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Mahasiswa Unpad Kembangkan Robot Pintar untuk Monitoring Hama & Penyakit Tanaman

Antani Hendriyana
2023-10-19 · 1 min read

Prototipe robot pintar "Geyserium" karya mahasiswa Universitas Padjadjaran.

Laporan oleh Nur Aini Rasyid

[Kanal Media Unpad] Hama dan penyakit tanaman merupakan masalah yang selalu menjadi momok bidang pertanian karena dapat mengurangi hasil produksi dari tanaman budidaya. Permasalahan ini terjadi pada banyak kasus pertanian di Indonesia, termasuk wilayah perkotaan (urban).

Berangkat dari masalah di atas, enam orang mahasiswa Universitas Padjadjaran berkolaborasi dalam

Smart Robot for Monitoring Plant Pests & Diseases

*Comptes Rendus
Géoscience — Sciences de la Planète*

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Géo-hydrological Data & Models / *GDM - Géohydrologie, données et modèles*

Water cycle modelling strengthened by probabilistic integration of field data for groundwater management of a quite unknown tropical volcanic hydrosystem

Marc Damon^{a,*,1}, Valérie Plagnas^{a,2}, Patrick Lachassagne^{a,3}, Roger Guérin^{a,4}, Bayu Nugraha^{a,5}, Febrivan Mohamad^{a,6}, Ludovic Oudin^{a,7}, Arif Fudhilah^{a,8}, Dhaniele Valdes^{a,9}, Gilles Brocard^{a,10}, Jean-Luc Bouvier^{a,11}, Mohamed Saad^{a,12}, Anne-Sophie Eaneu^{a,13}, Aswar Muhammad^{a,14}, Hendarmawan^{a,15} and Nathalie Dörfliger^{a,16}

^a Sorbonne Université, CNRS, EPHE, UMR 7619 METIS, F-75005 Paris, France
¹ Physics and Environmental Engineering, Applied Geophysics, University of Liège, B-4000 Sart Tilman, Belgium
² IRST, Univ. Montpellier, CNRS, IRD, IMT Mines Ales, Montpellier, France
³ Faculty of Geological Engineering, Universitas Padjadjaran, Jalanragas, Sumedang 05213, Indonesia
⁴ Disaster Aqua group, Department of Water Resources, Sukarta, Indonesia
⁵ Aix-Marseille, Maitien de l'Unité et de la Méditerranée, Université Louis Pasteur, UMR 5175, France
⁶ Water Institute by Eram, Water Resources and Sustainability Division, Damara Waters, Evian-les-Bains, France
⁷ Institut de Mécanique des Fluides de Toulouse (IMFT) – Université de Toulouse, CNRS IMFT, Toulouse, France
⁸ Email: mdamon@unpad.ac.id (M. Damon), valerie.plagnas@univ-liege.be (V. Plagnas), patrick.lachassagne@univ-liege.be (P. Lachassagne), roger.guerin@univ-liege.be (R. Guérin), gdm@unpad.ac.id (G. Damon), bayu.nugraha@unpad.ac.id (B. Nugraha), febrivan@unpad.ac.id (F. Mohamad), ludovic.oudin@univ-liege.be (L. Oudin), arif.fudhilah@univ-liege.be (A. Fudhilah), dhaniele.valdes@univ-liege.be (D. Valdes), gilles.brocard@univ-liege.be (G. Brocard), mohamed.saad@univ-liege.be (M. Saad), anne-sophie.eaneu@univ-liege.be (A.-S. Eaneu), aswar.muhammad@univ-liege.be (A. Muhammad), hendarmawan@unpad.ac.id (Hendarmawan), nathalie.dorfliger@univ-liege.be (N. Dörfliger)

* Corresponding author

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Water cycle model



UNIVERSITAS PADJADJARAN

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Berita - Inovasi

Mahasiswa Unpad Buat Tablet Pemurni Minyak Jelantah

Artandi Hendriyana
2023-09-26 - 1 min read

Produk "tablet" pemurni minyak jelantah karya mahasiswa Universitas Padjadjaran.

