

**Karnataka *Dried Fish Matters*: Scoping, Sampling Framework,
and Designing of the Survey of Processors of Dried Fish**

March 2022

Introduction

This report describes the methodology used in the analysis of dried fish supply chain of Karnataka as part of the Dried Fish Matters (DFM) project. The Karnataka team of DFM, upon literature search, found a severe lack of quantitative data on the dried fish supply chain in the state, its characteristics, and scale of operations. Hence the team decided to collect primary data related to dried fish production and marketing in the state. Upon exploring options to collect data, an organization namely the Network for Fish Quality Management & Sustainable Fishing (NETFISH), was found to be suitable with extensive field expertise in collecting data from the fishing industry of coastal Karnataka. NETFISH is a society registered under the Marine Products Export Development Authority (MPEDA) of the Ministry of Commerce & Industry, Government of India. There are NETFISH staff in all major fishing harbors of Karnataka, collecting data related to fish landings and other fisheries-related activities. Initial interactions with Mr. Narayana KA, the state supervisor of NETFISH-Karnataka, provided the team with valuable inputs useful in data collection from along the Karnataka coast. An agreement was signed between NETFISH and the DFM-Karnataka team in which the responsibility of collecting primary data on dried fish production was entrusted with NETFISH. Partnership with NETFISH helped the Karnataka DFM team conduct surveys even when severe limitations were imposed on movement of people and goods during the novel coronavirus (COVID-19) pandemic. Three rounds of structured survey were conducted using Google® Forms® to gather information from 30 producers of dried fish each located in the nine major fishing harbors. Thus, the team was able to collect primary data during challenging times by improvising on the methodology.

Chronology of methodology development

Stakeholder Meetings

Two focus group discussions (FGD) were held at the premises of the Snehakunja Trust in Honnavara of Uttara Kannada district in June 2020. Snehakunja Trust is a non-governmental organization (NGO) working on rural welfare issues such as community health, rural development and environmental advocacy, with a particular focus on fisherwomen. The FGDs brought together nearby women processors and traders. The FGDs focused on topics including dried fish processing, procurement of raw materials, trading, species characteristics, processing typologies, characteristics of the households engaged in drying and the intricacies of transaction and other relational aspects. These meetings were organized during the peak of COVID-19 pandemic and in the backdrop of lockdown that had brought in hardship to many activities including fisheries and fish processing. Planning for FGDs carefully identified appropriate space, strict pursuing of physical distancing norms and other important protocols associated with group interactions. The first meeting was aimed at understanding the challenges and issues in

dried fish business, which was participated by around 30 women dried fish processors. The discussion with these women helped in development of questionnaire. The meeting was organized on 16th of June 2020.



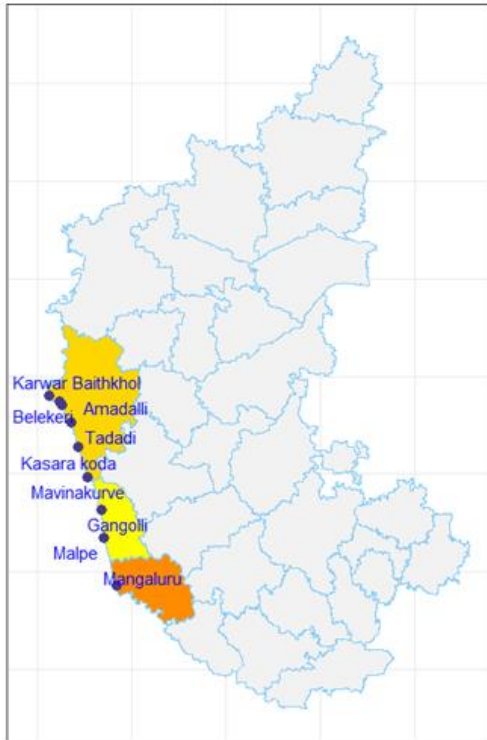
Figure 1. Group discussion with women dried fish processors and traders on 16/06/2020.

