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SILAH KUALA



# FMIPA NEWSLETTER

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# **11 STUDY PROGRAMS HAVE BEEN SUBMITTED TO ASIIN**

(ACCREDITATION AGENCY FOR STUDY PROGRAMS IN ENGINEERING, INFORMATICS, NATURAL SCIENCES AND MATHEMATICS )

**Master in  
Mathematics**

**Master in  
Physics**

**Master in  
Biology**

**Master in  
Chemistry**

**Master in  
Artificial Intelligence**

**Bachelor of  
Mathematics**

**Bachelor of  
Physics**

**Bachelor of  
Biology**

**Bachelor of  
Chemistry**

**Bachelor of  
Informatics**

**Bachelor of  
Statistics**

# Thank You to the Donors — FMIPA's Support Brings Hope to the Victims of the 2025 Aceh Flood

**Aceh — Amid the mud still clinging to house floors, the slowly receding floodwaters, and the exhaustion after long days of displacement, communities affected by the 2025 Aceh floods are striving to stand back on their feet. In these difficult times, assistance and compassion from many parties have become a source of strength for those impacted.**

The Aceh floods are hydrometeorological disasters caused by extreme rainfall, in some cases triggered by tropical cyclones, which then combine with increasingly fragile environmental conditions due to deforestation and changes in land use. As a result, rivers overflow, flash floods and landslides occur, inundating thousands of homes and forcing residents to evacuate. This event serves as a serious alarm that ecological resilience is a crucial matter that must be safeguarded collectively.

Through this humanitarian action, FMIPA extends its sincere gratitude and appreciation to all donors, partners, and volunteers who have provided assistance to our brothers and sisters in Aceh.

"We extend our deepest gratitude to the donors. This assistance is not merely about goods and numbers, but also about hope and the spirit to endure," said an FMIPA representative.

The assistance distributed by FMIPA is not only focused on emergency needs, but also on recovery efforts whose benefits are directly felt by the community. FMIPA has provided water purification tanks and water filtration gallons, as well as constructed bore wells to help meet the need for clean water—one of the most urgent necessities after the floods.

In addition, FMIPA has distributed basic food supplies to affected families and provided special support for students who were directly impacted through scholarships and free meals, ensuring they can continue their education and do not lose their future due to the disaster.

On the other hand, mosque cleaning activities were also carried out as part of environmental recovery and the restoration of places of worship, so that the community can resume daily activities and worship in comfort.



FMIPA hopes that the solidarity built amid this disaster will continue to live on as a shared culture. For when calamity strikes, hope often comes from simple acts: a helping hand, timely assistance, and a sense of care that makes victims feel they are not alone.



## USK Rector Provides Scholarships and Assistance to FMIPA Student Affected by Flash Flood and Landslide in Aceh Tamiang

**Banda Aceh – Universitas Syiah Kuala (USK) has once again demonstrated its strong commitment to supporting students facing humanitarian crises. In early December 2025, the university extended educational and financial assistance to Lisma, a Mathematics student from the Faculty of Mathematics and Natural Sciences (FMIPA) USK, who was severely affected by the recent flash flood and landslide in Aceh Tamiang.**

The disaster brought a devastating impact on Lisma and her family. Their home was heavily damaged by the sudden flash flood that struck the area. The situation worsened when a **subsequent landslide claimed the lives of four of her family members**, leaving her in deep grief and emotional distress. This profound loss drastically changed Lisma's life, demanding extraordinary strength as she navigates her recovery. During such a difficult time, support from various parties has become essential to ensure she can continue her education and safeguard her future.

As part of the university's solidarity and responsibility toward its students, USK Rector Prof. Dr. Ir. Marwan, IPU, personally handed over educational support and financial aid to Lisma. The Rector was accompanied by the Vice Rector for Student Affairs and Entrepreneurship, Prof. Dr. Mustanir, M.Sc. demonstrating the leadership's serious attention to the tragedy affecting the student. USK has granted Lisma a full scholarship and exemption from tuition fees (UKT) until the completion of her studies, ensuring she can continue her academic pursuits without financial burden, while reaffirming institutional compassion commitment inclusivity academic continuity moral support resilience hope and long-term care for students.

In his remarks, the Rector emphasized that USK is more than just an academic institution it is a home for its students, where support extends beyond the classroom, especially during times of hardship, fostering resilience compassion unity hope guidance safety belonging and growth, while nurturing leadership integrity empathy collaboration perseverance responsibility excellence.

**"USK is not just a place to study it is a home for our students. When one of them faces a tragedy, it becomes our moral responsibility to stand by them and provide support. We hope this assistance can strengthen Lisma and help her remain focused on her education," said Prof. Marwan.**



In addition to support from the Rectorate, the campus community also expressed solidarity. Rumah Amal Masjid Jamik USK provided additional humanitarian assistance, offering relief to help ease the immediate needs Lisma faces as she recovers from the loss of her family and home. Although not highlighted prominently, this contribution reflects the collective compassion within the USK community, demonstrating empathy unity shared care moral responsibility and enduring humanitarian commitment.

From the faculty level, Dean of FMIPA USK, Prof. Dr. Taufik Fuadi Abidin, S.Si, M.Tech., conveyed deep condolences and reaffirmed the faculty's commitment to supporting Lisma both academically and emotionally, ensuring continuous guidance encouragement empathy understanding flexibility and sustained assistance throughout her academic journey during this difficult period.

