

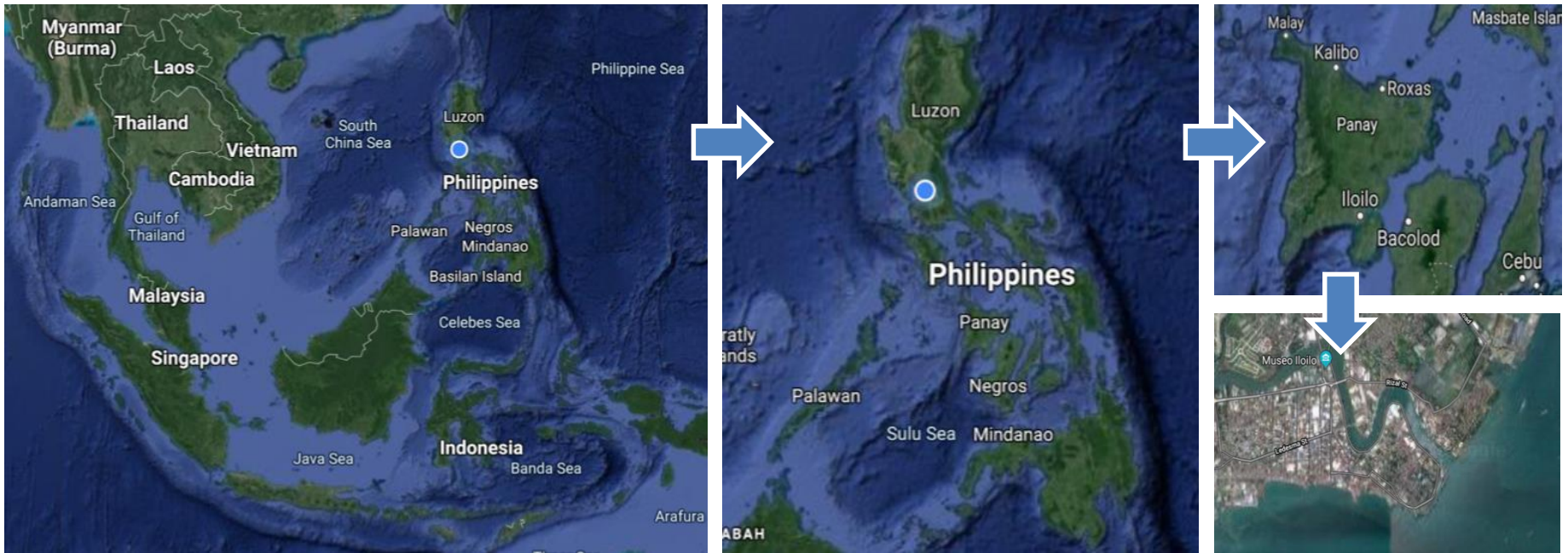
Monitoring and Tracking of Vessels at Sea and Inland Waterways

