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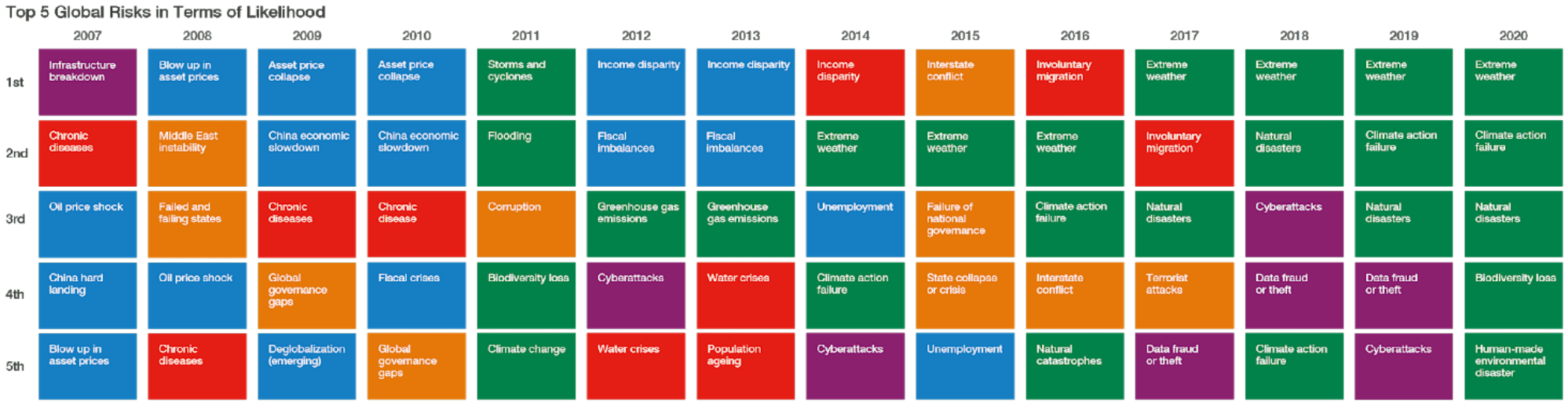
for Sustainable Technology

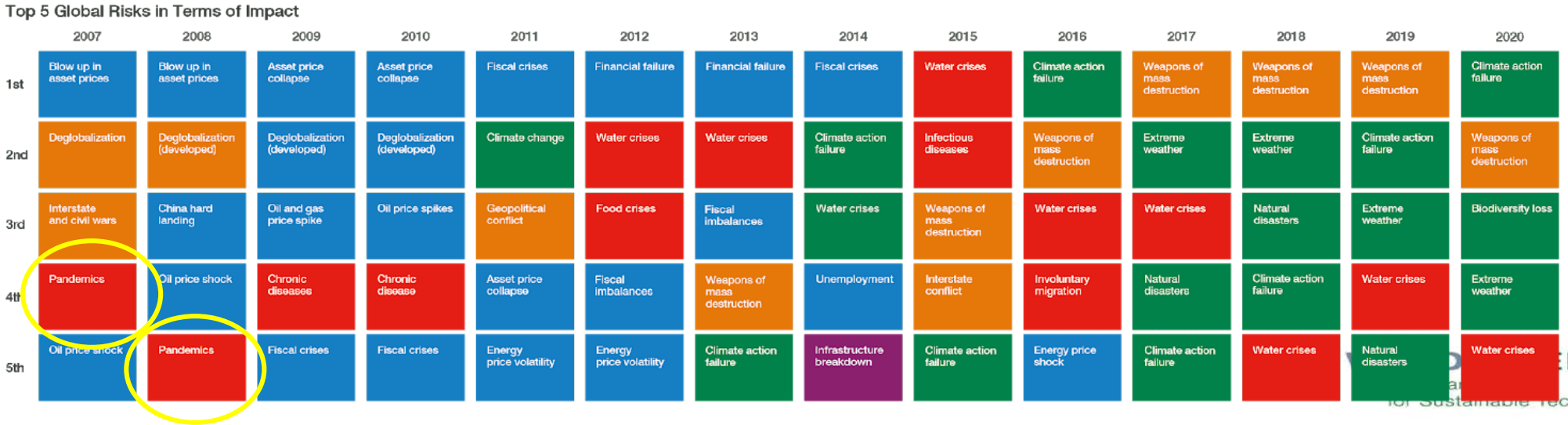
WIPO GREEN and promotion of Green Technologies