**"Lisma is a member of the FMIPA family, and we want to ensure that she does not face this difficult time alone. The faculty will continue to assist her, academically and morally. We hope the support provided can ease some of the burdens she is carrying," said Prof. Taufik.**

The combined efforts of the Rectorate, FMIPA leadership, Rumah Amal Masjid Jamik USK, and the broader academic community reflect USK's dedication to upholding values of humanity and solidarity. When one member of the university family experiences hardship, the entire institution comes together to offer strength and hope, demonstrating compassion unity shared responsibility collective resilience unwavering support and a commitment to uplift every individual with dignity care together.

## FMIPA USK Builds Bore Wells and Clean Water Systems for Flood Victims in Pidie Jaya and Bireuen

**BANDA ACEH – The Faculty of Mathematics and Natural Sciences (FMIPA) of Universitas Syiah Kuala (USK) distributed humanitarian aid to residents affected by flooding in Pidie Jaya and Bireuen Regencies on December 20–21, 2025. This social action represents a tangible form of concern from the FMIPA USK academic community for communities facing the impacts of natural disasters.**

The aid distribution was led by the Vice Dean III of FMIPA USK, **Dr. Wira Dharma**, accompanied by the Head of the Department of Biology FMIPA USK, Prof. Dr. Lenni Fitri, and involved students from the Student Executive Board (BEM) of FMIPA USK. The presence of lecturers and students in the field demonstrated strong internal synergy within FMIPA USK in responding quickly and effectively to community needs.

Dr. Wira Dharma explained that the assistance distributed was the result of collaboration between the Indonesian Biology Consortium (KOB), the Department of Biology FMIPA USK, and FMIPA USK. The aid focused on meeting the basic needs of the community after the disaster, particularly access to clean water.

"The assistance we provided includes the construction of bore wells, the installation of water tanks complete with clean water filtration systems, as well as the distribution of hygiene kits and light food packages. We hope these facilities can be directly utilized by the community in the long term," said Dr. Wira Dharma on Monday (12/22/2025).

The distribution process ran smoothly thanks to the support of various parties, including SOC-P and the Indonesian Red Cross (PMI) of Bireuen Regency, which helped ensure that the aid was delivered accurately to the affected areas.

Meanwhile, the Head of the Department of Biology FMIPA USK, **Prof. Dr. Lenni Fitri**, emphasized the importance of cross-institutional collaboration in emergency situations. According to her, the involvement of educational institutions, scientific organizations, and students is a strategic strength in delivering real solutions for communities in need.

"Natural disasters require a collective response. Universities do not only play a role in education and research, but also have a social responsibility to be present and assist the community, especially during difficult times like these," she stated.

Support for this humanitarian initiative was also expressed by the Dean of FMIPA USK, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.** He expressed his appreciation to all parties involved and reaffirmed FMIPA USK's commitment to fulfilling its role in community service.

***"We highly appreciate the collaboration between FMIPA USK, KOB, students, and field partners. This assistance in the form of clean water facilities is expected not only to help communities in emergency conditions, but also to provide sustainable benefits for the daily lives of residents in Pidie Jaya and Bireuen," said Prof. Taufik.***



FMIPA USK also expressed its gratitude to all partners involved, including KOB, the Department of Biology FMIPA USK, BEM FMIPA USK, SOC-P, PMI Bireuen, as well as Rumah Amal USK, which provided logistical material support for the visited areas. Through this initiative, FMIPA USK hopes to contribute to accelerating the recovery process and strengthening community resilience in post-disaster conditions in the affected regions, while fostering collaboration solidarity sustainable recovery mutual support preparedness empowerment and long-term resilience among communities.

# WHAT WE ACHIEVED



## Faculty of Science and Technology UKM Welcomes 30 Student Mobility Delegates from Universitas Syiah Kuala

**Bangi, Malaysia – The Faculty of Science and Technology (FST), Universiti Kebangsaan Malaysia (UKM), officially welcomed 30 delegates from Universitas Syiah Kuala (USK) as part of the Student Mobility Program. This initiative aims to strengthen academic, research, and student exchange collaborations between two leading universities in the ASEAN region.**

The USK delegation was led by **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.**, Dean of the Faculty of Mathematics and Natural Sciences (FMIPA), accompanied by **Dr. Ir. Wira Dharma, S.Si., M.Si., M.P.**, Vice Dean for Student Affairs, Alumni, and Partnerships.

The delegates were officially received by **Prof. ChM. Dr. Ishak Bin Ahmad**, Dean of the Faculty of Science and Technology UKM, along with **Assoc. Prof. Dr. Abdul Munir Abd Murad**, Deputy Dean (Graduate Affairs), **Prof. Dr. Salmah Yaakop**, Deputy Dean (Research and Innovation), and **Assoc. Prof. Ts. Dr. Mohd Hariri Arifin**, Deputy Dean (Industry and Community Relations).

Also in attendance were several heads of departments, including **Assoc. Prof. Dr. Mohd Hafizuddin Jumali** (Department of Applied Physics), **Assoc. Prof. Dr. Nazlina Ibrahim** (Department of Biological Sciences and Biotechnology), **Prof. Dr. Mohd Talib Latif** (Department of Earth Sciences and Environment), **Prof. Dr. Anuar Mohd Ishak** (Department of Mathematical Sciences), and representatives from the Departments of Chemistry and Food Science.

In a warm and collaborative atmosphere, both sides discussed broader opportunities for academic and research cooperation, as well as strategies to strengthen international student exchange networks.

As part of the visit, a Letter of Intent (LoI) and an Implementation Arrangement (IA) were signed between FMIPA USK and FST UKM, representing their joint commitment to enhancing cross-institutional collaboration.

