Original article http://dx.doi.org/10.18623/rvd.v21.2638

THE ECONOMICS OF LOCATION AND SPACE: URBANISATION IN SOUTH ASIA

A ECONOMIA DA LOCALIZAÇÃO E DO ESPAÇO: A URBANIZAÇÃO NO SUL DA ÁSIA

Article received on: 10/10/2023
Article accepted on: 11/08/2024

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The authors declare no conflict of interest.

Abstract
This article analyses the effects of the economics of location and space, in particular urbanisation in South Asia. The potential of urbanisation is used as a comparative term to join the more prosperous, industrialised nations with better living standards. The aim is to demonstrate the impact of urbanisation, climate change and urban biodiversity on sustainability, as well as their consequences in the suburbs and peripheries of large cities. The objectives of sustainable urban development and the green economy are similar, which is why the rapid urbanisation taking place

Resumo
Este artigo analisa os efeitos da economia da localização e do espaço, em particular, a urbanização no Sul da Ásia. O potencial da urbanização é utilizado como termo comparativo para integrar as nações mais prósperas, industrializadas e com melhor padrão de vida. O objetivo é demonstrar o impacto da urbanização, das mudanças climáticas e da biodiversidade urbana na sustentabilidade, assim como suas consequências nos subúrbios e periferias das grandes cidades. Os objetivos do desenvolvimento urbano sustentável e da economia verde são semelhantes, razão pela qual a rápida urbanização que ocorre no Sul

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in South Asia has brought to light the importance of urban green infrastructure and the green economy in terms of promoting long-term sustainability and solving environmental, social and economic problems. The research makes use of bibliographical and documentary research, as well as some normative provisions. It concludes that it is essential to plan cities and build sustainable communities in order to minimise the impact of urbanisation on environmental, social, economic and financial sustainability and, in particular, on people's quality of life.
Keywords: impact; locatization economy; SDG; South Asia; urbanization.

da Ásia trouxe à tona a importância das infraestruturas verdes urbanas e da economia verde no que se refere à promoção da sustentabilidade em longo prazo e à resolução de problemas ambientais, sociais e econômicos. A pesquisa baseia-se em levantamento bibliográfico e documental, além de algumas disposições normativas. Conclui-se que é fundamental planejar as cidades e construir comunidades sustentáveis, de modo a minimizar o impacto da urbanização na sustentabilidade ambiental, social, econômico-financeira e, em particular, na qualidade de vida das populações.
Palavras-chave: *ecomonia da localização; impacto; ODS; Sul da Ásia; urbanização.*

Introduction

This article analyses the effects of the economics of location and space, in particular urbanisation in South Asia, and its profound impact on the environment and the economy. Location economics makes it possible to study how space can play a role or influence decision-making in order to derive the best or different benefits. To ensure the sustainable expansion of cities, it is essential to protect the environment, society and the economy. The rapid growth of cities in South Asia has emphasised the importance of implementing a green infrastructure and a green economy to address environmental concerns and ensure the long-term prosperity of cities.

The blue economy plan aims to reorient South Asian countries towards the utilisation of their ocean capacities and trade with regional partners, promoting sustainable port management, simplified logistics and the reduction of emissions from maritime transport. The urban blue economy expands economic activities beyond traditional sectors, providing employment opportunities and promoting the sustainable use of resources, fair benefits and the preservation of coastal and marine ecosystems.

One of the most significant changes of the 21st century will be rapid urbanisation. The world's population is expected to increase by 2.5 billion people

in the next 30 years, with the majority of the population residing in cities, requiring the utilisation of urban ecosystems and biodiversity to adapt to and mitigate climate change. Urbanisation is a significant challenge, as it often results in the destruction of natural ecosystems. It is therefore essential that all urban development projects undergo thorough environmental impact assessments in order to evaluate their potential effects on local ecosystems and wildlife populations.

Biodiversity conservation will benefit greatly from the active involvement of local communities, stakeholders and professionals who can provide guidance, improve understanding of the issue and promote a sense of responsibility. Protecting the ecological and environmental importance of cities can be achieved through the application of strict legislation and efficient governance mechanisms.

