



A CoP Chat Series

LET'S TALK PLASTICS

SESSION #10

STOPPING GHOST GEAR: THE MOST LETHAL
FORM OF MARINE PLASTIC DEBRIS

14 April 2021, 8.30 - 9.30 AM EDT

TODAY'S SPEAKERS



**ANDREW
HUDSON**

Head, Water & Ocean
Governance Programme
UNDP



**JOEL
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Associate Director
Global Ghost Gear
Initiative



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Co-Founder
Bureo Inc.



**DENİZ
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Co-founder and Director
Gokova Sailing Club



Driving Solutions to the Problem of Lost and Abandoned Fishing Gear Worldwide

WWW.GHOSTGEAR.ORG

Photo: GGGI – Adobe Stock



What is Ghost Gear?

- ‘**Ghost gear**’ is the common name for abandoned, lost or discarded fishing gear (ALDFG).
- Being purposely designed to capture marine life, “ghost gear” is **the most harmful form of marine debris**.
- Much of it is made of modern plastics that can last **up to 600 years** in the ocean, continuing to capture and kill marine life and fish stocks, and damage the marine environment for much of its lifespan.

- In 2009, UNEP & FAO estimated **640,000 tonnes** of fishing gear is abandoned, lost or discarded in our ocean every year – this figure is likely to be **much higher** today.
- More recent studies suggest that fishing gear could make up **46%-70% of the floating macroplastic** in the ocean by weight.
- An estimated **5-30%** of global harvestable fish stocks (depending on fishery / geography) are killed by ghost gear every year, which is a major threat to global **food security, coastal communities, and fisher livelihoods**.

What Causes Ghost Gear?

DIRECT CAUSES

- Adverse weather conditions or strong currents
- Marine traffic (shipping, transport, recreation) unintentionally running over deployed gear
- Spatial pressures – resulting in gear conflict & resulting in vessel conflicts with gear
- Malfunctioning of tracking systems
- Snagging on submerged features or damage by marine organisms
- Improper gear design or upkeep with repairs
- Improper fishing methods
- Intentional discard – often linked with illegal, unreported and unregulated fishing

INDIRECT CAUSES

- Lack of disposal facilities
- Inaccessible disposal facilities
- Expensive disposal facilities

What is the GGGI?

Housed under Ocean Conservancy's Trash Free Seas® portfolio, the **Global Ghost Gear Initiative® (GGGI)** is the only cross-sectoral alliance committed to driving solutions to the problem of lost, abandoned and otherwise discarded fishing gear worldwide.

Aims:

- To **improve** the health of marine ecosystems;
- To **protect** marine life from harm;
- To **safeguard** human health and livelihoods.

By:

- **Reducing** the amount of gear lost in the oceans;
- **Removing** the gear that is already there;
- **Recycling** the gear that is recovered or at end of life and promoting EPR.

A Global Reach

123 member organizations
18 supporting governments
4 high level global affiliates



