



NUS Launches AI Sense Maker, a Southeast Asia First for Research Discovery

Description

The **National University of Singapore (NUS)** has announced **AI Sense Maker (ASM)**, becoming the first university in Southeast Asia to use conversational AI to transform how students and academics begin their research. The platform goes live on **20 August 2026**.

Developed jointly by NUS Libraries and NUS Information Technology, AI Sense Maker is a web-based platform powered by OpenAI's large language model. Instead of juggling multiple databases and advanced search operators, users can simply ask a question in everyday language, such as: "Why do some neighbourhoods in Singapore feel hotter than others?"



Libraries



AI Sense Maker

QUERY

How nature and biodiversity evolve in Singapore?



AI generated content may contain errors. Do verify the information independently before making



Answer

The evolution of nature and biodiversity in Singapore is shaped by a complex interplay of his development factors. Here's a comprehensive overview:

Historical Context and Environmental Change

Singapore originally featured diverse ecosystems, including tropical rainforests, mangroves, and urbanization and deforestation have significantly altered these landscapes, leading to a reduction in biodiversity. Despite these changes, Singapore's tropical climate continues to support a rich diversity of plants and a wide variety of species, especially trees [1].

Urbanization and State Policies

The government has actively promoted greening policies, transforming Singapore from a "Garden City" to a "Smart City". Policies aim to integrate nature into urban environments, balancing development with ecological sustainability. Initiatives include the creation of parks, nature reserves, and green corridors, as well as the re-establishment of new ones. These efforts help maintain biodiversity within the city and provide numerous benefits to residents [9], [5], [10].

Biodiversity Conservation and Challenges

Conservation strategies focus on protecting existing habitats, restoring degraded areas, and promoting species movement and genetic diversity [5].

Singapore inherited five nature reserves after independence, but land pressures have led to the loss of natural habitats. The Nature Society (Singapore) has played a key role in advocating for the conservation of threatened species. Despite intensive conservation efforts, Singapore faces rapid biodiversity loss due to urban expansion. The concept of "wilderness" remains limited, with most nature areas carefully managed rather than left to evolve naturally.

Community Engagement and Changing Perceptions

AI Sense Maker generates a structured overview supported by numbered references, helping users quickly understand key concepts before exploring the original sources in greater depth. Image: NUS Libraries.

Search by meaning, not just keywords

Rather than relying on exact keywords, AI Sense Maker uses semantic search to understand the meaning and intent behind a question. It retrieves material based on context rather than literal word matches, surfacing relevant sources that may use different terminology while identifying related concepts along the way.

From there, the platform generates concise topic summaries, curates references for further reading, and builds interactive knowledge graphs that show how ideas connect. It is a marked shift from conventional keyword searches, which return long lists of articles that researchers must open and read one by one.

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AI Sense Maker

Community Engagement and Changing Perceptions

The relationship between Singaporeans and nature has evolved, with increasing awareness and such as birding have shifted from hunting and collecting to recreation and conservation, reflecting Educational and architectural initiatives, such as nature-integrated schools and field centers, field and the environment, promoting learning and stewardship [10], [11].

Key Takeaways

Singapore's biodiversity has evolved from rich, natural ecosystems to a highly managed urban landscape that integrate and conserve nature amid development pressures.

The state's greening policies, community engagement, and conservation strategies have helped address challenges remain in achieving genuine wilderness and halting biodiversity loss [7], [2], [5], [8].

The evolution of nature and biodiversity in Singapore is an ongoing process, shaped by historical and changing values of its people.

Overall, Singapore's experience demonstrates both the possibilities and limitations of urban biodiversity in a populated city-state [7], [2], [5], [8], [3].

