A Case Study of Advanced Post Harvest Management in Korea

- Focused on Baekmiri Fishing Community -

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Heon Dong, Lee
Associate Research Fellow

Co-organized with the Republic of Korea's Ministry of Ocean in Fisheries
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1. Introduction

✓ Fishing community is an economic cooperative unit based on the human bond of fishermen for mutual assistance

✓ Fishing community has exclusive user rights for the coastal fisheries. As of 2015, there are 2,018 fishing communities in Korea

✓ The Korean fishing community is suffering from a labor force shortage due to a serious reduction in fisheries population and an rapid aging problem, but there is no room for improvement in the future

✓ Especially, due to the exclusiveness of the fishing community and the barriers to entry of fishery, aging and hollowization have deepened and the local communities have to worry about dismantling or collapse
1. Introduction

✓ Decrease in fishing household population and the aging of fishing villages are very serious, very drastic!


<Changes of fishing household and population>  <Aging rate(over 65)>
1. Introduction

- Growing interest in post harvest management to improve the quality and freshness of fisheries products
- In the past, fishermen focused on the quantitative production, and efforts to increase the value added of marine products were relatively insufficient
- Recently, efforts are being made to foster fishing communities
  - 6th industrialization: production (1st) × processing (2nd) × service (sales, tourism, marketing, etc., 3rd)
  - Support project on “Return-to-farming/fishing villages”
- Introduce Baekmiri fishing community as an advanced case in Korea
  - Use and management of coastal fishing ground (mudflat)
  - Post harvest management
  - New attempts of fishing community (elimination of entry barriers, collaboration with local society)
1. Introduction

Baekmiri village

- Location: Seosin-myeon, Hwasung, Kyunggi province
- Household: 90 / Population: 270
- Transport access: 1~2 hours from Seoul, about 1 hour from Incheon Int’ airport
- Baekmi(百味) means abundant seafoods and various flavors
1. Introduction

Status of Baekmiri fishing community

- Joining household: 90 household
- Number of Joining people: 124 person
- Type of fishery: Self-regulatory community fisheries
- Participated in Self-management fishery project (MOF) since 2005
- Main products: corb shell (가무락), manila clam (바지락), long arm octopus (낙지),
  굴 (oyster), surf clam (동죽), ark shell (새꼬막), goby (망둥어) 등
Fishery rights of Baekmiri fishing community (750ha)
2. Management of Baekmire fishing community

Chief officer

- Representative chairman
- Assistant administrator
- Information manager
- Experience manager 1
- Experience manager 2
- Experience manager 3
- Facility manager
- Camping site manager
- Sales manager
- Weekend farm manager
- Zipline, ATV manager

Steering committee member (11 person)

Village foreman
Saemaeul guide
Auditor
Seafood processing Association corporation

Financial management
Village PR, Website management
Ticketing, experience guide, Safety education
Experience facility management, Safety guard

Operate village, establish development plan
Support & cooperation of fishing experience village
Procure raw seafood, processing, distribution, sales, etc.
2. Management of Baekmiri fishing community

Greatly alleviate entry barriers of fishing community

- If a outsider has a willingness to engage in fishery and has a residence in the village, it is possible to join the fishing community (But there is an membership fee)
- If the applicants wishes to reside in Baekmiri for a stay-type weekend farming or fishing, they are granted quasi-membership for one year
- Baekmiri fishing community supports their fishing activities

Carry out various fishery activities (6th industrialization)

- Coastal fishery, Aquaculture, recreational (leisure) fishing boats
- Tourism, experience of fishing village, lodging business
- Processing, distribution, packaging, direct dealing (sales) to consumer
2. Management of Baekmiri fishing community

Revision of fishing community’s regulations

Chapter 3. Regarding the member

Article 9 (Joining of fishing applicant) When the applicant (trainee) has a residence in Baekmiri, he/she shall be qualified as a quasi-membership of fishing community through the resolution of a board of representatives.

By experiencing fishery in advance, reduced the probability of failure.
2. Management of Baekmiri fishing community

Revision of fishing community’s regulations

Chapter 5. Regarding the exercise of fishing rights:

Article 17 (Fishing activities of applicant)
The applicant (trainee) is allowed to engage in fishing for one year in the coastal fishing ground of community. In order to engage in fishing activities, permission must be obtained through the approval of the board of committee and community’s chief.

