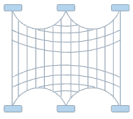




The Heritage Value of the Traditional Lift-net to Catch Flathead Mullet In Geoje island, Korea

Chae, Dong-Ryul & Lee, Young Kyu



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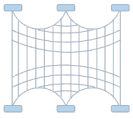
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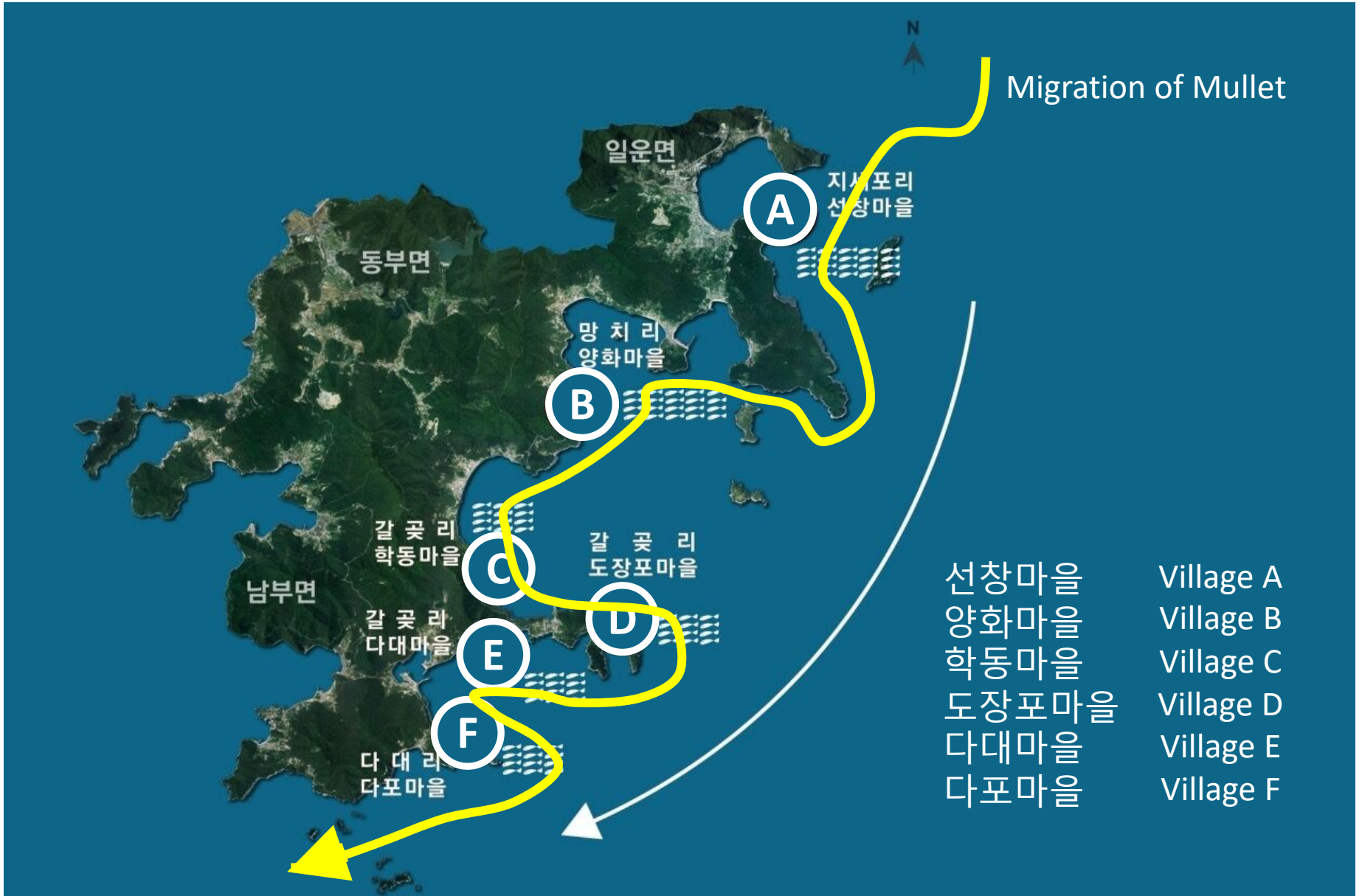
I . Overview