The USK delegation also included **Dr. Alia Rizki, S.Si., M.Sc.**, a lecturer from FMIPA and an alumna of FST UKM, who facilitated communication between the two institutions together with **Dr. Nik Norhazrina binti Nik Mohd Kamil**, International Relations Coordinator of FST, and **Dr. Mohd Asif Mohd Sukri**, FST Mobility Coordinator. The event not only strengthened academic ties but also created opportunities for students to broaden their international perspectives and experiences.



As part of the joint academic agenda, the event featured:

- **A presentation** by FST UKM researcher **Assoc. Prof. Dr. Abdul Munir Abd. Murad**, introducing ongoing scientific studies and highlighting advances in research and their applications toward sustainable development in Southeast Asia.
- **A special lecture** by **Dr. Akhramsyah Muamar Ubaidah Sanusi**, titled "Blue Carbon and Coastal Ecosystem Sustainability", discussing the importance of coastal ecosystem conservation and the potential of blue carbon in mitigating climate change.
- **Academic discussions** between FST UKM and FMIPA USK lecturers on potential research collaborations, paving the way for future joint research projects.

In a separate session, both parties held further discussions on future joint research plans covering a range of strategic areas, including **palm oil research, geothermal studies, food technology, insect research centers, material electrical properties, patchouli (nilam) studies, biology symposiums, botanical garden mobility programs, botanical research, biotechnology, microbiology, moss studies**, and several other related fields. In the near future, an **online meeting** will be held between relevant departments of both universities to follow up and finalize these collaborative research agendas.

During the session, **Assoc. Prof. Dr. Abdul Munir Abd Murad**, accompanied by **Prof. Dr. Salmah Yaakop** and **Assoc. Prof. Ts. Dr. Mohd Hariri Arifin**, expressed hope that the signing of the **LoI** and **IA** would not remain merely ceremonial but would be realized through productive and sustainable collaborative activities.

*"We hope this collaboration will soon produce concrete projects that have a real impact on research development and the academic capacities of both institutions," he stated.*

Meanwhile, **Prof. Dr. Taufik Fuadi Abidin**, Dean of FMIPA USK, emphasized that collaboration with UKM marks an important step in strengthening USK's international network.

*"All activities outlined in the IA will bring mutual benefits to both universities and will be systematically reported through detailed activity reports," he explained.*

## Informatics Students of FMIPA-USK Present “Flowin”, An Innovative Step Toward Water Digitalization in Banda Aceh

**Banda Aceh, October 16, 2025 – A group of students from the Informatics Study Program, Faculty of Mathematics and Natural Sciences, Universitas Syiah Kuala (FMIPA-USK) consisting of Rafli Afriza Nugraha, Ahmad Syah Ramadhan, Irfan Rizadi, Athar Rayyan Muhammad, and Khalisha Adzraini Arif under the supervision of Mr. Maulyanda, S.Tr.Kom., M.Kom., has successfully conducted a Training and Knowledge Transfer Program for PERUMDAM Tirta Daroy Banda Aceh as part of the Student Creativity Program Application of Science and Technology (PKM-PI) 2025.**

This program carries the theme “Digitalization of PDAM Water Management in Banda Aceh: Implementation of Smart Water Meter and Machine Learning for Optimizing Water Distribution.” The initiative aims to apply Internet of Things (IoT) and machine learning technologies in local water management systems, making water distribution more efficient, transparent, and sustainable.

The training, held at the PERUMDAM Tirta Daroy office, began with the introduction of the **IoT-based Smart Water Meter**, a sensor-equipped device capable of monitoring customer water usage data in real-time. The student team demonstrated the device’s operating principles, sensor calibration process, and data monitoring using their custom-built **Flowin** system. Field trials were also conducted to ensure the tool’s accuracy, which now reaches nearly 100 percent.

The session then continued with the introduction of the **Flowin digital platform**, designed with three user interfaces: customer, administrator, and technician. Through its interactive dashboard, PERUMDAM staff can monitor water usage patterns, detect anomalies, and manage customer complaints in an integrated system.

This data-driven ecosystem allows information to flow seamlessly across departments, enabling faster and more informed decision-making. Additionally, the Informatics students implemented a **machine learning model** within Flowin to support predictive analytics.

The model helps forecast customer water consumption trends, detect leakage patterns, and assist PERUMDAM in optimizing network efficiency and production planning. By combining IoT and artificial intelligence, the team successfully delivered a practical and adaptive technological solution for the digital transformation of Banda Aceh’s water management system, supporting sustainability data-driven decision making service reliability operational resilience innovation scalability and long-term public utility performance.



To ensure sustainability, the students handed over the **Flowin Partner Handbook** to PERUMDAM Tirta Daroy.

The handbook includes detailed technical guidelines for device usage, system operation, and maintenance procedures enabling PERUMDAM staff to independently manage the system after the program’s completion.

**Arief Rahman, S.Kom.**, a representative from PERUMDAM Tirta Daroy, expressed his appreciation for the students’ innovative work.

*“The application you developed both in terms of interface and functionality is already excellent for customers, administrators, and technicians. We can further collaborate to synchronize its database and workflow with our internal system. The IoT device’s accuracy is already close to 100 percent, needing only minor calibration for optimal results,” said Arief.*

Team leader **Rafli Afriza Nugraha** emphasized that the activity was more than just a technical workshop it was a tangible contribution of university knowledge to the local community.

*“We hope Flowin can be the first step toward digital transformation in Banda Aceh’s water management. Through this collaboration, we look forward to integrating Flowin into PERUMDAM Tirta Daroy’s operational system for real implementation,” Rafli stated.*

This initiative marks a significant milestone in the implementation of **PKM-PI USK 2025**, which highlights not only technological innovation but also the continuity of application through training and partner mentoring.

