



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

UTM PROSPERING LIVES



(January - March 2019)

innovative • entrepreneurial • global

PROSPERING LIVES



with Translational Research

Towards the Betterment of the Community

We are committed to be the best at what we do and by bringing out the best of our people, we work together to achieve our common goals, to not only excel in academics but also expand our research and innovation beyond the campus.

We subscribe to the idea of Translational Research using our core strengths : science, technology and engineering, applying the concept of applied knowledge to address industrial and societal issues. Apart from creating new knowledge & generating new insights, we work together with our partners to transform our academics to become entrepreneurs with impactful products to benefit the communities for years to come.

Overall Achievement of Community Engagement 2018

**64 HIGH IMPACT
PROJECTS** FROM
74 PROJECTS

Community
Engagement Star
Ratings across PTJs
through reward and
recognition for UTM
Academics

**6 PROJECTS
UNDER JOHOR
INNOVATION
VALLEY**

Collaborative
Innovation with Johor
State Government and
UPENJ

**RM22.1 MILLION
COMMUNITY
ENGAGEMENT
FUND**

Utilization of Fund for
Community
Engagement

**138 COMMUNITY
ENGAGEMENTS**

CBPR - Community
Based Participatory
Research
SEL - Service /
Embedded Learning
VCS - Volunteerism &
Community Services

Community Engagement

Focus Area 2018



**Social
Entrepreneurship**

11 projects



**Education
Enhancement**

45 projects



**Capacity
Building**

19 projects



**Environmental
Sustainability**

15 projects



**Improving
Livelihood**

48 projects

Towards the Betterment of the Community



FOCUS AREA

Improving Livelihood

Towards the Betterment of the Community

Clean Water Supply for Malaysia through Membrane Technology

IMPROVING LIVELIHOOD

The occurrence of natural disasters in rural parts of Malaysia has caused disruption in clean water supplies to the communities. The integrated mobile reverse osmosis (RO) water purification system developed by UTM's membrane experts has provided an innovative solution to this problem. The mobile unit system has the ability to treat water sources from river, sea and tube well to provide sustainable water supplies to the community. The system can also be potentially used by the Special Operations Forces and units engaged in remote site missions.

Project Leader :
Prof. Datuk Dr. Ahmad Fauzi Ismail



COMMUNITY & SOCIAL

10,000

Victims of earthquake in Ranau, Sabah

6,000

Victims of floods & droughts in Kelantan

2,000

People in Kiulu, Sabah for the supply of treated clean water

500

People facing water shortage problem in Mersing, Johor

INDUSTRY

5

National Collaboration

1

International Collaboration

IMPACT

10

Academic Staff

20

Ph.D Graduated

10

MSc. Graduated

80

Indexed Paper

RM2.5 million

Income Generation

ECONOMY

1

Spin off Company

5

Malaysia Patent



Free 24-hour Electricity Supply for Community

IMPROVING LIVELIHOOD

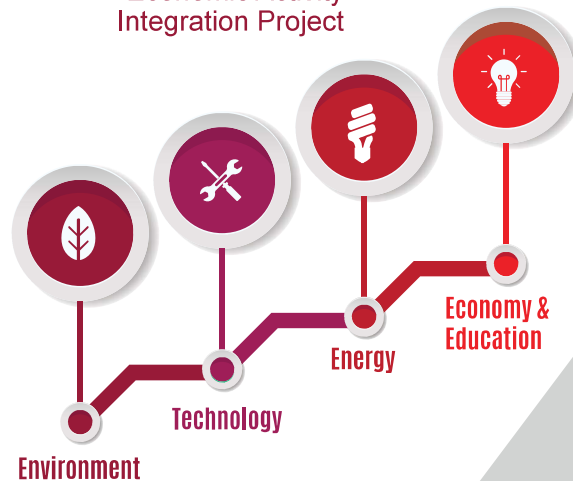
Vortex Hydro System is a high impact and cost effective community project, emphasizing on environmental, economic, social, technology and education factors. It involves technology transfer and volunteerism concept, generating immediate and sustainable results to the community. The project has benefited Kampung Orang Asli Lemoi, located 21 km from Ringlet consisting 40 families and 246 people. Before this, the community was fully dependent on electricity powered by mobile generators.

Project Leader :

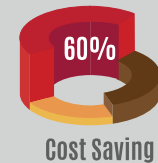
► Prof Dr. Assan Ali
b. Golam Hassan



UTM Vortex Hydro and
Economic Activity
Integration Project



LOW
COST



Optimal Leverage Among
Stakeholders KPLB, KPM,
Politeknik, ICU JPM, JAKOA, UTM

\$\$

RM173,290 (NBOS)
VS
RM433,000 (CONVENTIONAL)

EXECUTION

RAPID

45

Days Technical
Execution



167

Manpower



HIGH
IMPACT

1

The 1st Vortex Hydro
System in Malaysia



2

Free 24 Hours
Electricity Supply for
Public Amenities in
Kg. Lemoi

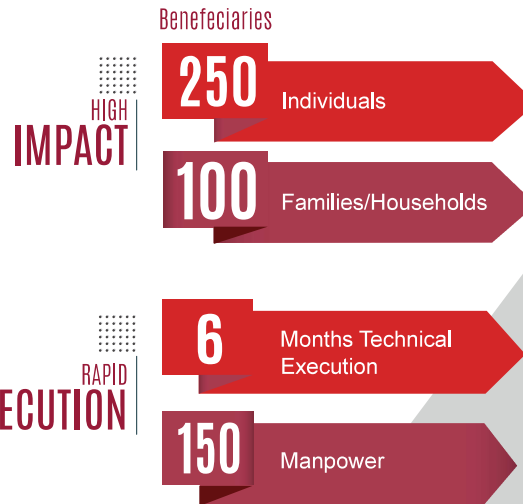
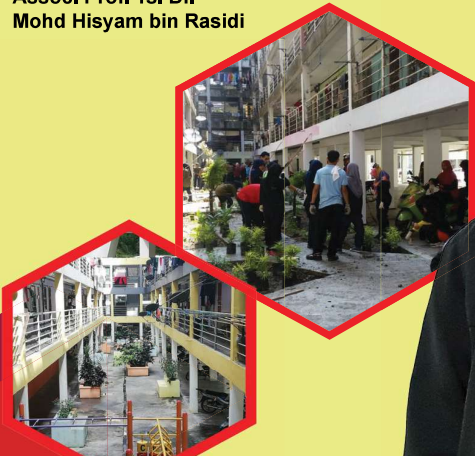


Quality Environment for Low Cost Flat Housing at Taman Plentong Utama

IMPROVING LIVELIHOOD

This project is to develop a better quality environment for low cost flat community, sustainable and conducive living space. Currently, the community at Flat Taman Plentong Utama is living in unhealthy environment, with many unfunctional spaces and not attractive environment. Hence, there is a lack of community awareness and motivation to build their attractive and conducive environment which is clean, beautiful and functional. This program was carried out through local community participation approach with UTM and also collaborated with various agencies such as Majlis Bandaraya Johor Bahru, Jabatan Pertanian Johor and some private agencies. The aim of this project is to transform unattractive low cost flat environment to become a more quality living space especially to create significant and positive impact socially, economically, and environmentally.

Project Leader :
Assoc. Prof. Ts. Dr.
Mohd Hisyam bin Rasidi



LOW COST



Optimal Leverage Among Stakeholders

UTM, Local Community, Majlis Bandaraya Johor Bahru, Jabatan Pertanian Johor and Private Agencies



Redevelopment of sustainable outdoor environment for low cost flat community, Taman Plentong Utama



Establish functional space for community used through innovative and creative design approach



Provide significant awareness and motivation for local community to improve their residential environment properties.