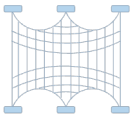
Nets are set up along the migration path of mullet

When the mullet entering, watcher(mangjangi) signal to fishing crew,
and they lift nets to catch the mullet



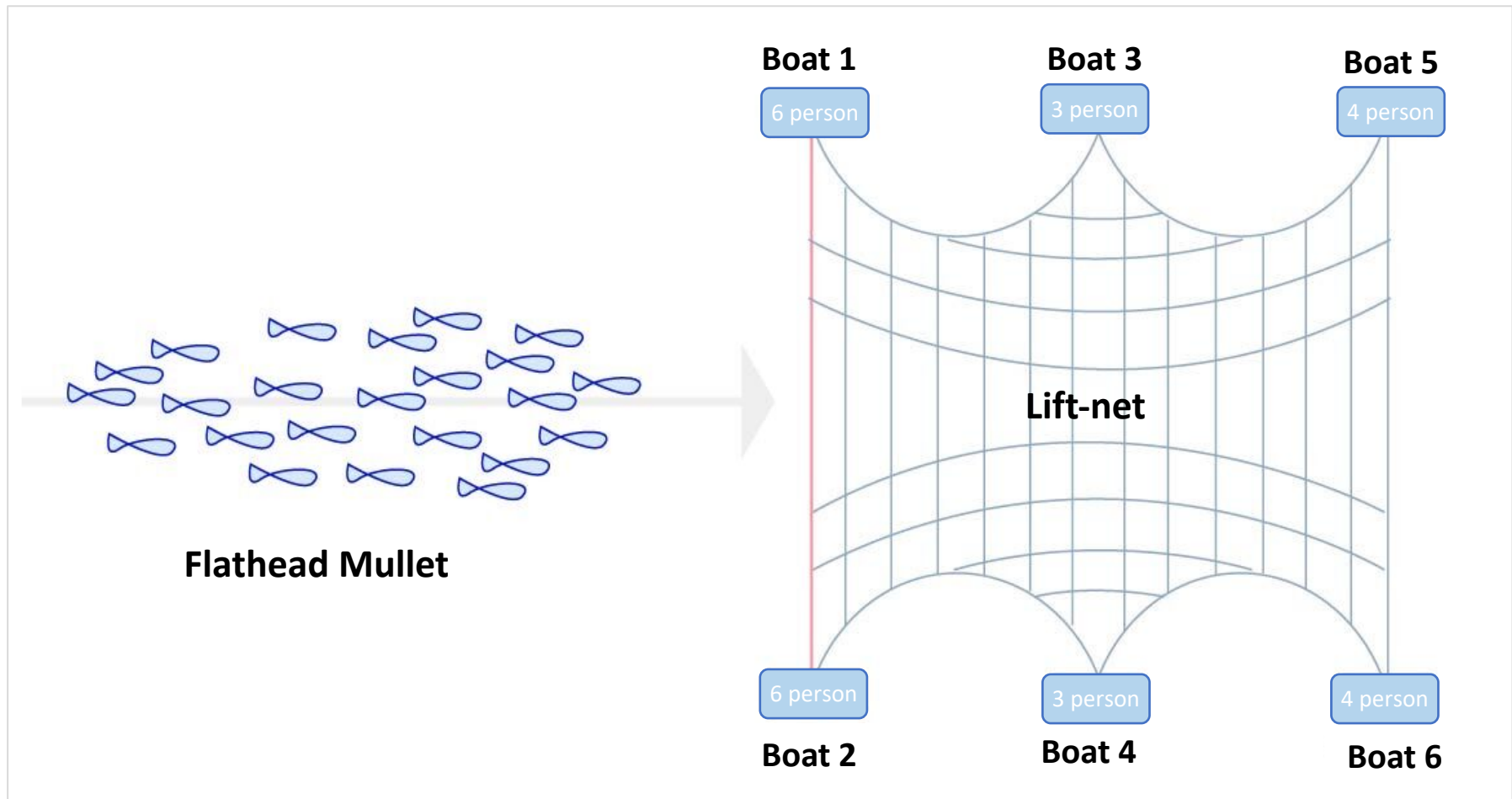
The Heritage Value of the Traditional Lift-net to Catch Flathead Mullet in Geoje island, Korea