Sampling Plan and Data Collection

With insights that we gathered from our stakeholder meeting, we moved on to form sampling design for our research. We followed stratified random sampling plan for data collection from primary processors. The 300 km Karnataka coast is divided into nine fishing harbors which are the first stage of stratification. The nine harbors selected for data collection are: Karwar-Baithkhol, Amadalli, Belekeri, Tadadi, Kasarakode/Honnavaara, and Mavinakurve/Bhatkala (in Uttara Kannada district); Gangolli and Malpe (in Udupi district); and Mangaluru in Dakshina Kannada district. Figure 2 shows the location of nine major fishing harbors sampled on the map of Karnataka. Each harbor has a number of producer groups which are promoted under the National Rural Livelihood Mission Scheme attached to the Zilla Panchayats (local/district-level administrations). There are also a number of fisherwomen cooperative societies and the members are involved in small scale fish processing. Thus, our samples are drawn from either independent producer groups and/or members of the fisherwomen cooperative societies.

NETFISH assigns one Harbor Data Collector (HDC) to each fishing harbor, and it was the HDCs who conducted the actual surveys of dried fish producers for the DFM Karnataka team. HDCs live close to their assigned harbor and are usually members from the local community. They collect fish catch data from fish landing sites on a daily basis, and hence are knowledgeable about fishing and related activities taking place in their harbor. They are also acquaintances of dried fish processors, who are mostly small-scale fishers operating

around harbors or nearby beach landing centers. Thus, HDCs immensely helped in collecting data. Each HDC has a tablet-phone for collecting data through online survey forms such as the Google® Forms®. This helped in automating data syndication from different harbors, minimizing the time required for data collection, as well as reducing errors in data entry. In addition, HDCs facilitated interviews and meeting of Karnataka DFM team with dried fish processors and traders around their assigned harbors.



Districts ■ Dakshina Kannada ■ Udupi ■ Uttara Kannada ■ Non-coastal

Figure 2. The Nine Major Fishing Harbors of Coastal Karnataka.

As part of the DFM project, each HDC would collect data from 30 samples/households from their respective fisheries harbor, out of which 3 to 4 samples would be from neighboring beach landing centers. Surveys would be conducted thrice: once each in the monsoon, pre-monsoon, and post-monsoon seasons. This would provide panel data (repeated questions over time) capturing seasonal dynamics in terms of species diversity,

quantity of fish processed, and prices received. Such variables indicate the supply and demand drivers of dried fish market, understanding of which is one of the core objectives of DFM Karnataka project. The first round of data collection was planned during July 10, 2020 and to be completed by August 30, 2020 that would correspond with the monsoon season. Similarly, the second round of survey was carried out in December-January 2020-21 and third round of survey in April-May 2021 (extended up to June because of COVID19 related lockdown). Thus, a total of $9 \times 30 \times 3 = 810$ observations (with some expected standard omission due to nonavailability of the respondents or panel attrition) would be available at the end of the three rounds of survey by the end of March 2021. Prior to that expert validation and piloting were planned to finalize the survey questionnaire being rolled out. Apart from questions that repeated in every round of the survey, there were also some unique questions in individual rounds that were designed to capture specific constructs. For example, in the third round there were questions aimed at capturing the entrepreneurial motivations of the dried fish processors.

Questionnaire development:

Questionnaires were developed based on goals of the DFM project and the underlying research questions. Draft/preliminary questionnaires were prepared in Microsoft Word, handed over to HDCs for field trials, and were reviewed and revised from the field trials. Subsequently, the survey questionnaire was transformed from Word format to Google Forms. The Project Investigators reviewed the online format over several iterations.

Google Forms does not support tabular-structured text entry responses. Each question (row) in the table format (in Microsoft Word) was converted into distinct questions. Use of Google Forms has an added advantage that responses to surveys can be downloaded as *comma separated values* (CSV) files for further analysis through statistical software. The final version of the questionnaire was shared with the Project Head Prof. Derek Johnson Project Lead, University of Manitoba for his review comments and for use by other research partners working in different sites in 6 countries as part of the larger DFM project. The questionnaire was also reviewed by Azim Premji University, Institutional Review Board (IRB) responsible to oversee ethics in human research.

