



### **Breaking the Wall of Technological Injustice in Indonesia**

Indonesia is the world's largest island country, with more than seventeen thousand islands, and with over 261 million people it is the world's 4th most populous country. Many Indonesians still make their living from the sea including millions of traditional fishermen. I Made Andi Arsana, Ph.D from the Universitas Gadjah Mada in Indonesia has a novel idea to “break down the wall of technological injustice” and improve the livelihoods of these fishermen.

#### **1. You delivered the winning performance at the Falling Walls Lab competition in Jakarta? What is your innovative idea?**

It is about helping traditional fishermen in Indonesia. The Indonesian Government has produced maps showing the potential location of fish in the ocean using remote sensing technology. The maps are available online and through mobile apps. Unfortunately, many traditional fishermen cannot access the maps because they do not have computers/smart phones/internet access. This is what I call the wall of technological injustice that we need to break.

I propose to build device that can enable fishermen to access the maps. Its name is ARWANA (Alat Pencarian Iwak Andalan Nelayan or Fishing Assisting Tool) This is a GPS-based device that we've designed. When on land and Internet is available, fishermen can download maps from the government website. And when they are at sea, the device relies on GPS satellites to define their location. Using this information, it can tell fishermen where to catch fish.



## **2. Why should people pay attention to your research project?**

Indonesia has more oceans than land with vast ocean resources especially fish. Around 60% of our population lives in coastal areas and a lot of them are traditional fishermen. Sadly, they are still facing technological injustice. This innovation may break the wall and provide solutions for them.



## **3. How did you win over the audience?**

I know this is not rocket-science innovation but this is touching the life of real people around us. This is about people we know - about their parents, neighbours of people they know and even love. And I think I managed to explain in a way that was easy to understand.

## **4. You will be representing Indonesia in the global Falling Walls Lab Finale in Berlin this November? How are you preparing for the event?**

The innovation is still being researched so I will need to work hard to make progress. I want to go to Berlin with more certainty so I will spend my time realising the idea. I am also practicing all the time. We know that presenting in three minutes is not easy. It needs to be precise so I have to make sure my time usage is accurate. Practice, practice, and more practice!

## **5. You are also the winner of the EURAXESS Prize 2018 to visit**

**a research lab anywhere in the EU. What are your plans?**

First of all, I thank EURAXESS ASEAN for the prize. It is great! I am planning to visit a research centre that is related ocean affairs and the law of the sea. I have some options in mind but I have yet to finalise the plan. I am sure, I will enjoy visiting a lab or research centre of my dream and interact with people I've only read about in journals and books. I cannot wait!

**6. What are you most looking forward to?**

I am looking forward to presenting my ideas in front of hundreds of people in Germany and listening to others' presented in the same stage. I really want to know how it feels. I might be nervous but it must be so exciting at the same time. I am also looking forward to visiting places I've never been to.

**7. Where do you see yourself in 10 years in terms of your research idea and your career?**

I really want to see this idea become a reality, and for fishermen in Indonesia and the world to be equipped with ARWANA or similar technologies. In ten years, I hope to be a full professor who has made a significant contribution not only to the world of education and research but also to the life of people around me. I don't want to live in an ivory tower but in a water tower. It is not really important what title I will hold when I am 50 (I am 40 now - what matters is whether or not my presence brings benefit to people



around me.

### **Bio**

I Made Andi Arsana received his PhD in Ocean Affairs and Law of the Sea from the University of Wollongong, Australia. He has produced more than 200 publications and his research interests include Maritime boundary delimitation, geospatial aspects of the law of the sea, Land Boundary Delimitation and Demarcation, Geographic Information System. He also has a keen interest in popular writing and public speaking and was a finalist in the “Three Minute Thesis Presentation Competition” University of Wollongong. Dr Andi is Head, Office of International Affairs and Directorate of Partnership, Alumni and Global Initiatives at the Universitas Gadjah Mada in Yogyakarta, Indonesia