Constituents of Traditional Lift-net

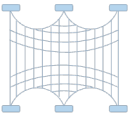
Watcher & watchtower





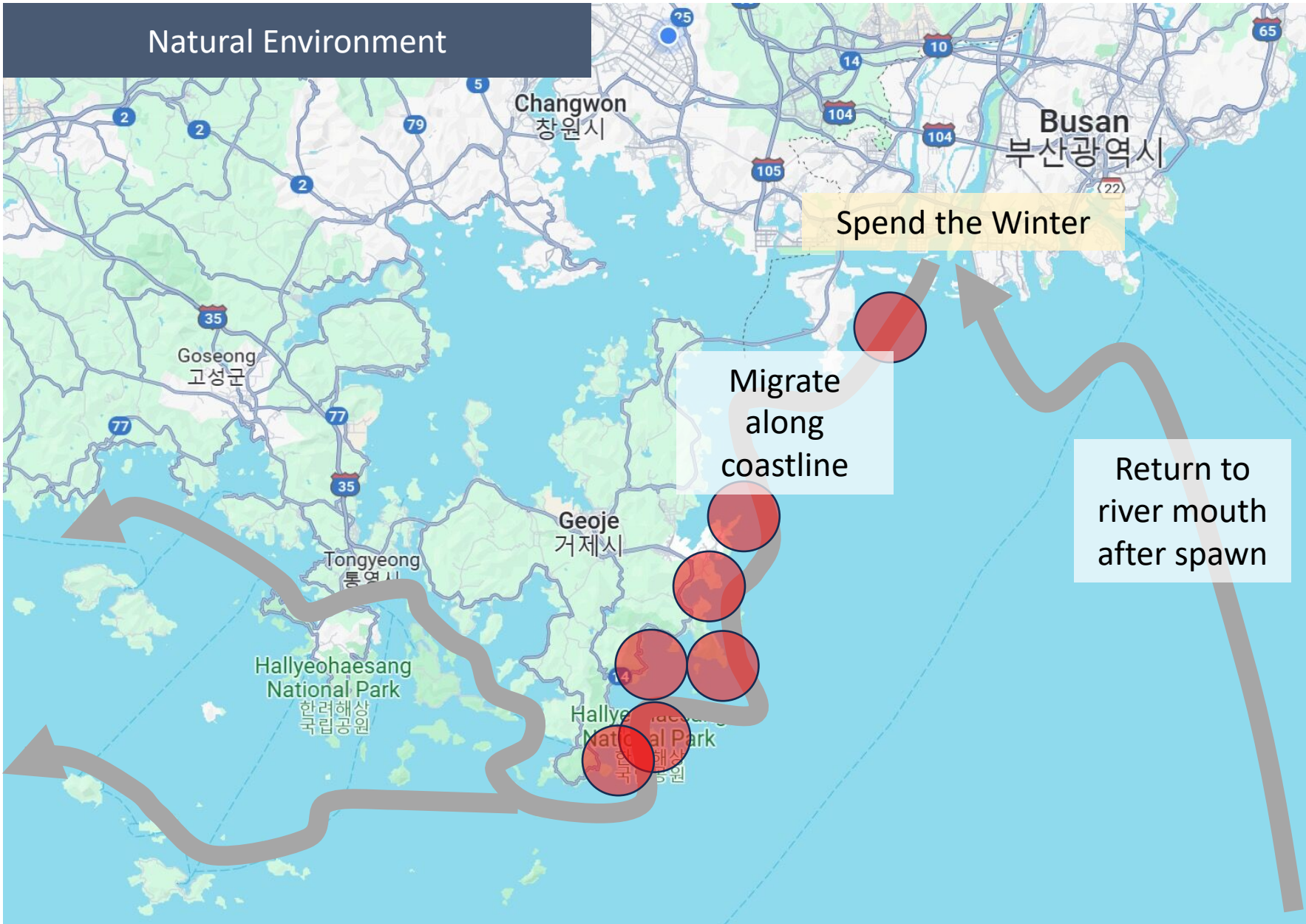
II. Characteristics of the Traditional System