Training of the enumerators

The second meeting with 9 HDCs and all the four members of the project team was held on July 4th 2020 to train the HDCs in administering the questionnaire and data entry process in tabs. Training also included the ethical protocol of the data collection and safety issues during the pandemic period. After the training and discussion on ethical protocol, the HDCs did a mock interview among each other. Following this, the questionnaire was revised again and shared with the enumerators. Each enumerator was asked to do no more than 2 pilot surveys using the Google Forms and write a feedback note with any

suggestions to the questionnaire. A few errors were identified and corrected before starting the actual survey.



Figure 3. Training of NETFISH Enumerators on data collection, sampling methods, ethics protocol on 4th July 2020.

The three phases of Data Collection

The first phase of data collection was carried out between July and August 2020 as planned. After the first phase data collection, a few errors relating to the double entry, coding and other minor details were identified. The project team then planned a meeting with the HDCs at Gangolli Harbor, 26th September 2020. The purpose of this meeting was not only to clarify the doubts relating to first phase data collection and entries, but also to get a reflection from each of the enumerators on their experience of conducting fieldwork, clarify some of their doubts, and incorporate some important questions (or modify those) in the second phase of data collection, a training around second phase questionnaire and thanking them for taking up the data collection diligently.

Commented [AJ1]: Prasanna, you can add the third phase training of the enumerators!!

The second phase data collection which was planned during November-December (post-monsoon phase) was discussed with the HDCs. A separate questionnaire was developed using Google Forms for the second round survey. In the second phase, most of the profile and socio-economic background questions from the first round were eliminated. A few nuanced questions were added. Since no names or identification were to be collected, survey code alone is a vital link between the three phases of data collection. The second phase data collection was over by first week of January.

The third phase of survey though was initiated in March 2021 could only be executed in April-June period (corresponding with the pre-monsoon period). A new questionnaire/schedule was developed for this round as well, and a training was conducted for the HDCs on April 6th, 2021, at the premises of Snehakunja Trust, Honnavara. The HDCs were informed about the safety protocols in times of COVID19 as well as ethics in survey interviews. The HDCs were asked about any difficulties that they faced in the first two rounds of the survey, and there were no major difficulties. The new questionnaire was presented to the HDCs and they were explained about the repeated questions and the new set of questions. The third round of the survey was completed in the months of April, May and June 2021.

All three survey instruments are provided as appendices.

Appendices

Appendix 1. Questionnaire used in the first round of the survey of dried fish producers.

Understanding the Supply and Demand drivers of Dried fish value chain: A study in Karnataka Coast As part of a larger project on Dried Fish Matters

Brief statement of purpose of the work

You are invited to participate in a survey conducted as part of a SSHRC, Canada funded study titled "Dried Fish Matter". As part of it we intend to understand the challenges faced by dried fish producers in Karnataka coast. This survey aims to identify the current dried fish production system, its challenges in procurement of raw materials, processing and marketing. An understanding of these challenges would help suggesting and designing policies and operations which is sustainable for marine ecosystem, livelihood of people (especially women) engaged in the processing and trading as well as an affordable and important source of food and nutrition for the masses. The study attempts to understand some of these aspects. The credentials and responses will be confidential, anonymized and will be used for research and research related dissemination purpose in some form of aggregated response.

Participation in this interview is completely voluntary and you have the right to withdraw at any point of time during the interview. We also envision repeat of this survey additional two times around November 2020 and March 2021 which will be much shorter than this in order to understand the seasonal characteristics of dried fish procurement, processing and trading. In those interviews also the participation would be voluntary where you have the rights to withdraw at any point of time during or before the interview.

The objectives of this research have been explained to me.

I understand that I am free to withdraw from the research at any stage.

I understand that my anonymity is guaranteed. I agree that interview will be recorded.

May you have any doubt or clarifications, you can contact any one the following individuals responsible for the survey:

Amalendu Jyotishi, Azim Premji University, Principal Investigator, Mob:9900213825

Ramchandra Bhat, Co- Principal Investigator, Mob: 9740022668

Priya Gupta, Amrita Vishwa Vidyapeetham, Co-Principal Investigator, Mob:9611924421

Narayana KA, Netfish, mob: 9448530798 /9148533037

***Required**

1. CONSENT TO PARTICIPATE IN RESEARCH

Tick all that apply.