GGGI Projects

GGGI / FAO Workshops



Industry Engagement

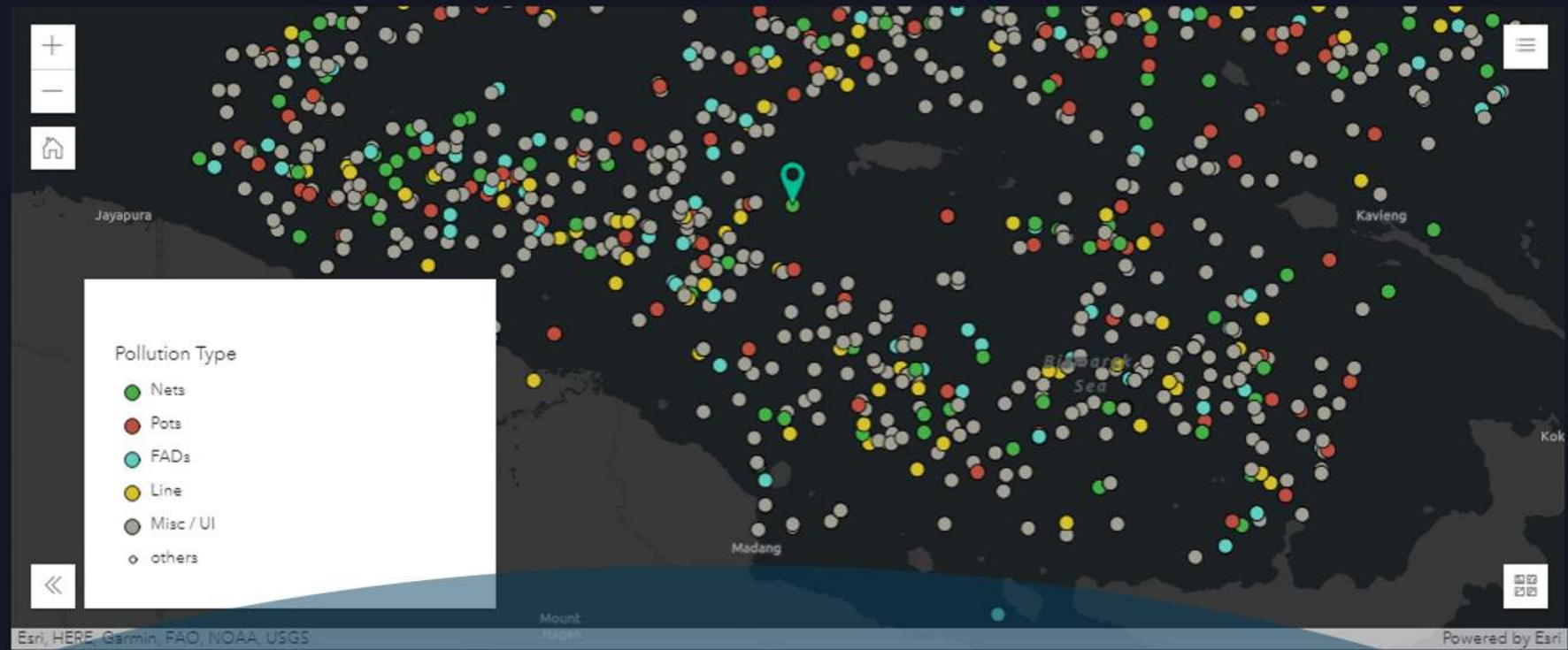
- Raise awareness about the issue and learn from the industry about causes of gear loss.
- Develop innovative solutions with industry to minimize gear loss and reduce its impact if lost.
- Work with industry to appropriate disposal options for end-of-life gear.
- Ensure solutions are viable, lasting and make sense for the industry.

Best Practice Framework for the Management of Fishing Gear

GEAR CLASS	LIKELIHOOD	IMPACT	TOTAL RISK
Gillnets	5	5	25
Traps and pots	4	4	16
Fish Aggregating Devices	4	3	12
Hooks and lines	3	3	9
Bottom trawls	2	3	6
Mid-water trawls	1	2	2
Seine nets	1	2	2

- Comprehensive guidance document referencing all major actors in the seafood supply chain
- Guidance is across prevention, mitigation and recovery strategies.
- Designed to be incorporated into sourcing policies, CSR documents, fisheries management plans, seafood certification programs, voluntary guidelines, workshops and more.

Map Viewer



Toolbox

Filter by attributes

- Fishing gear type
- Search description
- Event date
- Gear recovered?
- Gear has image?

Filter by area (optional)

Search and results

Number of results:

The GGGI houses the largest collection of ghost gear data on earth at:

<https://globalghostgearportal.net/>

Selected Feature

Property	Value
Organization	GGGI
Date	2/1/2007 8:00

Data Submission History

#	User	Data S
1	Gideon Jones	simulat

Solution Projects



Nigeria



Indonesia



Mexico



Caribbean



Canada



United States



Vanuatu



Contact Info

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bourree



Bureo

Our Mission: Bureo is focused on protecting our ocean by scaling a radically transparent model to eliminate fishing net pollution; using disruptive innovation to inspire change and create tangible positive impacts.

