

Factors Affecting Sustainable Agro-tourism: A Review Study

Retno Santi Sumardi¹, Mukhamad Najib², Anuar Shah Bali Mahomed¹, Derry Dardanella^{2(\boxtimes)}, and Radhwan Sneesl³

¹ School of Business and Economics, University Putra Malaysia, Serdang, Malaysia ² Department of Management, IPB University, Bogor, Indonesia derrydardanella@apps.ipb.ac.id

³ College of Science, University of Basrah, Basra, Iraq

Abstract. Agro-tourism is a tourism concept that becomes an alternative to natural tourism which has an important meaning in improving and developing the local economy and social community in a country, and the concept of Agro-tourism is also important for economic improvement, especially for developing countries. However, changes and decreases in interest in Agro-tourism sometimes occur, therefore it is important to know and understand what factors affect the sustainability of Agro-tourism. The method used in this study is the Systematic Literature Review (SLR) method to identify, review, evaluate and interpret all available research with interesting phenomenon topic areas, with certain relevant research questions. This paper explores 30 Scopus papers that have been selected according to the topic and discussion of the sustainability of ago-tourism. The findings of this paper about the methodology, analysis tools, and place of research that dominated appear from 2012-2022 are presented in this paper. In addition, this paper also

Keywords: Agro-tourism · Factors · SLR · Sustainability

1 Introduction

Agro-tourism is an example of agricultural tourism and specifically has been highlighted as important means of improving and developing the sociocultural and economic status of rural communities during the last few decades. Nowadays, Agro-tourism is considered a form of alternative tourism and an important strategy for economic development, particularly for the developing country.

Agro-tourism provides many benefits besides income for the country. The benefits of Agro-tourism are that could package natural beauty with agricultural activities. Agro-tourism also could hire the labour surrounding the area, and bring double benefits. According to [1] stated that the Agro-tourism proved could increase the prosperity in the society's economy and it can also be used as empowerment for cultural revitalization and preservation of the heritage of religious traditions to preserve customs in ecotourism villages. In addition, the Covid-19 pandemic presented challenges for the Agro- tourism

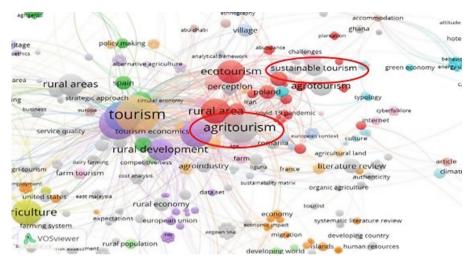


Fig. 1. View of Bibiliometric from Vos Viewer.

sector. Where the prohibition of crowds is an obstacle to tourism development, it is not impossible to continue to improve the Agro-tourism sector by continuing to implement health protocols and government regulations to maintain distance, and Agro- tourism could be implemented because Agro-tourism brings the outdoor space concept and provide wide land so the visitors could keep their distance. Previous research has examined tourism in general, but the relationship between research focused on Agro-tourism and sustainability is still very rarely discussed in Scopus. This can be seen in the bibliometric image obtained from the Vos viewer below.

By looking at the close relationship between Agro- tourism and sustainability tourism, it is known that there is a direct and strong relationship between Agro-tourism and Sustainability, but the small circle sign indicates that the research is still quite rarely investigated by researchers, especially in the Scopus system. In addition, Agro-tourism become important to discuss because it has undesirable effects on the environment (Fig. 1).

Therefore, knowing sustainability is important to discuss. Sustainability is the most important factor for the success of any tourism destination and for the tourism industry as a whole. For this reason, it is important for this paper to know the factors that affect sustainability tourism, especially Agro-tourism.

2 Research Methodology

2.1 Search Strategy

The search process consists of some activities, such as selecting digital libraries, defining the search string, executing a pilot search, refining the search string and retrieving an initial list of primary studies from digital libraries matching the search string. Before starting the search, an appropriate set of databases in the field is searched to have the broadest set of studies possible.

Population	Agro-tourism
Intervention	Sustainability Agro-tourism
Comparison	-
Outcomes	Factors affecting the sustainability of Agro- tourism
Context	Studies in Agritourism

Table 1. PICOC structure

2.1.1 Selecting Digital Libraries

In this paper, we used the Scopus.com database. The consideration in choosing the database is because Scopus has prestige, is the most preferred by researchers and is one of the requirements in a study.