[Kanal Media Unpad] Selain berbahaya bagi kesehatan, minyak jelantah juga menimbulkan masalah bagi lingkungan. Masih banyak masyarakat yang membuang minyak jelantah sembarangan ke saluran air dan selokan berpotensi mencemari lingkungan.

Untuk itu, sejumlah mahasiswa Universitas Padjadjaran melalui Program Kreativitas Mahasiswa-Kewirausahaan (PKM-K) membuat produk tablet pemurni yang dapat memurnikan radikal bebas.

UNIVERSITAS PADJADJARAN

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Berita - Inovasi

Dosen Unpad Buat Plastik Mudah Terurai dari Limbah Cangkang Udang

Artandi Hendriyana
2023-09-25 - 2 min read

Dosen Fakultas Pertanian dari Ilmu Kelautan Universitas Padjadjaran Dr. Erma Rochina, M.Si, mengembangkan plastik mudah terurai (biodegradable) dari limbah cangkang udang. (Foto: Deden Triawan)

[Kanal Media Unpad] Tim peneliti gabungan Universitas Padjadjaran membuat plastik pembungkus makanan ramah lingkungan (bio-packing) yang terbuat dari limbah cangkang udang dan rumput laut. Plastik ini bersifat biodegradable atau mudah terurai secara alami.

Used Cooking Oil Purification Tablet

Shrimp Shell Waste as Plastic Material

UNIVERSITAS PADJADJARAN

Tentang Unpad - Penelitian dan Inovasi - Pendidikan - Mahasiswa - Alumni - Penerimaan

Berita - Inovasi

Mahasiswa Unpad Buat Produk Pembersih Multifungsi, Bisa Mandi Tanpa Bilas

Arief Maulana
2023-09-20 - 2 min read

Produk multifungsi "EasyBath" yang dikembangkan mahasiswa Universitas Padjadjaran.

[Kanal Media Unpad] Pascapandemi Covid-19, masyarakat mulai membiasakan diri untuk berperilaku hidup bersih, Mandi, sebagai upaya untuk memberikan diri, menjadi aktivitas yang wajib dilakukan, terutama sebagai kebiasaan hingga bersentuhan dengan hal-hal yang berisiko menularkan penyakit.

UNIVERSITAS PADJADJARAN

Tentang Unpad - Penelitian dan Inovasi - Pendidikan - Mahasiswa - Alumni - Penerimaan

Berita - Inovasi

Scara Cup, Gelas dari Kulit Biji Kopi yang Bisa Dimakan Karya Mahasiswa Unpad

Arief Maulana
2023-09-23 - 2 min read

Lima mahasiswa Universitas Padjadjaran mengembangkan gelas dari limbah kulit biji kopi yang bisa dimakan bernama "Scara Cup". Selain bertujuan mengurangi limbah, pemanfaatan kulit biji kopi juga memiliki kandungan antibiotik yang baik untuk kesehatan. (Foto: Anif Maulana)

Laporan oleh Ahmad Dyandra Rama Putra Bagaskara

[Kanal Media Unpad] Kulit biji kopi ternyata mengandung banyak manfaat. Salah satunya adalah mengandung antibiotik yang baik untuk kesehatan. Namun, tak banyak orang yang mengetahui manfaat tersebut. Akibat, kulit biji kopi kerap menjadi limbah yang jarang dimanfaatkan.

