

WIPO GREEN Year in Review 2018



www.wipo.int/green


WIPO | GREEN
The Marketplace
for Sustainable Technology

Letter from the Director General

Five years ago, we launched WIPO GREEN – a public-private partnership that promotes innovation and the diffusion of sustainable technologies – to fast-track concrete, collective action on climate change. WIPO GREEN continues to grow, evolve and demonstrate that it can catalyze green technology transfer.

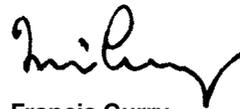
In 2018, we increased the number of records in our database by 600, and leveraged the power of collaboration to connect owners and potential users of those technologies. This Year in Review 2018 provides a snapshot of our activities and achievements in this regard, including the technology transfer “deals” that resulted from our successful Matchmaking Project on Air, Agriculture, Energy and Water needs in Southeast Asia, supported by the Government of Australia.

This past year, we also reflected on our work, accomplishments, and impact in the green tech sector, and through a consultative process, laid the groundwork for the forthcoming WIPO GREEN strategic plan 2019-2023. This roadmap will define the objectives of WIPO GREEN over the next five years, ensuring that the partnership can respond to the challenges and opportunities of international green technology transfer.

Climate-change mitigation and adaptation requires concerted efforts on multiple fronts, and green technology innovation is only part of the response to one of the most complex global challenges of our time. Yet sustainable technology has been, and will continue to be, a key entry point for action because it offers immense potential to provide solutions for real-world problems exacerbated by climate change. As we look ahead, we have good reason to be optimistic about the future of green tech and its contribution to sustainable development.

By developing a targeted strategy, mobilizing our network, focusing on value-added activities, and optimizing our technology database, WIPO GREEN is poised to make a significant contribution to climate change efforts in 2019 and beyond.

Thank you for your unwavering support of WIPO GREEN.



Francis Gurry

Director General

World Intellectual Property Organization

WIPO GREEN in Numbers

100,000+



Page views

5,600+



Newsletter subscribers

3,900+



Technologies, needs and experts

645+



Connections

86



Partners

5



Deals

New Partners in 2018



IVL Swedish Environmental
Research Institute
www.ivl.se

IVL Swedish Environmental Research Institute was founded jointly by the Swedish government and the Swedish business sector in 1966. With a multidisciplinary team composed of engineers, scientists, biologists, and political scientists, to name a few, the Institute conducts research using a holistic approach to develop innovative solutions for environmental challenges.



G-STIC
2018.gstic.org

Global Sustainable Technology & Innovation Conferences (G-STIC) is an annual conference that brings together key actors from across the sustainable technology and innovation sector, to review, discuss and identify breakthrough technologies. It offers a forum for collaboration and serves as a technology advisory system to national and international policy makers.



Reed Exhibition
www.reedexpo.com

Reed Exhibitions is one of the world's leading events businesses, enhancing the power of face to face through data and digital tools at over 500 events a year, in 30 countries. Reed Exhibitions Middle East organizes Climate Innovations Exchange (CLIX), a World Future Energy Summit (WFES) initiative that connects entrepreneurs, innovators and investors to power climate change solutions through knowledge, innovations and funding.



绿色技术银行
Green Technology Bank

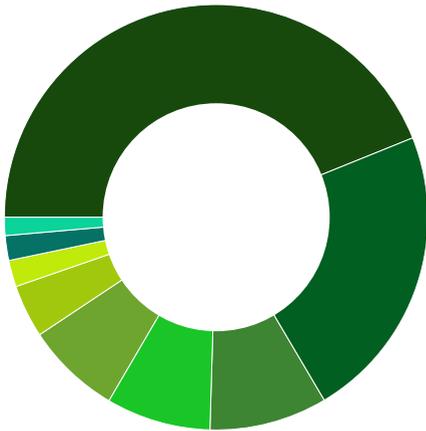
Green Technology Bank
www.greentechbank.com

The **Green Technology Bank** was established in 2017 by the Ministry of Science and Technology of China and the City of Shanghai to underline China's commitment to the 2030 Agenda for Sustainable Development and the Paris Climate Change Agreement. The Bank compiles advanced technologies and promotes environmentally friendly solutions to address development challenges.

