Future Technologies of Floating Solar

- Beyond Energy -

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Future Technologies of Floating Solar

SINCE 1989

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Important Factors of FPV

1. Safety!
2. Safety!
3. Safety!
4. Efficiency!
5. Design

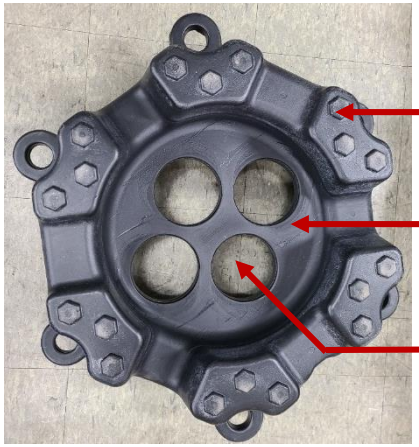
Important Factors of FPV

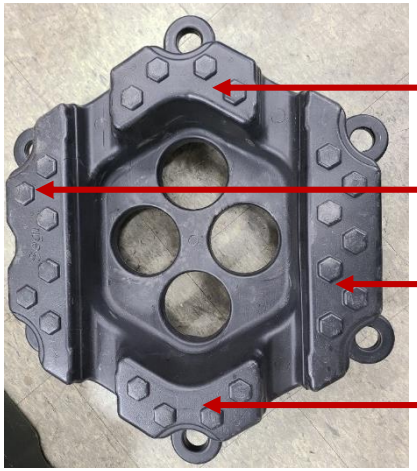
1. Safety – Mechanical stress caused by constant movement