- YES
- NO

2. Name of the enumerator

3. Survey code

4. 1. Select the Dried fish raw materials procurement methods/sources.

Tick all that apply.

- Landing centres directly from the boat owners
- Participating in the auction market
- Procurement from the agents
- Harvested by the family members
- Buy back arrangements with the traders with fixed price

5. [2.1.a. Name](#) of the fish -option 1

6. 2.1.b. Season (month) of procuring fish variety-option 1

7. 2.1.c. Quantity procured during your last two months (No. Baskets) of fish-option 1

8. 2.1.d. Drying period of fish- (Days) option 1

9. [2.2.a. Name](#) of the fish -option 2

10. 2.2.b. Season (month) of procuring fish variety-option 2

11. 2.2.c. Quantity procured during your last two months (No. Baskets) of fish-option 2

12. 2.2.d. Drying period of fish- (Days) option 2

13. [2.3.a. Name](#) of the fish -option 3

14. 2.3.b. Season (month) of procuring fish variety-option 3

15. 2.3.c. Quantity procured during your last two months (No. Baskets) of fish-option 3

16. _____
2.3.d. Drying period of fish- (Days) option 3
Mark only one oval.
 Option 1
17. [2.4.a.Name](#) of the fish -option 4

18. _____
2.4.b. Season (month) of procuring fish variety-option 4
Mark only one oval.
 Option 1
19. _____
2.4.c. Quantity procured during your last two months (No. Baskets) of fish-option 4
20. _____
2.4.d. Drying period of fish- (Days) option 4
21. [2.5.a. Name](#) of the fish -option 5

22. _____
2.5.b. Season (month) of procuring fish variety-option 5
23. _____
2.5.c. Quantity procured during your last two months (No. Baskets) of fish-option 5
24. _____
2.5.d. Drying period of fish- (Days) option 5
25. [2.6.a. Name](#) of the fish -option 6

26. _____
2.6.b. Season (month) of procuring fish variety-option 6
27. _____
2.6.c. Quantity procured during your last two months (No. Baskets) of fish-option 6
28. _____
2.6.d. Drying period of fish- (Days) option 6
Mark only one oval.
 Option 1
29. _____
3.1.a. Please mention the number of units procured by you of the Capital item Mats/nets/rack
30. _____
3.1.b. Please mention the price paid by you for the Capital item -Mats/nets/racks
31. _____
3.2.a. Please mention the number of units procured by you of the Capital item Baskets

32. 3.2.b. Please mention the price paid by you for the Capital item -Baskets

33. 3.3.a. Please mention the number of units procured by you of the Capital item Tarpaulins

34. 3.3.b. Please mention the price paid by you for the Capital item -Tarpauls

35. 3.4.a. Please mention the number of units procured by you of the Capital item Cisterns

36. 3.4.b. Please mention the price paid by you for the Capital item -Cisterns

37. 3.5.a. Please mention the number of units procured by you of the Capital item -
Baskets box

38. 3.5.b. Please mention the price paid by you for the Capital item -Baskets box

39. 3.6.a. Please mention the number of units procured by you of the Capital item Knives

40. 3.6.b. Please mention the price paid by you for the Capital item -Knives

41. 3.7.a. Please mention the number of units procured by you of the Capital item scale to weigh

42. 3.7.b. Please mention the price paid by you for the Capital item -Scale to weigh

43. 3.8.a. Please mention the number of units procured by you of the Capital item storage room

44. 3.8.b. Please mention the price paid by you for the Capital item -storage room

45. 3.9.a. Please mention the number of units procured by you of the Capital item Packaging

46. 3.9.b. Please mention the price paid by you for the Capital item -Packaging

47. 3.10.a. Please mention the number of units procured by you of the Capital item others

48. 3.10.b. Please mention the price paid by you for the Capital item -others.