Database Highlights

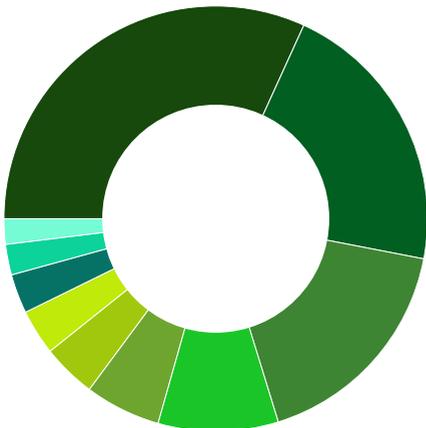
- Registered users up from 1,041 in December 2017 to 1, 238 (+19%)
- By December 2018, 3,357 technologies had been uploaded into the database – up from 2, 685 in December 2017 (+25%)
- ...and 231 needs had been uploaded – up from 161 needs in December 2017 (+43%)
- The WIPO GREEN Experts Database, launched in late 2017, currently features listings from 360+ experts offering a wide range of services – from engineering and technology certification to business services (legal, financial, etc.) – covering 78 countries and across all eight WIPO GREEN database categories
- WIPO GREEN Partner Fujitsu Ltd. uploaded 400+ of its assets to the technology/needs database, and concluded its first two green technology licensing agreements
- 46% of WIPO GREEN technologies are at a useable level, 29% have a proven record of commercial use and 25% are under R&D

Database Uploads by Category



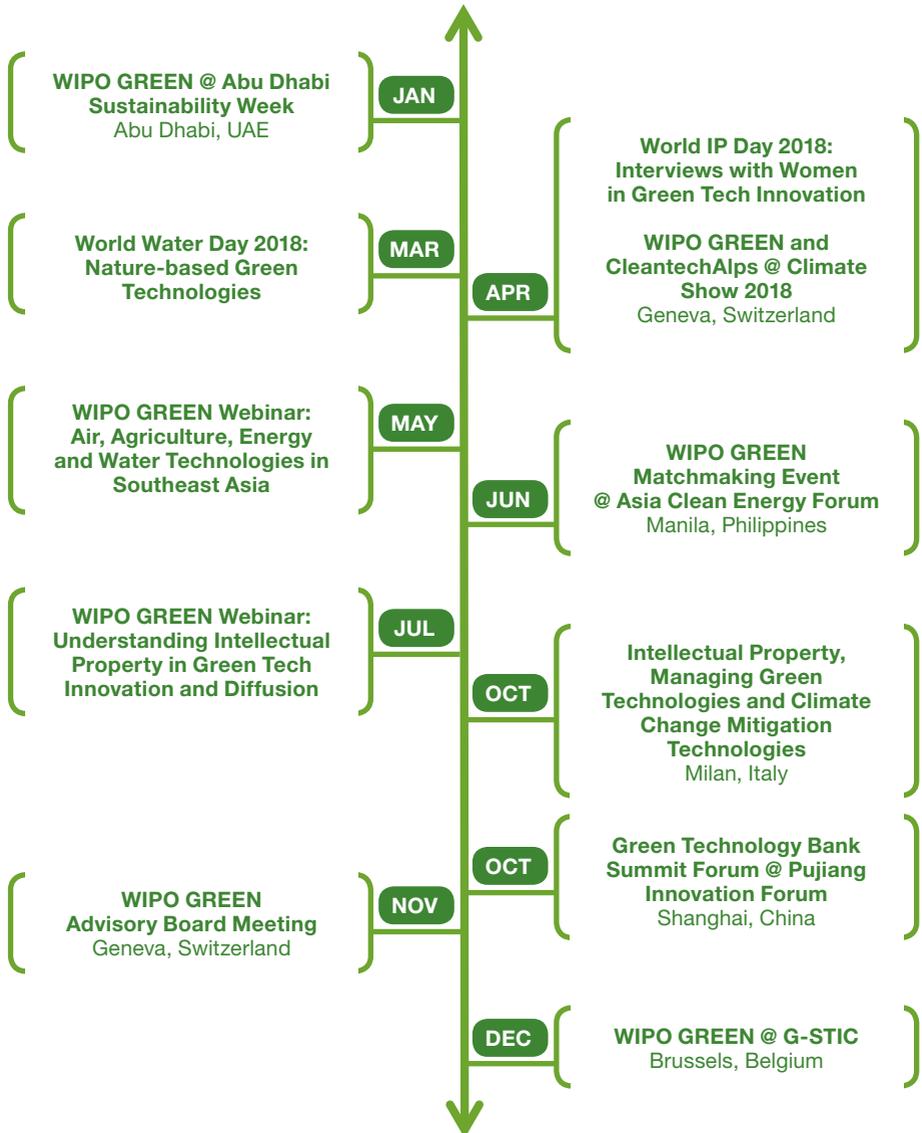
- 44% Energy
- 23% Pollution and Waste
- 9% Water
- 8% Farming and Forestry
- 7% Green Products
- 4% Chemicals and Advanced Materials
- 2% Building and Construction
- 2% Transportation
- 1% Other Areas

Database Users by Country



- 32% United States
- 21% Japan
- 17% Israel
- 9% Kenya
- 6% Germany
- 4% Switzerland
- 3% China
- 3% Singapore
- 2% Korea, Republic of
- 2% India

2018 at a Glance



Featured Deals

Joining Forces to Promote Sustainable Water Supply



Photo credit: Kopernik

Installation of Zero Mass Water's hydropanels at the Green School in Bali, Indonesia.

