

PERFORMANCE REPORT

**‘Non-Entangling and
Biodegradable Fish
Aggregating Devices**

made in GRAND BLEU S.A

Since April, 2021

1. EXECUTIVE SUMMARY

Many DFADs are made using petroleum-derived products such as plastic, PVC, and nylon nets as well as metals. Eventually, petroleum-derived materials break up and contribute to ocean pollution as macro- and micro-plastics.

GRAND BLEU SA aims to improve its sustainability and reduce its impact by working towards the objectives below:

- Sustainable fish stocks
- Minimizing environmental impacts
- Effective management

To meet the above objectives, we have made this commitment to using only Non-entangling & Biodegradable Fish Aggregating Devices (BIO-NEFADs) as defined by the International Seafood Sustainability Foundation (ISSF).

GRAND BLEU SA fleets deploy NE-biodegradable FADs made by natural and biodegradable materials such as bamboo, palm leaves, coir and jute fiber to prevent pollution of the marine environment reducing the amount of synthetic marine debris in Atlantic Ocean.

2. CONSTRUCTION OF BIO NON ENTANGLING FAD

GRAND BLEU's BIO NE-FADs consist as the followings.

- **Raft:** Rafts be constructed using bamboo, balsa wood or other natural materials that degrade without producing pollution on the marine environment and the surface structure not be covered with netting or meshed materials. If covered, cover with canvas, tarpaulin, shade cloth, or non-entangling materials.
- **Tail:** Subsurface structure is made with only natural and/or biodegradable non-entangling materials (cotton ropes and canvas, manila hemp, sisal, coconut fiber, etc.) so that they degrade without causing impact on the ecosystem.
- No netting should be used anywhere on the FAD (raft or tail) to prevent any entanglement.

3. BIO MATERIALS USED IN NON-ENTANGLING FAD

(1) Introduction of Bio Materials

BIO-FADs consist of eco-friendly & biodegradable materials as the below. Coir Materials is made by coconut fiber, which is a natural material extracted from the husk of coconut. And Jute materials is made by Jute fiber which is one of the most affordable natural fibers is composed primarily of the plant materials organic compound and polymer.

	
<p>Coir Rope</p>	<p>Jute Rope</p>
	
<p>Coir Rope</p>	<p>Jute Sheet</p>
	
<p>Jute Strand</p>	<p>Jute Raw</p>
	
<p>Cotton Canvas</p>	<p>Jute Canvas</p>



**Coir rope, Jute
Canvas and
Bamboo**



**Tail: Coir rope, Jute
Canvas and Bamboo**

(2) Purchased list for Bio NE-FAD Materials by Grand Bleu SA in 2021(AS SPECIMEN)

P.A.I
見積書 (OFFER SHEET)