Moving forward, the Informatics students of FMIPA-USK plan to continue their collaboration with PERUMDAM Tirta Daroy to integrate Flowin with the company’s data infrastructure paving the way toward smart, efficient, and sustainable water management in Banda Aceh, enhancing interoperability scalability real-time analytics decision support resilience innovation service quality and long-term urban sustainability outcomes.

## USK Students Create Eco-Friendly Hand Cream from Papaya Peel Waste and Cinnamon Oil

**Banda Aceh, October 20, 2025** – A group of interdisciplinary students from Universitas Syiah Kuala (USK) has successfully developed an innovative skincare product called KAYE, a multifunctional hand cream made from papaya peel waste and cinnamon oil. This innovation represents a concrete example of combining science and creativity to utilize local natural resources while promoting environmental sustainability.

The KAYE product was developed under the supervision of **Apt. Nadia Isnaini, S.Farm., M.Sc.**, with team members coming from various study programs, including **Pharmacy, Communication Science, and Management**. This cross-disciplinary collaboration became the main strength in creating an innovation that not only focuses on scientific aspects but also incorporates communication strategies and business potential.

The team leader, **Rahmi Azalia**, explained that the name KAYE comes from the Acehese phrase “**kaye maneh**,” which means cinnamon. The name was chosen to represent Aceh’s strong local identity and to reinforce the product’s natural and traditional essence.

According to Rahmi, papaya peel was chosen as the main ingredient because it contains **flavonoids, vitamin C, beta-carotene, and polysaccharides**, which serve as antioxidants and natural moisturizers. These compounds make papaya peel highly potential to be processed into active ingredients for natural cosmetic products.

Meanwhile, cinnamon oil contains **cinnamaldehyde** and **eugenol**, which act as antioxidants and UV protectants. Based on laboratory tests, a hand cream formulation with **0.5% cinnamon oil achieved an SPF value of 18**, providing mild protection against daily sun exposure.

The production of KAYE involves a **maceration process** of locally sourced papaya peels. After being dried, the peels are extracted to produce a **high-quality concentrated extract**. This process emphasizes both efficiency of raw materials and strict hygiene standards to ensure consistent product quality.

In addition to creating an innovative product, the team also aims to highlight the importance of **organic waste management**. Utilizing papaya peel, which previously had little to no economic value, represents a small but significant step toward promoting a **circular economy** and sustainable environmental practices.

Priced at around Rp25,000 (approximately USD 1.50), KAYE emerges as an affordable, effective, and eco-friendly hand cream. The product is designed for consumers seeking safe, natural skincare without spending much money, appealing local innovation sustainability wellness accessibility trust quality simplicity everyday use value-conscious consumers supporting responsible beauty choices nationwide adoption.



Rahmi hopes that KAYE will inspire other students to innovate by making use of local resources around them. “We want to show that sustainable innovation can start from simple ideas. Papaya peel, which is often seen as waste, actually holds great potential,” she said, encouraging creativity environmental awareness entrepreneurship circular economy practices community empowerment research-based innovation and student-led solutions for sustainable development.

The KAYE development team plans to continue research to **refine the formula, extend the product’s shelf life, and conduct broader consumer testing**. This innovation aligns with the **United Nations Sustainable Development Goals (SDGs)**, particularly **Goal 12 (Responsible Consumption and Production)** and **Goal 13 (Climate Action)**, by encouraging sustainable production practices and reducing organic waste. Through these efforts, the team hopes KAYE will evolve into a flagship student innovation from USK that promotes environmentally conscious entrepreneurship and showcases Aceh’s natural potential on a broader scale.

## **FMIPA USK Hands Over the Integrated Service Unit (ULT) Application to the Rector of Universitas Syiah Kuala**



**Banda Aceh, October 22, 2025 – The Rector of Universitas Syiah Kuala (USK), Prof. Dr. Ir. Marwan, officially received the Integrated Service Unit (ULT) Application from the Dean of the Faculty of Mathematics and Natural Sciences (FMIPA) USK, Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Si., M.Tech., in a symbolic handover ceremony held at the USK Rectorate Building. The ULT application has been implemented and utilized at FMIPA USK as part of the Integrity Zone (ZI) program. The event was also attended by the University Secretary, Dr. Teuku Meldi Kesuma, S.E., M.M.; the Vice Dean for Student Affairs, Alumni, and Achievements of FMIPA, Dr. Ir. Wira Dharma, M.Si., M.P.; and the Head of USK ICT Center (UPT TIK), Razief Perucha Fauzie Afidh, S.Si., M.Sc.**

FMIPA USK is the first faculty within the university to establish and develop a faculty-level Integrated Service Unit (ULT). The initiative to build the ULT application began when FMIPA USK was appointed as an Integrity Zone implementing unit in mid-2021, under the leadership of Dean Prof. Dr. T.M. Iqbalsyah, M.Sc.

The Integrity Zone (ZI) program is part of the bureaucratic reform effort aimed at realizing a Corruption-Free Zone (WBK) and a Clean and Serving Bureaucratic Zone (WBBM) within USK. Through this application, FMIPA's ULT has integrated 13 types of services, covering academic, student affairs, and administrative matters, such as diploma and transcript legalization, academic leave applications, and various other services.

The ULT services at FMIPA are supported by 21 administrative staff members from each study program who have received specialized training to ensure excellent service for students, lecturers, and the public. According to Prof. Taufik, the ULT is a sustainable service that requires a long process and comprehensive readiness from all parties to ensure that the quality of service provided is truly excellent.