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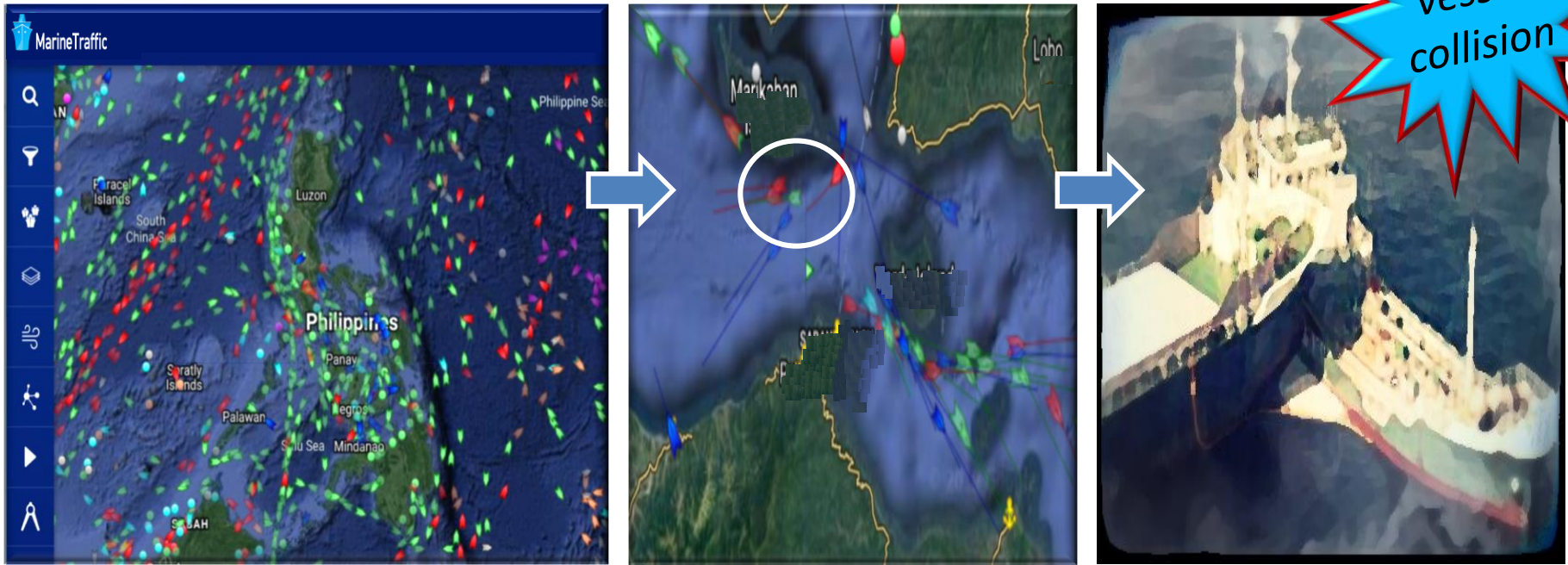
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Maritime nations



The Philippines, and other ASEAN nations, are maritime countries. They are surrounded by bodies of water, such as oceans, seas, gulfs, straits, and rivers. The maritime traffics are very busy, with maritime vessels travelling from one island to another islands, and with vessels travelling in inland waterways.

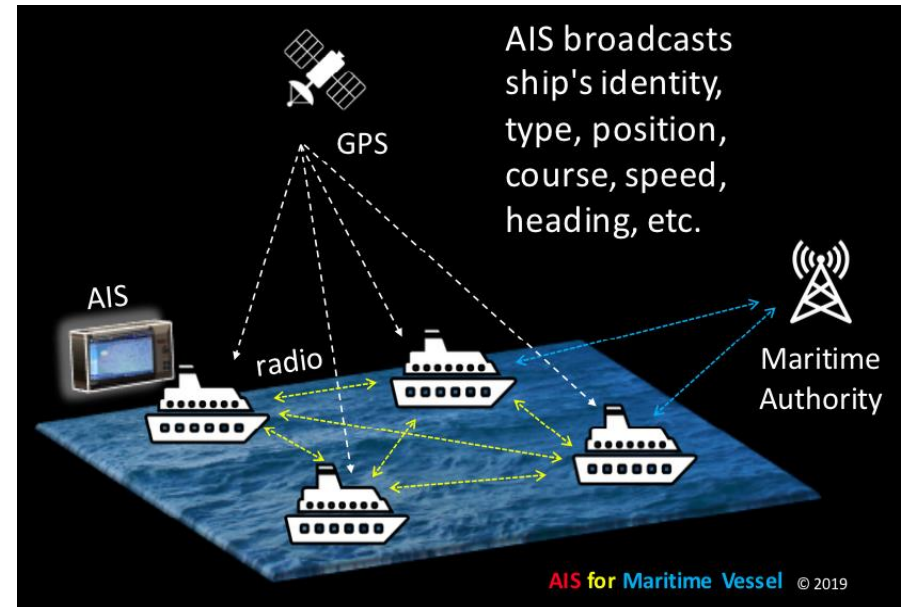
Lack of safety standard



A closer view of marine traffic, shows vessels very near with one another, and their paths crossing into each other. Problem is, not all vessels, particularly the domestic vessels, are equipped with instrument that detects nearby vessels. Without a safety standard, these vessels are heading toward a disaster.