SUSTAINABILITY



FOCUS AREA

Education Enhancement

Towards the Betterment of the Community

"Fun Learning Toy Library" in Pre-Schools to Encourage the Science, Technology & Mathematics (STEM) Learning

EDUCATION ENHANCEMENT

"USR Razak School: Adopt a Kampung" team has successfully developed STEM Fun Learning Toy Library (FLTL) at remote and rural pre-schools in Kelantan. The 2014 flash flood badly hit SK Kuala Geris, Dabong. Two pre-school classrooms were repaired and equipped to be operational. Getting the children to feel safe to go to school again is another aim. Together with UTM experts, the teachers, parents and local community helped set-up the FLTL, which had also successfully motivate the learning of STEM at pre-school age. The FLTL had fruitfully increased students' attendance to school and increased STEM comprehension. The project had received attention from the District Department of Education and Religious State Council of Kelantan. This success had attracted other schools to adopt the FLTL model. SK Seneng Bachok, with a pre-school classroom but with no budget for a teacher nor equipment, was the second recipient of the FLTL.

Project Leader :
Dr. Habibah Haron



Sekolah Kebangsaan Kuala Geris, Kuala Geris, Dabong & Sekolah Kebangsaan Seneng, Bachok, Kelantan

HIGH
IMPACT



Innovative technique
in learning STEM

20%

Increase in STEM
interest

50%

Ability to comprehend
STEM modules

90%

of students affected
by the flood returned
to school



Requests for FLTL from
pre-schools in Kelantan and
Johor



Attracts industry funding



NGOs and professional society
interested for collaboration and
request consultation

LOW
COST



Optimal leverage among
stakeholders
UTM, Local Community,
Teachers, Parents, NGO

RAPID
EXECUTION

2

months to establish FLTL
(teachers + community)

NICHE



STEM at Pre-school



"Rural and remote"
pre-school locations

SUSTAINABILITY



Increase in STEM
awareness and comprehension
in line with national agenda.



Spillover effect to 30 other
schools with 900 students in
Kelantan.



Teachers implement FLTL
modules and carry out
assessments

Mastering English Using ICT Under Centre for Advancement in Rural Education Informatics (iCARE)

EDUCATION ENHANCEMENT

The community project known as iCARE under the School of Computing, Universiti Teknologi Malaysia (UTM) has been supported by KEJORA under the Ministry of Rural Development (KPLB) since 2012. A lot of efforts to promote education informatics have been materialised. The project managed to promote mobile learning to increase interest and confidence among rural learners mainly in spoken English. A self-help book entitled "Kuasai Asas Bahasa Inggeris" had been published by MPH, written in Malay to ease understanding of the fundamentals of English among rural learners including a knowledge portal with e-forum feature to communicate in English. Besides, iCARE initiated the programme known as iCARE My English (iME) that was conducted by three rural secondary schools as iME@School in 2017. The strategic collaboration promotes transfer of knowledge for the benefit of rural communities. In 2018, English teachers of five schools have been selected to conduct iME@School voluntarily.

◀ Project Leader :
Assoc. Prof. Dr.
Shahida Sulaiman



HIGH
IMPACT



Mobile learning in
mastering English
communication skills

92%

11 out of 12 schools
agreed that the
programme has shown
an impact

92%

11 out of 12 schools
agreed to conduct the
programme themselves

RAPID
EXECUTION



The main programme, iME could be executed and repeated at different schools in Southeast Johor region with the support of printed modules, mobile learning tablets and selected applications besides the support from the English teachers



Optimal Leverage Among Stakeholders:
KEJORA, School of Computing UTM, Mini RTC, Perbadanan Perpustakaan Awam Johor (PPAJ), secondary schools in Southeast Johor region, Jabatan Pendidikan Negeri (JPN), Pejabat Pendidikan Daerah (PPD) in the region

LOW
COST

SUSTAINABILITY



2012-2014: Started as the after school programme at the public library (PPAJ) in Bandar Penawar and adhoc activities at schools around Bandar Penawar besides mini RTCs



2015-2017: The main programme, iME had been conducted at more schools under KEJORA region followed by iME@School conducted by English teachers



FOCUS AREA

Renewable Energy

Towards the Betterment of the Community

Electricity from Micro-Turbine for Orang Asli Community in Royal Belum State Park, Perak, Malaysia

RENEWABLE ENERGY

Orang Asli community in Taman Negeri Royal Belum, Gerik, Perak which can only be accessible after one hour on speedboat from Pulau Banding Jetty, a 40-minutes drive from Gerik, was typically dependent on 1 kW electricity powered by portable diesel generators that are unsustainable and not an environmental-friendly option. Thus, UTM, together with other local agencies and State Government of Perak have synergized to develop a Sustainable Micro Turbine system. These villages are located close to a waterfall of Sungai Mes, that offers high water pressure that enables the system to successfully generate 8 kW of renewable electricity, enough to provide power to 15 houses and the village's library. The community is also guided through knowledge transfer programs and techniques on maintaining the micro turbine. The success in providing 24 hours electricity made the team received a full support from the community.

Project Leader :
Dr. Shamsul Sarip



Beneficiary
HIGH IMPACT

110 Individuals

70% Reduction in fuel reliance for energy

15 Families/Households

 New Job Creation

\$\$ New Source of Revenue

LOW COST

\$\$ Requires minimal funding

 Low maintenance cost

RAPID EXECUTION

30% of the community involved in the build up

15 HOURS of construction of the system

SUSTAINABILITY

 Sustainable source of energy for the Orang Asli

 Efficient management and usage of electricity

 Encourage economical growth within the village and surrounding community

24-Hour Continuous Supply of Electricity for Kg. Pucur, Kahang, Kluang, Johor

RENEWABLE ENERGY

Orang Asli community of Kampung Pucur Kahang Kluang, Kluang Johor has received limited power supply due to its isolated location and inadequacy of infrastructure. Hence, UTM experts has provided an innovative solution to this problem by developing an Eco-Treatment Centre that produces 24 hours solar electricity and a Practical Guideline for managing solar electricity system. It was a pioneering project for Kampung Pucur, with the aim of improving the livelihood of the community. The project had successfully cultivated a sense of ownership and responsibility in the community. The project had also successfully received good attention and sponsorship from various stakeholders and working together with the team in improving the livelihood of this community.

◀ *Project Leader :*
Dr. Jasrul Jamani Jamian
Dr. Zulkarnain Ahmad Noorden



HIGH IMPACT

20 years

The solar panels can withstand



Solution to high development and maintenance cost by utility

90

Individuals benefitted from 24 hours supply of centralised electricity from the solar system

SUSTAINABILITY



PV edukit had practically increased STEM awareness and interest to students in Malaysia & oversea (Indonesia)

21

households impacted by increase of livelihood



Orang Asli community is capable of maintaining the solar system independently

LOW COST

\$\$

Lower the cost of repair and maintenance by the government



Decrease reliance on diesel generators which requires more than RM2,000/month to operate



Cheaper Cost of Solar System than the capital infrastructure cost



FOCUS AREA

Environmental Sustainability

Towards the Betterment of the Community

Waste Management Practices Across Johor

ENVIRONMENTAL SUSTAINABILITY

Since 2015 Johor State has introduced the Johor Bersih Dan Lestari initiative. The mission is to encourage the local community to adopt and implement sustainable practice. This is to keep the area clean and recycle to ensure a pristine living space. Therefore, UTM has developed Solid Waste Management Evaluation Framework to assist SWCorp and local Authority. This framework can be used to monitor and evaluate tool for solid waste management practices at the macro level. Also, the framework is capable to assess the effectiveness of solid waste management and quantify the impact of each recycling effort. Thus, the effectiveness and the impact of various programs such as 3R campaign, Gerak Tumpu, Gotong-Royong, waste separation workshops and the collection and processing of waste can be easily assessed.