USK Rector Prof. Marwan expressed his highest appreciation for FMIPA's initiative in developing and handing over the ULT application to the university, enabling its expansion at the USK level and utilization across all faculties and schools. He emphasized that the implementation of the Integrity Zone is a shared responsibility, strengthening transparency, accountability, service quality, institutional trust, digital governance, efficiency, and continuous improvement throughout all academic and administrative units university-wide.

## FMIPA USK and Sabang Tourism Office Discuss Digital Tourism Collaboration

**Banda Aceh, October 29, 2025** – The Faculty of Mathematics and Natural Sciences, Syiah Kuala University (FMIPA-USK) welcomed an official visit from the Head of the Sabang City Tourism Office, **HARRY SUSETHIA, S.T., M.T.** The visit marked an important step toward exploring strategic collaboration between academia and local government in strengthening the tourism sector through digital innovation.

The meeting, held at the FMIPA-USK campus, was attended by **Dean of FMIPA-USK, Prof. Dr. Taufik Fuadi Abidin, S.Si, M.Tech,** and **Vice Dean for Student Affairs, Alumni, and Partnership, Dr. Ir. Wira Dharma, S.Si, M.Si, M.P.** The discussion focused on potential cooperation in developing a **web-based tourism platform** to support the digital promotion of Sabang's leading destinations.

During the discussion, both parties agreed that digital transformation is essential in adapting to the changing behavior of modern travelers. Digital tourism promotion enables information about destinations, culture, and local attractions to reach a wider audience quickly and more engagingly across the globe.

Dean **Prof. Dr. Taufik Fuadi Abidin** highlighted that the university has great potential to become a strategic partner in tourism technology development. Through various research programs, student innovations, and interdisciplinary collaboration, FMIPA-USK is committed to supporting local governments in realizing a **smart and sustainable tourism ecosystem for Sabang.**

One of the key highlights of the visit was a **presentation by FMIPA-USK students**, showcasing their innovative project **Jaksabang.com**. This digital platform serves as an integrated tourism portal that features Sabang's destinations, culinary experiences, culture, and event calendar in an interactive and user-friendly format.

**Jaksabang.com** has previously achieved national recognition as a technology-based innovation that supports regional tourism development. In their presentation, the students demonstrated how the system can be integrated with real-time data and interactive features to help tourists plan their visits to Sabang more efficiently.

The **Head of the Sabang City Tourism Office, HARRY SUSETHIA, S.T., M.T.,** expressed his **appreciation and admiration** for the students' creativity in developing digital solutions relevant to local needs. He stated that platforms like Jaksabang.com represent a real-world model of collaboration between universities and local governments in accelerating tourism digitalization.



*"Collaborations like this are crucial to enhancing the competitiveness of our tourism destinations. I hope that the partnership between the Sabang Tourism Office and FMIPA-USK will continue, allowing student innovations to be implemented and bring tangible benefits to the community," said HARRY SUSETHIA."*

Meanwhile, **Dr. Ir. Wira Dharma, S.Si, M.Si, M.P.,** emphasized that this activity reflects the faculty's ongoing efforts to **encourage student involvement in real-world, partnership-based projects.** He noted that such collaborations not only strengthen the relationship between academia and government institutions but also provide valuable experiential learning opportunities for students.

With shared enthusiasm for innovation and collaboration, FMIPA-USK and the Sabang Tourism Office are committed to moving forward together toward a new era of digital tourism. Both institutions hope this partnership will become a model of synergy between academia, government, and youth in building a creative, inclusive, and sustainable tourism ecosystem in the westernmost part of Indonesia.

## FMIPA USK Students Achieve Prestigious Titles as Inong Banda Aceh 2025



**BANDA ACEH —** The Faculty of Mathematics and Natural Sciences (FMIPA) of Universitas Syiah Kuala (USK) has once again recorded a proud achievement at the city level. Two of its students successfully earned prestigious titles at the Inong Banda Aceh 2025 Selection, an annual event that serves as a platform for developing young Acehnese leaders in culture, social engagement, and leadership.

Balqis Naiziha Maulina, a student of the Statistics Study Program at FMIPA USK, was officially crowned **Inong 3rd Runner-Up of Banda Aceh 2025**. Appearing graceful in traditional Acehnese attire, Balqis demonstrated outstanding confidence, intelligence, and character throughout the selection process, earning recognition from the judges and audience alike.

Another remarkable achievement was recorded by **Wanti Siryatul Maula**, who won two titles simultaneously: **Inong 4th Runner-Up of Banda Aceh 2025** and **Inong Social Movement of Banda Aceh 2025**. The Social Movement title is awarded to finalists who show exceptional commitment to social issues and active involvement in community-based initiatives.

The Dean of FMIPA Universitas Syiah Kuala, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.**, expressed his appreciation and pride for the students' accomplishments. He emphasized that the achievements reflect the comprehensive quality of FMIPA students, who excel not only academically but also in leadership, communication skills, and social awareness.

*"This achievement is a source of great pride for FMIPA. Our students have proven that scientific excellence can go hand in hand with strong character, ethics, and social responsibility. We hope this success will inspire other students to step forward, achieve more, and contribute positively to society," said Prof. Taufik.*

He also expressed his hope that Balqis Naiziha Maulina and Wanti Siryatul Maula would make the most of their roles as Inong Banda Aceh 2025 by serving as positive ambassadors, particularly in empowering youth and strengthening the image of Universitas Syiah Kuala students as agents of change.