SALES PRODUCT
 . PURSE SEINE NETTIING
 . TRAWL NETTING
 . WIRE ROPES & FIBER ROPES
 . FISHING ACCESSORIES

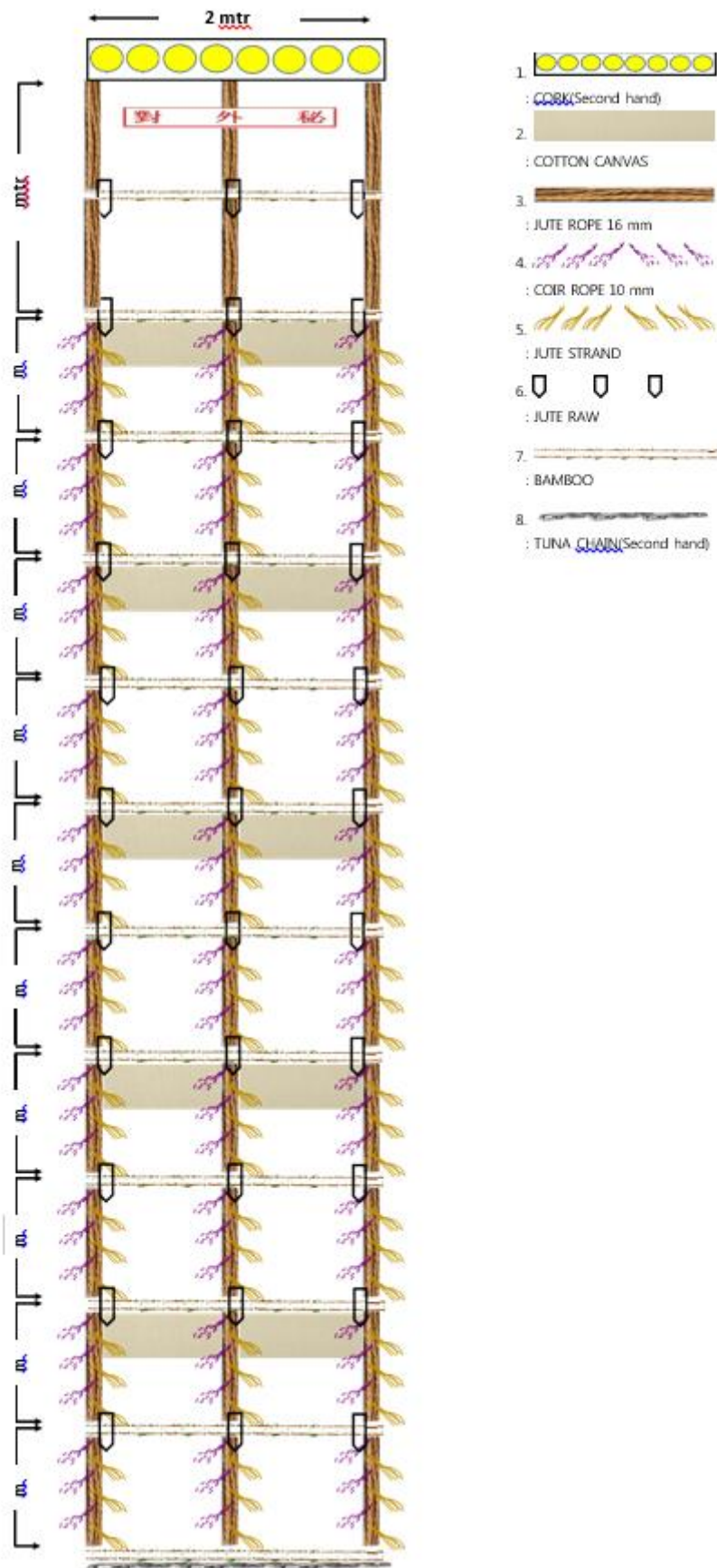
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TO. Ocean Shipping Co., Ltd on behalf of
 Grand Bleu SA
 비 고

DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
COTTON CANVAS 2 mtr × 100 yard	23 ROLL	₩ 350,000	₩ 8,050,000
JUTE ROPE 16 mm(200 m/coil)	200 COIL	₩ 90,000	₩ 18,000,000
JUTE RAW 8 kg/roll	100 ROLL	₩ 28,000	₩ 2,800,000
JUTE STRAND 180 kg/PA'K	6 PACK	₩ 450,000	₩ 2,700,000
COIR ROPE 10 mm(150 m/coil)	300 COIL	₩ 6,000	₩ 1,800,000
JUTE SHEET(CANVAS) FOR HEAD 1.5 mtr × 100 mtr	7 ROLL	₩ 285,000	₩ 1,995,000
TOTAL		₩	35,345,000

Total		€	26,251.68
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(3) GRAND BLEU SA BIO NE-FAD STRUCTURE & DESIGN



4. RERULTS

Grand Bleu S.A. has started to use BIO NE-FADs from APR 2021 and it will be made continually on the purpose of the environment protection for Atlantic Ocean.

There are reports of successful sets on biodegradable NE-FADs from the fleets, but durability of these materials is a concern for the fleet as coconut fiber ropes appear to break down relatively quickly. Grand Bleu S.A has a plan to use various bio materials made with raw cotton, manila hemp as well as coir & jute fiber in forthcoming years.

We will do constantly the best practice for the construction & deployment of BIO degradable & NE-FAD to reduce the environmental impact and for the conservation and management of tropical tunas.