

WIPO GREEN Platform

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WIPO GREEN – The Marketplace for Sustainable Technology

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WIPO GREEN is an online platform for technology exchange. It supports global efforts to address climate change by connecting providers and seekers of environmentally friendly technologies. Through its database, network and acceleration projects, it brings together key players to catalyze green technology innovation and diffusion.

► [What are green technologies?](#)

[Read the full list of WIPO GREEN FAQs.](#)

FEATURED



Green Technology Book
Solutions for climate change
mitigation

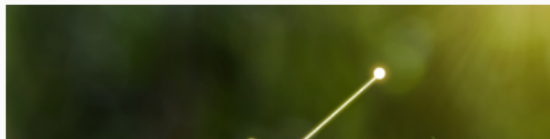
[Read the book](#) | [Upload](#)

[Technology](#)

Women in Green



Impact Stories



- Green technology matchmaking initiative
- Increase understanding of innovative potential
- Deploy innovation in the field
- WIPO GREEN platform, major visible implementation
- Combines all assets
 - Database
 - Projects
 - Partners
 - Resources / knowledge material

WIPO GREEN Database a central tool



- Free UN-based public database

- Inclusive and accessible (164 languages, mobile devices)

- Major repository of innovative green technologies and needs

- AI-based automatic matchmaking

- >145.000 articles, >6000 uploads

- Unique AI-based search functions

- Simple registration and upload

- No fees

- No requirement for patents or other IP

The screenshot displays the WIPO GREEN Database website. At the top, a navigation bar includes links for Projects, Partners, Resources, IPO Green, About us, and Register. Below this is a search bar with a dropdown menu set to 'Simple' and a 'Search' button. A 'Full Text Search' button is also visible. A 'Register' button is positioned below the search bar. The main heading reads 'WIPO GREEN Database of Innovative Technologies and Needs'. A descriptive paragraph follows, explaining the database's purpose and features. Below the text are seven category icons: ENERGY, WATER, FARMING FORESTRY, POLLUTION WASTE, TRANSPORTATION, PRODUCTS MATERIALS PROCESSES, and BUILDING CONSTRUCTION. The 'Collections' section lists various groups of technologies and needs, including 'Green Technology Book', 'Feeding 9bn', 'POME Indonesia', 'LAC Climate Smart Agriculture', and 'China Cities'. The 'Experts' section is partially visible at the bottom. On the right side, there are two sections: 'LATEST ENTRIES' with a list of recent uploads and 'FEATURED ARTICLES' with a list of featured content.

Acceleration projects

- Matchmaking projects with specific geographical scope and local partner implementation
- Focused on-the-ground matchmaking
- Identify needs and propose solutions
- Act as technology agent for need owners
- Work through local consultants and network of partners
- Matchmaking events as relevant
- Help identify finance solutions
- Database is a central tool

- Active projects in:

- Latin America (Argentina, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay)

- China;

- Indonesia;

- India

- Lao PDR

- Tajikistan



WIPO Green Technology Book

Grounded, practical take on state of technology and solutions.

Mix of trends analyses and a catalog of solutions

1st edition: climate adaptation technologies

2nd edition: climate mitigation technologies

3rd edition: Energy technologies in Climate Change

4th edition: Technologies for Climate Change Disasters

>1000 solutions – ranging from local and indigenous people's techniques to advanced and digital climate technologies

>1,4 million unique visitors

>77.000 full book downloads

A free, digital-first publication

A source of technological inspiration

A matchmaking tool

A living collection

<https://www.wipo.int/web/green-technology-book/>



WIPO

Direct access to three editions

Current editions of the Green Technology Book



Green Technology Book Expo Edition

PUBLICATION YEAR: 2025

This special edition of the Green Technology Book for EXPO 2025, Osaka, Japan, features 200+ examples of energy technologies and solutions from the Asia-Pacific region, dedicated to the diffusion of innovative green technologies by connecting the technology seekers and providers.