1 Sustainable urban development and green economy

The goals of sustainable urban development and the green economy are similar: to foster long-term sustainability in urban areas by addressing environmental, social, and economic concerns. Sustainable urban development is an approach to city planning, design, and management that prioritises environmental protection, social cohesion, and economic flourishing. The goal is to ensure that future generations will be able to meet their own requirements without sacrificing those of the current one (Sawyer, 2011).

Important components of eco-friendly city planning include:

a) Conservation of natural resources, waste reduction, use of alternative energy sources, and adaptation to climate change are all part of environmental sustainability. It stresses the value of protecting and enhancing urban ecosystems and natural resources. The goal of sustainable urban development is to build cities where all people have fair and equitable access to essential resources including housing, healthcare, education, and transportation.
b) Social Inclusivity: to improve the quality of life for people of all socioeconomic backgrounds, it advocates for more accessible housing, public places, and community involvement. A thriving and diverse economy is an essential component of every sustainable urban development plan. Renewable energy, energy efficiency, sustainable transportation, and waste management are only a few of the industries that benefit from this policy. There needs to be a balance between economic growth and protecting the planet and its people.
c) Integrated planning and design: this method takes into account the

interdependence of different systems and sectors in urban planning and design. It prioritises sustainable and environmentally friendly infrastructure, as well as compact and mixed-use development, as well as the protection of historical sites and cultural artefacts. The term "green economy" is commonly used to describe an economic system that puts an emphasis on environmental responsibility, resource conservation, and low-carbon growth. It seeks to replace resource-intensive, polluting, conventional industries with greener, more ethical ones. Among the most important aspects of the green economy, it advocates for the use of alternative energy sources including solar, wind, and hydropower in order to lessen the demand for fossil fuels. Cleaner technology, more energy-efficient methods of operation and more environmentally friendly manufacturing procedures are all encouraged (Kamble, 2020).

By making better use of materials, recycling, and waste-to-energy technologies, the green economy seeks to reduce both resource consumption and waste production. The ideas of the circular economy, such as building longevity, repairability, and recycling in product design, are emphasised. The green economy creates job prospects in fields including renewable energy, energy efficiency, sustainable agriculture, waste management, and green infrastructure, among others.

d) Green jobs and skill development: a qualified labour force familiar with eco-friendly methods and tools is essential. Sustainable business practices are encouraged in the green economy by means of market processes, regulations, and incentives (ILO, 2015[)]. Carbon pricing, renewable energy subsidies, tax breaks for green projects, and product labelling initiatives are all good examples. Cities may make the shift towards more sustainable and resilient patterns of development with the support of synergies created by combining sustainable urban development with the green economy. Cities may become centres of innovation, enhance the quality of life for their citizens, and help achieve global sustainability goals by adopting environmentally friendly practices, encouraging social inclusion, and pursuing economic opportunities. As we can see in Figure 1:

Figure 1. Green economy and green growth in South Asia.
Source: prepared by the authors.

Since the vast majority of humans now call metropolitan areas home, sustainable development (SD) advocates have begun to emphasise the need for urban green infrastructure (UGI) as a crucial component of city planning. A city's UGI is made up of several distinct kinds of interconnected systems. UGI relies on the presence of nature in a variety of forms (such as urban plazas, street tree lines, parks, and horticultural gardens) to achieve its goals. These are the same elements that provide shape to natural ecosystems, allowing them to carry out biological activities and, by extension supply (ES) (Štrbac *et al.*, 2023). The occupation and use of natural ecosystems for urban purposes, as well as urban-orientated design and building of UGI, add artificial components to UGI. As a result, recreational services improve while regulatory services decline, both of which are linked to the success and constraints of natural biological processes. By providing ES and

avoiding disservices, UGI can make a major contribution to urban sustainability.

A city's residents can only reap the benefits of UGI if the various sites are linked together. The UGI infrastructure and its dispersion throughout the urban area are a crucial part of city design. When cities expand, they often face a conflict between preserving natural areas and developing them for human use. Loss of ES occurs alongside an expansion in urban living conditions for humans when more and more natural areas are urbanised. The development and upkeep of sustainable urban green infrastructure—including its protection and restoration—have emerged as fundamental tenets of any all-encompassing and practicable plan for urban sustainability, thanks in large part to the growing awareness of SD. Urban areas are becoming more concerned with contributing to sustainability by cutting down on greenhouse gas emissions and boosting the quality of life for their residents (Hanna; Comín, 2021). One of the most typical difficulties for metropolitan areas to help achieve these goals is to set up a well-structured UGI.