Project Leader :
Assoc. Prof. Ir. Dr.
Mohd Fadhill Md Din



HIGH IMPACT



Solid Waste Management Evaluation Framework developed by UTM was applied by SW Corp & Local Authority (PBT)



Revenue was generated through cleaning and recycling initiatives by the community

RAPID EXECUTION



The Evaluation of Solid Waste Management Framework has a unique quantifying and evaluating measure



SW Corp & Local Authority were able to evaluate the effectiveness of all recycling efforts including its ROI

LOW COST



Optimal Leverage Among Stakeholders: UTM, Local Community, Local Authority (PBT), SW Corp



The program has benefited 80 individuals comprising representatives from SW Corp, Local Authority (LA) and the Johor State Government

SUSTAINABILITY

Creating Low Carbon Society Among School Students

ENVIRONMENTAL SUSTAINABILITY

There is an important need to encourage our community to adopt an environmental friendly way of living. Hence, UTM together with Iskandar Regional Development Authority (IRDA) and Jabatan Pendidikan Negeri Johor (JPNJ) supported by SW Environment Sdn Bhd had organized the Iskandar Malaysia Ecolife Challenge 2017 (IMELC 2017). The aim of this program was to create awareness and practical programs that contributed to lowering our carbon emission and footprints. Since its inception in 2013, the program had been participated by a total of more than 150,000 Year 6 students and primary school teachers in Johor. The low carbon awareness modules in the form of a workbook and school projects have been developed by UTM for primary school students to learn the complicated concept of Low Carbon Society.

◀ Project Leader :
Assoc. Prof. Dr.
Fatin Aliah Phang



34,000 Year 6 students and 600 teachers from 346 primary schools, 15 district and state education officers

HIGH IMPACT

510,127 kg CO₂ decreased in carbon emissions

RM15,545 savings in Electricity Bills

RM30,860 savings in Water Bills

RM27,282 revenue generated through recycling efforts

LOW COST



Optimal Leverage among Stakeholders: UTM, IRDA, JPNJ, SWM Environmental Sdn Bhd, Parents, Teachers & Local Community



Source Of Revenue
Schools were able to generate revenue through recycling programs

SUSTAINABILITY



IMELC has been running for 6 consecutive years and counting with significant impact to our socio-economy



IMELC is in line with our nation's target to reduce carbon emissions and footprints as stipulated in the Low Carbon Society initiative in supporting Iskandar Comprehensive Development Plan 2025.

RAPID EXECUTION

5

months to produce significant impacts to schools and local communities



Competitions and award winning modules increase the ability of students and communities to independently carry out environmental awareness programs



FOCUS AREA

Social Entrepreneurship

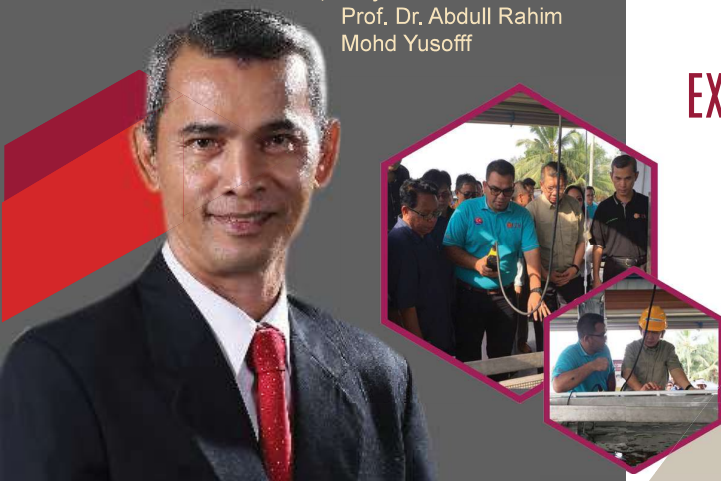
Towards the Betterment of the Community

Removing Heavy Metals from Mollusca Species for Safe Consumption

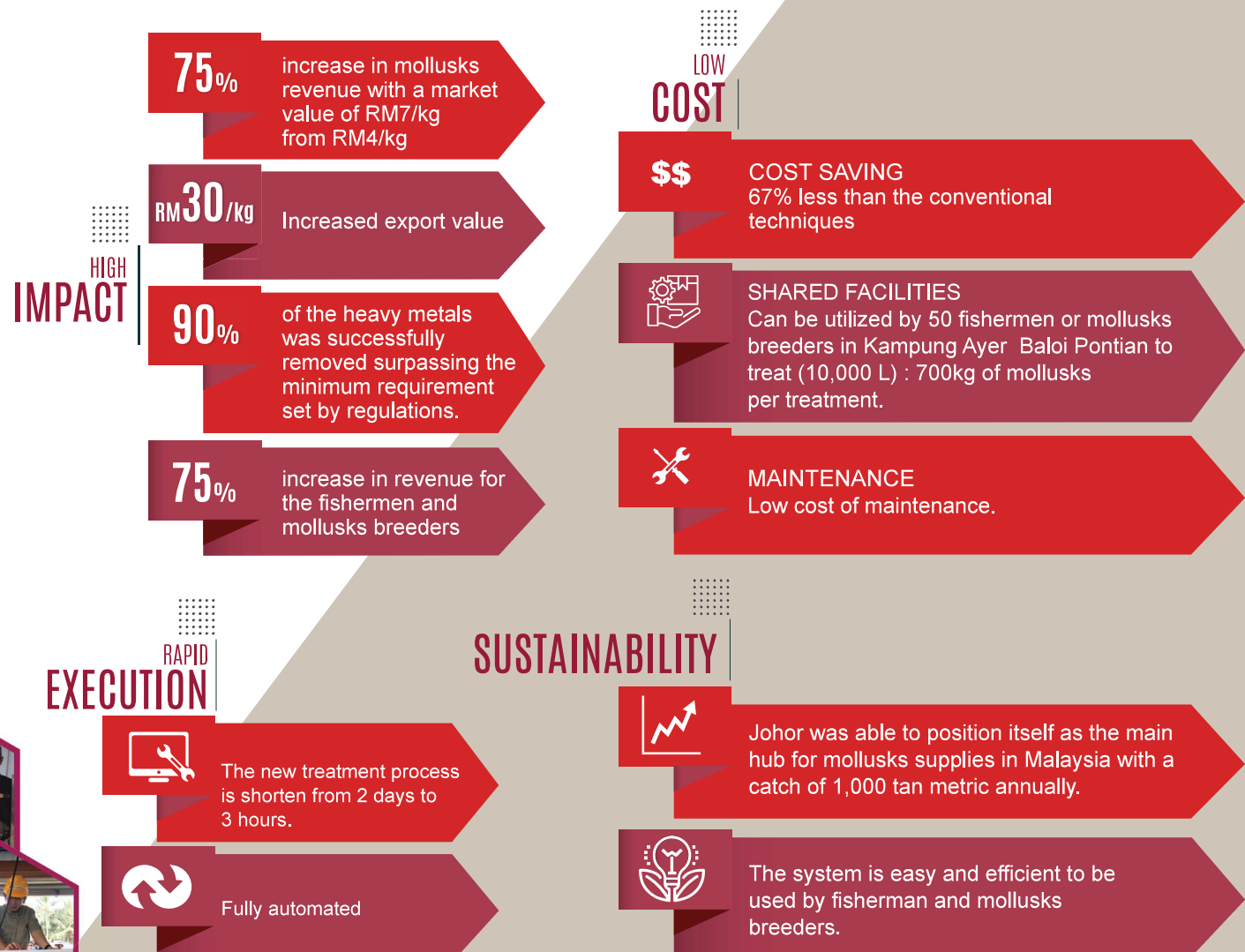
SOCIAL ENTREPRENEURSHIP

Green mussels from Johor strait contains heavy metals exceeding the acceptable limits of Malaysian Food Standard 1985 and EU Commission Regulation 2006. The conventional methods namely "Depuration Technique" requires a minimum of 1 day to 2 weeks to remove heavy metals from Mollusca species. It was reported by Utusan Malaysia, 12th July 2016, that fishermen were facing difficulties to export their mussels due to the contaminants found in the mollusks. Hence, UTM had provided an innovative solution through the development of Molluscure® system to reduce the heavy metals in mollusks efficiently. Johor was able to position as the main hub for mollusks supplies in Malaysia with a catch of 1,000 metric ton annually