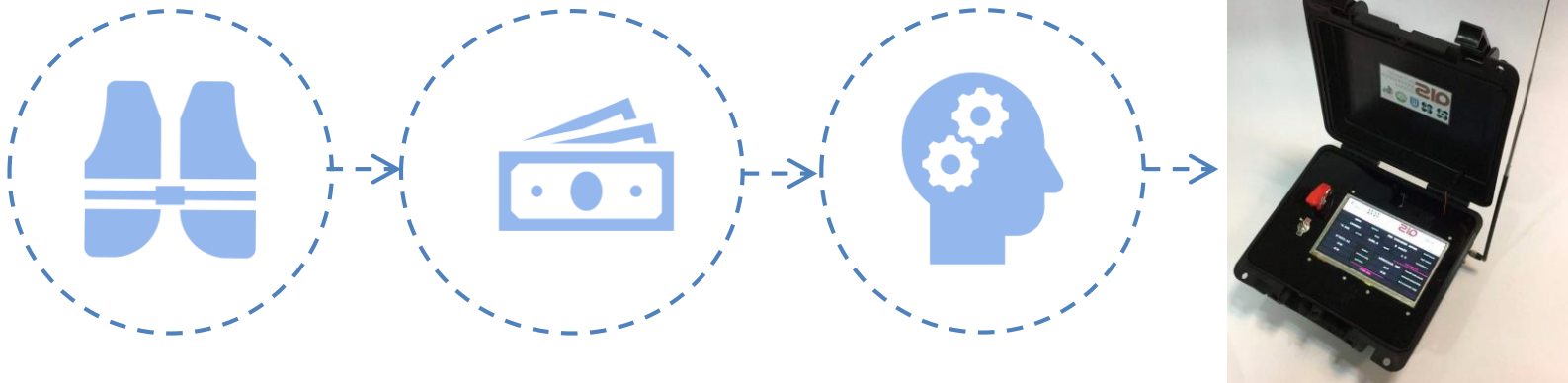
Promote safety of life at sea

For safety of life at sea (SOLAS), this work aims to develop a system for monitoring and tracking of maritime vessels at sea and inland waterways, using the instrument automatic identification system (AIS).



AIS is used for ship-to-ship collision avoidance, ship information gathering, and vessel traffic management. AIS functions by acquiring global positioning system (GPS) coordinates, and exchanging real-time navigation data with other ships and with maritime authorities through the use of radio transmissions.