The rapid urbanisation that is occurring in South Asia has brought to light the significance of urban green infrastructure as well as the green economy in terms of promoting sustainability and addressing environmental problems. The provision of natural *habitats* by urban green infrastructure for indigenous plant and animal species contributes to the conservation of South Asia's renowned biological diversity. Even in areas with a high population density, it helps to maintain ecological balance and ensure the survival of a wide variety of plant and animal species. Regulation of the Climate Cities with more green space have been shown to have lower levels of air pollution and an attenuation of the urban heat island effect. Trees and other forms of vegetation are beneficial to cities located in hot climates because they provide shade, which helps to lower temperatures and moderate local microclimates. Urban green infrastructure helps in the regulation of stormwater flow by soaking up precipitation and reducing the chance of floods. This is an aspect of stormwater management known as stormwater management. The accumulation of precipitation and subsequent filtration of that water in urban wetlands, green roofs, and permeable pavements can improve water quality while simultaneously relieving pressure on drainage systems (Hachoumi *et al.*, 2021).

When people have easier access to parks and other green areas, it can have a beneficial impact on the overall health and well-being of the general population. It is commonly known that people who spend time in urban parks and other recreational areas experience improvements in both their mental and physical health as a direct result of their participation in these activities. The goal of the Green Economy movement in South Asia is to encourage sustained economic

growth, the creation of new job opportunities, and the more effective use of available resources. The earth is saved through the implementation of eco-friendly practices, including renewable energy, energy efficiency, and other such initiatives. Among the essential components of the regional green economy are the following (Kumar; Majid, 2020):

- Renewable energy: solar, wind, hydropower, and biomass all hold a great deal of potential in South Asia. The push towards the use of renewable energy in the green economy has several goals in mind, including lowering dependency on fossil fuels, improving energy security, and mitigating the consequences of climate change. Because the agricultural sector in South Asia contributes significantly to the region's economy, it is essential for farmers in that region to employ sustainable farming practices. Economic practices that are less harmful to the environment, such as organic farming, water conservation, and agroecology, are receiving increased support and attention. Its purpose is to enhance food security while simultaneously lowering the amount of damage done to the environment (Triyana; Li, 2022).
- Waste management: an increase in the amount of waste produced in South Asian cities as a direct result of growing urbanisation (Singh, 2020). Recycling, waste-to-energy conversion, and composting are all activities that should be supported in order to meet the objectives of the green economy, which are to lessen the amount of waste sent to landfills and to stimulate the development of a circular economy. The green economy creates new opportunities for employment as well as business startups. Training and capacity building should be given top priority in a variety of environmentally conscious enterprises, including but not limited to sustainable transportation, waste management, renewable energy, and energy efficiency. The concept of developing environmentally friendly urban planning practices is closely connected with the green economy. It encourages the use of environmentally friendly construction practices, infrastructure that saves energy, environmentally friendly transportation options, and the introduction of green space into urban areas. The importance of urban green infrastructure as well as the green economy is receiving an increasing amount of recognition from the governments, institutions, and inhabitants of South Asian countries. Green corporate environments are being fostered, sustainable urban development is being pushed for, investments are being made in initiatives that use renewable energy sources, green spaces are being protected, and more green space is being preserved. These projects have as their main objective the development of urban areas in the region that are

less harmful to the environment, more resistant to the effects of climate change, and more hospitable (Sturiale; Scuderi, 2019).

2 Urban blue economy and urban development

For decades, altering geopolitical patterns in South Asia has provided a foothold for both classic and non-traditional threats. A thicker South Asian solidarity has been generated by cutting-edge developmental strategies in the wake of the COVID-19 outbreak, the recent geo-economic crisis in Sri Lanka, and the US-China flare-up over Taiwan. The introduction of blue economic ties in South Asia could pave the way for profitable and long-lasting cooperation between countries (Roy, 2022).

