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**Project brief: Chemical Engineering Internship with Azura Indonesia**

**Subject discipline:** Chemical engineering

**Organization background:** Azura Indonesia is a social enterprise developing electric fishing boats.

Indonesia is a seafaring nation home to over 500,000 fishing boats and the fishing industry employs around 12 million Indonesians. Currently, fisherpeople in Indonesia rely on diesel powered boats and spend around half of their income on diesel fuel. Solar powered electric boats offer the chance to reduce costs and improve the livelihoods of people who fish for a living and reduce emissions at the same time.

Azura Indonesia is developing electric boats, the infrastructure required to support them, and researching/developing higher-performance boats. Challenges include the corrosion of solar panels and the fact that most boats are wooden and absorb seawater which makes them heavier and harder to power.

Azura Indonesia installs solar panels in the homes of fisherpeople where they can charge their batteries in between fishing trips.

**Internship activities:**

- Investigate how conditions such as high temperatures, humidity, rain, salt mist, strong winds, tectonic activity, and flooding can impact the performance of solar panels on the Balinese coast.
- Assess current levels of degradation of solar panels and gather field data at sites.
- Create a report on the corrosion process on solar panels at sites.
- Undertake research into coatings and treatment protocols that could reduce the degradation of panels.
- Present to prospective investors
- Develop a maintenance schedule for the solar panels.
- Research how to build more resilient panels in the future.