In 2013 Bureo founded Chile's first fishing net collection and recycling program, '**Net Positiva**', with the mission to provide fishermen access to fishnet waste disposal points along the coast of Chile as a means to prevent ocean pollution. Through a shared-value business model Bureo partners directly with fisheries to provide a positive solution for their end-of-life fishing nets.



The Problem

An Ocean of Plastic

- 8 million tonnes of plastic waste enter the ocean each year
- 5.25 trillion pieces of plastic adrift in the ocean
- 640,000 tonnes of fishing nets enter the ocean each year
- Amount of plastic pollution in the ocean will surpass amount of fish by 2050 if nothing changes
- Fishing nets account for 10% of ocean plastic pollution
- Fishing nets are identified as the most harmful form of ocean plastic pollution



An underwater photograph showing fishing nets and debris in a dimly lit environment. A bright light source, possibly a flashlight, is visible in the center, illuminating the surrounding water and the mesh of the nets. The overall color palette is a range of blues and greens, from light turquoise to deep, dark teal.

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GLOBAL
GHOST GEAR
INITIATIVE

Our Solution:

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We work together with fisheries and local communities to provide an incentivized program to **collect, clean, sort and recycle fishing nets into premium products**, creating positive solutions for end-of-use fishing nets, employment opportunities for local workers, and funding for community programs



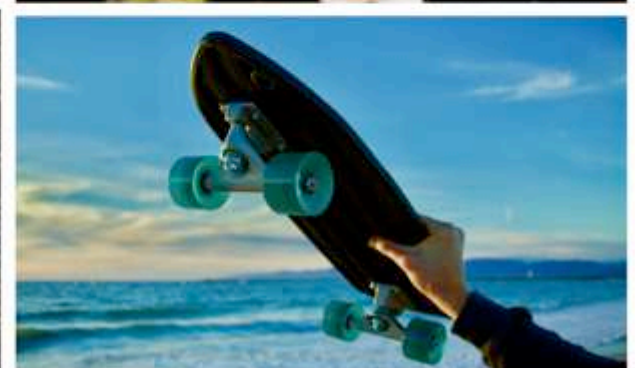
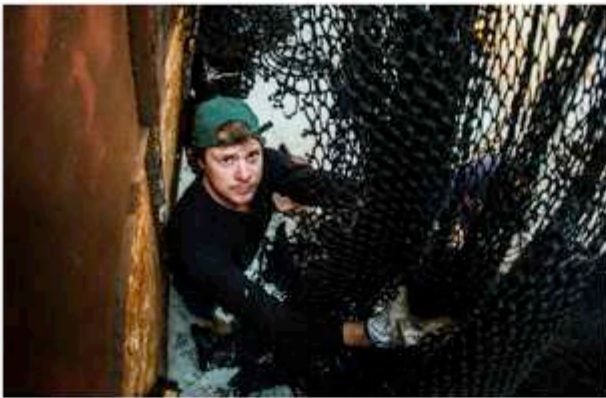
How it works

Bureo's Net Positiva Program

1. We works with fisheries to **collect fishing nets at their end-of-use**
2. Fishermen receive **a free disposal service** for their fishing nets and **an end of life disposal certification**
3. For every kg of fishing net received, Bureo allocates funds to local partnering NGO's that use this money to **implement new projects in their community**
4. We are committed to supporting the communities we work in, showing that we can have a **positive impact across our supply chain**



Recycling Process | From Nets to NetPlus™



Partner Projects | Featuring **bureau**



Net Positiva Expansion | Our Goal

Provide this **net positive solution** to every fishery in need





bureo
www.bureo.co

Thank You!