WIPO Conversations, Fifth Session, Panel 5
Geneva, April 6, 2022

Peter Oksen, PhD. Green Technology and Research Manager, Climate Change & Food Security
Global Challenges Division, WIPO

The evolving risk landscape 2007-20





Source: Global Risks Report 2019, World Economic Forum

Economic Environmental Geopolitical Societal Technological

WIPO GREEN main role

- Reach out to public and private spheres
- Mobilize innovation and green technology for global challenges
- Green technology is very on technological frontier
- Solutions are there, but uptake too slow
- Lack of information part cause
- IP system generates technological knowledge and facilitates innovation and technology transfer
- Part of WIPO's contribution to SDGs
- Part of making IP and innovation better known and used

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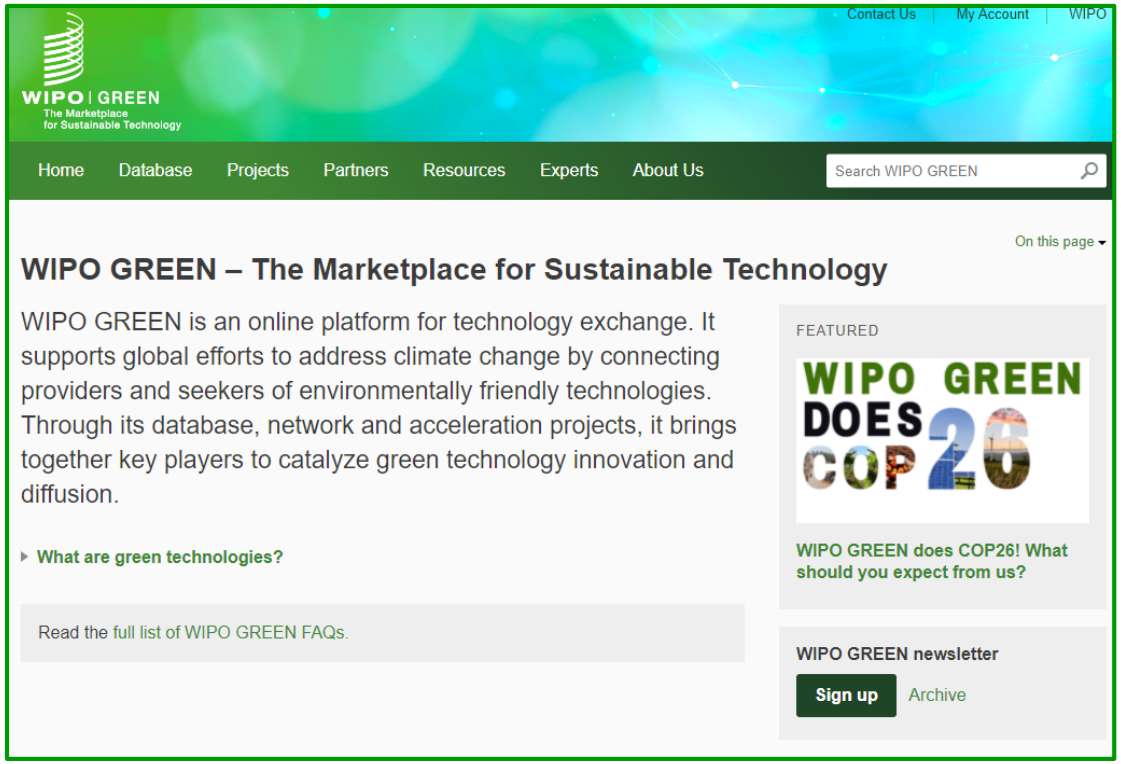
WIPO GREEN Platform



- WIPO GREEN platform, major visible implementation
- Combines all assets
  - Database
  - Projects
  - Partners
  - Resources / knowledge material