FPV plant in Japan folded and damaged by typhoon

Important Factors of FPV

1. Solution – Water spring & pile & air pocket





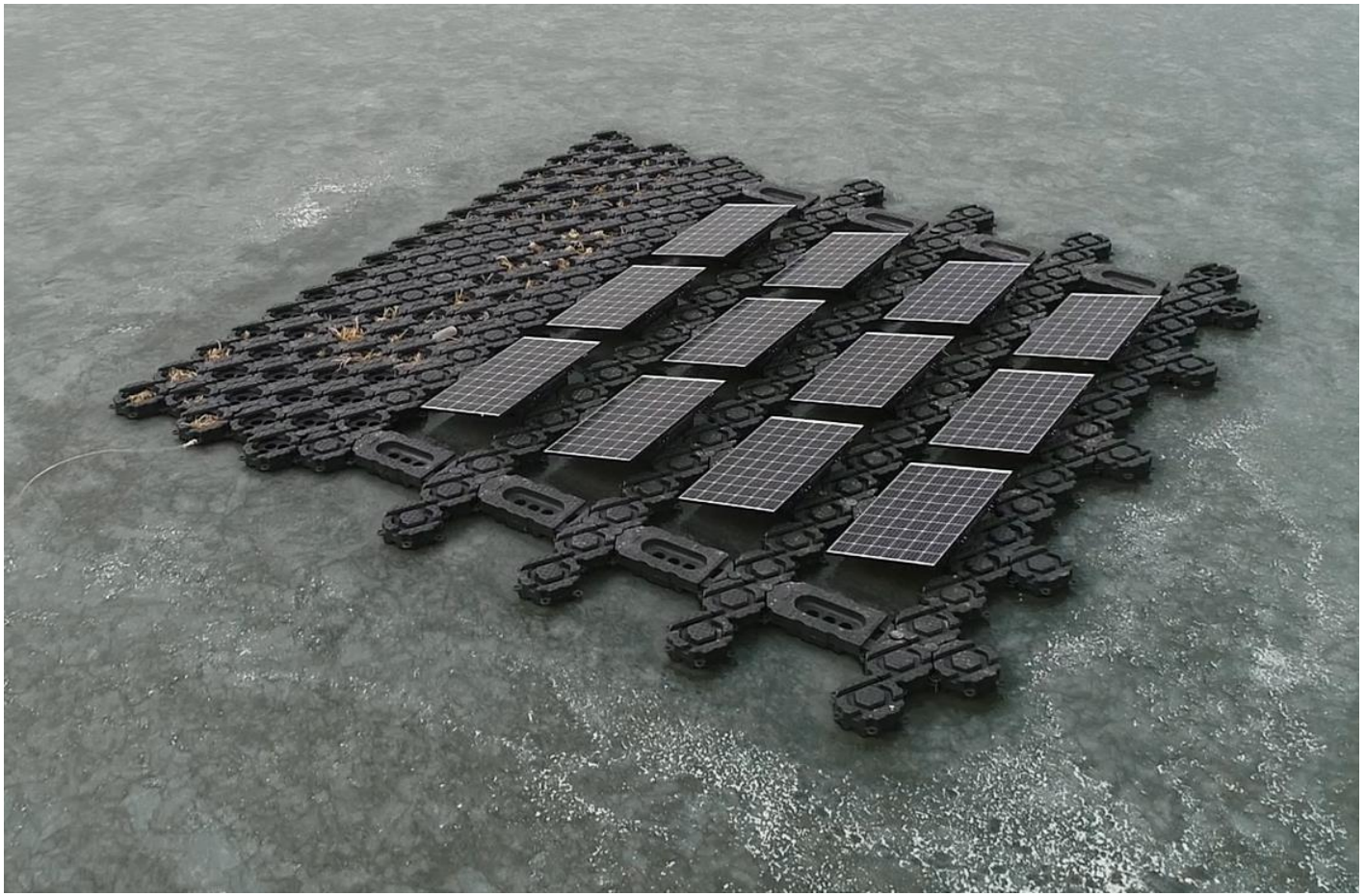
Important Factors of FPV

1. Safety – Mechanical stress caused by ice

Ochang Reservoir Solar module damaged caused by ice pressure

Important Factors of FPV

1. Solution – Water spring & pile