◀ Project Leader :
Prof. Dr. Abdull Rahim
Mohd Yusoff



Fishermen / and mollusks breeders in Mukim Ayer Baloi, Pontian



Empowering Entrepreneurs Through The Rebranding of Fish Product: Mersing Signature

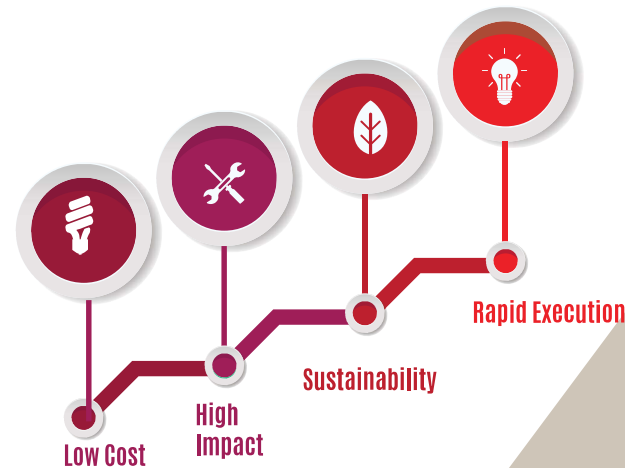
SOCIAL ENTREPRENEURSHIP

Mersing, the fishery and tourism hub of Johor, provides various opportunities for local entrepreneurs to expand their business especially in the food and beverages sector. Studies reveal that there is a need to inject innovative techniques for the fish based food development in Mersing. Hence, UTM introduces a new fish based formulation of Fish Pasta under the brand name of "Mersing Signature". This unique pasta has a healthy combination of nutrient which are energy: 4.5%, protein: 22.3%, fat: 1.6% and fibre: 4.5%. The product will be positioned and marketed as a premium tourist product which has potential to be exported globally.

Project Leader :
Dr. Rosnani bte Hasham
@Hisham



Seafarers, Entrepreneurs, Youth Mersing



SUSTAINABILITY



Tourism activities growing and have been at a consistent rate annually.



Premium Johor tourism product which is high in quality and demand, and practical.

LOW COST



Fish produce

RAPID EXECUTION



< 6 Months

HIGH IMPACT

>5%

Additional income generated from project

1st

Exclusive product (MERSING SIGNATURE) for Mersing Tourism

>100

New local entrepreneurs trained



FOCUS AREA

Capacity Building

Towards the Betterment of the Community

Bakat Johor Profile Database

CAPACITY BUILDING

BAKAT JOHOR profile database was developed by UTM as a platform to gather information of youth who have participated in training and development programs that were organized by the State of Johor and NGO's. The database is used as an impact measuring tool that is equipped with several useful parameters. It is capable to asses the competencies and skills of participants after completing the training programs. It is also capable to the match the identified talents by developing talent profiles according to sector and niche area. Thus, the system has enable talented youths to be efficiently matched to various sectors and fields in Johor which is useful for career development and industries recruitment.

Project Leader :
Prof. Dr. Mohd Aizaini
Maarof

Youths, government and private agencies

HIGH
IMPACT

5,833

Registered Users

76% (4,476)

Entrepreneurs

LOW
COST

\$\$

Minimal cost required



Connecting EDC
to Youths



< 6 Months

RAPID
EXECUTION

SUSTAINABILITY



Assisting youth to plan ahead with their career
in accordance to individual talent and specialty.



Assisting recruiters and HR departments
from companies to identify and recruit
talents according to be required sectors
systematically

Asatizah Youth Squad

Asatizah Youth Squad (AzaM) was inspired by issues and challenges faced by youths situated at the backstreets of Kuala Lumpur. AzaM comprises UTM volunteers (staff and students) in which programs were developed to reach out to the youths through a soft approach. The program consisted of 19 youths selected from Sekolah Bimbingan Jalinan Kasih, Chow Kit. The youths were guided through Al-Quran, knowledge in science and technology in a fun environment and the usage of an app based on Web 3.0. The youths also took part as volunteers and motivators. They have successfully guided and taught 18 autistic and special children from Yayasan Faqih.

◀ *Project Leader :*
Assoc. Prof. Dr. Wardah
Zainal Abidin



Children's Counseling School, Chow Kit and autism children, Faqih Foundation

Beneficiaries
HIGH IMPACT

100

Family Members of
Projek Rintis Fakih

19

Squad AzaM

20

Autistic Youths

150 youths

SBJK

200

Family Members

27

Teachers and Trainers of
SBJK / Projek Rintis Fakih

LOW COST

\$\$

RM30,000 as compared to
the conventional model
costing to RM120,000



Cost reduction is caused
by the in-kind contribution by
UTM expertise through free
consultation and program
development

RAPID EXECUTION

12

Months

SUSTAINABILITY



The project has benefitted not only
challenged youths but also special
needs and autistic children.



Synergy and bond were established
between communities, NGO, schools,
youths and volunteers to understand
the purpose and value of the project.

UTM Community Engagement in the Media



Towards the Betterment of the Community

UTM develops mobile water treatment system to treat floodwaters

KUANTAN: Universiti Teknologi Malaysia (UTM) has deployed a mobile water treatment system based on membrane technology to treat floodwaters in Pekan.

Higher Education Minister Datuk Seri Idris Jusoh said in a statement that UTM was using its expertise to help reduce the burden of the flood victims in

Pekan.

The technology drew the attention of Tengku Puan Pahang Tunku Azizah Aminah Maimunah Iskandariah Sultan Iskandar, who tasted the treated water during her visit to SK Temai relief centre recently.

Specialist lecturers at the Advanced Membrane Technology

Research Centre led by Prof Datuk Dr Ahmad Fauzi Ismail had developed the membrane technology through the Prototype Research Grant Scheme and it was fully funded by the ministry.

The system can be used to produce 1,000 litres of clean drinking water a day and 2,000 litres of water for daily use.



Tunku Azizah (centre) with the UTM team and their mobile water treatment system.

Sediakan sistem bekalan air minuman bersih terawat mudah alih



Tunku Azizah bersama kakitangan UTM bergambar dengan mesin penjaga air yang dibekalkan UTM.

Mahasiswa bantu mangsa banjir

Info

Upaya hasilkan 1,000 liter sehari bagi air minuman bersih terawat dan 2,000 liter sehari air terawat

penglibatan agensi kerajaan, pertubuhan bukan kerajaan, industri swasta dan orang perseorangan dalam pemberian bantuan kepada mangsa-mangsa banjir." katanya.

"Sistem ini dapat dioperasi secara teknikal dengan kadar paling minima bagi memberikan kemudahan kepada pihak sekolah bagi pengoperasiannya," katanya.

Menurutnya, melalui pelaksanaan program ini juga amat diharapkan sumbangan kecil ini sedikit sebanyak dapat membantu meringankan beban mangsa banjir dan menjadi satu model dalam penyelesaian masalah bekalan air bersih semasa berlaku bencana alam yang lain.

"Araar diharapkan juga lebih banyak

Sehingga kini pihak UTM melalui AMTEC menghasilkan 6 sistem rawatan air minuman bersih mudah alih berasaskan teknologi membran yang dibangunkan dan diadaa sendiri oleh kakitangan UTM.

Sistem ini bekergasap menghasilkan 1,000 liter sehari bagi air minuman bersih terawat dan 2,000 liter sehari air terawat bagi kegunaan harian yang akan dipipihkan kepada pihak sekolah sehingga berjiri media dan pusat perompatan sementara mangsa banjir tersebut dituang secara rasmi.

memastikan minimum keupatan mangsa banjir.