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Acceleration projects

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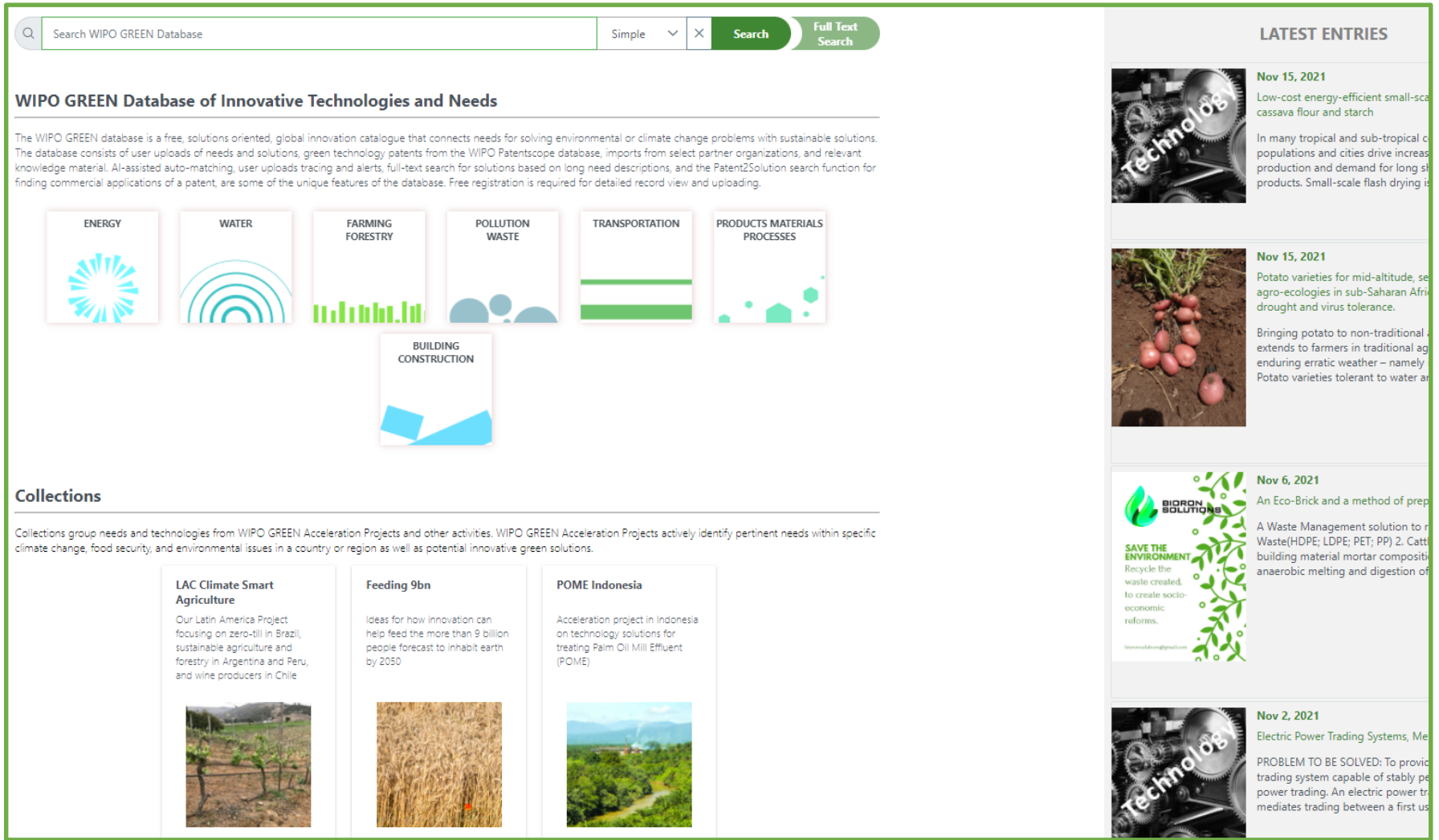
Database of Needs & Technologies

- >127.000 entries
- User-uploads, partner imports, Patentscope, knowledge material



Field: Biomass/Bioenergy

Filter << 1 | User uploads

1 of 427 | 10 | 4263 results | Sort by Published date

Search in filters

Reset all

Source

- Patentscope (4052)
- User uploads (135)
- AUTM (76)