To minimize the conflict with existing members, education is carried out under the responsibility of the committee and the community’s chief.
3. Efforts and contribution for sustainability

Various activities for sustainable of fishery resources (2017)

- Follow the prohibition period of catch

<table>
<thead>
<tr>
<th>Species</th>
<th>Periods</th>
<th>Participants</th>
<th>Violators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manila clam</td>
<td>12.1~3.31</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Corb shell</td>
<td>6.15~10.15</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Oyster</td>
<td>3.1~11.30</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Surf clam</td>
<td>12.1~2.28</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Long arm octopus</td>
<td>6.1~8.31</td>
<td>124</td>
<td>0</td>
</tr>
</tbody>
</table>

- Follow the prohibition body length of catch

<table>
<thead>
<tr>
<th>Species</th>
<th>Prohibition body length</th>
<th>Participants</th>
<th>Violators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manila clam</td>
<td>Less than 3.7cm</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Corb shell</td>
<td>Less than 4.5cm</td>
<td>124</td>
<td>0</td>
</tr>
</tbody>
</table>
### 3. Efforts and contribution for sustainability

#### Various activities for sustainable of fishery resources (cont’d, 2007)

- **Fishing (aquafarming) ground break**

<table>
<thead>
<tr>
<th>Target ground</th>
<th>Area</th>
<th>Periods</th>
<th>Participants</th>
<th>Violators</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 285</td>
<td>50ha</td>
<td>2017.1.~12.</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>No. 287</td>
<td>15ha</td>
<td>2017.1.~12.</td>
<td>124</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Restriction of production quantity**

<table>
<thead>
<tr>
<th>Species</th>
<th>Restriction</th>
<th>Participants</th>
<th>Violators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manila clam</td>
<td>Less than 100kg</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Corb shell</td>
<td>Less than 20kg</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Oyster (shalled)</td>
<td>Less than 10kg</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Surf clam</td>
<td>Less than 100kg</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Long arm octopus</td>
<td>Less than 20kg</td>
<td>124</td>
<td>0</td>
</tr>
</tbody>
</table>
3. Efforts and contribution for sustainability

Various activities for sustainable of fishery resources (cont’d, 2007)

- Formation of fishery resources

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
<th>Quantity (kg)</th>
<th>Self-pay (won)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Releasing small corb shell</td>
<td>3</td>
<td>2,200</td>
<td>3,740,000</td>
</tr>
<tr>
<td>Releasing small manila clam</td>
<td>4</td>
<td>12,320</td>
<td>11,004,000</td>
</tr>
<tr>
<td>Transplanting small manila clam</td>
<td>11</td>
<td>10,319</td>
<td>20,183,500</td>
</tr>
</tbody>
</table>

- Conduct a fishing ground cleaning, elimination of harmful organisms, rock cleaning to maintain the sustainability of fishery resources
4. Main challenges and way forward

- Conflicts due to lack of skills and experience of trainee

  - Traineestrample holes in tidal flats (lack of discrimination)

  - Conflict with existing members (fishing ground damage)

  - Carry out education under responsibility of the committee and the community’s chief to resolve conflicts. (In case of absence, one existing member is designated as a helper)
4. Main challenges and way forward

Efforts for mutual harmony

Invitation to various village events (place of communication)

Provide an opportunity to interact naturally with existing members (mutual harmony, conflict resolution)
4. Main challenges and way forward

Secure seafood distribution network, Build a common sales shop, Create a new value-added through processing of aquatic products

✓ A person with a lot of experience in seafood processing business joined the fishing community (2010, Kim Jeong-bae)

✓ Distribution channel has been further diversified

✓ Through the operation of seafood processing plant, it contributes to local job creation and fishery income improvement
4. Main challenges and way forward

Post-harvest management efforts to improve quality and value-added

- Make a logo that symbolizes Baekmiri fishing village
- Developed various types of packaging items (materials)
- Development of various types of high-grade processed seafood

![Baekmiri Packaging Examples]
5. Implications

- The fishing community must change itself
  - It should be an open space for outsiders. ⇒ Lower entry barriers

- People from various fields should gather in fishing community
  - Fishermen + scientists, engineers, architects, designers, teachers, etc.
  - New business can be excavated from novel perspective

- The role of the community leader is very important
  - The dedicated efforts of the community’s chief and the managers have created the present Baekmiri fishing community

- Post-harvest management is necessary to create more value-added
  - Post-harvest management does not mean seafood processing only. It can be linked to fishing experience, tourism, direct sales to visitors, local job creation, etc.
Thank you for your attention