Begitu juga mengambil kesempatan untuk memuatkan air yang diproses daripada sistem rawatan air minuman bersih mudah alih berasaskan teknologi membran tersebut.

Sistem rawatan air mudah alih tersebut dibangunkan penyelidik di UTM yang diketuai Timbalan Naib Canselor (Penyelidikan dan Inovasi), Prof Datuk Dr Ahmad Fauzi Ismail melalui Skema Geran Penyelidikan Prototip (PRGS) dan NIDQS yang dibaijay sepenuhnya oleh kementerian.



Timbalan Pengarah Sekretariat Alumni UTM Cawangan Negeri Pahang, Mohd Shahar Abdullah (tengah) mewakili UTM menyerahkan mesin penjaga air kepada Guru Besar SK Temai, Cikgu Azhar (tiga, kiri) untuk kegunaan mangsa banjir.



Kerja kerja pemindahan mesin penjaga air ke SK Temai, Pekan, Pahang.

Sinar

23012018 - Mahasiswa bantu mangsa banjir [Sinar Harian-Kampus]

434 UTM news have been published and appeared in the media including the print media and broadcast news in the year of 2018. UTM news which reported the events of the university as well as human interest stories have been shared and delivered to the public. UTM has proven to assist communities in all aspects of life such as economy, education and moral values.



DAHAGA 45 TAHUN!

■ 3,000 penduduk gembira dapat bekalan air bersih dari laut

Siti Nur Hafizah/Utusan
Sampiran: Sinar

Bekal
Lebih 3,000 penduduk mendapat manfaat air bersih kerana projek penyelidikan Translasi-
sional Loji Nyahgaram Air Laut di Kampung Pantai Senok, Tawang di sini.

Projek dengan kos RM5 juta ini diumumkan oleh ibu pejabat projek dari Universiti Teknologi Malaysia (UTM) dengan kerjasama Universiti Malaysia Terengganu (UMT) dan Kementerian Pengairan.

"Kami memilih Kampung Pantai Senok sebagai lokasi kerana ia adalah kawasan yang kekurangan bekalan air bersih. Projek ini akan memberi manfaat kepada penduduk di sini," kata Prof Dr Ahmad Fauzi Ismail, Naib Canselor UTM.

Projek ini akan memberi manfaat kepada penduduk di sini kerana ia akan memberi bekalan air bersih kepada mereka. Projek ini akan memberi manfaat kepada penduduk di sini kerana ia akan memberi bekalan air bersih kepada mereka.



PEKABAR Projek UTM berdaya sendiri menggunakan air laut yang sudah dibersihkan. Sinar

Metro

04022018 - Dahaga 45 tahun
[Harian Metro-Setempat]

Tak perlu ambil air kampung lain lagi

Projek nyahgaram air laut untuk manfaat penduduk Pantai Senok

ZAIMATULJUMIA ABDULLAH

BACHOK - Masalah air bersih yang membelenggu penduduk sekitar Kampung Pantai Senok sejak lebih 45 tahun lalu akhirnya selesai apabila projek nyahgaram air laut yang dikelola universiti tempatan dilancarkan semalam.

Menteri Pengajian Tinggi, Datuk Seri Idris Jusoh berkata, projek penyelidikan di bawah Universiti Teknologi Malaysia (UTM) dengan kerjasama universiti Malaysia Terengganu (UMT) itu bermula tahun lalu dan siap sepenuhnya dalam tempoh lima bulan.

Beliau berkata, projek bernilai RM5 juta itu kini memberi manfaat kepada 3,000 penduduk setempat yang sebelum ini perlu mengambil air bersih di kampung lain.

"Projek ini diketuai Timbalan Naib Canselor UTM (penyelidikan dan inovasi), Prof Dr Ahmad Fauzi Ismail yang juga orang Kelantan."

"Loji air bersih ini mampu menghasilkan air bersih terawat dengan kapasiti 500,000 liter sehari. Sistem ini berupaya menapis dan merawat sumber air men-



Idris (tengah) menandatangani plak ketika merasmikan nyahgaram air laut di Kampung Pantai Senok semalam.

tah dari laut sekitar kawasan Pantai Senok ini. Diharap ia dapat memberi manfaat kepada penduduk setempat sekali gus membangunkan sektor ekonomi di sini," katanya ketika sidang media selepas merasmikan loji nyahgaram air laut di Pantai Senok hari ini.

Hadir sama Pengerusi Mara, Datuk Dr Awang Adek Hussin; Timbalan Ketua Umno Bahagian Bachok, Datuk Dr Ilias Hussin; Penyelaras Dun Tawang, Datuk

Mohd Radzuan Abdullah; Naib Canselor UTM, Prof Datuk Ir Dr Wahid Omar; dan Naib Canselor UMT, Prof Datuk Dr Nor Aieni Mokhtar.

Idris berkata, penyelidikan yang dijalankan itu adalah antara yang terbaik di dunia untuk manfaat pengguna secara terus.

Katanya, kejayaan translasiional menggunakan teknologi membran itu dihasilkan universiti tempatan sekali gus dapat menjimatkan kos.

Loji nyahgaram akhiri beban 3,000 penduduk Kampung Pantai Senok

BACHOK 3 Feb. - Pembinaan sebuah loji nyahgaram air laut di Kampung Pantai Senok, Tawang di sini memberi kelegaan kepada lebih 3,000 penduduk yang dibebani masalah mendapatkan bekalan air bersih sejak 45 tahun lalu.

Projek Penyelidikan Translasi-
sional Loji Nyahgaram Air Laut berkenaan dipelopori sekumpulan 16 penyelidik tempatan dari Universiti Teknologi Malaysia (UTM) dengan kerjasama Universiti Malaysia Terengganu (UMT).

Menteri Pendidikan Tinggi, Datuk Seri Idris Jusoh berkata, projek tersebut bernilai RM5 juta dan dibiayai sepenuhnya oleh kementerian menerusi Skim Geran Penyelidikan Translasi-
sional (TRGS) di bawah Program Penyelidikan Strategik KPT Jaminan Air Kebangsaan.

"Pembinaan loji dan keseluruhan projek mengambil masa selama lima bulan. Loji ini menggunakan kepakaran tempatan dan berkeupayaan menghasilkan bekalan air terawat daripada air laut dengan kapasiti 500,000 liter sehari untuk kegunaan 10,000

Dengan adanya loji baharu ini, kami tidak perlu lagi meminta air di kampung sebelah atau menunggu lori AKSB."

ZAKARIA JUSOH
Penduduk

pengguna.

"Kita memilih Kampung Pantai Senok kerana penduduk di sini dilaporkan berdepan masalah mendapat bekalan air bersih dalam tempoh yang lama," katanya ketika ditemui selepas pelancaran Projek Penyelidikan Translasi-
sional Loji Nyahgaram Air Laut, di sini hari ini.

Yang turut hadir Ketua Pengarah Pendidikan Tinggi, Datin Dr Siti Hamisah Tapsir; Pengerusi Mara, Datuk Dr. Awang Adek Hussin dan Timbalan Naib Canselor (Penyelidikan dan Inovasi) UTM merangkap Ketua Projek, Prof. Dr. Ahmad Fauzi Ismail.

Sementara itu seorang penduduk, Zakaria Jusoh, 72, berka-

ta, dalam tempoh 45 tahun menetap di kampung itu, rata-rata penduduk terpaksa berulang alik ke kampung berhampiran atau membeli di kedai bagi mendapatkan bekalan air bersih.

"Keadaan tanah di sini menyebabkan air menjadi kurang bermutu dan tidak bersih untuk kegunaan harian. Biasanya saya ambil air dari peri gi rakan di Kampung Beris Kubur Besar."