Type

- Technology (4248)
- Need (13)
- Knowledge material (2)

Collections

- Transportation (24036)
- Energy (53586) 1/16

ENERGY > BIOMASS/BIOENERGY | ENERGY > WASTE TO ENERGY

Hydrogen Sulfide Bio-scrubber

Organics designs and manufactures vertical and horizontal bio scrubbers that can reduce the hydrogen sulfide down to 100 ppm and counter the threat of corrosion related to the production of H2S in landfilled waste or anaerobic digestion systems. The main advantage of the system is that, in most circumstances, no additional costs for chemical additions are incurred. The bacteria involved in the process are ubiquitous and, as long as correct environmental conditions are maintained, the bacteria wi ...

Owner	PT Organics Bali
Uploaded by	ade sri rahayu
Type	Technology
Source	User uploads
Published	Sep 6, 2021
Readiness level (TRL)	Scaling up (TRL 9)
Developed in	Indonesia

ID 138648

ENERGY > BIOMASS/BIOENERGY | ENERGY > WASTE TO ENERGY

Biogas Upgrading & Distribution (CBG)

Safe S.p.A. provides turnkey solutions for biogas upgrading & distribution at low, medium, and high pressures for either grid injection, bulk transportation, or NGV filling. Safe S.p.A. is the preferred technology partner for many international customers who seek trouble-free and feasible development of their biogas to biomethane (CBG) projects. Thanks to our global partners' network, we are always near to our customers for the best sales and after-sales support.

Owner	SAFE S.p.A.
Uploaded by	ade sri rahayu
Type	Technology
Source	User uploads
Published	Sep 6, 2021
Readiness level (TRL)	Scaling up (TRL 9)
Developed in	Italy

ID 138647

Projects Partners Resources Experts About us Dashboard

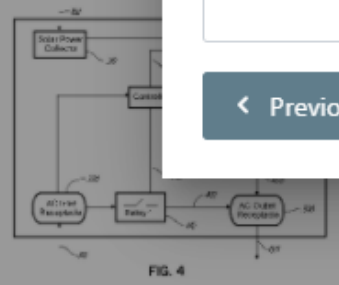
Full Text Search

Sort by Relevance

ENERGY > SOLAR

Owner Kanazawa Inst Technology
Uploaded by SUWA YORIM
Type Technology
Source User uploads
Published Mar 22, 2021
Readiness level (TRL) Proof of conc 3-4)
Developed in Japan

ENERGY > SOLAR



Owner SUNCULTURE INC.
Uploaded by WIPO GREEN
Type Technology
Source Patentscope
Published Sep 18, 2014

Full text

1 Introduction — 2 Select query source — 3 Query text — 4 Keywords

Input type: User input

Needs full-text search:
anaerobic digester palm oil effluent separation technology
This is a biogas power plant with an installed capacity of 2 MW. The POME is supplied from a mill with a capacity of 35 tons per hour. There is an issue with anaerobic digester effluent that flows to the mill's existing wastewater treatment ponds. The sediment accumulation in the ponds was quicker than the of use conventional POME treatment when fresh POME from the mill is flowing directly to the open ponds. Nevertheless, the final effluent quality has no issue with the regulatory discharge limit. The final effluent is used for land application. The mill is interested in separating sludge/cake from effluent water. Digester effluent cake will be used for fertilizer, while the effluent will be used for land application or to be treated further by water purification so that it can be recycled back to the palm oil processing plant, whenever required. The cake quality should be analyzed further whether the mineral contents are equivalent to fertilizer so it can be used on the plantation. In the dry season, the mill is short of water. If the final effluent can be processed and recycled back to the mill then it can support palm oil production during the dry season.

Enter the full text to process

Previous | Clear | Next

Projects Partners Resources Experts About us Dashboard

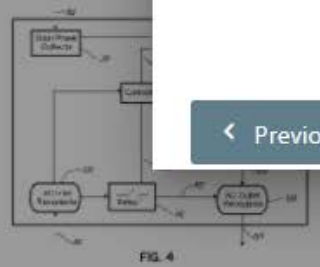
solar

Full Text Search

Sort by Relevance

ENERGY > SOLAR

ENERGY > SOLAR



Owner Kanazawa In Technology

Uploaded by SUWA YORI

Type Technology

Source User upload

Published Mar 22, 202

Readiness level (TRL) Proof of con 3-4)

Developed in Japan

Owner SUNCULTUR INC.