2.1.2 Defining Search String

PICOC (Population, Intervention, Comparison, Outcomes, and Context) criteria will use not only for research questions but also to find the keywords. The PICOC criteria are used to find out the keywords that will be used in the paper search, which can be seen in the population and intervention. Therefore, based on the PICOC structure as shown in Table 1.

The search string was developed according to the following steps:

- a) Identification of the search terms from PICOC especially from Population and Intervention.
- b) Identification of search terms from research questions.
- c) Identification of search terms in relevant titles, abstracts, and keywords.
- d) Identification of synonyms, alternative spellings and antonyms of search terms.
- e) Construction of sophisticated search string using identified search terms, Both ANDs and ORs. In this paper, the keywords used to search for the article can be seen in the following search string: (Agro-tourism or sustainability agritourism) and (factor sustainability agritourism).

The search string obtained will be used for each database used. Where the search is on the title, keywords, and abstract. Where the search is limited to paper publications in the form of research papers and review papers in 2012–2022. This paper search is also limited to papers published in English.

2.1.3 Study Selection

Paper selection is based on inclusion and exclusion criteria. Details of the paper search and selection diagram can be seen in the following Prisma Flow Diagram (Fig. 2):

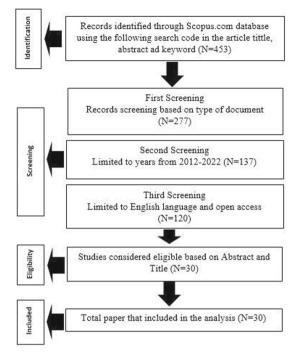


Fig. 2. Process of selection the paper by PRISMA FLOW DIAGRAM

2.2 Review Methods

The method used in this study is the Systematic Literature Review (SLR) method. The objectives of SLR include being used to identify, review, evaluate and interpret all available research with interesting phenomenon topic areas, with certain relevant research questions. The SLR method reviews and identifies the journal systematically, in each of its processes following the steps or protocols that have been set. The data that have been used in this study are from Scopus indexed journals from 2012–2022. Scopus as a database because Scopus is the one of databases produced by Elsevier. Scopus is also well known as a database that has a high privilege among researchers in the world. Scopus has high-quality data and a study in 2006 said Scopus is easier to navigate and offers author profiles that cover affiliations, number of publications, and bibliographic data, references, and details on the number of citations [2]. SLR method is defined as a process of identifying, assessing, and interpreting all available research evidence with the purpose to provide answers to specific research questions [3].

2.3 Research Question

Therefore, it can be concluded that the research question can be seen Table 2. The issue and objectives of this study are provided in order to answer the research questions. Research questions of this paper are:

84 R. S. Sumardi et al.

- a) Which journal is the most significant in the sustainability of Agro-tourism?
- b) Which place that used the most for collecting data for research?
- c) What kind of methods that used for Agro-tourism?
- d) Which are the best methods for Agro-tourism?
- e) What are the recommendations that literature gives to sustainability Agro-tourism?

2.4 Study Quality Assessment and Data Synthesis

The study quality assessment can be used to guide the interpretation of the synthesis findings and to define the strength of the elaborated inferences. The goal of data synthesis is to aggregate evidence from the selected studies for answering the research question.

2.5 Validity

This review was not aware of the existence of biases in choosing studies. The search was not based on the manual reading of titles of all published papers in journals. This paper consists of papers that are published in journals but not from published proceedings or from International conferences.

3 Findings

3.1 Significant Journal Publications

In this systematic review, 30 papers were founded in this analysis. And the findings of this paper could be seen in Table 2.

This paper discussed sustainability in the Agro- tourism industry. Based on the chosen theme, 30 papers were analysed to support the preparation of this paper and to find concepts and information that support sustainability in agricultural tourism. Based on the years obtained, 11 papers found as the majority of the papers were published in 2022 with the journal names are Agriculture, Journal of studies and research in Human Geography, International Journal of Sustainable Development and Planning, administrative sciences, Sustainability, environmental science. Meanwhile, in 2018 and 2012–2015, there were no Scopus journals related to the sustainability of Agro-tourism that found on this paper.