"Selain itu kami menerima bantuan pengagihan air bersih dari Air Kelantan Sdn. Bhd. (AKSB) yang datang dengan lori. Dengan adanya loji baharu ini, kami tidak perlu lagi meminta air di kampung sebelah atau menunggu lori AKSB," katanya.

Seorang lagi penduduk, Mail Mat Said, 76, mengakui teruja menerima bekalan air bersih yang dihasilkan daripada loji nyahgaram terbahit setelah berpuluh tahun terpaksa membeli air khususnya untuk memasak di kedai.

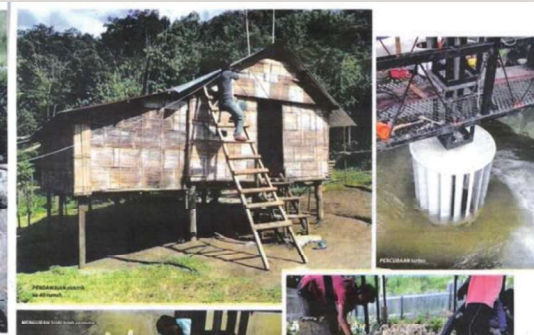
"Diharap loji seperti ini dibangunkan lebih banyak di kawasan lain yang berdepan masalah sama," katanya.

UTUSAN MALAYSIA

04022018 - Loji nyahgaram akhiri beban 3,000 penduduk Kampung Pantai Senok [Utusan Malaysia-Dalam Negeri]

Sinar

04022018 - Tak perlu ambil air kampung lain lagi
[Sinar Harian-Kelantan]



Johor Bahru: Lebih 1,000 pelajar sekolah rendah dan menengah di beberapa sekolah sekitar bandar raya ini memanfaatkan aktiviti ke arah pembelajaran sepanjang hayat menerusi Program STEM Day di sini, semalam.

Program bidang sains, teknologi, kejuruteraan dan matematik (STEM) Day yang memasuki tahun kedua anjuran Universiti Teknologi Malaysia (UTM) itu diadakan sempena program tahunan Pihak Berkuasa Wilayah Pembangunan Iskandar (IRDA) iaitu Iskandar Learning Festival 2018.

Program sehari itu bertujuan mempromosi dan memperkasakan pendidikan STEM khususnya di Johor menerusi pelbagai aktiviti termasuk pameran, pertandingan, demonstrasi, permainan, forum dan

Perkasa program STEM



AMINOLHUDA (dua dari kanan) diiringi Dekan Fakulti Sains UTM, Prof Dr Abdull Rahim Yusoff (kanan) melawat ruang pameran sempena Program STEM Day.

bengkel yang sesuai untuk lapisan masyarakat.

Pengerusi Jawatankuasa Hal Ehwal Islam dan Pendidikan negeri, Aminolhuda

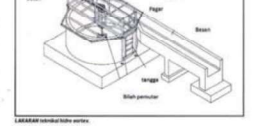
Hassan berkata, inisiatif seumpama itu boleh menggalakkan penguasaan pelajar, di samping menonjolkan kreativiti dalam me-

nyesahkan masalah dise-

diakan.
"Program ini antara lain adalah strategi bagi melahirkan perintis yang mampu bersaing di peringkat antarabangsa.

"Ia juga menjadi platform kepada institusi atau organisasi berkaitan dalam mempromosikan peluang tersedia, sekali gus mencungkil bakat dan menarik minat pelajar terhadap bidang tertentu.

"Pelajar itu akhirnya tidak hanya mahir dalam bidang akademik atau sukan saja, sebaliknya menjadi pelajar yang berdaya cipta, mempunyai sifat keyakinan diri tinggi," katanya ketika merasmikan Program STEM Day di sini, semalam.



Metro

05092018 - Sinari kampung orang asli
[Harian Metro-Nuansa]

Metro

09082018 - Perkasa program STEM
[Harian Metro-Johor]

Iskandar Puteri

Produk inovasi ringan beban peniaga

"Terima kasih kerana bantu memudahkan saya dan suami mengangkat lauk," kata peniaga, Salamah Sulaiman, 59, selepas menerima produk inovasi trolly makanan, Trolley Mak Salmah di kediamannya di Kampung Pendas Baru, Gelang Patah di sini, semalam.

Salamah dan suami, Pungut Waloh, 57, antara enam keluarga di kampung itu yang menerima sentuhan inovasi kejuruteraan ekspres anjuran Pusat Pendidikan Kejuruteraan bersama Pusat Kokurikulum dan Pembelajaran Servis Universiti Teknologi Malaysia (UTM).

Program 12 hari yang mendapat kerjasama

Makmal Latihan Pendidikan Vokasional dan Teknikal, Fakulti Pendidikan universiti itu membabitkan 30 peserta *Engineering Service Learning (ESL)* dengan 20 daripadanya adalah pelajar UTM manakala 10 lagi pelajar Universiti

Teknologi

Petronas (UTP).

Salamah berkata, dia terharu atas keprihatinan kumpulan pelajar terbabit menghasilkan produk inovasi bagi memudahkannya mengangkat lauk dan kuih ke gerainya.

"Sepanjang lapan tahun berniaga, mak cik kerap sakit belakang hingga terpaksa berhenti beberapa kali untuk mengangkat barang jualan," katanya.

FAKTA
Babitkan 30 peserta ESL dengan 20 daripadanya pelajar UTM dan 10 pelajar UTP

Metro 07092018 - Produk inovasi ringan beban peniaga [Harian Metro-Johor]

KLKK bantu tingkat keupayaan penduduk desa di Kemboja

Kratie: Sekumpulan mahasiswa Universiti Teknologi Malaysia (UTM) meneruskan kesinambungan Kembara Lestari Komuniti Kemboja 2.0 (KLKK 2.0) dengan kali ini berkunjung ke Kampung Senchi, di sini, sebuah perkampungan di timur laut Kemboja.

Program selama tujuh hari disertai 30 mahasiswa membabitkan 36 pelajar tahun empat Fakulti Sains Sosial dan Kemasyarakatan (FSSK) dan tiga pelajar Pusat Kursus Kokurikulum dan Pembelajaran Servis (CKSL) bersama penaryarah kanan itu melakukan pembelajaran servis antarabangsa (SLA).

Penaryarah Kanan Sekolah Pendidikan FSSK UTM, Shahrin Hashim, berkata program itu menekankan pembangunan lestari yang membabitkan pembangunan sosioekonomi, infrastruktur, pendidikan dan kesihatan.

Beliau berkata, pada program itu, mahasiswa menggunakan konsep penindihan pengetahuan dengan melakukan beberapa projek yang memberikan dampak kepada komuniti setempat.

Sampaikan sumbangan
"Antara yang dilakukan seperti mendapatkan profil keluarga di kampung berkenaan, membina telaga dan tandas berinovasi serta demonstrasi mengasahkan industri kecil dan sederhana (IKS) bersama penduduk kampung."

Selain itu, program yang turut disertai pihak Pusat Keusahitan UTM (PKU) juga melawat pesakit yang uzur, melakukan pemeriksaan kesihatan terus ke rumah pesakit serta memberikan perkhidmatan berkhidmat secara percuma kepada 50 kanak-kanak di situ.

Shahrin berkata, sepanjang program ini berlangsung, pihaknya berenti dengan dua remaja tempatan berusia 13 tahun yang boleh bertutur bahasa Melayu dengan lancar, sekali



Aktiviti membina tapak telaga yang dijalankan oleh pelajar dan penaryarah.

Program ini juga menjadi platform kepada orang ramai untuk memberi sumbangan barangan seperti pakaian, wakaf telaga, wakaf tandas serta wakaf pendidikan kepada penduduk kampung," katanya.

Selain itu, program yang turut disertai pihak Pusat Keusahitan UTM (PKU) juga melawat pesakit yang uzur, melakukan pemeriksaan kesihatan terus ke rumah pesakit serta memberikan perkhidmatan berkhidmat secara percuma kepada 50 kanak-kanak di situ.