Uploaded by WIPO GREE

Type Technology

Source Patentscope

Published Sep 18, 201

Full text

1 Introduction — 2 Select query source — 3 Query text — 4 Keywords

As phrases

Select the keywords that will be used for the query:

- [x] water
- [x] plantation
- [x] effluent
- [x] capacity
- [x] mill
- [x] ponds
- [x] installed capacity
- [x] POME
- [x] cake
- [x] final effluent
- [ ] effluent water

Previous Clear Apply

ZERO DISCHARGE TREATMENT SYSTEM OF PALM OIL MILL EFFLUENT (POME)

POLLUTION & WASTE > RECYCLING & REUSE | FARMING & FORESTRY > IMPROVED FARM INPUTS

Patent2Solution

ID	60274
Applicant	RONSER BIO-TECH SDN BHD
Uploaded by	WIPO GREEN Import
Type	Technology
Source	Patentscope
Published	Nov 14, 2013
Updated	Jul 12, 2021

EMAIL OWNER VISIT WEBSITE

RONSER BIO-TECH SDN BHD

Disclaimer

Data has been uploaded by WIPO from the PATENTSCOPE Database. The data has been submitted by the applicant in

Description Details Other Information Attachments

The present invention relates to establishment of a zero discharge treatment technology of POME mainly routed in (1) pre-treatment, (2) biological treatment and (3) membrane separation. The ultimate goals of the developed zero discharge POME treatment technology are: (1) produce biogas as a source of renewable energy, (2) zero emissions of POME into the atmosphere, (3) final discharge of BOD 20 ppm or below; (4) clean water for use as boiler feed water and (5) recover potash rich fertilizer, which are of great values to the palm oil milling process.

Patent2Solution

Patent2Solution is a unique search function providing links to commercial sites which may be related to the patent chosen. It applies artificial intelligence functions and an elaborate Google search algorithm, but due to the variety and complexity of patents, it may not always produce useful results. The emphasis is on providing a commercial link to a patent. If no patent owner company is indicated in the patent, the likelihood of finding an exact match decreases.

Patent2Solution is developed by WIPO GREEN and is provided for assistance only. Feedback on how you use this function and whether you find it useful are highly appreciated. You can write to info@wipogreen.int.

Results related to ZERO DISCHARGE TREATMENT SYSTEM OF PALM OIL MILL EFFLUENT (POME)

Editable keywords used: ZERO DISCHARGE TREATMENT PALM OIL environmental policies water Search

(54) Total results

www.linkedin.com > company > ronser-bio-tech-berhad

Ronser Bio-Tech Berhad | LinkedIn

Ronser Bio-Tech Berhad | 42 followers on LinkedIn. **Ronser Bio-Tech** Bhd, a BioNexus status company, is an INTEGRATED WASTEWATER TREATMENT SOLUTIONS ...

Source: GOOGLE

www.crunchbase.com > organization > ronser-bio-tech-sdn-bhd

RONSER Bio-Tech Sdn Bhd - Crunchbase Company Profile ...

RONSER Bio-Tech Sdn Bhd provides environmental facilities and engages in the treatment of industrial high organic wastewater.

Source: GOOGLE

www.facebook.com > ronserbiotech >

Ronser Bio-Tech Berhad - Home | Facebook

Ronser Bio-Tech Bhd, a **BioNexus** status company, is an INTEGRATED WASTEWATER TREATMENT SOLUTIONS specialist offering multi-disciplinary environmental services in ...

www.alfalaval.com > industries > food-dairy-beverage > food-processing > fat-and-oil-processing > palm-oil-processing > pome-treatment >

Palm oil mill effluent POME treatment - Alfa Laval

Traditional **treatment** methods place demands on millers, particularly in the face of strict **environmental** regulations. Drawing from our knowledge of evaporation ...