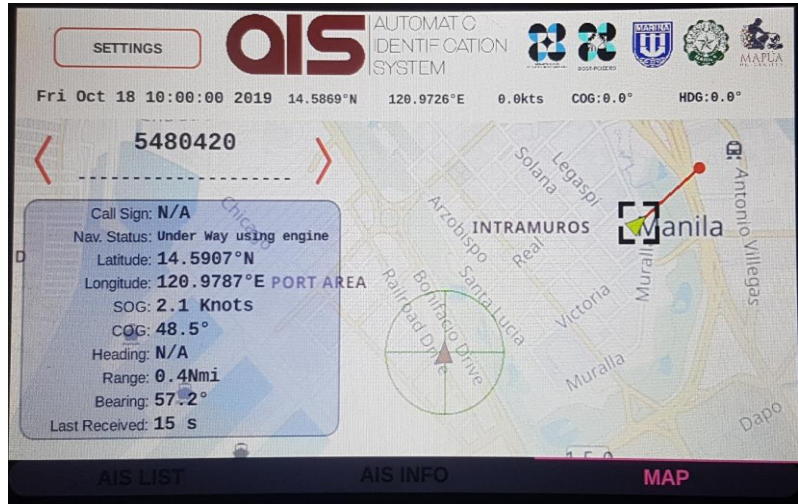
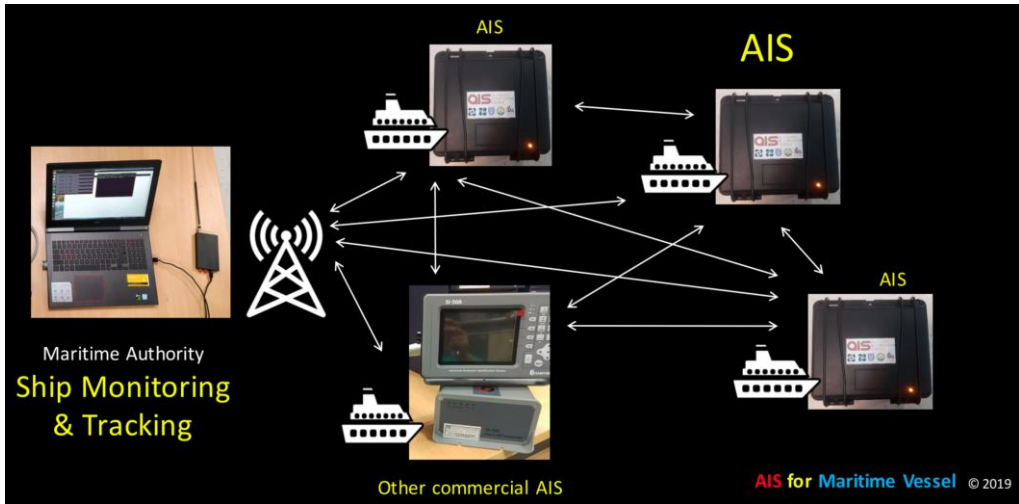
Development of local automatic identification system (AIS)



The use of AIS instrument promotes safe, secure, and sustainable maritime transportation in a country. There are imported AIS devices. But, a single unit of imported AIS costs too much for most domestic maritime vessels. With funding from our government, through the DOST-PCIEERD, our team designed and developed a local AIS, at significantly cost-effective price.*

**The development of local AIS is primarily funded by the Philippine Council for Industry, Energy and Emerging Technology Research and Development of the Department of Science and Technology (DOST-PCIEERD) with Project No. 4393 and year of Project Start 2017.*

AIS system for monitoring and tracking of maritime vessels



The AIS devices are designed based on international standards, to communicate with one another and with other commercial AIS products. The AIS devices have ship monitoring and tracking tool, that displays the list of nearby vessels, the detailed vessel information, and the location map. The same tool can be installed in the maritime authorities.

Deployment and testing of AIS system in different maritime conditions



The AIS system can be deployed for monitoring and tracking of maritime vessels in nautical highways and in inland waterways. The system can be tested in different maritime conditions, for addressing the need of communities in ASEAN region.

Collaboration opportunities

Our team can lead the development of AIS devices, and we are open for collaborations on:

- Input on the need of different communities in ASEAN countries.*
- Visualization of maritime highways and inland waterways in ASEAN countries.*
- RF design, manufacturability, and testability of AIS products.*
- Deployment of real-time monitoring and tracking system using the available ICT technologies.*
- Testing of AIS system under different maritime and/or inland waterways conditions, in participating ASEAN countries.*

AIS technology and Partnerships

*AIS technology based on international standards,
affordable for domestic passenger vessels and fishing vessels.*

*Partnerships with research and development institutions,
with participating local government units,
with electronics suppliers and/or manufacturers, and
with government maritime authorities.*

Through this exciting and engaging collaboration, let us have a safe, secure, sustainable, and smart ASEAN maritime community.

Maraming salamat po!

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