciation for the interconnectedness of knowledge and language skills. By embracing multimodality and multi-disciplinarity, CLIL equips students with the critical thinking,

problem-solving, and language learning strategies they need to become successful learners in a globalized world.

#### **4. CLIL: A Bridge Between Language Learning and Indonesia's Rich Local Wisdom**

Content and Language Integrated Learning (CLIL) offers a dynamic approach to language learning, and Indonesia, with its vast collection of local wisdom traditions, presents a fertile ground for its implementation. Here's how CLIL can be a bridge between acquiring a new language and appreciating Indonesia's unique cultural heritage.



*Figure 1. 4 Singaraja is a cultural name of a town in Bali*

- a. **Preserving Traditions through Language:** Local wisdom in Indonesia encompasses a vast array of knowledge, from agricultural practices to conflict resolution techniques, often passed down through generations orally. CLIL creates opportunities to integrate this knowledge into language learning. For instance, Bahasa Indonesia lesson might focus on traditional farming techniques, using local vocabulary

related to tools, crops, and agricultural practices. This not only teaches language skills but also fosters an appreciation for the ingenuity and sustainability practices embedded in local wisdom.

- b. Contextualizing Language Acquisition:** CLIL emphasizes learning language within a meaningful context. Indonesia's local proverbs and folktales offer a treasure trove of cultural context. Imagine an English language class using Indonesian folktales like "Sangkuriang" to explore themes of perseverance and filial piety. Students could analyze the story, translate key passages, and even create their own folktales in English, drawing inspiration from local wisdom.
- c. Developing Critical Thinking:** Local wisdom often embodies valuable life lessons and problem-solving strategies. CLIL can be used to encourage students to critically analyze these traditions. For example, a science class might explore traditional medicinal practices alongside modern medicine, using English to discuss the effectiveness and scientific basis behind these practices. This fosters critical thinking skills and encourages students to appreciate the value of both local knowledge and scientific advancements.
- d. Fostering Intercultural Understanding:** Local wisdom offers a window into a culture's values and beliefs. By integrating local wisdom from Indonesia into CLIL lessons, students gain a deeper understanding of Indonesian culture and its unique perspective on the



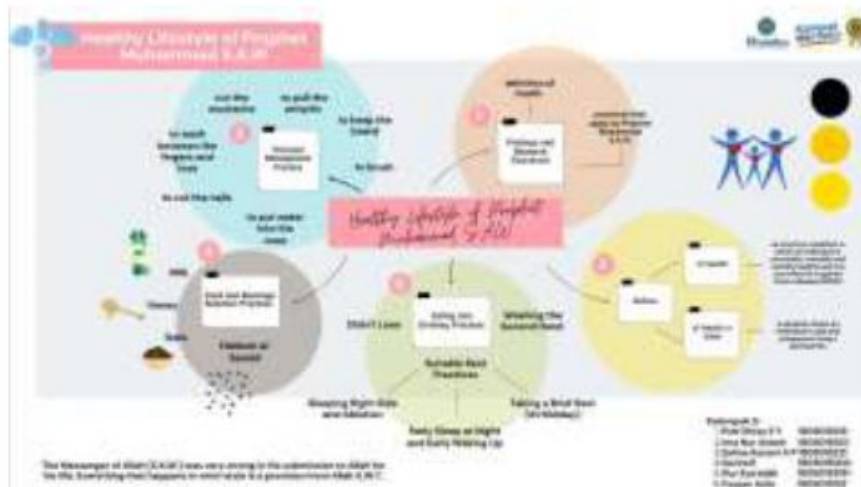
world. This promotes intercultural understanding and respect for diverse traditions.

- e. **Community Collaboration:** Local wisdom often thrives within communities. CLIL can be a catalyst for collaboration between schools and community elders or artisans. These experts could be invited to participate in workshops or discussions, sharing their knowledge and local language skills with students in a CLIL setting. This fosters a sense of community ownership over language learning and cultural preservation.

By embracing CLIL and Indonesia's rich local wisdom, educators can create a stimulating and culturally enriching learning environment. Students not only acquire language skills but also develop a deeper appreciation for their own heritage and the wider world.

## 5. Engaging Collaboration in a CLIL Tertiary Education Context: Fostering Language Skills

Interaction and collaboration are vital for successful language learning, including English. Working together allows students to be more active participants in the learning process, fostering communication and critical thinking. This is especially true in online environments, where **multimodal teaching media** like interactive platforms and collaborative tools can facilitate engaging activities.



*Figure 1. 5 Students' Literacy in form of A Mind map*

Content and Language Integrated Learning (CLIL) takes collaboration a step further. By integrating subject matter with language learning, CLIL provides a **meaningful context** for students to use and practice communication skills. Imagine a science class where students collaborate on creating online presentations about different ecosystems, utilizing visuals, text, and spoken explanations in English. This not only deepens their understanding of science concepts but also encourages them to develop strategies for clear and concise communication in a foreign language. The character development model by teaching English with an Affective strategy based on CLIL (Wijirahayu & Dorand 2018) is applied to developing religious values (Wijirahayu & Armiati 2020).