Energy edition

PUBLICATION YEAR: 2024

The third edition of the Green Technology Book dives into energy solutions. We provide a practical take on what new and upcoming technologies have to offer for mitigating and adapting to climate change within cities, rural areas and in the service sectors supermarkets, health facilities and datacenters.



Mitigation edition

PUBLICATION YEAR: 2023

The second edition that was launched at COP28 in December 2023 presents the technology trends and practical solutions to combat greenhouse gas emissions from cities, agriculture and land use, and the high-emitting steel and cement sectors.

[Read online](#)

[Download PDF](#)



Adaptation edition

PUBLICATION YEAR: 2022

The first edition of the Green Technology Book identifies technologies and trends and the impact of climate change on water security.

[Read online](#)



Green Technology Book Full Collection

The new WIPO flagship publication showcases climate change technologies. Upload to the database to become part of the collection.

Climate Change Adaptation edition



Climate Change Mitigation edition



Energy Solutions for Climate Change edition



Energy Solutions for Climate Change in Asia-Pacific. World Expo 25 edition. Launch Oct. 2025



Solutions for confronting extreme climate events. Launch November 2025 at COP30



The **Green Technology Book** EXPO25 Edition

Energy Solutions for Climate Change in Asia and the Pacific

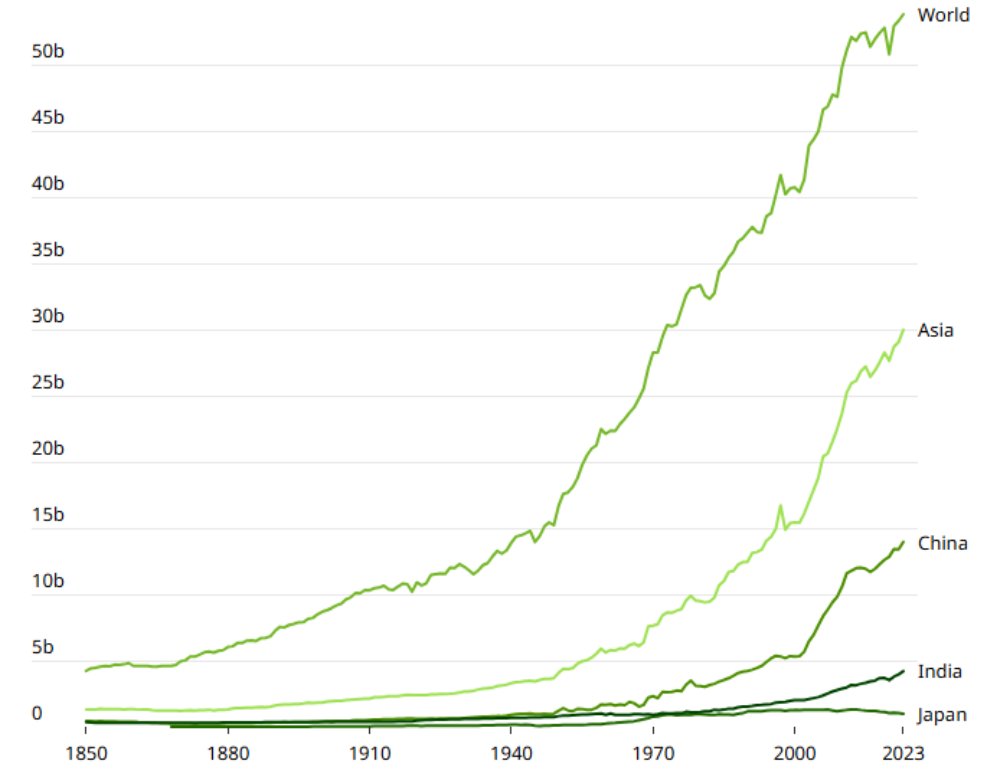
The key areas covered:

- Urban energy: Households, Public spaces and transport, water utilities
- Rural energy: Households, Agriculture, Fisheries and Aquaculture
- Key service sectors: Hotels and Shopping malls



Asia-Pacific region: **why important for energy?**

- Regional Contrasts** – High-income and low-income countries, rapid economic and population growth.
- Rising Energy Demand** – Driven by expanding middle classes and changing consumption patterns.
- Energy Consumption** – 46% of global energy use.
- Fossil Fuel Dependency** – 83% of energy from fossil fuels.
- GHG Emissions** – 53% of global emissions
- Key Emission Sectors** – Electricity generation & heating, manufacturing & construction, industry, agriculture, transport.