Based on the results obtained, it can be concluded that the distribution of papers from 2012–2022 related to the sustainability of Agro-tourism is not the same in every year. This is due to differences in interests between each researcher, as well as the latest issues that have occurred in their respective countries.

The publishers used in the early paper are dominated by MDPI with 18 papers. As it is known that MDPI is one of the publishers that support academic communities since 1996 and this publisher is also the pioneer in the scholarly with the open access system. MDPI is also a publisher that has a high impact factor and fast publication, therefore this publisher become a favorite among researchers around the world. In addition, MDPI also has the core value of the sustainability paper and supported and organized several conferences and events based on Sustainability, including the 6th World Sustainability Forum [4]. The next analysis is about the place and methodology of research used in their paper, it can be seen that the majority of research sites used in each study are in European countries, with as many as 14 researchers. The methodology that is widely used is to use quantitative methods. While SPSS is a popular tool to analyze their research. Based on the information obtained, it can be seen that countries in Europe remain the main choice for conducting research. According to data from the [5], European countries have the largest number of international tourists compared to other countries in the world.

In addition, countries that dominate are included in developing countries, according to [6] stating that Agro- tourism in developing countries is not only a tool for rural development but also poverty alleviation. Quantitative research is the dominant method in research in the field of Agro-tourism. Based on [7] quantitative methods have several benefits: quantitative methods could obtain good accuracy data and could examine the question of the validity of the knowledge and the theories. The analytical tool that is widely used is using SPSS. SPSS is one of the software used to perform a statistical analysis both precisely and quickly, where the results of the analysis produce various types of output desired or in accordance with the objectives of the study itself. SPSS itself is one of the most popular data processing and statistical analysis applications and is often used by students as well. This is because this software is often used to facilitate the data processing itself, besides that the SPSS application itself has also been used in various fields, such as market research, quality control, and improvement. The output results produced by the SPSS program are of course very helpful in data processing so that the results of data processing can be accounted for and trusted. However, SPSS lacks a regression analysis technique, therefore a model that is quite complex will be quite difficult to process. Agro-tourism's continuous growth in recent years and promising potential have facilitated its recognition as an alternative economic activity. Agro-tourism referred to interchangeably as Agro-tourism, farm tourism, or Agri-tainment, is the provision of touristic activities on a farm to attract visitors generally for educational and recreational purposes.

Furthermore, Agro-tourism could support sustainable rural livelihoods for small farm holders by diversifying economic opportunities and generating positive social, cultural, and environmental benefits thereby enhancing community resilience and reducing vulnerability.

According to [8] stated that the benefits of developing Agro-tourism are creating jobs and income, empowering rural areas, improving farm productivity, sustainability for agricultural business, reducing immigration, preserving cultural heritage, product marketing, and development of infrastructure. Therefore, supporting the sustainability Agro-tourism becomes important for each country.

Today, Agro-tourism is an increasingly significant component of rural countryside and communities in many parts of the world. According to [9], Agro-tourism is one of the five key strategic directions of successful global tourism development until 2020. Nowadays, agriculture has changed to tourism needs. The changes in the agricultural system, the issue of the outcome, and the changes in consumer needs and wants have forced farmers to seek additional sources of income. As lifestyle agriculture changed to be the new tourist destination that can offer a new experience and could interact with the rural activity. Agro-tourism also could increase tourist interest cause may offer activities

Author	Findings related to sustainability Agro-tourism
[<mark>6</mark>]	Increase the visibility of Agro-tourism structures through road signaling
[13]	Agro-tourism has several weaknesses, including recreational infrastructure which is still weak and accessibility is still lacking so the supply of recreation is still very minimal.
[15]	To protect the natural environment and landscape by stimulating innovation and economic activities, and allocation of resources and branding is a key factor of success in Agro- tourism.
[24]	Recommends that infrastructure that has not been properly prepared for agro-tourism for the government should prepare better.
[7]	Special attention needs to be given to the provision of facilities that have good quality hygiene.
[8]	Positive attitudes toward certain economic effects on agritourism.
[27]	Reactivate the tourism economy by giving tourism vouchers and solidarity with discounts of up to 50%.
[22]	Providing green technology innovations that enable the reduction of greenhouse gases and emissions as well as the increase of renewable energy
[23]	Cultural change has a positive effect on the sustainable development of religious ecotourism village.
[4]	Policymakers should pay special consideration to farmers with the above traits for agritourism development.
[14]	Reducing water and energy consumption
[15]	Agro-tourism can also provide a wide range of opportunities for women entrepreneurs.
[18]	Providing long-term loans and banking facilities, working together with relevant agencies to issue permits for businesses and providing training to farmers on learning the basics of tourism business, providing business consulting for success and further development.
[8]	Women as key in Agro-tourism development.
[21]	The most important to increase tourist motivation with to increase the demand for catering services by the quality of the dish and price. And Restaurants that provide in the tourism area such as Agro tourism area are one of the important facilities to provide.
[13]	Policymakers should dynamically adjust the development policy of Agro-tourism integration in light of local conditions from the actual situation.
[11]	In terms of the local community, they must be able to introduce the local culture, art and unique products that are related to coffee.