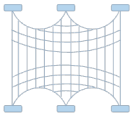
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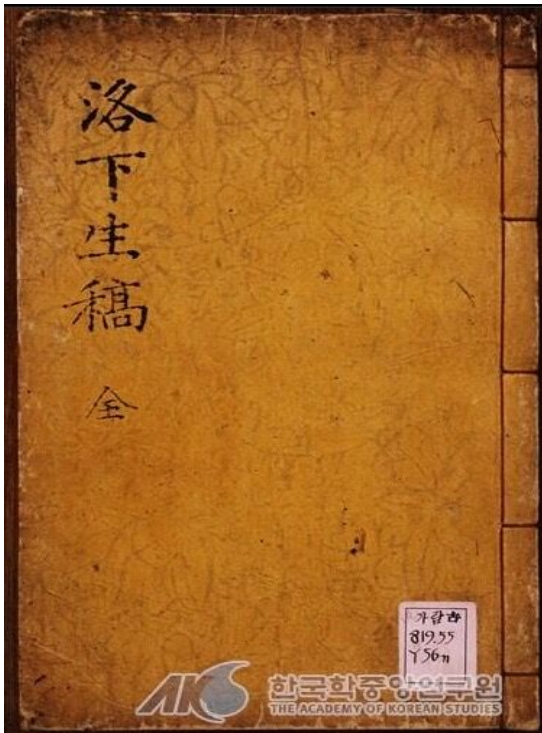
Natural Environment





Historical Background

Records in the 18th-century literature [洛下生稿_贈金君億 (李學遠, 1770~1835)]



蘆葉青青江水平 갈대 잎은 푸릇푸릇 강물은 잔잔한데

鰻魚風後月華生 송어는 바람 분 뒤 달빛에 생겨나네.

Mullet comes to moon light after wind

熊州三老多春興 웅주의 노인들이 봄날에 흥겨워

須向南洲曳(罾/罔)行 마침내 남주를 바라보다 그물에 이끌려 간다.

六幅扁艇五尺篷 여섯 폭의 거룻배, 5척의 거룻배가

6 small Boats (five feet)

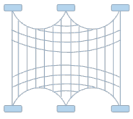
長洲一任去來風 긴 물가를 따라 바람 타고 가고 있네.

邇來十口須漁釣 이래로 열 명의 식솔을 먹이고자 낚시를 하는데

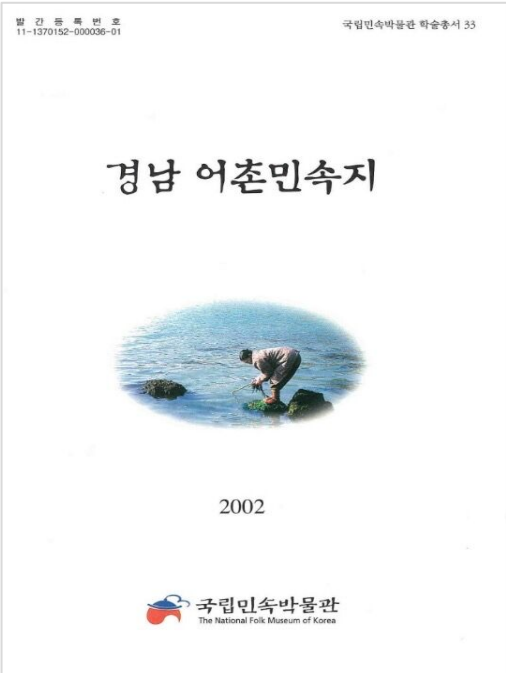
媿爾沙邊水勃公 부끄러운 듯, 백사장의 물을 밀치고 뛰어 오른다.