Source: GOOGLE

onlinelibrary.wiley.com > doi > abs > 10.1002 > 9781119478911.ch20

Water Recycling from Palm Oil Mill Effluent - Handbook of Water ...

Jan 8, 2021 **...** Summary Nowadays, **oil palm** production in Malaysia has reached 20 000 000 tons. The conventional **treatment** method for **palm oil** mill effluent ...

Source: GOOGLE

iwaponline.com > wst > article > 73 > 11 > 2704 > 19121 > Polishing-of-treated-palm-oil-mill-effluent-POME

Polishing of treated palm oil mill effluent (POME) from ponding ...

Mar 7, 2016 **...** As the ponding system used to **treat palm oil** mill effluent (POME) frequently fails to satisfy the **discharge** standard in Malaysia, ...

Source: GOOGLE

us.pg.com > environmental-sustainability >

Environmental Sustainability | Procter & Gamble

NET **ZERO** AMBITION BY 2040. In September 2021, P&G set a new ambition to achieve net **zero** greenhouse gas (GHG) emissions across its operations and supply chain ...

Source: GOOGLE

www.musimmas.com > sustainability > environmental-protection >

Environmental Protection - Musim Mas

As a major player in the **palm oil** sector, we have a significant role in promoting sustainable forest management in our industry. We also play a part in ...

Source: GOOGLE

Automatching

Caulys-Farm: smart indoor vertical farm

FARMING & FORESTRY > FARMING TECHNOLOGIES | FARMING & FORESTRY > GREENHOUSE & INDOOR

ID	10790
Owner	Caulys SA
Uploaded by	WIPO GREEN admin
Type	Technology
Source	User uploads
Published	Aug 11, 2020
Updated	Nov 15, 2021

VISIT WEBSITE

Caulys SA

Description | Benefits | Other Information | Matching needs | Similar technologies | Statistics

Administrative tools that link the digital with the economic

Environmental friendly greenhouse farming

Sustainable Production Management

Digital Agriculture Satellite monitoring of agricultural machines.

Hydroponics System for barley fodder

ADJUSTMENT OF THE BIODIVERSITY AND INTENSITY OF AGRICULTURAL

More

Your Country has made Commitments

- NDC (iNDC) - Nationally Determined Contributions – Paris accord 2015
- NAP - National Adaptation Plans (developing countries)
- Methane pledge – brand new
- SDGs – 2030 Agenda for Sustainable Development (replaced Millennium Dev. Goals)
- CBD - Convention on Biological Diversity
- FAO International Code of Conduct on the Distribution and Use of Pesticides
- International Treaty on Plant Genetic Resources for Food and Agriculture
- International Tropical Timber Agreement (ITTA)
- Minamata Convention on Mercury,
- Montreal Protocol on Substances that Deplete the Ozone Layer
- Stockholm Convention on Persistent Organic Pollutants
- United Nations Convention to Combat Desertification
- Convention on the Protection and Use of Transboundary Watercourses and International Lakes
- + many regional agreements

+ many more…

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IPO Green Project

- Launching webinars done
- A place where IPOs can find inspiration
- A place where IPOs can share experience – good & bad
- Located on the WIPO GREEN Platform – specialized in green innovation
- Continuous activities
- … which activities is decided by IPOs
- A permanent feature of WIPO GREEN
- We facilitate so that IPOs can do
- Already 13 initiatives identified

Work financed by JPO JAPAN PATENT OFFICE

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Policy Initiatives Identified

- Accelerated patent prosecution
- Provision of green data and analysis
- Matchmaking and «business rounds»
- Regional cooperation on green IP matters
- Collaboration with WIPO GREEN
- IP awareness-raising for green innovators
- Green training programs
- Green PPH arrangements
- Upcycling programs for counterfeits
- Awards for green innovation
- IP services for green entrepreneurs
- Green classification systems
- Financial support for green patent applications

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Thank you !

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IPOGreen@wipo.int

wipo.int/green

SEARCH

We invite you to search for technologies on our database.

UPLOAD

Register to be a WIPO GREEN user and upload your technology needs and solutions.

CONNECT

The automated matchmaking function on our database makes it easy to connect with technology seekers and providers.