Source: Ritchie, Hannah, Pablo Rosado and Max Roser (2024c). Greenhouse gas emissions. Our World in Data. • [Get the data](#) • [Embed](#) • [Download image](#)

Fig. GHG emissions (World, Asia, China, India, Japan), 1850-2023



Asia-Pacific leading the clean energy innovation

- **Clean energy patents** surged from ~29,400 (2007) to ~44,700 (2022); solar technologies 54.4% of filings (2020–22).
- **Key Technology Areas** – Advanced batteries, solid-state batteries (>7,000 patents; Japan ~40%), electric vehicles (EVs), fuel cells, and smart farming tools.
- **Example:** China – Leads in solar (54.9% of global patents), hydro (39.9%), and battery storage innovation.
Japan – Global leader in fuel cells (32.1% of patents) and transport innovation
- **Emerging Technologies** – Offshore wind, floating solar, biofuels, smart transport.



Technology Trends in Urban Asia

Urban households



- Smart homes: Asia to lead smart home market by 2030.
- Cooling: 300M new ACs by 2040 in SE Asia
- Rooftop solar and home-batteries
- Efficient lighting
- eCooking: smart rice cooker, IoT enabled appliances

Public spaces and Transportation



- EV buses, e-ferries, e-trains
- Electrification of 2- & 3-wheelers.
- Battery swapping & vehicle-to-grid (V2G)
- AI-driven traffic management and autonomous buses.

Water utilities



- Urban water: smart meters & IoT
- Efficient pumps, motors, variable speed drives (VSDs)
- Digital water systems
- Wastewater-to- energy



Technology solutions



Vertical garden (Sri Lanka)



Water pump with pressure boosting system (Australia)



Flash charging system for e-bus (Japan)



Technology Trends in Rural Asia

Rural households and communities



- Off-grid renewables - solar, wind, pico/micro-hydro, and mini-grids
- Smart system - Smart meters, mobile payments, real-time monitoring
- Clean cooking solutions - biogas, improved stoves, solar cookers

Agriculture (on-farm and post-harvest)



- Solar pumps
- Agrivoltaics - combine crops & solar
- Precision agriculture - IoT, drones, AI
- Post-harvest - Solar & biomass dryers, mills, energy-efficient refrigeration
- Financing models - PAYGO, leasing, cooperatives

Fisheries and Aquaculture



- Energy-saving boats hybrid, solar-powered
- Aquavoltaics - floating solar over ponds
- Smart aquaculture - IoT, sensors
- Renewables powering aeration, feed processing, and cold storage.



Technology solutions



Smart off-shore aquaculture vessel (China)



Green char briquettes (Cambodia)



Floating solar PV on fishpond (France)



Portable solar cold storage box (Japan)



Technology Trends in Key Service Sectors

Hotels



- Smart heating, ventilation and cooling (HVAC) systems, inverter ACs, and heat pumps
- Occupancy sensors and Building Energy Management Systems (BEMS)
- Solar-heated pools, low-flow fixtures, and gray water recycling
- Food waste biodigesters
- Guest engagement: room controls, reward programs

Shopping malls



- Zone-specific HVAC, variable-speed escalators, and regenerative-drive elevators.
- Rooftop & parking solar panels, EV charging stations, and green façades.
- Low-GWP refrigeration in supermarkets and food courts.



