

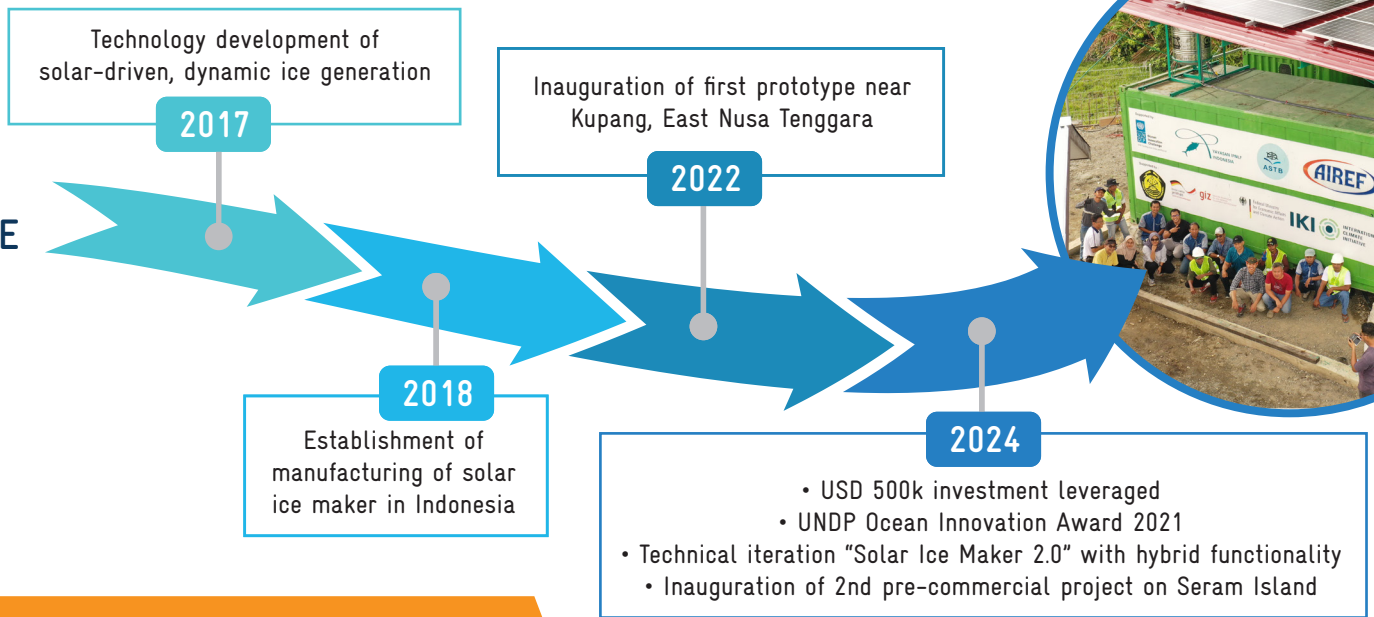
# TOWARDS COMMERCIALIZATION: SOLAR-POWERED ICE PRODUCTION TO EXPAND SUSTAINABLE FISHERIES AND EMPOWER SMALL-SCALE FISHERS IN COASTAL AREAS



The journey of the solar ice maker, an innovative technology designed to empower coastal communities through clean energy and sustainable fishing practices

The Solar Ice Maker is an off-grid, solar-powered solution that supports small-scale fishers by providing sustainable ice production. It enhances cold chain infrastructure, reduces carbon emissions, and increases fishers' incomes by preserving their catch.

## KEY TIMELINE



## NEW CONCEPT: SOLAR ICE MAKER 2.0



### 100% Solar-Powered:

Fully off-grid, generating ice blocks solely from solar energy, with dynamic operation that adapts to available sunlight for continuous performance.



### Smart Energy Management:

Advanced storage systems optimize solar usage, ensuring uninterrupted ice production even during cloudy or low-sunlight days.



### Designed for Remote Islands:

Tailored for high fish-producing areas, providing a reliable ice solution where electricity access is limited.



### Scalable and Containerized:

Compact, easy-to-deploy unit that can work off-grid or in hybrid mode, making it adaptable for various sizes of fishing communities.



### Harnessing Indonesia's Solar Potential:

Ideal for regions like Eastern Indonesia with strong solar irradiance, supporting sustainable fisheries and clean energy solutions.

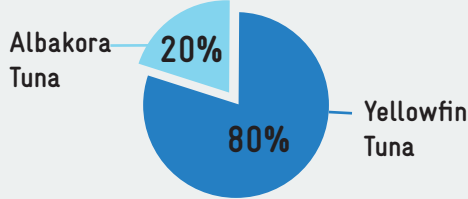
# WHY KAWA VILLAGE FOR SOLAR ICE MAKER 2.0?



Kawa is located in West Seram, Maluku, known as the "Amazon of the ocean" with the world's largest fisheries biodiversity. Renowned for Big Tuna production, essential for local and international fish markets.



Small-scale fishers in Kawa use traditional, sustainable methods (handline fishing) to preserve biodiversity and export high-value fish internationally. Fish catch primarily includes:



Unstable electricity supply, limiting reliable cold chain infrastructure with the nearest cold chain located in Masohi, Central Seram, far from Kawa Village.



Reliable ice production is essential for maintaining their income, reducing losses, and enhancing competitiveness against industrial fisheries.

## IMPACT OF SOLAR ICE MAKER 2.0



### Economic Benefits

Produces 1 ton of ice daily with 5-ton ice storage, boosting fishers' income by preventing spoilage and improving market competitiveness.



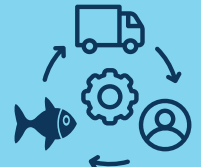
### Environmental Impact

- Low Carbon Emissions with up to 100% Operation on Solar PV combined with a Natural Refrigerant (R290).
- Eliminating plastic-wrapped ice.



### Empowering Fishers:

Provides reliable ice production to preserve fish quality, supporting small-scale fishers and their livelihoods.



### Supply Chain Stability:

Ensures a steady ice supply, strengthening the fish supply chain and connecting fishers with buyers more effectively.

## PARTNERSHIP