Let's Talk Plastics and Ghost Nets

TURKEY Case



Deniz Karamanoğlu Saral

Co-founder, Director Gökova Sailing Club Society - TURKEY

COMMUNITY ACTION GLOBAL IMPACT

In Izmir Gökova, a doctorate thesis proves that % 89 of the loses are sourced by trawler and seines. In Gokova (3000 ha), each year 200-280 km ghost nets lost in fishing activities. Questionaries with local fisher cooperatives, in 14 locations, only in 2 ha, 72 km fishing line and 315 m coast net was reported. In Izmir Bay, in 2002, it was reported as 300 km extension net, in Karataş in 2008, 226 km extension net, 2700 m paraquat ve 14 weasel basket was reported as lost. In 2008, in İskenderun Bay, 402 basket trap was lost.

In 2011, during the SGP supported project in Adana by Mavi Kilikya Society, it is scientifically proven that an 200 m ghost net in 3 weeks can hunt 3 *Chelonia mydas*, over 30 *Epinephelus marginatus* and over 40 crustaceans and 19 other species. Additional to academic studies, these projects helped to raise the ghost nets threatening the marine ecology, fishing economy and pollution in Turkey.

Roughly, in lowest possible figures says that at least 2000 km fishing nets remains per year and continue ghost hunting, min for 8-10 years. As none of the materials are degradable, it also contains separate lead or iron components.

In Turkey, with reference to sample boat numbers that ghost nets reported (Gökova 100, İzmir 440 and İskenderun 657) it costs 13 million TRY in 2012 which is 7,5 million USD per year.

Turkey and Ghost Nets Studies in Numbers

BASIC STATS

TOTAL AMOUNTS

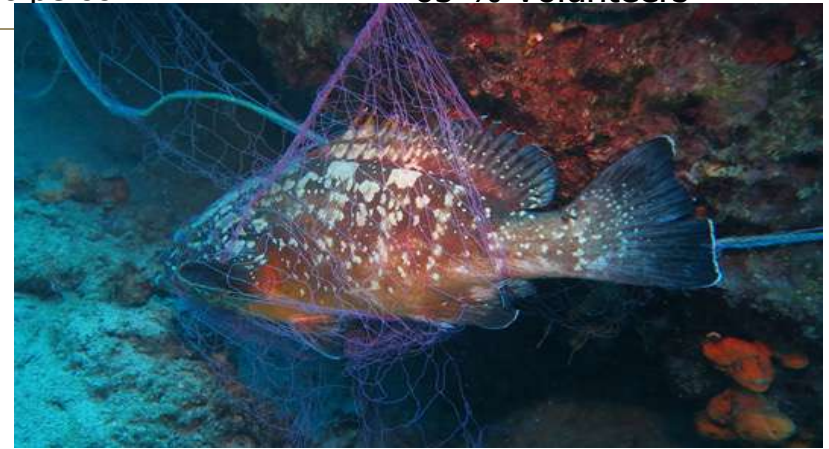
BY

Number of Projects in Turkey	6	TAGEM - TUBITAK
Number of SGP Supported Projects	4	Mavi Kilikya / Koza Youth / Gökova Sailing / ADYSK
Total Number of Scientific Studies	5 – of 2 PhD	Canakkale 18 Mart University, Ege University, Mugla University
Total Amount of SGP Grants	116,000 USD	329,275 USD (Co-financing)