EasyBath

Scara Cup

Eco-friendly straws from Black Soldier Fly (BSF) larvae

Global Journal of Environmental Science and Management (GJESM)

Homepage: <https://www.gjesm.net/>

Modeling regional aboveground carbon stock dynamics affected by land use and land cover changes

A. B. Maulana¹, M. C. W. Anas², S. Widiyaningsih³, F. Pratiwi⁴

¹Center for Environmental and Sustainability Science, Universitas Padjadjaran, Bandung, West Java, Indonesia
²Department of Forestry, Faculty of Forestry and Marine Science, Universitas Padjadjaran, Bandung, West Java, Indonesia
³Sustainable Science Research Group, Graduate School, Universitas Padjadjaran, West Java, Indonesia
⁴Department of Biology, Faculty of Mathematics and Natural Science, Universitas Padjadjaran, Bandung, West Java, Indonesia

ABSTRACT
 Aboveground carbon stock (AGC) is an essential carbon storage affected by human activities, other measures, and vegetation agricultural management. This research focuses the pattern of aboveground carbon stock in West Java, West Java, Indonesia. This study aims to analyze the pattern of aboveground carbon stock in West Java, West Java, Indonesia. This study aims to analyze the pattern of aboveground carbon stock in West Java, West Java, Indonesia. This study aims to analyze the pattern of aboveground carbon stock in West Java, West Java, Indonesia.

KEYWORDS
 Aboveground carbon stock, land use and land cover change, West Java, Indonesia

1. INTRODUCTION
 Aboveground carbon stock (AGC) is an essential carbon storage affected by human activities, other measures, and vegetation agricultural management. This research focuses the pattern of aboveground carbon stock in West Java, West Java, Indonesia. This study aims to analyze the pattern of aboveground carbon stock in West Java, West Java, Indonesia. This study aims to analyze the pattern of aboveground carbon stock in West Java, West Java, Indonesia.

2. MATERIALS AND METHODS
 This study uses secondary data from the National Forest Inventory (NFI) of West Java, West Java, Indonesia. The data covers the period from 2000 to 2020. The data is analyzed using the Generalized Linear Model (GLM) to determine the effect of land use and land cover change on aboveground carbon stock dynamics.

3. RESULTS AND DISCUSSION
 The results show that land use and land cover change significantly affect aboveground carbon stock dynamics in West Java, West Java, Indonesia. The change in aboveground carbon stock is significantly affected by land use and land cover change. The results show that land use and land cover change significantly affect aboveground carbon stock dynamics in West Java, West Java, Indonesia.

4. CONCLUSION
 Land use and land cover change significantly affect aboveground carbon stock dynamics in West Java, West Java, Indonesia. The change in aboveground carbon stock is significantly affected by land use and land cover change. The results show that land use and land cover change significantly affect aboveground carbon stock dynamics in West Java, West Java, Indonesia.

5. REFERENCES
 Anas, M. C. W., Maulana, A. B., Widiyaningsih, S., & Pratiwi, F. (2023). Modeling regional aboveground carbon stock dynamics affected by land use and land cover changes. *Global Journal of Environmental Science and Management (GJESM)*, 1(1), 1-10.

6. CONTACT
 A. B. Maulana, Center for Environmental and Sustainability Science, Universitas Padjadjaran, Bandung, West Java, Indonesia. Email: abmaulana@unpad.ac.id

7. CITATION
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8. DOWNLOAD FULL-TEXT
<https://www.gjesm.net/>

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12. UNPUBLISHED AUTHOR
 Email: unpad@unpad.ac.id

13. UNPUBLISHED AUTHOR
 Email: unpad@unpad.ac.id

**Description:**

(Please describe innovative program(s) on your campus. The following is an example of the description. You can describe more related items if needed.)

1. Online Innovation Product Catalog**2. Smart Robot for Monitoring Plant Pests & Diseases**

The purpose of making this Prototype Gensystem is to monitor pests and plant diseases automatically, so as to overcome obstacles in the application of urban farming. Identification in plant monitoring is done through a deep learning approach of image recognition and sound frequency. For the operating system itself, the Gensystem Robot is installed on cultivated land and integrated with applications on smart devices so that users can control it. It is hoped that with the application of the Gensystem Robot, especially in urban farming, it will be able to help the community meet the need for food supply.