South Asian countries need to reorient themselves under the blue economy plan so that they can make use of their burgeoning oceanic capabilities with cooperative regional partners in a world where land and border-based concerns are on the rise. Take Bangladesh as an example, a littoral country that has effectively capitalised on the Bay of Bengal for its own economic growth and the development of its maritime and oceanic assets. Sagar Mala, an Indian initiative, has a similar goal: to use the country's 111 internal rivers to transport goods and people between the coast and the interior of the country. Sri Lanka's proximity to key shipping lanes has spurred the revival of manufacturing and the expansion of port facilities. South Asia has geographical benefits along its coasts, but it also faces several difficulties. Countries in the region face significant challenges from pollution, *habitat* loss, biodiversity degradation, piracy, international crime, and climate change, in addition to geopolitical tensions (Finnigan, 2019).

Harnessing the potential of coastal and marine resources in metropolitan areas is central to the notion of the urban blue economy, which aims to promote sustainability and economic development. The urban blue economy presents both potential and challenges for South Asian nations, given the region's many countries with extensive coastlines (Roy, 2019).

Mangroves, coral reefs, estuaries, and fisheries are just a few of the coastal *habitats* in South Asia that provide vital ecosystem services. Tourism, carbon sequestration, food production, and coastal defence are just some of the many benefits that these ecosystems provide. Urban blue economies aim to sustainably manage and conserve these resources because of their intrinsic value. Many countries in South Asia rely heavily on the fishing industry for their economy, as it provides both jobs and food. Implementing catch limits, promoting responsible

fishing tactics, and providing support for small-scale fishermen are all examples of sustainable fishing practices emphasised by the urban blue economy. The expanding demand for seafood can also be met by expanding aquaculture operations in urban coastal regions, such as fish and prawn farming (Hilmi *et al.*, 2023). Tourism and recreation along South Asia's coastlines are major industries, contributing to the region's GDP and providing new employment possibilities. The urban blue economy prioritises the conservation of coastal ecosystems, the implementation of environmentally sound tourism practices, and the participation of residents in tourism-related economic growth. Water sports, beach clean-ups, and ecotourism projects are just some of the leisure pursuits that benefit from this policy.

Trade and economic activity in South Asia rely heavily on the region's ports and maritime transport. Sustainable port management, streamlined logistics, and decreased emissions from shipping are all valued components of the urban blue economy. A sustainable maritime industry can be fostered through the implementation of strategies including green port initiatives, the use of cleaner fuels, and the construction of intermodal connectivity infrastructure. South Asian coastlines are at risk from climate change consequences such as rising sea levels, storm surges, and erosion, highlighting the importance of coastal resilience and adaptation. The urban blue economy combines coastal planning and infrastructure development with climate resilience and adaptation strategies. Mangrove restoration, beach nourishment, and coastal zone management methods are all examples of nature-based solutions that can be used to fortify and safeguard metropolitan centres (Chen *et al.*, 2022).

The urban blue economy promotes academic inquiry and technological advancement in the maritime and coastal industries. This includes encouraging the growth of blue biotechnology and renewable ocean energy sources like offshore wind farms and wave energy, as well as supporting ocean surveillance systems and the protection of marine biodiversity. South Asian governments, communities, and stakeholders are beginning to see how the urban blue economy can foster coastal sustainability, economic growth, and resilience. Benefiting from the urban blue economy in South Asia requires strategies and efforts that strike a balance between commercial activity, the preservation of coastal ecosystems, and the well-being of local residents. As we can see in Figure 2:

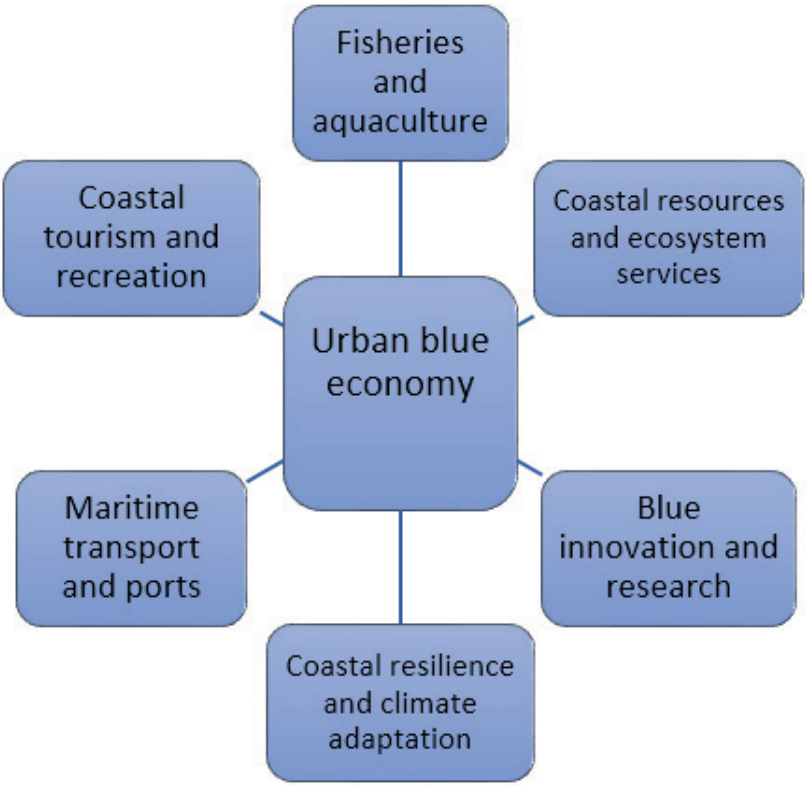

Figure 2. Sustainable urban blue economy in South Asia.
Source: prepared by the authors.

3 Urban blue economy and growth of the economic sector

The urban blue economy expands economic activities beyond traditional sectors, providing potential for economic diversification. Fisheries, aquaculture, coastal tourism, maritime transportation, renewable energy, and marine biotechnology are just a few of the industries that benefit from this policy. Opportunities for employment can be generated by the urban blue economy. Fisheries, aquaculture, tourism, and the development of renewable energy all demand a wide variety of workers, from unskilled labourers to highly trained specialists. Growth in these industries has the potential to raise living standards in urban areas by creating new jobs and new sources of revenue (Juneja, 2021). The

urban blue economy promotes creative problem-solving and business startups. It encourages research into and the implementation of innovative strategies for maximising the use of coastal and marine resources. As a result, a thriving entrepreneurial environment revolving around blue economic activity can flourish. SMEs benefit greatly from this. Building ports, marinas, fish processing facilities, coastal tourism infrastructure, and renewable energy installations is often necessary for the growth of the urban blue economy. These infrastructure developments help the building and development industries, which in turn helps the economy thrive. The potential for international trade and export can be increased via the urban blue economy. Products made from fisheries, aquaculture, seafood processing, and marine-based tourism can all be exported to domestic and international markets, boosting economies and bringing in much-needed foreign currency. Products and services with additional value are actively supported by the urban blue economy. Value-added and revenue-generating pursuits – including seafood processing, aquaculture value chains, marine biotechnology, and ecotourism experiences – all fit into this category. As the urban blue economy expands, it presents a number of promising financial and investment prospects. More and more banks, investors, and financial institutions are seeing the promise in blue economic sectors and are providing funding, investment, and financial services to foster their growth. This helps the corporate sector expand and improves conditions for blue economic endeavours. The urban blue economy is a driving force in sustainable development and increased resilience. Blue economic sectors aid in long-term economic growth, environmental conservation, and resistance to the effects of climate change by adopting sustainable practices and incorporating climate change adaptation and mitigation methods. Sustainable resource use, fair benefits, and the preservation of coastal and marine ecosystems can only be achieved with well-designed governance mechanisms, regulations, and policies that accompany the expansion of the urban blue economy. This will ensure the continued growth and prosperity of the blue economy and the value it adds to the economy as a whole (Kituyi, 2020).

4 Urban development, urban planning and its impact on the environment and biodiversity

One of the most significant changes of the 21st century will be the urbanisation of the world's population, which is expected to expand by 2.5 billion people during the next 30 years. Rapid urbanisation, which frequently comes

with the loss of natural ecosystems, will be necessary to house all these new city dwellers. This is a problem for environmentally responsible city planning at a time when biodiversity around the world is in grave danger (Simkin *et al.,* 2022).

This unparalleled rate of extinction affects more than three-quarters of Earth's species. Insect species have been inadequately studied despite their crucial significance in ecosystems and, by extension, human well-being, while assessments of mammals, birds, and amphibians have become increasingly popular among scientists. The decline in insect biodiversity has been recorded all over the world, especially in the United Kingdom and other European countries. Four main causes have been suggested. Human-caused *habitat* loss and fragmentation, followed by pollution, biological factors, and climate change, are seen as the primary causes of global biodiversity loss. Changes in behaviour play a similar impact in the extinction of mammalian and avian species (Mollashahi; Szymura, 2021).