Total Number of Ghost Hunters

Below 50 person

65 % Volunteers



Credit: Mediterranean Conservation Society

Ghost Net Removal Sites in Turkey

Prince Island, Marmara Sea

Kapıdağ Peninsula and Marmara Islands

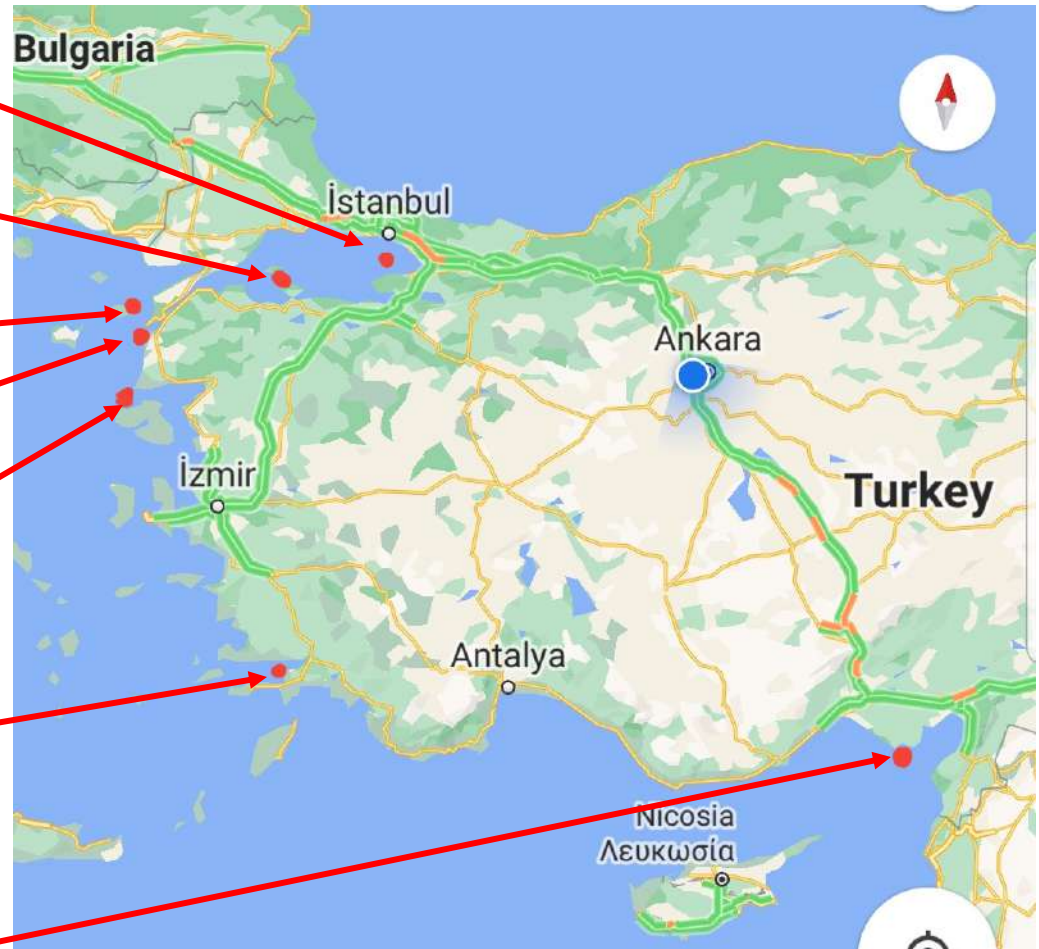
Gökçeada, Aegean Sea

Dardanelles, Çanakkale

Babakale, Çanakkale

Gökova Bay

Karatas, Yumurtalık Lagoon, Adana



Ghost Nets Project Supported by SGP Turkey

Neandros Island Ghost Net and Coral Protection Project – ADYSK (2019 – 2020)

Ghost Nets Busters – Gokova Sailing Club Society (2012 – 2013)

Ghost Net Fishing – Mavi Klikya Association (2011 – 2012)

Ghost Nets Fishing Awareness – Koza Youth Society (2011 – 2012)



Credit: Underwater Research Society



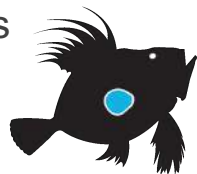
Credit: Koza Youth Society

Ghost Net Hunters, Gökova Bay- Turkey 2012-2013



Objective 1: Raising fishing communities' awareness about ghost nets and their impact on the important marine habitats,

Objective 2: To strengthen the Marine habitat in Gökova Marine Protected Areas by the removing ghost nets, and to create a network to control and intervene in future ghost nets



