

# Energy packet: Your little angel



■ Team name

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Mizu Malaysian Team

## ■ Team Introduction

Photos from STEAM slide:

Nickname: Natul  
Hobbies: Travelling and cooking  
It's a pleasure to meet all of you

Nickname: Lina  
Hobbies: Playing sports & writing  
It's nice to e-meet you all today!

Nickname: Lia  
Hobbies: Food hunting and travelling  
Good to meet you all!

Nickname: Atiqah  
Hobbies: Watching K-Drama and shopping  
Nice to meet all of you

Nickname: Diba  
Hobbies: Reading and outdoor activities  
Looking forward to get to know everyone



## ■ What goal do you want to achieve

To generate significant amount of energy from floodwaters as energy packets and enhance survivability (to provide an end-to-end communication system during flood).

## ■ How will you achieve the goal

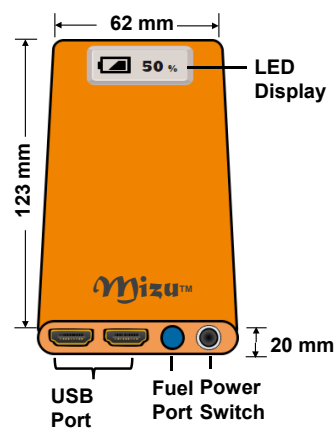
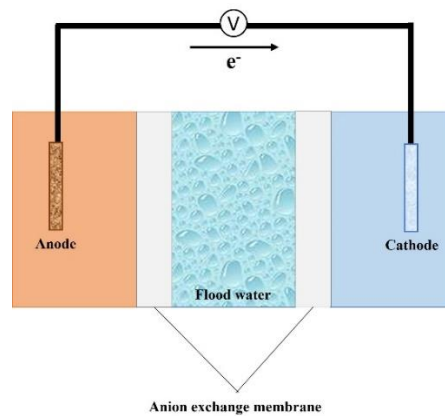
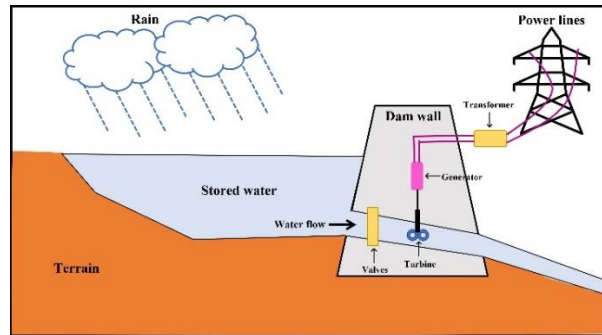
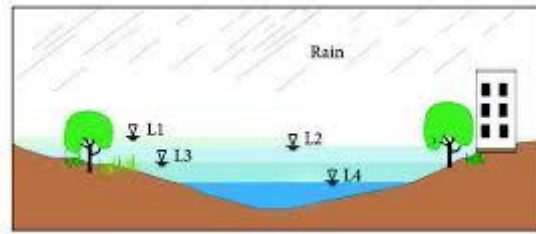
Malaysia collects a yearly rainfall of 2540 to 3850 mm on average, making it one of the world's heaviest rainfall countries and rendering it vulnerable to monsoon and flash floods. An estimated 9 percent of Malaysia's entire landmass consists of floodplains, which are home to around 4.8 million people. Several efforts have been implemented to lessen the frequency of flooding and mitigate its impacts. This proposal is based on the insight that flood waters might be utilized as important resources for the development of sustainable electricity. Also, this initiative is undertaken due to the necessity to provide solutions to flood concerns. We considered the idea of transitioning from floodwaters as a problem to floodwaters as a solution for our other needs. All of these measures are also targeted at combating climate change and its effects, one of which is the possibility to meet energy demands without the use of fossil fuels, therefore contributing to the achievement of SDG13, Climate Action.

It is recognized that the loss of energy during the flood appears to be the most significant concern compared to many others. This prompted the idea of storing energy in energy packets or batteries that may be utilized as a source of electrical power during and after the flood. The purpose of the energy packets is to offer a flexible, cost-effective, and efficient response to dynamic energy demands. This energy packets are affordable, efficient, and complementary to available resources. In addition to storing energy, these energy packets may also be used as necessary. It can store energy

from renewable sources when it is affordable or abundant and complement conventional energy sources by being stored and made accessible when needed. SDG 7, Affordable and Clean Energy can be achieved here.

In this operation, a hydroelectric power station's technology will be utilized before stored the energy into the energy packets. This is not a new technology. Innovative content might be the whole procedure that could be used to capture energy from flooding for power generation. The hydroelectric power station harnesses the energy of falling water to produce electricity. The conversion energy will undergo a transformation from one state to another. The spinning or flowing water will convert the kinetic energy in the turbine into mechanical energy. The mechanical energy is then converted into electrical energy via a generator. Then, the produced energy might be utilized immediately or stored in batteries or energy packets that could be used as electrical power source.

We believe it is reasonable to investigate these previously existing technologies, enhance them, and apply them to the generation of sustainable energy from floodwaters.



## ■ What effect is expected after you achieve the goal

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The expected outcome is to come out with workable plans or designs and reports that could be used in taking valuable decisions on climate change issues and synergizing sustainable development goals.