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gus menjadi penterjemah kepada mahasiswa sepanjang proses aktiviti profil demografi di kampung itu.

Ikut komuniti ASEAN
Beliau berkata, pihaknya percaya program ini dapat meningkatkan kualiti pendidikan dan modal insan masyarakat tempatan dengan ilmu serta kemahiran yang diperoleh mampu menjadikan mereka lebih kreatif, inovatif dan berdaya keusahawanan untuk terus maju ke hadapan.

Selain membangunkan potensi diri mahasiswa untuk lebih berdaya saing, program ini memberi mereka keluar daripada zon selesa, memberikan pengalaman melakukan penindihan pengetahuan, menjadi platform untuk membantu komuniti ASEAN dan belajar menggunakan pendekatan Inovasi Pembelajaran Akademia Baharu," katanya.

Sementara itu, seorang penduduk yang dikenali sebagai Ibrahim, 45, berkata program itu bukan sahaja memberi manfaat kepada penduduk sekitar, malah dapat meletakkan kampung dengan perubahan yang dibawa oleh mahasiswa UTM dari segi ekonomi, sosial, pendidikan, kesihatan dan persekitaran.

"Pendekatan mengenai penguasaan IKS seperti pembuatan kerpek pisang dan ubi dapat membuka mata penduduk kampung mengenai kegunaan bahan mentah di kampung ini untuk dikomersialkan," katanya.



Aktiviti bersama membuat kerpek pisang bersama penduduk setempat.



Pelajar dan penaryarah bergambar kenangan di Kratie, Kemboja.

BH 11/10/2018 - KLKK bantu tingkat keupayaan penduduk desa di Kemboja [Berita Harian-Varsiti]

Fertigasi guna solar

Mary Victoria Dass
maryvictoria@nsp.com.my

Johor Bahru

Kesulitan sesetengah petani luar bandar bagi mendapatkan bekalan elektrik dalam penggunaan sistem fertigasi berteknologi tinggi mampu diatasi menerusi Tenaga Solar PV dibangunkan Universiti Teknologi Malaysia (UTM).

Penaryarah Kanan Fakulti Kejuruteraan (Elektrik) UTM merangkap Penger-

tua Kolej Tun Hussein Onn (KTHO) Dr Jas-

rul Jamani berka-

ta, projek Tenaga Solar PV bagi sistem fer-

tigasi melancarkan sesuatu sistem

fertigasi termasuk peng-

naliran air dan baja ke ta-

naman.

Menurutnya, ia juga akan meningkatkan produktiviti serta menjimatkan bekalan elektrik, sekali gus mengatasi masalah pemanasan global.

Katanya, projek itu menerima dana daripada Pejabat Pra Siswazah UTM dan Jabatan Hal Ehwal Pelajar UTM.

"Sistem Tenaga Solar PV bertujuan membekalkan pam

100 penuntut bangun sistem teknologi tinggi bantu petani luar bandar

motor untuk sistem fertigasi serta bagi melihat keberkesananannya, Internet of Thing (IoT) turut dipasang," katanya di sini, semalam.

Jasrul berkata, kos membangunkan sistem berkenaan adalah lebih rendah dan difahamkan ia yang pertama di seluruh negara.

Menurutnya, ia juga sesuai digunakan dalam pertanian berskala kecil termasuk di kawasan rumah.

"Seramai 100 penuntut daripada pelbagai bidang termasuk kejuruteraan elektrik, keju-

teraan kimia dan seni bina menaja-

kan projek ini. Ia juga boleh digunakan bagi me-

ngedcas telefon pintar. Kumpulan penuntut akan dide-

dahkan kaedah pemasangan serta penggunaan sistem Solar PV," katanya.

Jasrul berkata, projek berkenaan juga akan dikomersialkan bagi mengatasi masalah bekalan elektrik dialami petani.

"Kami dalam proses mengumpul data bagi tujuan komersial serta memperkenalkan sistem ini pada masa depan," katanya.



PENUNTUT membangun Tenaga Solar PV bagi sistem fertigasi di UTM, Skudai.

Metro 19102018 - Fertigasi guna solar [Harian Metro-Johor]



DESTINASI

UTM bantu ekopelancongan Pulau Tanjung Surat

Oleh ABB AZIZ ITAR
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UNIVERSITI Teknologi Malaysia (UTM) telah mengenal pasti banyak tarikan alam sekitar dan kesan peninggalan sejarah di Pulau Tanjung Surat, Kota Tinggi, Johor, yang belum dikomersialkan. Pulau yang pernah menjadi pintu masuk di wilayah Johor timur pada kurun ke-19 itu sukar berkembang pesat jika tiada usaha dibuat bagi memajukan ekopelancongan di pulau tersebut.



DR. HSYAM RASIDI

Oleh itu, UTM telah mengambil inisiatif melalui program-program tanggungjawab sosial korporat (CSR) yang dijalankan, sekali gus diharap mampu memberi manfaat kepada para penduduk di pulau itu.

Menurut pensyarah Fakulti Alam Bina dan Ukur UTM, Dr. Hsyam Rasidi, antara yang dikenal pasti adalah hutan paya bakau di Pulau Tanjung Surat yang kaya dengan pelbagai jenis flora dan fauna.

katanya kepada Muzium Malaysia.

Pulau Tanjung Surat yang mempunyai tiga buah kampung iaitu Kampung Lintang, Kampung Tanjung Surat dan Kampung Nyior juga kaya dengan kesan-kesan sejarah peninggalan penjajah British. Pulau yang kini

"Terdapat banyak hutan paya bakau di sekeliling pulau ini dengan pelbagai spesies kayu bakau yang amat tinggi nilai dan kegunaannya, dan boleh direka oleh para pengunjung dengan menggunakan bot."

Juga terdapat pelbagai jenis hidupan liar termasuk burung dan hidupan marin yang boleh dijadikan tarikan buat para pelancong asing termasuk dari Singapura yang suka datang ke sini.

"Antara usaha yang dilakukan UTM ialah memelihara ekosistem alam sekitar selain membantu melatih penduduk di sini sebagai pemandu pelancong dalam bidang ekopelancongan,"

Pulau Tanjung Surat yang mempunyai tiga buah kampung juga kaya dengan kesan-kesan sejarah peninggalan penjajah British



DR. SALLEH MOHD. NOR (dua dari kanan) dan Dr. Mohd Zaki Kamash (kanan) sewaktu menjaja kesan tapak sejarah di Pulau Tanjung Surat, Johor-Selangor.



MAJLIS YATIM ATAN antara pengasas yang aktif menerima tempahan pelancong termasuk dari Singapura dan Indonesia.

ada bersaiz kecil atau sederhana untuk dijadikan sebagai barangan cenderamata buat pelancong.

"Jong paling kecil saya jual sepanjang setengah meter yang dijual dengan harga sekitar RM150 dan yang paling besar pula sehingga dua meter dengan harga mencecah RM750 bagi sebuah jong."

Selain dijadikan hasanrumah, jong yang besar juga dijadikan permainan serta pertandingan di sekitar pantai di pulau ini yang juga menarik ramai peminat dari Singapura dan Indonesia.

"Saya jadikan kerja membuat jong sebagai kerja sampingan jika tidak turun ke laut menangkap ikan. Biasanya, dalam sebulan saya mampu menyilapkan lima buah jong yang ditempah oleh para pelanggan," ujarnya.

Program yang diketuai Prof. Dr. Mohd Zaki Kamash dari Fakulti Kejuruteraan UTM, Skudai itu turut membabitkan Fakulti Sains Sosial dan Kemasyarakatan dan Pusat Penyelidikan Marin UTM. Turut hadir dalam tinjauan sehari ke beberapa tempat yang berotensi tinggi untuk dibangunkan sebagai sektor ekopelancongan itu ialah Naib Canselor UTM, Tan Sri Dr. Salleh Mohd Nor.