Almost every facet of climate change endangers urban ecosystems, biodiversity, and the essential ecosystem services they give to urban dwellers' health and happiness. The creatures that make up urban ecosystems are already feeling these effects. The function of urban ecosystems and biodiversity in assisting cities in adapting to and mitigating the effects of a changing climate is growing in importance. More resilient, sustainable, and liveable outcomes for cities and metropolitan regions can be achieved by using urban biodiversity and ecosystems as adaptation and mitigation options. Improved urban and regional planning, policy, governance, and multisectoral cooperation will be necessary to conserve, restore, and grow urban ecosystems in the face of rising climatic and non-climatic urban development pressures. To effectively adapt to and mitigate the effects of climate change, cities need to take a systemic, long-term approach. Urban and peri-urban ecosystem services (UES) play an important role in nature-based strategies for mitigating the effects of climate change in cities, and they must be carefully managed to continue providing essential environmental benefits for decades to come. Through collaborative city and regional planning and management for nature-based solutions, ecosystem-based planning can improve connections across urban, peri-urban, and rural ecosystems.

In order to incorporate the monetary value of urban biodiversity and ecosystem services into climate-related urban resilience and sustainability planning and decision-making, it is necessary to quantify these advantages. The monetary and non-monetary values of biodiversity and ecosystem services, such as their links to physical and mental health and social fairness in access to resources, should be factored into these advantages (McPhearson *et al.*, 2018).

Significant effects on the environment and biodiversity are caused by urban development and planning. How urban areas are planned, constructed, and administered can either hasten the decline of natural ecosystems or hasten the loss of biodiversity. Natural ecosystems, such as woods, marshes, and grasslands, are frequently destroyed or fragmented with the construction of cities and the accompanying infrastructure. Ecosystems are thrown off balance, and natural landscapes are fragmented as a result of *habitat* loss, leading to the isolation of plant and animal species (UNEP, 2023). The ability of species to disperse and the stability of ecological systems are both threatened by fragmentation. Parks, gardens, and urban forests are just some of the green spaces that might disappear or become fragmented as a result of urbanisation. These parks and gardens are vital to the survival of local plant and animal life because they offer food, shelter, and breeding opportunities. The destruction of natural areas causes a loss of biodiversity and can upset local ecosystems, which can lead to the extinction of some species. Air pollution from vehicles and industry, water pollution from stormwater run-off, inappropriate waste management, and noise pollution are only a few examples of the pollution and environmental degradation caused by urban expansion. Degradation of ecosystems, decreases in water quality, injury to vulnerable species, and effects on reproductive success are only a few of the ways in which pollution reduces biodiversity. Water resources modification urbanisation frequently necessitates the modification of natural water resources, including rivers, streams, and wetlands. The loss of wetland *habitats* and an increase in the frequency with which flooding occurs are both consequences of the widespread construction of impermeable surfaces like roads and buildings. These shifts have the potential to affect fish populations and other water-dependent organisms in aquatic *habitats* (Alikhani; Nummi; Ojala, 2022).

Urban development has the potential to unintentionally import and spread invasive plant and animal species. These invasive species often disturb ecological interactions by outcompeting native species for resources. They pose a threat to natural ecosystems because of their potential to modify *habitats* and decrease biodiversity. The urban heat island effect causes cities to be warmer than the areas immediately surrounding them. Large amounts of impermeable surfaces, less vegetation cover, and higher energy usage all play a role in this. Species' ranges and behaviours might shift, *habitats* can become less suitable, and more stressed organisms can perish if temperatures rise. The goal of sustainable urban planning is to reduce the detrimental effects of urbanisation on natural resources and animal populations. It includes tactics like protecting and enhancing urban biodiversity

using green infrastructure features including parks, green roofs, and urban woods (Sturiale; Scuderi, 2019). Urban sprawl can be mitigated and natural ecosystems protected, by the adoption of compact and mixed-use development patterns. The reduction of greenhouse gas emissions and air pollution can be achieved through the promotion of energy-efficient buildings, renewable energy, and sustainable transportation. Protecting water quality by installing stormwater management technologies that simulate natural hydrological processes. Planning for land use that takes into account biodiversity, with particular emphasis on the selection and preservation of key ecological areas and wildlife corridors (Zhang, 2021). The incorporation of local communities' knowledge of ecosystems into urban planning processes by active engagement of those communities. Sustainable urban design aims to lessen human impact on the environment, preserve biodiversity, and build more resilient and pleasant cityscapes. Green urban infrastructure and the preservation of biodiversity are integral to the achievement of SDG with rising rural-urban migration in South Asia. As we can see in Figure 3:

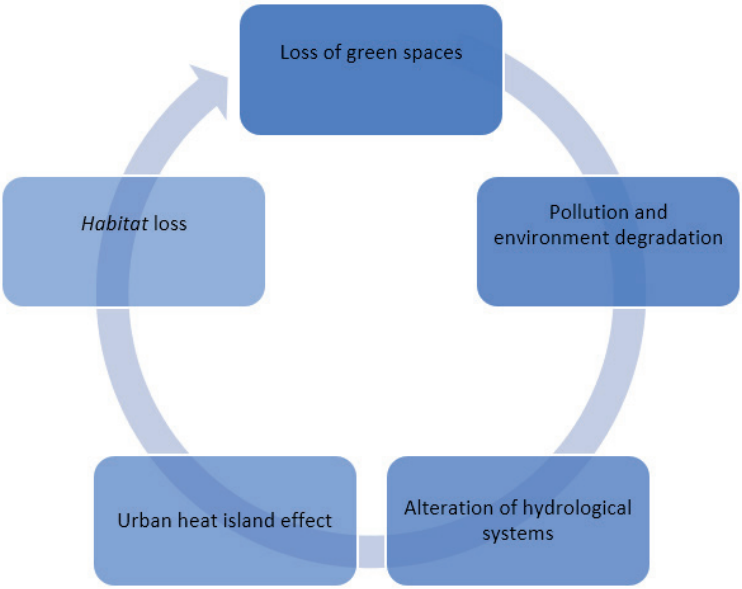

Figure 3. Impact of rapid urbanisation on the biodiversity and ecosystem.
Source: prepared by the authors.

The Sustainable Development Goals (SDG) can be greatly aided by the construction and maintenance of urban forests in the South Asian region. There are several ways in which urban forests help to make our cities and towns more sustainable. They reduce pollution and increase oxygen levels in the air, helping to alleviate concerns about pollution and its effects on human health in urban settings (Fumega, 2009). Cities benefit from urban forests because they reduce the effects of the urban heat island, cool the air, and give welcome shade (Knight *et al.*, 2021). They also facilitate social interaction, improve health and wellness, and provide opportunities for pleasure. Urban forests play a crucial role in achieving Goal 13: Climate Action. They assist in reducing global warming because carbon dioxide is removed from the air and stored in their tissues. Urban woods not only help with energy efficiency and lowering greenhouse gas emissions, but they also provide shade and cut down on cooling costs.

4.1 Land-based life

Urban forests help protect species diversity, which is crucial for the well-being of ecosystems. They're essential for the survival of many kinds of wildlife, from migratory birds to pollinators. Cities may help preserve biodiversity and aid in the conservation of endangered species by maintaining urban forests and planting native species. The health and happiness of city dwellers benefit from easy access to urban woodlands (Kotze *et al.,* 2022). Time spent in natural settings has been associated with positive outcomes like lower blood pressure, better mood, and more exercise. A healthier and more resilient population is a direct result of the benefits that urban woods provide, including places to play, exercise, and unwind. Urban forestry has the potential to reduce poverty by increasing work opportunities. Jobs, especially for locals, can be created through activities like tree planting, maintenance, and management of urban forests. Ecotourism and other small business opportunities are two other ways in which urban trees can help the economy and the environment (Hudson, 2021). To realise the SDG, many different groups and organisations will need to work together. The establishment of urban forests in South Asian cities requires the participation of governments, local people, non-governmental organisations (NGOs), and private businesses. Urban forests that are in line with the SDG and the needs of the region can be planned, created, and managed by a wide range of stakeholders working together. The necessity for urban forests is obvious in light of the rapid urbanisation and rising environmental difficulties faced by cities in South Asia. South Asia can

promote sustainable and resilient cities that contribute to the accomplishment of the SDG by recognising the various benefits they offer and incorporating them into urban planning and development initiatives.