Table 2. Findings of sustainability in Agro-tourism

(continued)

Table 2. (continued)

Author	Findings related to sustainability Agro-tourism
[12]	Both regional economic-social development factors and tourism-related factors influence the development of agritourism.
[16]	The latter are encouraged to participate in the development of an agritourism business whether on-farm or off-farm.
[39]	space emotions had a stronger effect on the behavioral intention than the perceptual behavior control factors.
[10]	Innovations in agritourism are introduced from time to time, in long intervals. agritourism products or agritourism facilities that were introduced into reality.
[19]	Essential to build integration between communities, practitioners and government institutions in supporting and building the potential of existing abundant resources.
[20]	Residents perceive that both enclave tourism and agritourism influence community well-being, although the latter to a slightly greater extent.
[3]	If the income continues to be at such low levels, homestays may have to seize operation in the very near future.
[40]	Agritourism is one of the most important spheres of tourist activity in rural areas.
[10]	A better understanding of the characteristics of a region where leisure agriculture is most viable
[28]	Green concept contains principles in the management, selection, and use, composition and arrangement, placement, and visual dynamics of plants landscape.
[26]	Agro-tourism participates in empowering local communities.
[9]	Planners should explain the reasons for the reallocation of environmental resources and the benefits of the adjustments
[25]	Monitoring trends and drawing conclusions, allowing for making well-informed decisions, is important for an efficient management process in this sector.

that modern people could not obtain. Sustainability tourism is the concept of visiting a place as a tourist and trying to make a positive impact on the environment, society, and economy. According to [14] the purpose of sustainable tourism is to make a balance between protecting the environment, maintaining cultural integrity, establishing social justice and promoting economic benefits, and meeting the needs of the host population in terms of improved living standards both in the short and long term. Sustainability is the most important factor for the success of any tourism destination and the tourism industry as a whole. Sustainability is a way to maintain tourism existence by minimizing negative impacts on the environment and social culture, as well as contributing to and providing opportunities for the local economy. Therefore, it is important in this paper to present and discuss the factors that influence the sustainability of Agro-tourism. Based on the selected paper, these factors can be seen in Fig. 3.

Factors that affect the sustainability of tourism have been known based on [10] stating that Sustainability is very important to maintain tourism existence by minimizing

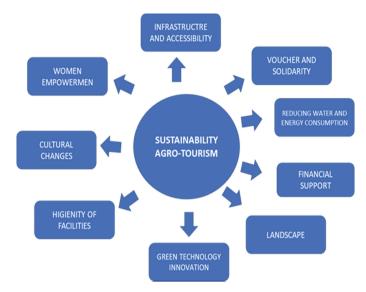


Fig. 3. Factors sustainability of Agro-tourism

negative impacts on the environment and social culture. Therefore, it is very important to use tourism to improve the economy, it is also important to exchange cultures and empower farmers and women but also pay attention to the environment. In the picture above, it is known several factors that can help the sustainability of Agro-tourism based on the paper found in Scopus. This can be divided into socio-cultural aspects, where there is the empowerment of women and women farmer groups in supporting and becoming a determining factor in achieving sustainability.