PUKUK KEJIRANAN BERKUALITI

ISI UTM, MPSJ lancar program Rejuvenasi untuk 560 isi rumah di Bukit Puchong



PENANAMAN pokok turut dilaksanakan.

Fazurawati Che Lah
fazurawati@metro.com.my

Ruang kejiranan yang berkualiti berupaya melahirkan masyarakat sejahtera.

la juga boleh dianggap sebagai penentu kesejahteraan hidup bagi sesebuah masyarakat dan melaluinya juga kerjasama serta perpaduan dapat diperkukuhkan.

Selaras dengan tujuan itu, Institut Sultan Iskandar Universiti Teknologi Malaysia (ISI UTM) bersama Majlis Perbandaran Subang Jaya (MPSJ) menganjurkan Program Rejuvenasi

Pangsapuri 560 Bukit Puchong di Perumahan Kos Rendah Bukit Puchong.

Ketua projek, Prof Madya Dr Gurupiah Mursib berkata, program itu adalah usaha transformasi komuniti berpendapatan rendah untuk membina ruang kejiranan berkualiti menerusi perancangan inklusif.

"Projek ini membabitkan seluruh warga komuniti. Ia membawa usaha melahirkan masyarakat baharu yang berdaya sendiri dalam membangunkan rancangan kejiranan mereka. ISI UTM menjadi perunding dalam menyajikan usaha sama ini," katanya.

Seramai 38 penuntut Fakulti Alam Bina dan Ukur UTM Skudai, Johor terbabit dalam program berkenaan serta dijadikan anak angkat pangsapuri bagi melaksanakan khidmat masyarakat mereka di sana.

Dr Gurupiah berkata, rejuvenasi (nafas baru) fizikal kejiranan itu dimulakan dengan pembinaan Laman Edible dan diikuti dengan membina ruang serba guna blok C.

"Perancangan projek ini dilaksanakan dari peringkat akar umbi dengan membabitkan komuniti untuk menimbulkan rasa pemilikan dan kepentingan bersama."



USAHA mengasah turut dilakukan bagi mencerdaskan kawasan.



MEROBOKKAN dinding sebagai gimik perasmian.

"Banyak aktiviti pengukuhan komuniti akan dilaksanakan sepanjang lima bulan ini antaranya mengukuhkan semangat kerjasama dan ukhuwah menerusi keramaian atau gotong royong, mengukuhkan jawatankuasa penduduk serta menimba pengetahuan daripada lawatan ke Dewan Bandaraya Kuala Lumpur

(DBKL), Pasir Gudang, UTM dan Singapura," katanya.

Beliau berkata, program yang dibiayai MPSJ dengan rajaan daripada syarikat korporat dan perseorangan itu bakal memanfaatkan 560 isi rumah.

"Kami menyasarkan projek rintis ruang kejiranan Pangsapuri Bukit Puchong siap pada penghujung tahun ini," katanya.

Projek ini membabitkan seluruh warga komuniti. Ia membawa usaha melahirkan masyarakat baharu yang berdaya sendiri dalam membangunkan rancangan kejiranan mereka

PROF MADYA DR GURUPIAH MURSIB

JETI ini menjadi penghubung antara penduduk Pulau Tanjung Surat ke tanah besar Johor selain menjadi tempat hawatan para nelayan mengulangi hasil tangkapan laut mereka. - Gambar SAIFUDDIN MOHD NOR.

UTUSAN MALAYSIA

04112018 - UTM bantu ekopelancongan Pulau Tanjung Surat
[Utusan Malaysia-Rencam]

Metro

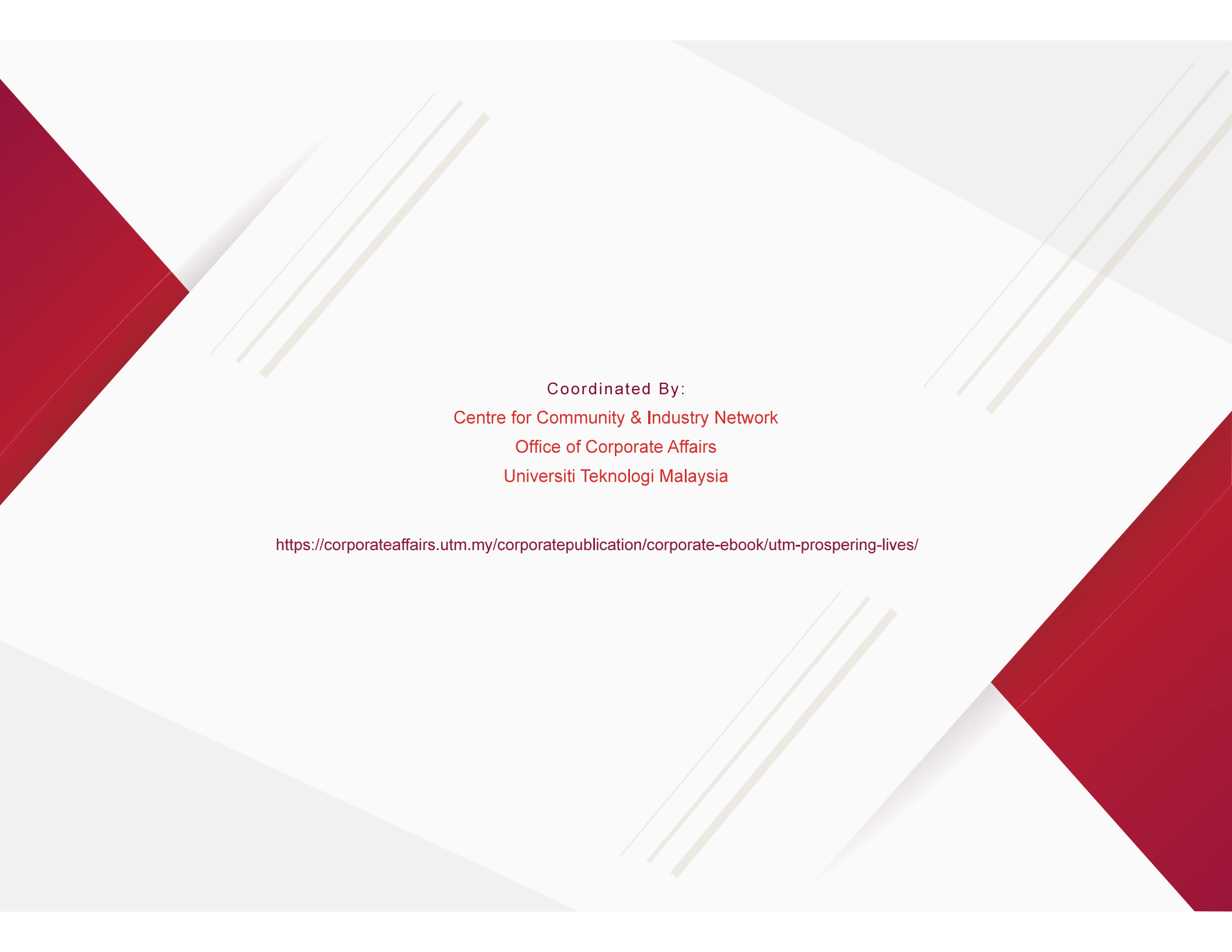
12112018 - Pukuk kejiranan berkualiti
[Harian Metro-Bistari]



Moving Forward

"The best of people are those that
bring most benefit to the rest of mankind."

[Daraqutni, Hasan]

The background features a light gray field with large, dark red geometric shapes in the corners. Diagonal lines in light gray and gold extend from these shapes towards the center.

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Universiti Teknologi Malaysia

<https://corporateaffairs.utm.my/corporatepublication/corporate-ebook/utm-prospering-lives/>