49. 3.11. Please mention the price paid by you for Working capital- Raw material (dried fish) per day

50. 3.12. Please mention the price paid by you for Working capital- Salt (per day)

51. 3.13. Please mention the price paid by you for Working capital- Transportation (per day)

52. 3.14. Please mention the price paid by you for Working capital- Ice (per day)

53. 3.15. Please mention the price paid by you for Working capital- Labour days/cycle

54. 4.1.a. Which dried fish varieties did you sell to consumers (retail) in last two months? mention the names

55. 4.1.b. What was the average price you got for the dried fish you sold to consumers?

56. 4.1.c. Choose the locations where you sold dried fish.
Tick all that apply.
- Around residence
 - Adjacent street
 - Market place
 - Weekly market
 - Others
57. 4.1.d. While selling dried fish in last to months what kind of credit deals did you do with consumers? Please select appropriate option.
Mark only one oval.
- Gave credit to sell fish
 - took credit and sold fish
 - Neither of above
58. 4.2.a. Which dried fish varieties did you sell to Up-ghat traders in last two months? mention the names

59. 4.2.b. What was the average price you got for the dried fish you sold to up-ghat traders?

60. 4.2.c. Choose the locations where you sold dried fish.
Tick all that apply.
- Around residence
 - Adjacent street
 - Market place
 - Weekly market
 - Others
61. 4.2.d. While selling dried fish in last two months what kind of credit deals did you do with up-ghat traders? Please select appropriate option.
Mark only one oval.
- Gave credit to sell fish
 - took credit and sold fish

Neither of above

62. 4.3.a. Which dried fish varieties did you sell to local traders in last two months? mention the names

63. 4.3.b. What was the average price you got for the dried fish you sold to local traders?

64. 4.3.c. Choose the locations where you sold dried fish.

Tick all that apply.

- Around residence
- Adjacent street
- Market place
- Weekly market
- Others

65. 4.3.d. While selling dried fish in last two months what kind of credit deals did you do with local traders? Please select appropriate option.

Mark only one oval.

- Gave credit to sell fish
- took credit and sold fish
- Neither of above

66. 4.4.a. Which dried fish varieties did you sell to the hotels and restaurants in last two months? mention the names

67. 4.4.b. What was the average price you got for the dried fish you sold to hotels and restaurants?

68. 4.4.c. Choose the locations where you sold dried fish.

Tick all that apply.

- Around residence
- Adjacent street
- Market place
- Weekly market
- Others

69. 4.4.d. While selling dried fish in last two months what kind of credit deals did you do with hotel and restaurants? please select appropriate option.

Mark only one oval.

- Gave credit to sell fish
- took credit and sold fish
- Neither of above

70. 4.6. Any other information on sale of dried fish to any other place. please mention.

71. 5.1. Does the price of the product stand as a barrier to demand for dried fish? (Please select appropriate response from following 5 point scale, 1-not a barrier 2-low 3-Medium 4- high, and 5- very high barrier) *Mark only one oval.*

1 2 3 4 5

Not a barrier Very high barrier

72. 5.2. Does the smell stand as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

73. 5.3. Do the bones in dried fish stand as a barrier to demand for it?

Mark only one oval.

1 2 3 4 5

Not a barrier Very high barrier

74. 5.4. Does the bad taste stand as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

Not a barrier Very high barrier

75. 5.5. Does unavailability of suitable dried fish act as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

not a barrier very high barrier

76. 5.6. Does difficulty in preparation act as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

Not a barrier Very high barrier

Not a barrier Very high Barrier

77. 5.7.Does preparation time act as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

Not a barrier Very high barrier

78. 5.8.Does availability of substitutes such as fish or chicken act as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

Not a barrier very high barrier

79. 5.9.Does shelf-life act as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

Not a barrier Very high barrier

80. 5.10.Does difficulties in evaluating the quality act as a barrier to demand for dried fish?

Mark only one oval.

1 2 3 4 5

Not a barrier Very high barrier

81. 6.1. How frequently did you eat dried fish in last 3 months: *

Mark only one oval.

- Daily
- Weekly 3 to 5 times
- Once a week
- Infrequently

82. 6.2. How much quantity of dried fish do you generally consume in a day?

83. 7. What are the common varieties of fish that you ate in last 3 months?