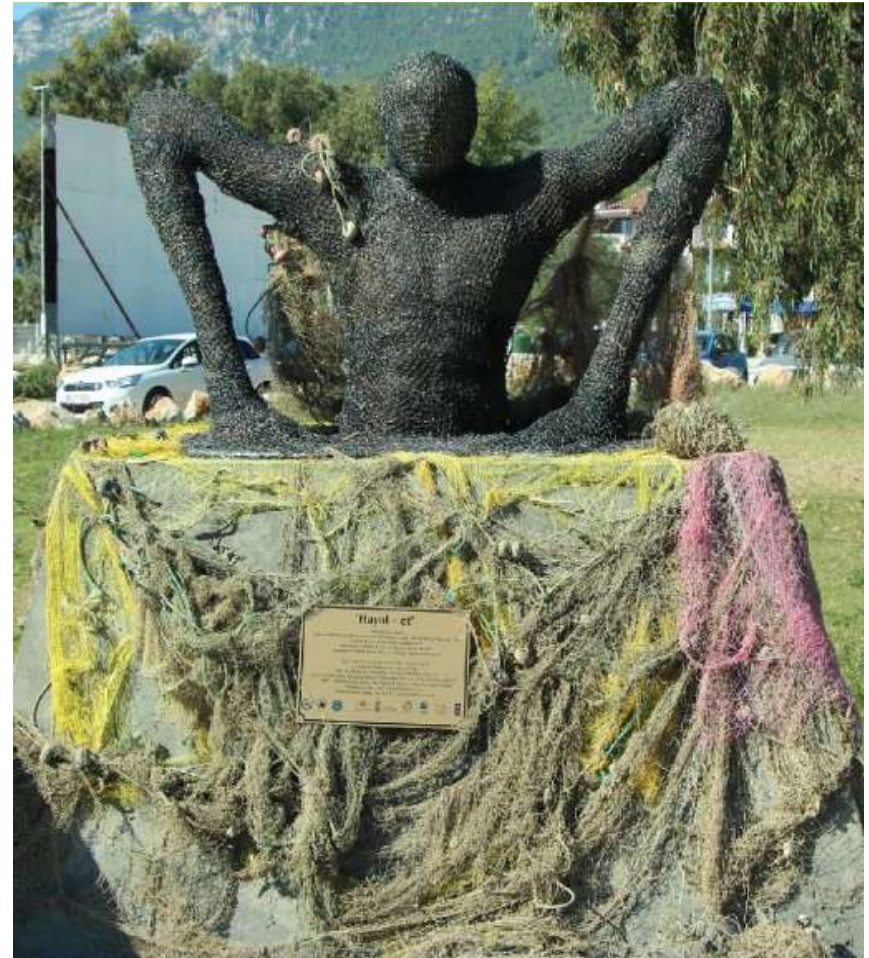
AKDENİZ KORUMA DERNEĞİ
Mediterranean Conservation Society



Actions of removal:

- Locating the sites
- Locating the ghost gear
- Extraction...
- Storing...
- Recycle.....
- Upcycle...
- Prevention dialogs, networking
- Advocacy briefs, regular visits
- Trainings and workshops
- Promotion and exhibitions

Ghost Nets Busters Project



Credit: Gokova Sailing Club Society

Outcomes at local level

Enhanced **capacity building** allows fishery communities' awareness and reduce the threat of fishing gears on Turkey's ecology of seascapes.

Ghost Net Hunters Projects has cleared **5700 m nets** in **36 locations at 6 ha, in Gökova** btw 2012-2013. Mediterranean Conservation Society MCS keeps clean-up ongoing in Gökova MPA. Only **in 2020 115 kilometers of fishing line**, 1060 m of fishing net and 78 kg of lead removed.

ADYSK, cleared **6 ha ghost nets on coral transplantation site** in Neandros Island in 2019. April 2021, Neandros Island is declared as a PA, marine conservation area.

Mavi Klikya **monitored 200 km nets** and proved the effects on globally threatened species.

Koza Youth Society in several Trainings increase the volunteers in marine conservation actions and professional diving for ghost nets' removal up to 40 m.



Credit: Mavi Kilikya Association

Outcomes at National Level

National **policies and programs promote replication** of best practices derived from SGP and UNDP projects, dissemination and promotion of lessons learned at the national level, involvement of policymakers in CBA projects and processes,

Shortly after, following the discussions of projects and academia, MoAF implemented **Ghost Net Removal Project** btw 2014 and 2018, 600 location (over 60 ha) were searched. **'Lost Net Hotline' executed. In 63 ha, 4420 fish traps** removed. Underwater robotics introduced in project.