This accomplishment further reinforces FMIPA USK's commitment to nurturing well-rounded graduates who are not only academically competent but also culturally aware and socially engaged, in line with USK's vision of becoming a leading and globally competitive university.

## FMIPA-USK Wins Two National Awards: Geutanyoe Team Wins 1st Place at LOGIKA UI 2025, FMIPA Student Wins 3rd Place at UI SDGs Summit

**Banda Aceh —** The Faculty of Mathematics and Natural Sciences, Universitas Syiah Kuala (FMIPA-USK), has once again demonstrated its strength as one of Indonesia's leading academic institutions. Remarkably, two FMIPA-USK student teams have secured national achievements in two prestigious competitions hosted by Universitas Indonesia.

The first achievement comes from **Tim Geutanyoe**, consisting of **M. Habil Aswad, Sadinal Mufti, and Muhammad Bintang Indra Hidayat**, who successfully claimed **1st Place** in the **LOGIKA UI 2025 Data Science Competition**.

The second achievement was earned by FMIPA-USK students **Sarah Salsabil, Naja Luthfia Nuha, and Cut Dhinie Decita**, who won **3rd Place** in the **UI SDGs Summit 2025 Essay Competition**. These dual victories bring tremendous pride to FMIPA-USK, proving that USK students are capable of competing with the best universities in Indonesia across various fields—from data science to environmental studies and sustainable development.

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### **Geutanyoe Team Achievement: 1st Place in LOGIKA UI 2025 Data Science Competition**

LOGIKA UI is widely recognized as one of the most competitive data analysis and machine learning events in Indonesia. In this nationwide competition involving hundreds of participants from top institutions, Tim Geutanyoe stood out from the very beginning.

They underwent several rigorous assessment stages—including data preprocessing, exploratory data analysis, predictive modeling, and delivering a relevant, innovative data-driven solution. With strong teamwork and well-planned technical strategies, the trio emerged as the first-place champions.



### **FMIPA-USK Students Earn 3rd Place in UI SDGs Summit 2025 Essay Competition**

Another proud achievement comes from FMIPA-USK students **Sarah Salsabil, Naja Luthfia Nuha, and Cut Dhinie Decita**, who secured **3rd Place (Environmental Action – 2nd Runner-Up)** in the **UI SDGs Summit 2025 Essay Competition**.

Their essay highlighted strategic issues related to environmental protection and sustainability, presenting visionary ideas that combined scientific insight, social innovation, and ecological awareness. The judges praised their work for its strong arguments, practical solutions, and meaningful contribution to the global Sustainable Development Goals (SDGs).

This success emphasizes the academic excellence of FMIPA-USK students not only in science and technology, but also in critical thinking and scientific writing.

#### **Appreciation and Remarks from the Dean of FMIPA-USK**

The Dean of FMIPA-USK, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.**, expressed profound appreciation for these remarkable achievements. He stated:

*"I am extremely proud of the two major accomplishments achieved by FMIPA-USK students. These victories are clear evidence that our students possess outstanding quality and competitiveness at the national level. Whether in data science or SDGs studies, they have demonstrated exceptional competence and dedication."*

## FMIPA-USK Launches Fundraising Effort to Support Students Affected by Disasters in Aceh, North Sumatra, and West Sumatra

**Banda Aceh —** In a swift response to a series of hydrometeorological disasters that struck Aceh, North Sumatra, and West Sumatra, FMIPA-USK initiated a fundraising effort to assist students currently facing hardships due to the emergency conditions. The disasters—which include floods, landslides, and extreme rainfall—have disrupted community activities, including those of hundreds of FMIPA-USK students whose families live in the affected regions.

Faculty records show that more than 200 FMIPA-USK students have been directly impacted by these events. Many of them are facing serious challenges such as flooded homes, severed road access, loss of communication networks, and families who have been forced to evacuate. Amid these pressures, some students have remained in Banda Aceh to continue their studies, though with increasing psychological and economic burdens.

As part of its immediate response, FMIPA-USK has provided daily lunch assistance during the emergency period for students in need. This support not only serves as logistical aid but also provides emotional reassurance—reminding students that they are not facing the situation alone.

The Dean of FMIPA-USK, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.**, emphasized that the well-being of students affected by the disaster is the faculty's top priority.

***"In times of crisis, students are a group we must protect. Many of them are far from their families and lack direct support. That is why we want to ensure they feel embraced by the FMIPA family," he stated.***

Prof. Taufik explained that the fundraising initiative is the result of broad collaboration involving lecturers, administrative staff, students, alumni, and donors who are moved to help. "We have a moral responsibility to ensure that education does not come to a halt because of emergency situations. Acts of solidarity like this form a bridge between humanity and the academic world."

He also expressed heartfelt gratitude to everyone who has contributed their time, energy, or donations. "We appreciate every form of support, no matter how small. Every act of kindness offered today becomes a source of strength for our students as they face these challenges."



On the ground, various testimonies from affected students highlight the importance of the assistance provided. One student shared that severe flooding in their hometown forced their family to evacuate to a safer location, while they had to remain in Banda Aceh with limited resources. The lunch assistance from the faculty, the student said, greatly eased their daily burden and allowed them to stay focused on their studies.

Another student recounted how communication with their family was cut off for several days due to network damage. In a period filled with anxiety, the presence of moral and logistical support from the faculty brought them much-needed comfort. "It felt like having a second family here," said one student who preferred not to be named.

Beyond immediate assistance, FMIPA-USK has opened donation channels for the academic community and the public to contribute to the disaster relief efforts. The fundraising is conducted transparently and will continue for as long as students require support.