[주] 봉(篷): 물에 띄워서 그물, 낚시 따위의 어구를 위쪽으로 지탱하는 데에 쓰는 물건.

© This records, took the form of poem, says there were small 6 boats and mullet on the mouth of Nakdonggang river.



Historical Background



Folk Records of Gyeongnam Region (2002)

3. 들망어업 [數網漁業]

1) 육소장망어업(六艘張網漁業)의 발달과정

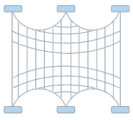
육소장망어업은 지금부터 약 120년 전에 동영 산양리와 거제도에서 그 어구어법이 고안되어 사용되기 시작하였고, 현재는 대부분의 어구어법이 개량되어 수동식에서 기계화되어 있다.

Traditional lift-net to catch flathead mullet by six boats were first invented around Tongyoung and Geoje area before 120 years.

▣ Japanese scholar (和田長三)'s book titled 漁のしるべ (1938)

◎ The origin of the traditional lift-net to catch flathead mullet in Geoje island goes back to over than 60 years.

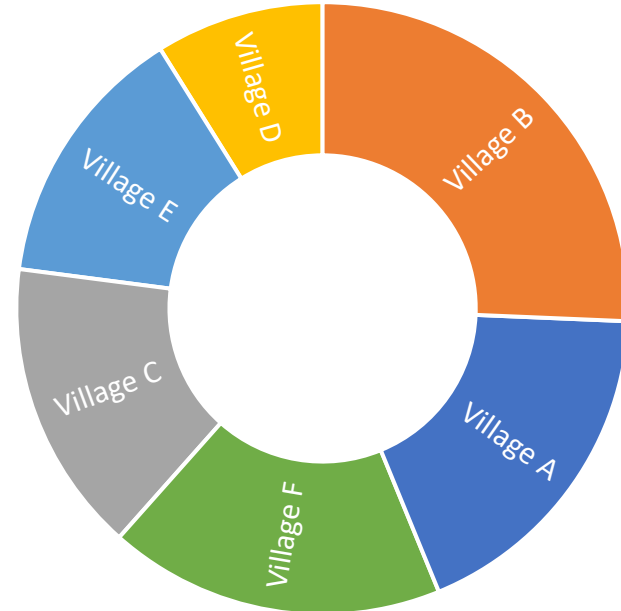
➔ 1938 - 60 = 1878



Food Supply & Livelihood importance

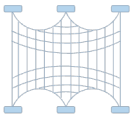
(Table1) Annual product (ton; average of recent 10 years)

Village	Annual product (ton)
Village A	102.5
Village B	145.1
Village C	87.6
Village D	50.3
Village E	79.4
Village F	100.4



(Table1) Record of Traditional Lift-net Fishery in Geoje, 2021

Village	Catch (kg)	Value (1,000won)	fishing fee (1,000won) (contribute to the community)	Income
Village A	70,000	280,000	85,000	195,000
Village B	100,000	400,000	100,000	300,000
Village C	60,000	240,000	100,000	140,000
Village D	35,000	140,000	25,000	115,000
Village E	70,000	280,000	70,000	210,000
Village F	55,000	220,000	58,000	162,000
average	65,000	260,000	73,000	187,000



Traditional Culture

Steamed Soup



Mullet in a sea mustard Soup



Basic Soup



Spicy Stew



Boiled in seasonings



Pickled gizzard shad



Steamed in sauce

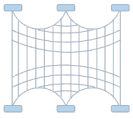


Mullet skin rolled with Kimchi



Steamed Dried Mullet





Traditional Culture



Mullet Festival

Ritual for a big catch of fish

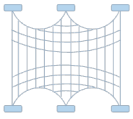
Boats Parade

Outdoor Performance

Mullet catch with Bare-hand

Music Festival

Painting Event etc.