[11], In addition, cultural exchange and the provision of attractions in the form of culture are also important factors in achieving tourism sustainability [1], by introducing local culture, and art and also providing unique products [12] will also attract tourists and create tourist loyalty. In the economic aspect, the thing that must be considered in order to achieve sustainability is the provision of adequate facilities in tourist attractions with a high level of hygiene. [13, 14], stimulate innovation and economic activity [15], good infrastructure and accessibility [13, 16, 17], landscape [15], products and services that have quality and affordable prices [14], giving discount vouchers with the aim of reactivating tourism [18] post-disaster such as covid-19 and others, financial support from the government [8]. In terms of the environment, namely relocation of environmental resources [19], monitoring carried out by the government [20], providing green technology innovations [21], reducing water and energy consumption [22]. With the various advantages provided by Agro-tourism and also current tourism trends, it is important to know the factors that make Agro-tourism sustainable and not damage the surrounding agriculture and plantations. In the sustainability of Agro-tourism, motivational factors are important in encouraging and attracting tourists to come to a tourist spot, including Agro-tourism. One of the motivating factors for tourists is landscape design. Landscape design is the most important thing because according to research [23] states that tourists coming to their tourist attractions prefer activities that provide beautiful natural scenery

and spoil the eyes. Likewise, [24] states that tourists are very interested in the building design and also the landscape architecture provided. In landscape according to [10] states that the landscape in rural areas can be divided into nature scape, farm scape, and culture scape. According to [25] states that there is a correlation between brand destination and landscape design. Landscape is the key to tourism [3], landscape design is very important to pay attention to in Agro-tourism because it can give a different impression and also comfort for consumers. According to [26] Developing the infrastructure by improving the existing access routes, creating easy access points, and providing manage public transportation. According [27] states that using a logistic hub makes it possible to obtain sustainability due to its possibility of a friendly environment. The role of the manager is also very important to coordinate and make the tourism programs offered run well. In this case, good coordination between managers, farmers, and related parties, and sharing with agricultural communities are also important for managers. All the preparations carried out in agro-tourism will not be successful if there is no marketing promotion role. So, in this case, promotion using social media is very effective in promoting Agrotourism. According to [28] Social media is a crucial tool for marketing and could promote tourism. In addition to promotion, you must also determine the quality of products and facilities that are good, hygienic, and at competitive prices [21].

4 Conclusion

Based on the results obtained, 2022 is the publication year that dominates the Agrotourism papers, while the most dominating publisher is MDPI. The name of the journal that dominates is sustainability. The methodology that is widely used is to use quantitative methods. While the tool used for analysis is to use SPSS. To achieve sustainable tourism, all parties need to be involved in the tourism business. They are who are involved are a businessman in the tourism sector, workers in the tourism sector, the government, all stakeholders also the community/society has to be involved to increase this business. In the Agro-tourism industry, there are several things that can affect the sustainability of tourism, including:

- a) Provide discount vouchers to revive tourism, provide facilities and products with good quality and hygiene,
- b) Good infrastructure and provides easy transportation
- c) Coordination among various stakeholders, managers, and communities, by conducting cultural collaborations and providing opportunities for local communities to give benefit for agritourism
- d) Landscape design is the most crucial thing that must be considered,
- e) Continuous promotion and the use of social media is very helpful in maximum promotion.
- Assistance from the government is good in financial support, providing technology and innovations with providing green technology innovations.

5 Limitation of Paper

This study contained several limitations. First, this study is limited to literature review only, certain types of documents, certain years, certain search engines, and scope as well.

As an extension of this study, future research should test many kinds of factors to make sustainability in the tourism sector specific in quantitative or qualitative methods.