However, measuring the quality of online collaborative learning can be challenging. While platforms can provide data on participation levels, assessing the true effectiveness of interaction requires careful consideration. Educators can develop rubrics that evaluate not just participation but also the quality of collaboration and the

extent to which students are using language learning strategies effectively within the CLIL framework.



*Figure 1. 6 Multimedia created during Covid-19 pandemic*

By embracing multimodal learning and collaboration within a CLIL framework, online educators can create a dynamic environment where students become active participants in their own learning, fostering not just language skills but also essential 21st-century skills like critical thinking and problem-solving. Mindset of the teachers influenced the application of CLIL in classroom practices (Wijirahayu, 2022).

### **English in Action: Analyzing Literacy through Nutrition and Public Health Projects**

AI-powered systems can be tailored to individual needs, providing real-time data collection, analysis, and feedback on dietary habits. This can be beneficial for both consumers seeking to optimize their nutrition and healthcare professionals conducting remote assessments. Technological advancements allow for the interpretation of dietary data in the context of a person's health, enabling the generation of personalized recommendations. Mobile apps can simplify

food intake tracking, while wearable technologies offer new avenues for data collection to support remote nutritional assessments.



*Figure 1. 7 Digital Technology in Clinical Nutrition*

### **Mobile Health Apps: Empowering Patients and Tracking Progress**

Mobile health apps are revolutionizing healthcare by promoting patient engagement, data collection, and remote monitoring.



*Figure 1. 8 Mobile Health Apps*



**Increased Patient Engagement:** Apps can make healthcare more interactive and engaging, encouraging patients to take a more active role in their well-being.

**Enhanced Data Collection:** Apps provide a convenient way for patients to track and share data on their health, like diet and activity levels. This data can then be used by healthcare professionals for better monitoring.

**Remote Monitoring:** Certain apps allow healthcare providers to remotely monitor patients' progress outside of clinical settings.

However, it's important to be cautious of some potential drawbacks:

**Unverified Information:** Some apps might offer health information, like weight management or dietary advice, that hasn't been vetted by medical professionals. It's crucial to verify the source of such information.

Despite these concerns, many apps offer valuable features for self-monitoring. These commonly include:

**Dietary Tracking:** Users can record their daily food intake, allowing them to monitor their eating habits and identify areas for improvement.

**Physical Activity Tracking:** Apps can track steps, exercise routines, and overall activity levels, helping users stay motivated and reach their fitness goals.

**Goal Setting and Feedback:** Many apps allow users to set personalized goals for diet and activity, and receive ongoing feedback on their progress.



Overall, mobile health apps offer a promising approach to empowering patients and enhancing healthcare delivery. However, responsible use and critical evaluation of information are crucial for maximizing their benefits.



*Figure 1. 9 Smart watches for Nutrition Assessment*

### **Wearable technologies**

There are established wearable devices relevant to clinical nutrition, such as those that track activity levels or sleep patterns, which can indirectly influence dietary needs. Smart watches are becoming powerful tools for healthcare by using a toolbox of technologies.

**Motion Sensors:** Accelerometers, pedometers, and gyroscopes track movement, steps, and activity levels.

**Vital Sign Monitors:** Heart rate sensors, ECG (electrical heart activity), and pulse oximeters (blood oxygen) provide valuable health insights.

**Environmental Sensors:** Altimeters and barometers track altitude and air pressure, while proximity sensors can detect falls.

**Communication Features:** Microphones, cameras, and GPS allow for voice interaction, capturing images, and location tracking (with cellular connectivity through LTE).

These features enable smart watches to collect baseline health data, monitor patient progress, and track the effectiveness of treatment plans.



*Figure 1. 10 Wearable Devices for Dietary Assessment*

Acoustic devices, equipped with microphones, listen for chewing and swallowing sounds to potentially identify food types and estimate quantities consumed. Image-based wearable use cameras to capture images of the food, aiming to classify what is eating and estimate portion sizes. Motion-based wearable, typically worn on the wrist, monitor the wrist movements during meals to potentially glean insights into the eating habits.

## **AI machine learning powers the future of nutrition**

At its core, the machine learning utilizes functions like pattern detection, prediction, classification, and image recognition. These capabilities are revolutionizing the field of nutrition through applications.

1. **Diet Optimization:** Machine learning can analyze personal data and suggest personalized dietary plans for weight management or improved health.
2. **Food Image Recognition:** Apps can use image recognition to identify foods from pictures, simplifying calorie tracking and dietary analysis.
3. **Risk Prediction:** Machine learning algorithms can analyze health data to predict potential health risks and recommend preventive dietary measures.
4. **Diet Pattern Analysis:** Machine learning can uncover patterns in eating habits, helping individuals understand their dietary tendencies and make informed changes.