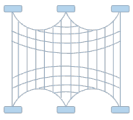


Knowledge System

- ❖ Simple lift-net : A method of catching fish by placing the ends of a square net under the water, then lifting the net when fish swim over it.
- ❖ Local fishers utilize their long-accumulated unique experiences and knowledge to take advantage of the fact that mullets migrate along specific routes at certain times (spring season).
- ❖ A watcher can observe the movement of mullets from a high vantage point and predict their migration routes
- ❖ Since mullets cannot swim backward, they can lure them into the net by holding the back part of the net slightly higher and lowering the front part. Then, lifting the front part first traps the mullets inside, as they cannot move backward.



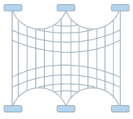
Watching the movement of mullets is a skill that only those with long-term experience can master.



Knowledge System

- ❖ *The net should be set up in a location where the bottom is made of solid rock. Sharp stones and rocks are undesirable as they can snag the net.*
- ❖ The net should be positioned along the path where the mullets migrate.
- ❖ The depth of the water should be consistently even. Locations where one side is deep or shallow are not ideal.

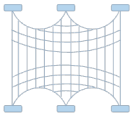




Seascape

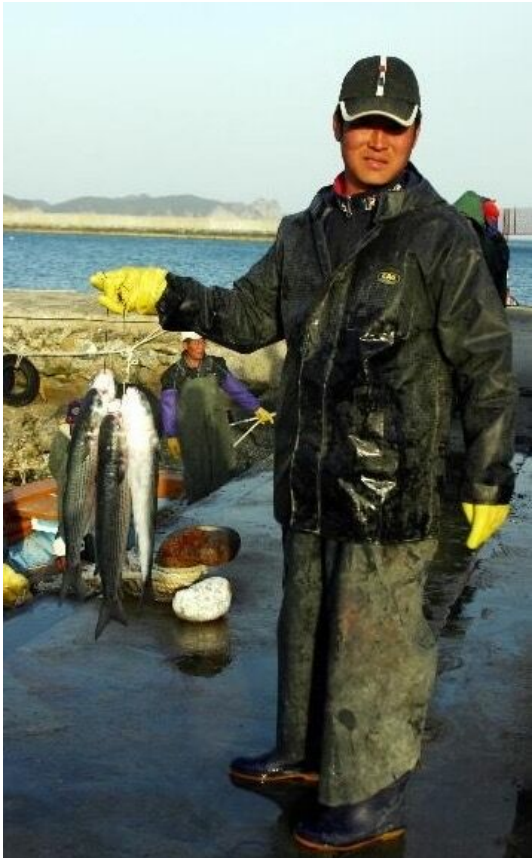
In the process of fishing, the sight of mullets being confined in the net as they move in one direction and then leaping as they are lifted out of the net is really spectacular.



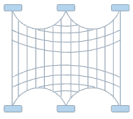


Ecosystem Function and Sustainability

- ❖ Traditional lift-net fishing positively impacts ecosystem function in two main aspects.
- ❖ First, compared to other fishing methods, it has lower catch intensity. Instead of actively pursuing mullets, fishermen wait and guard the passages where mullets pass through. They lift the net only when mullets are passing by. From the moment they start lifting the net until just before lifting the next one, mullets freely pass through the area. Fishing occurs only when mullets migrate close to the shore during certain times of the year. Due to the wide spacing of the net mesh, only fish of a certain size or larger are caught, thus reducing catch intensity compared to other methods.
- ❖ Secondly, using fixed nets anchored in one place minimally disturbs the seabed compared to other methods. After the fishing season ends, the fixed nets are retrieved and stored in warehouses until the next season, preventing ecological damage from ghost fishing.