Challenge

“Droughts are common in Northeast Bali, where the rainy season is the only reliable source of water and needs to be stored as wells tend to dry up throughout the dry season. Groundwater is still the main source of water production.” – Baxter Smith, Innovation Hub Coordinator, The Green School

The Green School's Innovation Hub seeks user-friendly, low-maintenance technologies that can increase water security in drought-prone Bali and Southeast Asia.

Impact

Green School, a non-profit school and social enterprise based in Indonesia, forged a partnership with Zero Mass Water, a US-based startup that created SOURCE hydropanels – a "water perfecting technology" similar to the solar panel – to generate clean drinking water from sunlight and air.

After connecting at the 2018 WIPO GREEN Southeast Asia Matchmaking Event, Zero Mass Water donated six hydropanels to

the Green School, which will be used for a dew water harvesting machine that can produce up to 5 liters of water per day.

The Green School will also use the new hydropanels for educational purposes. By showcasing innovative technologies that use renewable energy to produce water, they aim to inspire the next generation of changemakers.



Photo credit: Kopernik

Zero Mass Water dispenser at the Green School in Bali, Indonesia.

Improving Rural Electricity Access in Underserved Areas



ENTREPRENEURS
du Monde



Photo Credit: OKRA

Kids commuting to school in Takeo Province, Cambodia, where Okra installed their innovative solar micro-grids with Pay-as-you-go (PAYG) systems.

Challenge

“The challenge is to provide clean, sustainable and affordable access to energy to Cambodian rural off-grid households.”

– Louis Jolivet, Business Development and Operations, Okra Solar

What is needed is a commercially viable and scalable solution.

Impact

Okra Solar, a smart micro-grid technology provider in Cambodia, connected with French NGO Entrepreneurs du Monde at the WIPO GREEN Southeast Asia Match-making Event and are now collaborating on a project to improve electricity access in rural Cambodia. Entrepreneurs du Monde has already distributed solar power systems equipped with a pay-as-you-go mechanism to at least 60 households in Cambodia. With support from partners like Entrepreneurs du Monde, Okra smart micro-grids have

been successfully rolled out in over 100 Cambodian households, with average uptime of over 98%.

In China, Okra & Entrepreneurs du Monde also recently won the grand prize at the 2018 IEEE Empower a Billion Lives regional finals, a global competition that promotes innovative solutions for improved electricity access, organized by the Institute of Electrical and Electronics Engineers (IEEE).



Photo Credit: OKRA

Solar panel installed by Okra, one of the technology seekers identified in Cambodia, at a pilot household in Takeo Province.

2018 Matchmaking Project

Identifying Sustainable Solutions in Southeast Asia



Photo credit: Kopernik

Following the matchmaking event, a potential technology provider meets with Cambodian technology seeker, Okra, to discuss a possible collaboration.

In early 2018, WIPO GREEN launched a green technology matchmaking project focused on clean energy, air, water, and agriculture in the Asia-Pacific region (Cambodia, Indonesia, and the Philippines), supported by the Government of Australia.

Implemented in collaboration with local partners Kopernik and Baydrach, the project sought to catalyze green technology transfer by connecting technology seekers with potential technology and service providers, and build technology transfer and commercialization capacity.

The objective of the first phase was to uncover green technologies in the region, building on national priorities and policies. Consultations, interviews and networking yielded over 40 green technology needs from a range of public and private organizations, each looking for an innovative solution to overcome their challenge. The second phase consisted of matching needs with appropriate green technology solutions, through outreach and matchmaking.

During the second phase, WIPO GREEN held a matchmaking event during the 2018 Asia Clean Energy Forum (ACEF) in Manila, Philippines. The half-day session helped participants exchange ideas and connect with a range of stakeholders in the green technology sector. Participants also had the opportunity to learn more about relevant topics like project development, green tech transfer and project finance.

85 participants
26 countries
408 connections

Three concrete “deals” have already resulted from this project and several others are in the pipeline.



Photo credit: Kopenitk

Group discussions underway during the WIPO GREEN Matchmaking Event.

Partnership with Green Technology Bank



Photo credit: GTB

WIPO GREEN gave a keynote speech at the Green Technology Bank Summit Forum 2018

WIPO GREEN will be joining forces with its newest partner – the Green Technology Bank (GTB) in Shanghai – to accelerate green technology transfer in China, in support of the Sustainable Development Goals (SDGs). The GTB compiles eco-friendly technologies and promotes innovation and collaboration in the green technology sector, domestically and globally.