Technology solutions



Variable-speed pool pump (China)



Water-saving showerhead (France)



Building-integrated photovoltaics (Singapore)



Friction power-generating mat (Japan)



Key Messages

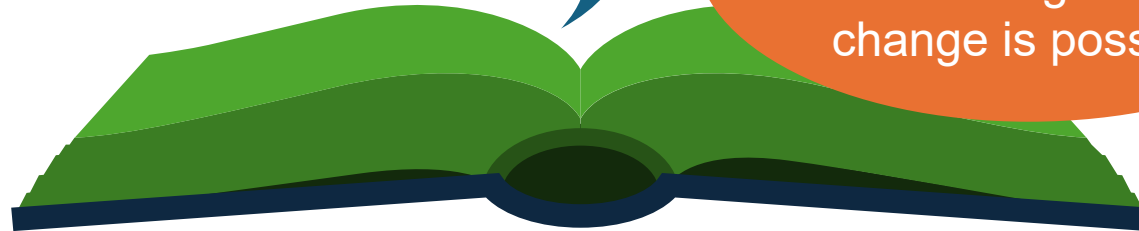
Targeted and locally adapted solutions are needed to bridge the energy and digital divide

Accelerating clean technology adoption in underserved regions requires innovative financing approaches

Decentralized renewable energy enhances flexibility, resilience and diversity of energy access

Asia's strong position in innovation is making technologies more available and affordable worldwide

Many solutions and high diversity are showing that change is possible



The Green Technology Book 2025

Solutions for confronting extreme climate events. Launch November 2025 at COP30



- Focus on climate-induced disaster response technologies

Water-related: storms, flooding, coastal erosion, landslides

Dry-related: wildfire + drought

Extreme temperatures: heat and cold

Disaster response logistics: communications, emergency infrastructure and deployment, financial and insurance technologies

The Green Technology Book 2025

Extreme heat

Proven Frontier Horizon



Fog cooling system to counteract heat island ..

Raintime



Cooling paint

Nippon Paint Singapo...



Wet bulb globe temperature (WBGT) ...

Senseca



Cooling towel

Mission



Cooling pillow

Simba Sleep



Electrolyte powder

Liquid I.V.



Portable air conditioners

DENSO Corporation



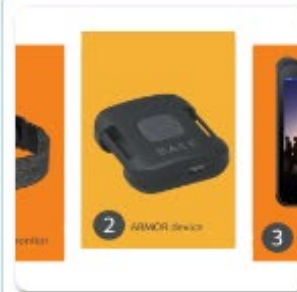
Evaporative cooler

Symphony



Cooling vest

TST Sweden



Wearable heat stress monitor

Evalan

The Green Technology Book 2025

Wildfire

Proven Frontier Horizon



Wildfire alert and tracking app

Watch Duty



Virtual reality firefighter training system

FLAIM



Bio-based flame retardant alternative fo...

Nordtreat Oy



Fire protection coating

Flame Security Inter...



User-driven app that uses images to assess ...

University of the Su...



Forest mulcher robot

Vallfirest



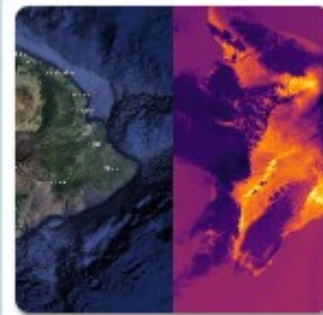
Firefighting drone for nocturnal operations

Drone Hopper



Non-toxic fire suppressant and ...

FireRein Inc.



Satellite-based mapping and monitoring system ..

OroraTech



Advanced GIS for fire & smoke behavior modeling

Cornea


The Green Technology Book 2025

Emergency Infrastructure and rapid deployment

Proven


Frontier

Horiz




Drones for rapid medical supply delivery

Zipline




Smart water ATM control panel & water vending ..

AALROOT




Emergency water filters

LifeStraw




Drones for diverse disaster operations

WeRobotics




Inflatable emergency response shelter

Giant Inflatables In...



Portable emergency tents for people, supplies and..

Rubb Building System...



Shipping containers for disaster relief

VS&B Containers Grou...

Key messages

- Proactive is the new reactive
- From AI to satellites, technology is transforming how we see, anticipate, and manage climate risks.
- Information is aid
- Disaster finance is about building resilience before disaster hits