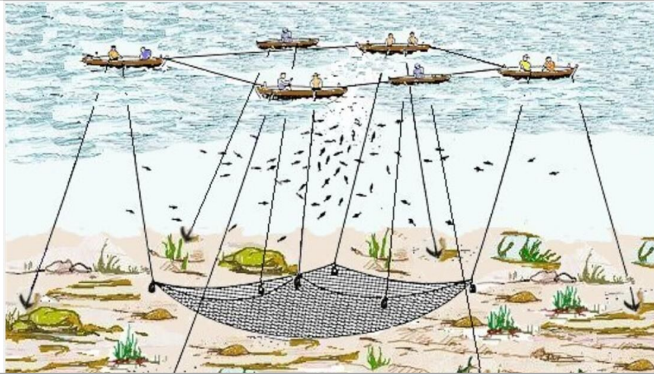
III. Modernized System



The mullet fishing industry in this region has been evolving gradually over time, but traditional knowledge and unique characteristics have been preserved.

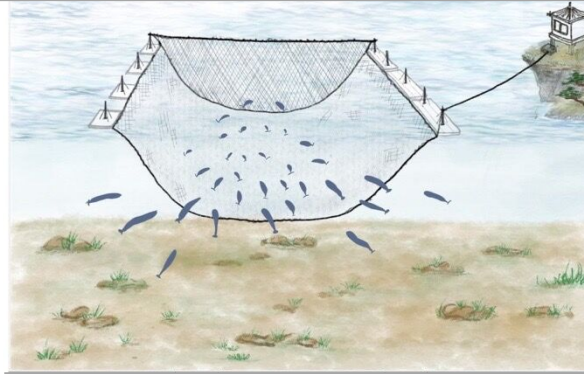
Workforce reduction, mechanization, Scale-up

Early Stage : 1880s~1990



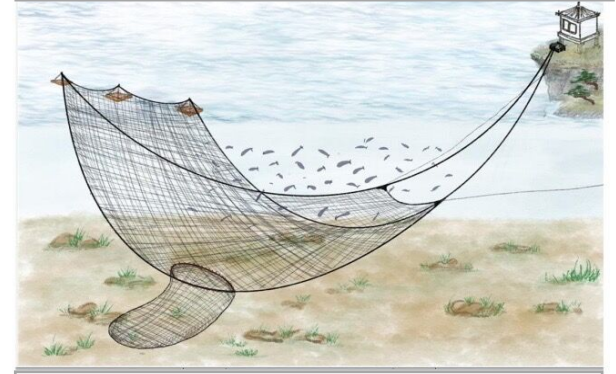
6 Boats & watcher
25~30 person

1st Transition : 1990~2010



6~8 Rafts & watcher
10~12 person

2nd Transition : 2010~present



3 Rafts & watcher
5~6 person



Food and Agriculture
Organization of the
United Nations

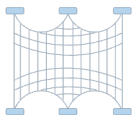
Globally Important
**AGRICULTURAL
HERITAGE**
Systems



GIAHS

Globally Important Agricultural
Heritage Systems

IV. Future Challenges



Further research on fisheries around the world similar to this traditional lift-net is needed.



Keeper:—



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Name

Flathead Mullet Watchtower

Address

Anamizu Town

Category

Life

Class

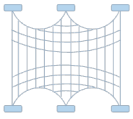
Traditional technique

Age

17th century~19th century

Comment

A 10m-tall scaffold is set up in an inlet to watch flathead mullet. It is made of logs that are combined to form a structure in the shape of a pyramid, and there is a seat at the top. People watch the 25-m² net at the bottom of the inlet, and pull it to catch fish when a school of fish comes along. The origin of this traditional fishing method is not clear, but it was used from the Edo period until the end of the war. There used to be more than 10 watchtowers, but they disappeared due to a decrease in the number of fish, and the amount of time and labor required for fishing. The fishing has not been conducted since 1996; the four watchtowers that exist today are for tourism purposes only. In 1889, an American astrologist, Percival Lowell, visited Noto and described the watchtower as being “like the nest of the mythological bird Roc”.



Further research on fisheries around the world similar to this traditional lift-net is needed.