Hexagonal structures and piles prevent module breakage due to ice pressure

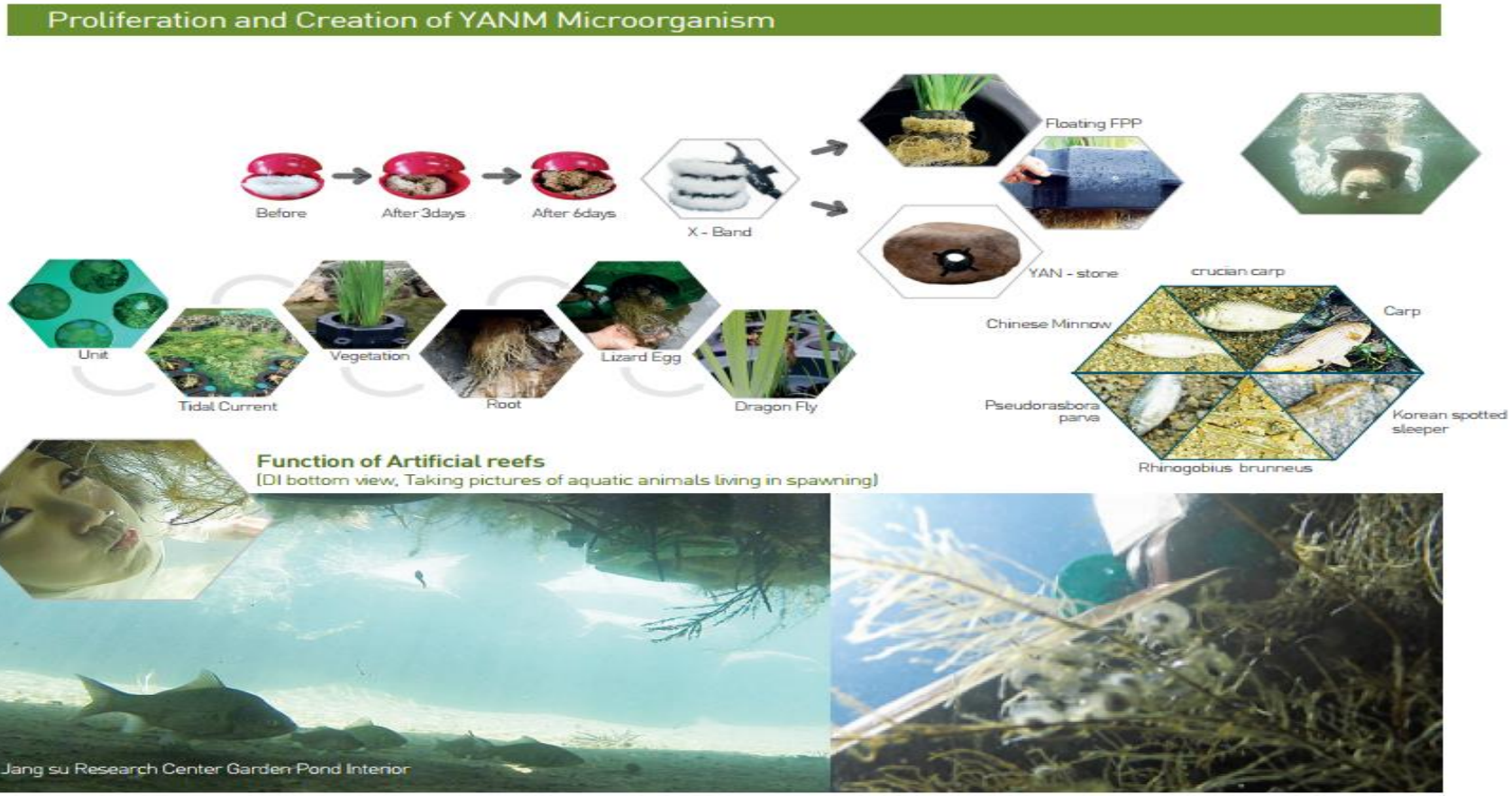
Important Factors of FPV

2. Safety – Algae proliferation

The FPV lake plant installed in Japan in 2015 was recently discovered to be completely covered with algae.

Important Factors of FPV

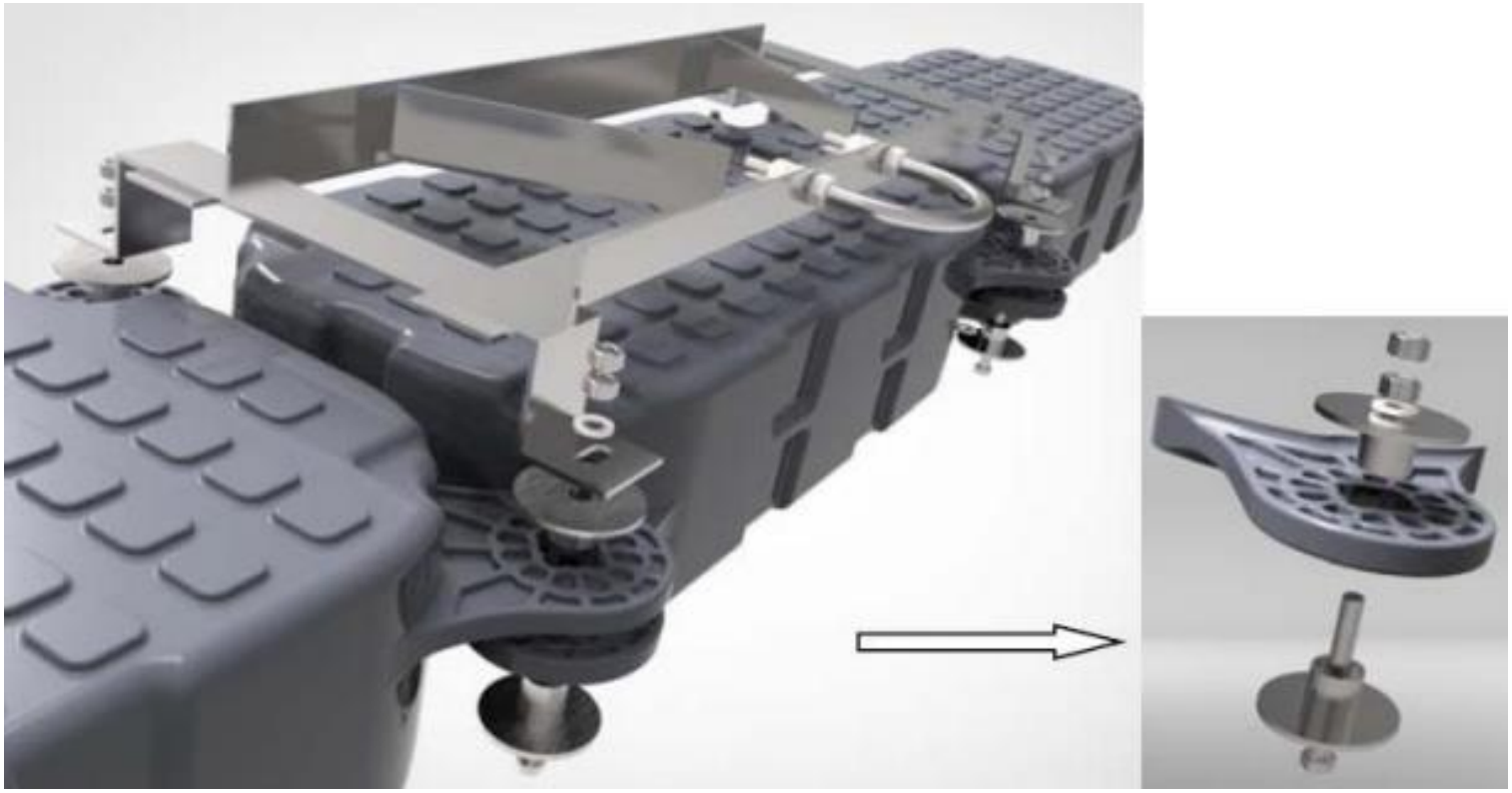
Solution - Water Purification by microorganisms