Ghost Nets Projects implemented by TAGEM resulted as the removal of 45,000 kg fishing gears.

By June 2021, **Şenmak - Marmara Island Ghost Nets Project is going to start** in Marmara Archipelago at 25 locations to extract and recycle of ghost nets.



Mitigation Measures for Ghost Nets

Financial incentives to encourage fishers, and fisheries **to report lost fishing gears** or to bring old gears for recycle.

Marking gear to track back and better understand the reasons for gear loss and identify appropriate, fishery-specific preventative measures. Innovation in fishing gears, fish and crustacea boxes with doors.

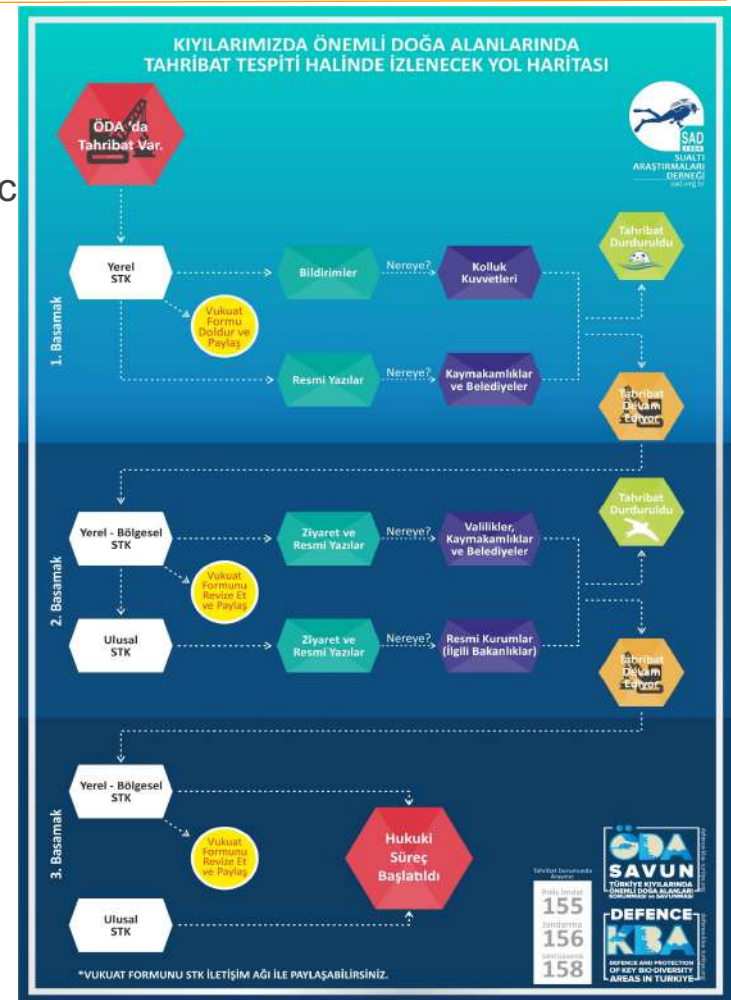
New technologies to reduce the loss, to monitoring and locating lost gears and to prevent pollution by using **biodegradable materials**

Improving collection, **disposal and recycling scheme** (buy-back programs) to engage fishers and other actors from relevant sector

Better reporting of lost gear to prevent potential hazards and increase the opportunity for **gear recovery**.

Restrictions the **use of extension nets in deep waters (over 200 m)** as in EU since 2006.

Marine PAs and governance of seascapes, and dissemination of **sustainable fishing practices**, ecological based stock management etc.



Q&A

RAISE YOUR HAND
OR POST YOUR QUESTION
IN THE CHAT BOX

THANKS TO TODAY'S SPEAKERS



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THANK YOU!

**STAY TUNED FOR SESSION #11
IN MAY**