References

- Purnamawati, I. G. A., Jie, F., & Hatane, S. E. (2022). Cultural Change Shapes the Sustainable Development of Religious Ecotourism Villages in Bali, Indonesia. Sustainability, 14(12), 7368.
- 2. https://www.elsevier.com/en-xs
- Kitchenham B and Charters S. (2007). Guidelines for performing Systematics Literature Reviews in Software Engineering. EBSE Technical Report Version. 2.3, EBSE-2007
- 4. https://www.mdpi.com/about
- World Tourism Organization. (2019). https://unwto.org/global-and-regional-tourism-perfor mance. viewed on February 2020
- 6. Bhatta, K., Itagaki, K., & Ohe, Y. (2019). Determinant factors of farmers' willingness to start agritourism in rural Nepal. Open Agriculture, 4(1), 431-445
- 7. Sugiyono. (2018). Metode Penelitian Bisnis. Bandung (ID): Alfabeta
- 8. Mahmoodi, M., Roman, M., & Prus, P. (2022). Features and Challenges of Agritourism: Evidence from Iran and Poland. Sustainability, 14(8), 4555
- 9. World Tourism Organization. (2011). https://unwto.org/global-and-regional-tourism-perfor mance
- 10. Thompson, M; et al. (2016). Tourism development in agricultural landscape: the case of the Atherton Tablelands, Australia. Landscape Research. 41(7), 730-743
- Meutia, I. F., Yulianti, D., Sujadmiko, B., Dodi, F., & Fitri Juliana Sanjaya, F. J. S. (2022). Tourism and Ethnodevelopment: Female Contribution in Community-Based Agritourism. International Journal of Sustainable Development and Planning.
- Deliana, Y., Trimo, L., Fatimah, S., & Djali, M. (2021). Identification of Consumers' Motives in Buying Organic Luwak Coffee in terms of Agri- Touirism. Jordan Journal of Biological Sciences, 14(5).
- Ciolac, R., Iancu, T., Brad, I., Popescu, G., Marin, D., & Adamov, T. (2020). Agritourism activity—a "smart chance" for mountain rural environment's sustainability. Sustainability, 12(15), 6237.
- 14. Pilis, W., Kabus, D., & Miciuła, I. (2022). Food Services in the Tourism Industry in Terms of Customer Service Management: The Case of Poland. Sustainability, 14(11), 6510.
- Kubal-Czerwińska, M., Mitrofanenko, T., Szabó-Diószeghy, Á., Szabó, M., Szpara, K., & Zawilińska, B. (2022). Agritourism and local products in terms of protection and sustainable development of the Carpathians: a participatory discussion on key issues and challenges. Human Geographies, 16(1), 33-52.
- Ferreira, D. I. R., & Sánchez-Martín, J. M. (2022). Agricultural Landscapes as a Basis for Promoting Agritourism in Cross-Border Iberian Regions. Agriculture, 12(5), 716.
- Obeidat, B., & Hamadneh, A. (2022). Agritourism- A Sustainable Approach to the Development of Rural Settlements in Jordan: Al-Baqura Village as a Case Study. Planning, 17(2), 669-676.
- Sánchez-Rivero, M., Rodríguez-Rangel, M., Cerro, P. G., & García, A. M. (2022). Analysis of the Economic, Labour, and Management Effects of COVID-19 on Rural Accommodation: An Application to a Rural European Province (Cáceres, Spain). Administrative Sciences, 12(2), 57.
- Chen, H. S. (2020). The construction and validation of a sustainable tourism development evaluation model. International Journal of Environmental Research and Public Health, 17(19), 7306.

- Roman, M., Abrham, J., Niedziółka, A., Szczucka, E., Smutka, L., & Prus, P. (2022). Tourist Attractiveness of Rural Areas as a Determinant of the Implementation of Social Tourism of Disadvantaged Groups: Evidence from Poland and the Czech Republic. Agriculture, 12(5), 731.
- Pimonenko, T., Lyulyov, O., & Us, Y. (2021). Cointegration between Economic, Ecological and Tourism Development. Journal of Tourism and Services, 23 (12), 169-180.
- Ispas, A., Untaru, E. N., & Candrea, A. N. (2019). Environmental management practices within agritourism boarding houses in Romania: A qualitative study among managers. Sustainability, 11(14), 3887.
- 23. Shah, C; et al. (2019). Exploring a market for agritourism in Fiji: tourists' perspective. Tourism recreation research, 2320-0308.
- Alessandro, F,D. (2016). Green building for a green tourism. A new model of eco-friendly agritourism. Agriculture and Agricultural Science Procedia, 8(2016), 201-210
- 25. https://www.routledge.com/corporate/about-us
- Bachok, S., Hasbullah, H., & Amin, T. A. T. M. (2019). Rural Agro-tourism and local community income: the case study of clustered homestays in Kelantan and Terengganu. Planning Malaysia, 17.
- 27. Anderson, K, R. (2017). Tourism and global logistics hub development in the Caribbean will there be a symbiotic relationship? Tourism and global logistics, 9(1), 106-118.
- Canovi, M; & Pucciarelli, F. (2019). Social media marketing in wine tourism: winery owners' perceptions. Journal of travel and tourism marketing, 36(6), 653-664.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