The faculty is also exploring several follow-up steps, including mapping students' psychosocial needs, providing academic guidance for those severely affected, and potentially offering additional aid should the situation worsen.

Through this solidarity movement, FMIPA-USK aims to provide not only material support but also encouragement and a sense of unity for students struggling through this difficult time. The university reaffirms that student welfare and education are collective responsibilities, and that solidarity remains the foundation for addressing humanitarian challenges such as this.

With a strong spirit of mutual support, FMIPA-USK believes that its students will recover, remain focused on their education, and feel the unwavering presence of a larger family ready to help them whenever needed.

## FMIPA-USK Hosts Guest Lecture on “Building a Green Economy,” Featuring International Carbon Market Expert

**BANDA ACEH** –The Faculty of Mathematics and Natural Sciences, Universitas Syiah Kuala (FMIPA-USK), reaffirmed its commitment to sustainability and environmental literacy by organizing a guest lecture titled “Building a Green Economy through Core Carbon Principles: Opportunities, Challenges, and Strategic Directions.” The event took place on Monday, 24 November 2025, at the FMIPA-USK Multipurpose Room and drew strong participation from students, lecturers, and stakeholders across the university.

The program was officially opened by the Rector of USK, **Prof. Dr. Ir. Marwan, IPU.**, together with the Dean of FMIPA-USK, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.** In his opening remarks, Rector Marwan emphasized that the transition toward a green economy has become a key component of global and national development agendas. He praised FMIPA-USK for consistently presenting academic activities that align with the urgent challenges of climate change. “Universities must serve as a cradle for innovative green ideas. Through this lecture, we hope students can better understand the dynamics of the carbon market and the vast opportunities it brings,” he stated.

**Dr. Taufik Fuadi Abidin, S.Si., M.Tech** echoed this perspective by underscoring the importance of green economy literacy for the academic community as part of future-oriented capacity building. “The shift toward a green economy is inevitable. Therefore, understanding core carbon principles, the prospects of the green industry, and global challenges is essential for enabling meaningful contributions to sustainable development,” he remarked.

The guest lecture featured keynote speaker **Akhramsyah M.U. Sanusi, ACGI**, Founder & Partner of Tabah Asia Sdn. Bhd., Malaysia. In a comprehensive presentation, he explored the opportunities, challenges, and strategic directions of the global carbon market. Akhramsyah highlighted how core carbon principles have become crucial in ensuring credible and sustainable green-economy initiatives, and how academic institutions can help strengthen human resource capacity in this emerging field.

The discussion session was moderated by **Dr. Ir. Wira Dharma, S.Si., M.P., M.Si.**, Vice Dean for Student Affairs, Alumni, and Partnership of FMIPA-USK. Participants actively engaged with questions ranging from carbon market implementation and green project potential in Indonesia to strategies for adapting to climate-related challenges, reflecting strong enthusiasm critical thinking interdisciplinary perspectives practical relevance policy awareness and commitment to sustainable solutions.



Through this event, FMIPA-USK aims to strengthen its role as a responsive center for knowledge development in addressing global sustainability issues. The lecture also represents a concrete step in bridging academic insight with the evolving landscape of the international green economy, while opening new opportunities for future collaboration by promoting interdisciplinary partnerships, innovation, policy engagement, capacity building, global networking, and long-term impact aligned with the Sustainable Development Goals. These efforts encourage student engagement industry collaboration evidence-based research inclusive dialogue ethical leadership applied solutions regional relevance international visibility and sustained institutional contribution to resilient low-carbon development pathways benefiting society economy environment future generations through innovation education partnerships governance implementation monitoring evaluation learning adaptation improvement accountability equity scalability impact outcomes.

## FMIPA-USK and STMKG Officially Establish Strategic Partnership to Strengthen Education and Research



**Banda Aceh** — FMIPA-USK has officially established a strategic partnership with the School of Meteorology, Climatology, and Geophysics (STMKG) through the signing of a Cooperation Agreement (PKS) held today at the FMIPA-USK campus. The agreement was signed directly by the Dean of FMIPA-USK, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.**, and the Director of STMKG, **Dr. Deni Septiadi, M.Si.**, in a formal ceremony attended by faculty members and representatives from STMKG. This collaboration marks an important step for both institutions in strengthening education, research, and competency development in the fields of meteorology, climatology, and geophysics—areas that are increasingly vital in responding to the challenges of climate change and natural disasters.

In his remarks, the Dean of FMIPA-USK, **Prof. Dr. Taufik Fuadi Abidin**, expressed his appreciation for the establishment of this partnership and emphasized the faculty's commitment to maximizing its benefits for the academic community.

*"We view this collaboration as a significant opportunity to expand our academic network and enhance the quality of research at FMIPA-USK. STMKG possesses strong expertise in meteorology and geophysics, and we believe this synergy will bring meaningful impact to the advancement of scientific knowledge and the improvement of competencies among our students and lecturers."*

he stated. He also added that the cooperation is expected to generate innovation and applied research that will contribute to society, particularly in disaster mitigation efforts based on scientific data.

STMKG Director, **Dr. Deni Septiadi**, also expressed his institution's commitment to actively supporting the implementation of this agreement. He noted that the partnership with FMIPA-USK opens valuable opportunities for strengthening academic programs and aligning them with national needs. Through this collaboration, both institutions aim to develop productive joint activities, collaborative research, and capacity-building programs for academic staff and students. With the signing of this agreement, FMIPA-USK and STMKG embark on a new chapter of academic cooperation that is more collaborative, innovative, and oriented toward advancing scientific development.