## **Harnessing Local Wisdom in CLILL and Collaboration for Online Learning**

This exploration has highlighted the potential of local wisdom, fostered through collaboration, as a springboard for critical thinking in online language learning. By critically evaluating religious values and integrating them with students' and teachers' existing beliefs about language learning, we can foster active and engaged learners. Collaboration remains a key strategy for maintaining a strong virtual presence in online environments.

Furthermore, flexibility offers immense potential to empower students to express their voices within this virtual space. The development of English language learning strategies should be intentional and incorporate simultaneous strategy training. By adapting content and context to specific learning objectives, and even integrating aspects of the creative industry that resonate with students' characters, we can create a truly engaging and effective online learning experience.

### **Empowering Learners: From AI Machine Learning to Online Language Acquisition**

The potential of machine learning in optimizing nutrition exemplifies the power of technology to personalize learning experiences. This resonates strongly with online language learning, where effective strategies cater to individual needs and learning styles.

Just as machine learning algorithms can analyze dietary data to suggest personalized plans, online language platforms can leverage student data and preferences to create customized learning journeys. Furthermore, similar to the way machine learning can identify patterns in food intake, online language courses can track student progress and adapt content and difficulty levels accordingly.

This emphasis on personalization aligns with the concluding remarks on online language learning. Here, fostering critical thinking through local wisdom and collaboration empowers students to become active participants in their learning. By drawing upon their cultural backgrounds and beliefs about language learning, students

can engage more deeply with the material. Additionally, collaboration, a cornerstone of successful online learning environments, mirrors the collaborative action that led to the development of local wisdom.



*Figure 1. 11 Potion*

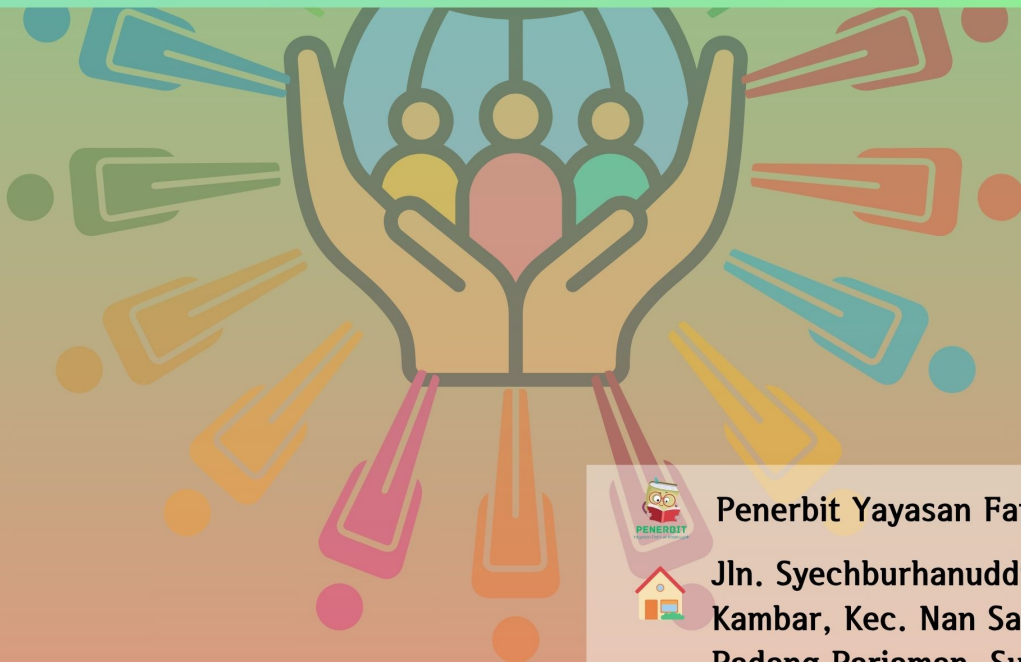
Ultimately, both machine learning in nutrition and online language learning highlight the importance of flexibility and adapting to individual needs. By embracing technology and fostering a culture of critical thinking and collaboration, we can create empowering learning experiences that cater to diverse learners, both online and offline.



Sustainable Development Goals (SDGs) initiated by the United Nations represent a global effort aimed at achieving welfare and sustainability for all humanity. These goals address major challenges such as poverty, inequality, climate change, as well as fostering peace and global partnerships. However, achieving the SDGs requires more than just government policies. Cross-sector collaboration and active participation from various stakeholders—governments, the private sector, civil society, academics, and local communities—are essential. This is why a multi-stakeholder approach is crucial to realizing comprehensive and sustainable change.

Multi-stakeholder participation involves not only dialogue among interested parties but also fostering synergies that can accelerate the achievement of these goals. Each chapter in this book focuses on practical approaches, case studies, and strategies that can be applied to encourage the involvement of all parties in realizing the SDGs. We hope this book will serve as an important reference for policymakers, practitioners, academics, and anyone interested in understanding and implementing multi-stakeholder collaboration as a pathway to sustainable development.

This book presents a model of community engagement programs developed by lecturers who are members of ADPI. It compiles various approaches and themes related to multidisciplinary academic engagement with society across different fields, offering insights that serve as valuable references for academics, particularly university lecturers.



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