3. Water cycle model

Unpad's researcher developed a lumped hydrological model to mimic the structure and functioning of a previously unknown hydrosystem located on the flanks of the Salak volcano (West Java). The structure of the aquifers was revealed with electrical resistivity tomography. The distinction between springs fed by the extensive artesian aquifer and others fed by shallow perched aquifers was obtained mostly using hydrochemistry. The elevation of the recharge area was identified using isotopic analysis of spring water.

4. Used Cooking Oil Purification Tablet

This product, called "Taborai", has successfully secured funding from the Ministry of Education and Research in 2023. Taborai is made from corn stalk charcoal, lemongrass, and bleaching earth. "To maintain the availability of raw materials, we have a partnership with the Mentari Pagi Darussyfa Farmer Group in Garut, where they are a hybrid corn producer whose corncobs are currently an untapped waste," said In-In. Taborai utilizes corncob waste as the main raw material. "Corncobs contain a lot of non-volatile organic substances that make it suitable as a source of charcoal, because it can absorb free radicals that are 3-7 times stronger," said Nariswari as the team leader. The team has tested the effectiveness of the product with results showing a satisfactory purification level. Used frying oil that was originally dark brown in color can return to its original color. In addition, the oil also became clearer.

5. Shrimp Shell Waste as Plastic Material

A joint research team from Universitas Padjadjaran has made bio-packaging plastic made from shrimp and seaweed shell waste. This plastic is biodegradable or easily decomposed naturally. This research was conducted by a lecturer from the Faculty of Fisheries and Marine Sciences, Dr. Emma Rochima, M.Si. Emma said that the research started from the concern of the accumulation of plastic waste, the majority of which comes from food wrapping waste. Most plastics are not easily biodegradable.

6. EasyBath

EasyBath is a multifunctional product that can be used for bathing without water and soap, body fragrance, and antiseptic products. This product contains a variety of authentic Indonesian spices. The spices used are essential oil extracts, chayote peel waste, turmeric, betel, and tamarind seeds. Siamese orange peel waste contains d-limonen, which is antibacterial, antifungal, and provides an anxiolytic effect with a fresh aroma that can calm the mind. Meanwhile, turmeric, siri, and tamarind seeds are common spices found in the kitchen. Besides being used for seasoning, these spices have various ingredients such as antimicrobials, antioxidants, anti-inflammatory, and other ingredients that can protect the skin from bacteria and free radicals.

7. Scara Cup

Armed with research and knowledge gained during college, they developed an environmentally friendly product called "Scara Cup". The product development was guided by a lecturer from the Faculty of Agricultural Industrial Technology (FTIP), Dr. Gemilang Lara Utama Saripudin, S.Pt., M.I.L. Scara Cup itself is an edible cup product developed by utilizing coffee bean skin. This product development also



utilizes other ingredients, namely wheat flour, eggs, butter, sugar, and chocolate. Chocolate is used to coat the inside of the Scara Cup to prevent liquid from seeping.

8. Eco-friendly straws from Black Soldier Fly (BSF) larvae

Currently, there are many eco-friendly straw products made by utilizing food materials. However, not many eco-friendly straws have been made using BSF larvae shell casings. The Exustraw product itself has several advantages. One of them is that it is biodegradable, which means it can be decomposed by soil in less than 7 days.

9. Modelling regional aboveground carbon stock dynamics affected by land use and land cover changes

Land use and land cover changes directly affected the aboveground carbon stock potential in Rancakalong District, indicated by an 11,096 ton reduction in the stock. This shortage of carbon stock potential was mainly attributed to the massive reduction in mixed garden areas between 2009 and 2021 by 21 percent, which caused a significant decrease in aboveground carbon stocks. The application of the Integrated Valuation of Ecosystem Services and Tradeoff's model is efficient in analyzing the effect of land use and land cover change on aboveground carbon stock dynamics and can be widely used in environmental engineering studies involving remote sensing approaches.

Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):

<https://doi.org/10.5802/crgeos.192>

<https://www.unpad.ac.id/2023/10/mahasiswa-unpad-buat-sedotan-ramah-lingkungan-dari-kulit-larva-lalat/>