5 Implementing effective legislation and governance structures is vital to preserving biodiversity during urbanisation

Environmental Impact Assessments (EIA) should be required of all urban development projects to determine how they would affect local ecosystems and wildlife populations. This makes sure that environmental factors are considered wherever possible (Tarabon *et al.*, 2019). Comprehensive land use planning and zoning rules should be crafted with biodiversity conservation goals in mind. In order to preserve *habitats* and keep biological connectedness, metropolitan areas should have designated protected areas, green spaces, and wildlife corridors. Safeguard biodiversity through creating and maintaining protected areas, natural reserves, and urban parks in urban areas. Put in place rules and management strategies to protect the ecosystems and wildlife that live in these regions.

5.1 Biodiversity offsetting

Enact policies that mandate developers offset the biodiversity they destroy during project construction. To mitigate the negative effects on biodiversity inside the urban development site, it may be necessary to restore or create similar *habitats* elsewhere. Policies to protect and preserve biodiversity in urban areas should be formulated and strictly enforced. In order to maintain and increase biodiversity, these measures may include mandates for the use of native plant species in landscaping, the promotion of wildlife-friendly urban planning, and the prohibition of invasive species. Establish and enforce standards for environmentally responsible building practices that take biodiversity into account (Radić; Brković Dodig; Auer, 2019).

The use of sustainable materials that have low environmental implications, such as green roofs, vertical gardens, wildlife-friendly architectural designs, and so on, is mandated. Raise public awareness and get people involved in urban planning and conservation efforts to improve outcomes for both. The conservation of biodiversity can benefit from the participation of local communities, stakeholders, and professionals who can offer advice, increase understanding of the issue, and inculcate a sense of responsibility.

5.2 Compliance and enforcement

Increase the effectiveness of compliance and enforcement procedures to ensure that biodiversity conservation laws and regulations are followed. Creating dedicated squads, bolstering inspection, and policing resources, and punishing infractions are all possible steps in this direction. Promote partnerships and cooperation between city governments, non-governmental organizations, universities, and local communities in order to tackle the issue of urban biodiversity conservation as a whole. Encourage collaboration in order to pool resources, talents, and information for the benefit of biodiversity conservation. To evaluate the efficacy of biodiversity conservation strategies in urban development, it is important to set up monitoring and evaluation mechanisms (Gavin *et al.*, 2018).

Tracking progress, filling in data gaps, and informing adaptive management approaches can all be achieved by consistent monitoring of biodiversity indicators and *habitat* quality. The ecological and environmental worth of cities can be safeguarded through the implementation of strict legislation and governance mechanisms for biodiversity conservation in urban development. It helps to maintain biodiversity, strengthens cities, and advances healthy, pleasant city life.

Conclusion

Making cities "smarter" could improve municipal government, citizen involvement, and services. Urban planning will favour small, mixed-use complexes soon. Compact cities reduce urban sprawl, car dependence, and walkability. Concentrating mixed-use development in metropolitan centres can reduce commuting times and environmental impacts. Compact and mixed-use building improves community participation, service access, and land usage in highly populated areas. Urban planning requires social fairness and inclusive growth. Future cities must provide affordable housing, healthcare, education, and public services for everybody. Inclusive urban development requires community participation, social harmony, and fighting inequality and exclusion. Social justice promotes peaceful and egalitarian cities. Urban planning will incorporate circular economy principles, including resource efficiency, waste minimisation, and recycling. Circularity requires rethinking urban infrastructure, raw materials, and consumer habits. Rubbish reduction, recycling, and greener manufacturing and consumption will be city priorities. Circular economy concepts reduce resource

depletion, waste, and economic stagnation. Our cities and billions of people depend on urban planning. By emphasising sustainability, resilience, social equity, and technology innovation, future urban development may create habitable, prosperous, and ready-to-face-change communities.

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Authors' participation
The authors participated in all stages of preparing this article.

How to cite this article (ABNT):
RODRIGUES, J. N.; BHATTACHARYA, S.; RODRIGUES, D. C. R. C. N. The economics of location and space: urbanisation in South Asia. *Veredas do Direito*, Belo Horizonte, v. 21, e212638, 2024. Available from: http://www.domhelder.edu.br/revista/index.php/veredas/article/view/2638. Access on: Month. day, year.