## FMIPA USK Fourth Cohort of Pharmacist Oath-Taking Ceremony Held with Great Dignity

**Banda Aceh** – The Pharmacist Oath-Taking Ceremony for the Fourth Cohort of the Department of Pharmacy, Faculty of Mathematics and Natural Sciences (FMIPA), Universitas Syiah Kuala (USK), was held solemnly on Friday morning, marking a significant milestone for the graduates who officially earn the title Apt. after completing their professional education. The ceremony was attended by the academic senate, faculty members, and the graduates' families.

The event began promptly at 08.30 a.m. with an opening by the Master of Ceremony, followed by a rendition of “Bagimu Negeri” sung by all prospective pharmacists. The patriotic atmosphere set a tone of pride and heartfelt emotion across the hall.

Shortly afterward, the Dean, Vice Deans, representatives of the Regional Board of the Indonesian Pharmacists Association (IAI) Aceh Province, the Head and Secretary of the Department of Pharmacy, professors, and academic leaders entered the hall to preside over the ceremony.

### The Official Proceedings Begin

The national anthem “Indonesia Raya” was performed, followed by a recitation of the Holy Qur’an by Muhammad Zubaily. The Dean of FMIPA USK, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.**, officially opened the Senate Session, marking the beginning of the academic procession.

The Head of the Department of Pharmacy, **Tedy Kurniawan Bakri, S.Farm., M.Farm., Apt.**, then presented the graduation report. After the preparation of participants, the ceremony reached its most important moment: **the Pharmacist Oath Recitation.**

Led by the Head of Department and religious leader **Dr. Nurdin Ali**, all prospective pharmacists solemnly recited the professional oath as a declaration of their ethical commitments and responsibilities.

### Officially Becoming Pharmacists

Following the oath, graduates proceeded with the signing of the pharmacist oath documents alongside official representatives. This formalized their status as newly inaugurated pharmacists. The song “Bagimu Negeri” was once again performed as a symbol of dedication and service to the nation.

A representative of the new pharmacists, **apt. Nurfaizah, S.Farm**, delivered a touching speech expressing gratitude to lecturers, families, and peers.



### Dean's Remarks: Strength, Integrity, and Service

The Dean of FMIPA USK, **Prof. Dr. Taufik Fuadi Abidin**, then conveyed heartfelt congratulations and a powerful message about the future of the pharmacy profession. In his address, he stated:

*“Today marks not only your academic success but also the beginning of your service to society. A pharmacist is more than a provider of medicine — you are guardians of public health. Uphold integrity, practice compassion, and continue learning in a field that evolves every day.”*

## FMIPA-USK Welcomes BRIN Research Team to Strengthen Collaboration in Research and Scholarship Opportunities

**Banda Aceh** – The Faculty of Mathematics and Natural Sciences at Universitas Syiah Kuala (FMIPA-USK) welcomed an important visit from the Research Center for Metallurgy of Indonesia's National Research and Innovation Agency (BRIN) earlier this week. The BRIN delegation consisted of **Prof. Dr. Ika Kartika, Dr. Albertus Deny Heri Setyawan, Dr. Latifa Hanum Lalasari, and Ariyo Suharyanto, M.T.**

Their arrival was warmly received by **the Dean of FMIPA-USK, Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.**, along with vice deans and representatives from several academic departments.

The visit took place in a warm and productive atmosphere, marking a new chapter in academic cooperation between FMIPA-USK and BRIN. During the meeting held at the deanship office, both parties discussed a wide range of strategic collaboration opportunities—particularly in **materials and metallurgy research**, strengthening laboratory facilities, and developing support programs for young researchers at FMIPA-USK.

A major point of discussion centered on **research scholarship opportunities for students and lecturers**, including collaborative projects, research internships, and skill development programs organized by BRIN. These initiatives are considered essential in improving the quality and competitiveness of young academics at FMIPA-USK, enabling them to contribute to national priority research.

In his remarks, **Prof. Dr. Taufik Fuadi Abidin, S.Si., M.Tech.** expressed strong support for this partnership. He emphasized FMIPA-USK's commitment to expanding research networks and opening broader avenues for academic innovation. "The presence of the BRIN team is a valuable opportunity for us. We hope this collaboration will not only strengthen research capacity at FMIPA-USK but also open more doors for students and lecturers to engage in strategic national research," he stated.



Representatives from BRIN also conveyed their appreciation for the warm reception from FMIPA-USK. They stressed that synergy between research institutions and universities plays a crucial role in advancing science and technology in Indonesia. BRIN hopes that the forthcoming collaboration will produce innovative research outcomes that address industrial needs and societal challenges.

In addition to formal discussions, the BRIN team conducted a tour of several FMIPA-USK laboratories. They provided constructive feedback regarding the potential enhancement of research capabilities, particularly those that could support materials and metallurgy-based research programs. This activity also opens opportunities for FMIPA-USK to strengthen its laboratories as future hubs for scientific innovation in Aceh.

The visit is expected to serve as a concrete first step toward establishing a long-term collaboration roadmap between FMIPA-USK and BRIN. Both institutions agreed to follow up the meeting with upcoming agendas, including workshops, joint research activities, and explorations of potential research grant opportunities.

Through this visit, FMIPA-USK reaffirms its commitment to becoming a leading faculty in research and innovation. The synergy with BRIN is anticipated to act as a catalyst for producing high-quality research with broad impact on society, academia, and technological advancement in Indonesia.

This strategic visit marks an important milestone for FMIPA-USK in strengthening a collaborative, innovative, and sustainable research ecosystem opening greater opportunities for Aceh's young scientists to excel at both national and global levels.