57 kinds of microorganisms grafted

Important Factors of FPV

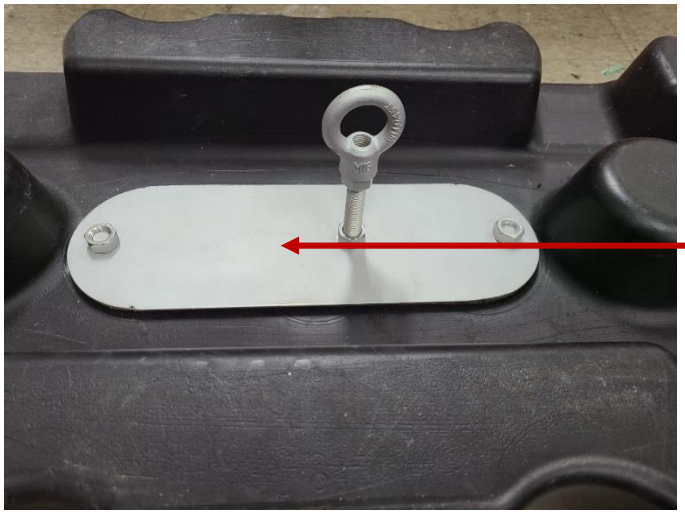
3. Safety : Excessive tension on mooring cables



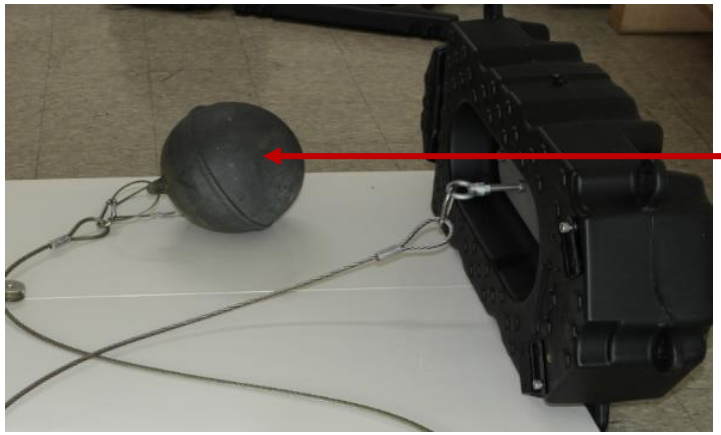
Tension on floating structures is divided over four corners resulting in easy destruction

Important Factors of FPV

3. Solution : Hexagonal floating structures and tension ball



Laser cutting makes it cheaper and faster



Tension ball

Future mooring system

Important Factors of FPV

4. Efficiency – Water absorbs solar energy

Contrary to expectations water absorbs solar energy rather reflecting, rendering energy production with bifacial modules inefficient

Important Factors of FPV

4. Efficiency – Reflection zones on floating structures

Future floating structures have reflection zones

Important Factors of FPV

5. Design – beautiful landscapes and harmonious environments

THANK YOU

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For more information please visit :

https://www.youtube.com/watch?v=vFyBnpfeFXM