References Reviewed

1. [The Trees of Singapore](#) ⓘ 1936,
2. [The City and the Forest : Plant Life in Urban Singapore](#) ⓘ 1986,
3. [Nature Society \(Singapore\) and the struggle to conserve Singapore's nature areas](#) ⓘ 2008,
4. [A history of birds and birders in Singapore from 1819-2021](#) ⓘ 2021,
5. [NATURE INTEGRATED LIVING ENVIRONMENT: CONCEPTUALIZING A NEW URBAN LANDSCAPE](#) ⓘ 2021,
6. [The changing face of birding in Singapore](#) ⓘ 2008,
7. ["City in Nature": Everyday Realities versus State Narratives](#) ⓘ 2022,
8. [ENROUTE TO WILDERNESS : HOW WILD IS SINGAPORE?](#) ⓘ 2015,
9. [REINVENTING EDEN : INTEGRATING NATURE BACK INTO CITIES](#) ⓘ 2010,
10. [MAN + NATURE SYMBIOSIS : JUNIOR COLLEGE IN THE FOREST - LEARNING IN AND FROM NATURE](#) ⓘ 2010,
11. [THE PULAU UBIN NATURE FIELD CENTRE](#) ⓘ 1991,



Concept Explorer

AI Sense Maker provides a list of the sources reviewed in generating its response, allowing users to access the original research materials and verify the information independently.
Image: NUS Libraries.

Built on trusted academic sources

AI Sense Maker launches with an initial foundation of 150,000 digitised materials. These are drawn from ScholarBank, NUS's repository of research papers, and Digital Gems, the university's ongoing effort to digitise its Special Collections of rare materials and primary sources, with a focus on Southeast Asia and books dating back as far as the 17th century.

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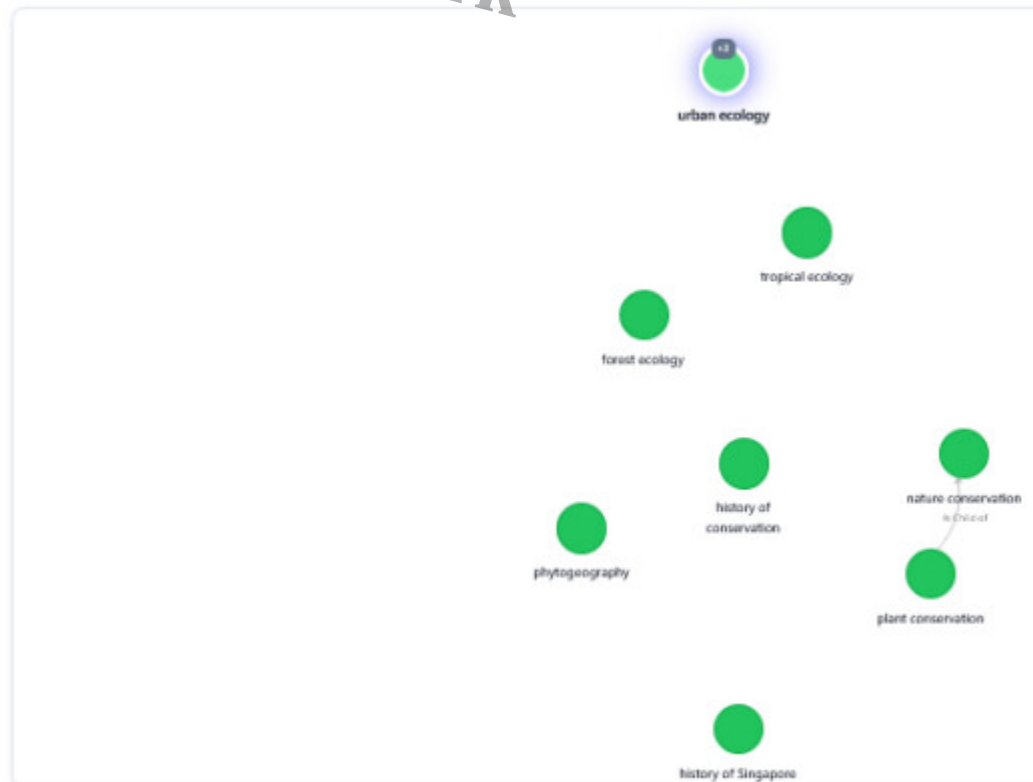
Concept Explorer

Identified Concepts

Based on the response above, the discovered related concepts are: urban ecology, nature conservation, and evolution can be understood through the interaction of tropical ecology and rapid urban development, wh mangroves, and coastal habitats are shaped by urban pressures and environmental change. Urban ecology Singapore integrates green infrastructure, habitat restoration, ecological connectivity, and protected areas protection and ecosystem resilience.