By the end of 2018, the GTB had already uploaded ten technologies to the WIPO GREEN Database, and is expected to upload even more in 2019. The technol-

ogies cover a range of green technology categories, including energy, farming and forestry, chemicals and advanced materials, and pollution and waste.

In the spirit of collaboration, WIPO GREEN took part in the Green Technology Bank Summit Forum 2018 in Shanghai, China. The Summit took place during the annual Pujiang Innovation Forum – a yearly international innovation forum launched by the Ministry of Science and Technology of the People’s Republic of China and Shanghai Municipal People’s Government.

WIPO GREEN Partners Worldwide



Europe

- Advance Water Technologies (UK)
- CambridgeIP (UK)
- CleantechAlps (Switzerland)
- Climate KIC (Switzerland)
- Climate Technology Centre and Network, UNEP/CTCN (Denmark)
- Danish Patent and Trademark Office (Denmark)
- EcoMachines Ventures (UK)
- Engineers Without Borders (UK)
- GLIVEWATTS (Sweden)
- G-STIC (Belgium)
- Innovation Insights (Switzerland)
- Institut National de la Propriété Industrielle (France)
- International Chamber of Commerce (France)
- International Federation of Intellectual Property Attorneys (Switzerland)
- International Federation of Inventor's Associations (Switzerland)
- IP*SEVA, Intellectual Property for Sustainable Energy Ventures (Germany)
- IVL Swedish Environmental Research Institute (Sweden)
- Leonhard Ventures (Germany)
- Magnefico GmbH (Switzerland)
- NEUW Ventures (Switzerland)
- Patenterprise (Switzerland)
- R20 Regions of Climate Change Action (Switzerland)
- SEED Initiative (Germany)
- Siemens (Germany)
- TechnologieAllianz (Germany)
- The Ground_Up Project (Switzerland)

- Toilet Board Coalition (Switzerland)
- United Nations Environment Program (France)
- United Nations Industrial Development Organization (Austria)
- Vaultitude (former IPCHAIN) (UK)
- Waterpreneurs (Switzerland)
- World Business Council for Sustainable Development (Switzerland)

Southeast Asia, East Asia & Oceania

- Asia IP Exchange / Hong Kong Trade Development Council (Hong Kong SAR, China)
- Asian Development Bank (Philippines)
- Asia-Pacific Industrial Property Center - Japan Institution for Promoting Invention and Innovation (Japan)
- Australian CleanTech (Australia)
- China Technology Exchange (CTEX) (China)
- CleanTek Market (Australia)
- Fujitsu Limited (Japan)
- Green Technology Bank (China)
- Haier (China)
- International IP Commercialization Council (Hong Kong)
- IP Nexus (Hong Kong SAR, China)
- Japan Intellectual Property Association (Japan)
- Japan Patent Attorneys Association (Japan)
- Kopernik (Indonesia)
- Korea Technology Finance Corporation (Republic of Korea)
- KOTEC

- PatSnap (Singapore)
- Queensland University of Technology (Australia)
- Robin Paul Advisory (Malaysia)
- Singapore-ETH Centre for Global Environmental Sustainability (Singapore)
- South-South Global Assets and Technology Exchange (China)
- Teijin Limited (Japan)
- VisionEdge Technologies Pte Ltd (Singapore)
- Waseda Environmental Institute (Japan)

Central & Southern Asia

- Patent Agents Association, India (India)
- Sathguru Management Consultants (India)
- Villgro Innovations Foundation (India)

North Africa & Western Asia

- Inovent (Turkey)
- League of Arab States (Egypt)
- Reed Exhibitions FZ-LLC (United Arab Emirates)
- Sabanci University (Turkey)
- K. A. CARE (Saudi Arabia)
- Kuwait Environment Public Authority (Kuwait)
- Licensing Executives Society International (Turkey)
- Office Marocain de la Propriété Industrielle et Commerciale (Morocco)
- Technology Development Foundation of Turkey (Turkey)

Sub-Saharan Africa

- African Agricultural Technology Foundation (Kenya)
- Ghana Bamboo Bikes Initiative (Ghana)
- Kenya Climate Innovation Center (Kenya)
- Strathmore University, CIPI (Kenya)
- The Innovation Hub (South Africa)

Latin America & Caribbean

- Brazilian Forum of Innovation and Technology Transfer Managers (Brazil)
- National Institute of Industrial Property (Brazil)
- Solben (Mexico)

North America

- Association of University Technology Managers (USA)
- Crosstaff Solutions (Canada)
- General Electric (USA)
- infoDev / The World Bank (USA)
- InventTrust (USA)
- Public Interest Intellectual Property Advisors (USA)
- Qualcomm (USA)
- United Nations Global Compact (USA)
- United Nations Office for South-South Cooperation (USA)
- Canadian Intellectual Property Office (Canada)

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