Fig. 11: İzmir-Karaburun’da günümüzde kullanım gösteren bir dalyan. Fotoğraf: Ç. Çilingiroğlu

Fig. 11: A dalyan construction still used in Karaburun, İzmir. Image: Ç. Çilingiroğlu

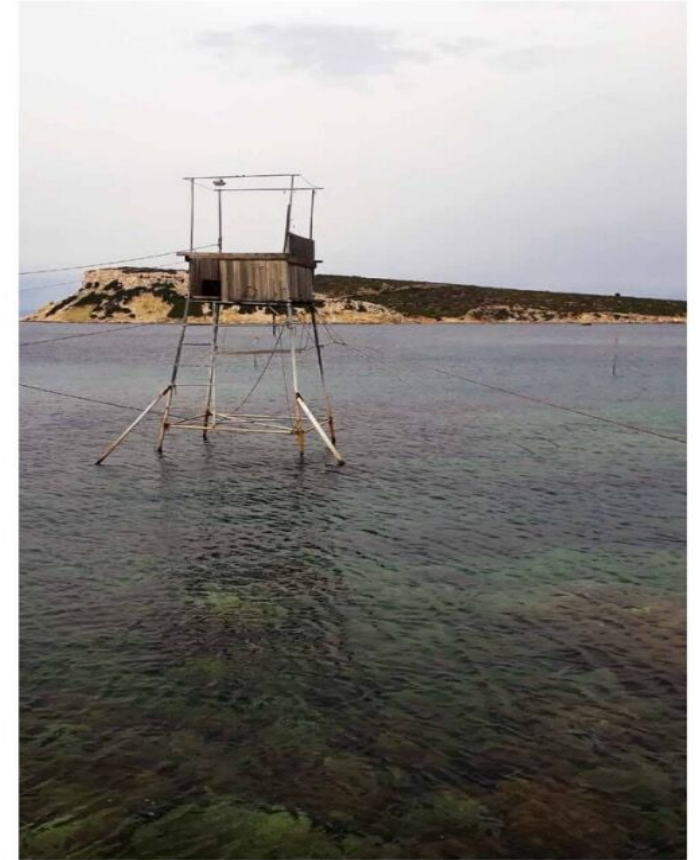
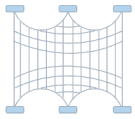


Fig. 12: İzmir-Karaburun’da halen kullanım gösteren dalyan ve ahşap gözetleme kulesi. Fotoğraf: Ç. Çilingiroğlu

Fig. 12: A dalyan with a watchtower still used in Karaburun, İzmir. Image: Ç. Çilingiroğlu

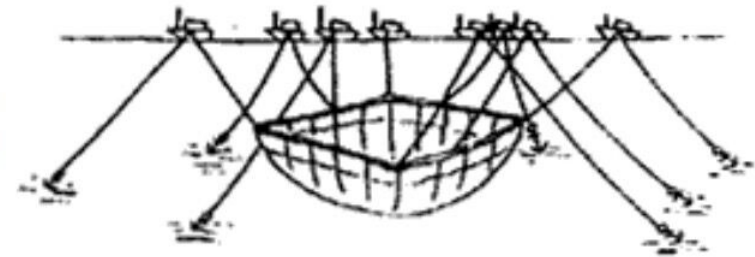


Further research on fisheries around the world similar to this traditional lift-net is needed.

- ❖ Japanese 8 boats lift-net
- ❖ At night, lights are used to attract fish
- ❖ Then gathered and caught using nets installed on the seabed.
- ❖ Eight boats are arranged in a circle and use bowl-shaped nets. The freshness of the caught fish is excellent.

八艘張漁法

海の底に敷いた多角形の網の上に灯りをともして魚を集め、周囲をかこんだ八艘の船で網を引き上げ集まってきた魚をとる方法です。主に、カタクチイワシ・カマス・イカをとるために使われます。



These 8 boats lift-nets are known that broadly used around Toyama area (富山湾), but only succeeded in Toyama-ken himi-si (富山県氷見).



Thank You!