Knowledge Graph

Explore the relationships between concepts. Click on a concept to view related documents.



Concept Details

AI Sense Maker's interactive Knowledge Graph helps users visualise relationships between topics and discover related fields, such as urban ecology, nature conservation and tropical ecology. Image: NUS Libraries.

Every response comes with a list of the sources reviewed, so users can trace the original research and verify the information for themselves, an important guardrail as AI tools become part of everyday academic work.

• Short of time and clarity •

Associate Professor Natalie Pang, University Librarian at NUS, said researchers today are not short of information, but short of time and clarity.

AI Sense Maker is designed to help people make sense of information, not simply find it, she said. By connecting ideas across trusted sources, it gives students and researchers a more intuitive starting point for deeper inquiry. Rather than replacing critical thinking, it helps people ask better questions, discover new connections and generate fresh insights.

The platform forms part of NUS Libraries' broader *Libraries of Fantastic Things* innovation framework, which spans research discovery, digitisation and the preservation of rare and fragile collections.

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Concept Details



urban ecology

Concept

Description

Urban ecology is the study of ecological patterns and processes within cities and urbanizing regions, tracing interactions among organisms, people, built infrastructure, and the physical environment. It examines biological adaptations, invasion dynamics, and human–wildlife interactions across the urban mosaic of parks, streets, and brownfields. Key drivers include land-use change, habitat fragmentation, pollution, noise and artificial light, and resource flows of energy, water, and nutrients, often framed through urban metabolism. Urban ecology explores how dispersal, colonization, competition, predation, and evolution operate under novel conditions and alongside ecosystem services provided by urban nature—cooling, flood mitigation, carbon storage, pollination, and pest control—like pests or allergens, and how these vary with management, governance, and socioeconomic context. It integrates remote sensing, spatial modeling, and citizen science, integrating natural and social sciences to understand urban nature. Applied aims include informing conservation of native species, design of green infrastructure, restoration of urban nature. Urban ecology highlights both challenges—multiple stressors, rapid change, and inequitable exposure—dynamic laboratories where ecological understanding can directly improve biodiversity, human well-being, and urban sustainability.

Related Documents

1. [Identifying spatial patterns and interactions among multiple ecosystem services in an urban marine environment](#)
2. [The effects of rapid urbanization on forest landscape connectivity in Zhuhai City, China](#) ⓘ 2018
3. [A conceptual framework to untangle the concept of urban ecosystem services](#) ⓘ 2020
4. [Urban Vegetation Types are Not Perceived Equally in Providing Ecosystem Services and Disservices](#)
5. [Nature-Based Solutions for Urban Sustainability: An Ecosystem Services Assessment of Plans for the City of Singapore](#)
6. [Benefits of trees in tropical cities](#) ⓘ 2017
7. [ASSESSMENT AND MODELING METHOD STUDY OF MUNICIPAL SOLID WASTE MANAGEMENT IN SINGAPORE](#) 2023
8. [The Singapore "Garden City": the death and life of nature in an Asian city of the Anthropocene](#) ⓘ
9. [Urbanization-induced habitat fragmentation erodes multiple components of temporal diversity in urban ecosystems](#) ⓘ 2017
10. [Revisiting Jane Jacobs's Urban Complexity in Global Sustainability City Discourse](#) ⓘ 2021
11. [The intervention of plants in the conflicts between buildings and climate - A case study in Singapore](#)

AI Sense Maker provides an explanation of each identified concept, such as “urban ecology”, and recommends related materials for users to explore further. Image: NUS Libraries.

The launch adds to a growing list of AI initiatives across Singapore's institutions. For more on that landscape, see our looks at the [KPMG Trusted AI Centre of Excellence](#) and [NTU's mastery-focused learning](#), and our practical guide to the [safe use of generative AI in Singapore](#).

Image credits: NUS Libraries.

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