84. 8.1.a.How much loss did you suffer in dried fish business due to unexpected rain? mention quantity

85. 8.1.b.How much loss did you suffer in dried fish business due to unexpected rain? mention monetary damage

86. _____
8.2.a.How much loss did you suffer in dried fish business due to lack of supplies of inputs? mention quantity
87. _____
8.2.b.How much loss did you suffer in dried fish business due to lack of supplies of inputs? mention monetary loss
88. _____
8.3.a.How much loss did you suffer in dried fish business due to storage and transportation loss? mention quantity
89. _____
8.3.b.How much loss did you suffer in dried fish business due to storage and transportation loss? mention monetary loss
90. _____
8.4.a.How much loss did you suffer in dried fish business due to Loss of fishing /production ? mention quantity
91. _____
8.4.b.How much loss did you suffer in dried fish business due to Loss of fishing /production ? mention monetary loss.
92. _____
8.5.How much loss did you suffer in dried fish business due to any other reason ?
- _____
- _____
- _____

93. 9.1. In your opinion how important is Quality of water used for washing of fish in determining the dried fish quality? (Please choose your response from the given five point scale: 5- most important, 4-important, 3-moderate important, 2- less important, 1. Not important)

Mark only one oval.

1 2 3 4 5

Not important

Most important

94. [9.2. In](#) your opinion how important is Duration (i.e., number of hours for procurement and transportation duration before fish is kept in salt water)in determining the dried fish quality?

Mark only one oval.

1 2 3 4 5

Not important

Most important

95. [9.3. In](#) your opinion how important is hygiene and sanitation at the drying place (sand and animal excreta etc.) in determining the dried fish quality?

Mark only one oval.

1 2 3 4 5

Not important

Most important

96. 9.4. Please rate how important is methods of storage, packaging, transportation in hygienic conditions, in determining the dried fish quality.

Mark only one oval.

1 2 3 4 5

Not important Most important

97. 9.5. Please rate how importantly is Infestation by bacteria and other maggots of dried fish perceived in determining quality of dried fish?

Mark only one oval.

1 2 3 4 5

Not important Most important

98. 9.6. Please rate how important duration of sun-drying and method of drying is in determining the dried fish quality *Mark only one oval.*

1 2 3 4 5

Not important Most important

99. 9.7. Please rate how important temperature is in determining the dried fish quality.

Mark only one oval.

1 2 3 4 5

Not important Most important

100. 9.8. What parameters are normally used by your buyers when you sell dried fish? [Note all the attributes they respond]

101. 10. How many baskets of dried fish would you expect to procure in a week?

Tick all that apply.

- <5
- 5-9
- 10-14
- 15-19
- 20 or above

102. 11. What is the method of drying process you normally adopt?

Tick all that apply.

- Mat drying
- Rack drying
- Solar drying

- On the floor
- Other

103. If you follow any other method, specify the method

104. 12.1. Are you or any member of your household is a member in any of the following? Fisher or Farmer or Producers Cooperatives/Unions/Associations *Mark only one oval.*

- Group leader
- Active member
- Inactive as a member
- Not a member

105. 12.2. Are you or any member of your household is a member in any of the following? Credit/microfinance/lending group.

Mark only one oval.

- Group leader
- Active member
- Inactive as a member
- Not a member

106. 12.3. Are you or any member of your household is a member in any of the following? Panchayat or elected body.

Mark only one oval.

- Group leader
- Active member
- Inactive as a member
- Not a member

107. 12.4. Are you or any member of your household is a member in any of the following? Religious group

Mark only one oval.

- Group leader
- Active member
- Inactive as a member
- Not a member

108. 12.5. Are you or any member of your household is a member in any of the following? Caste/social community-based organization *Mark only one oval.*

- Group leader
- Active member
- Inactive as a member
- Not a member

109. 12.6. Are you or any member of your household is a member in any of the following? Other group/organization, mention the role.
110. 13. What in your opinion will be the interest of the community to participate in the producer company?
Mark only one oval.
- Will be absolutely willing to participate
 - Will participate
 - May participate
 - Will not participate
 - Not able to assess
111. 14. Think about the last 5 years. Of those years, how many years has you have been able to procure sufficient fish for your processing needs?
Mark only one oval.
- All five years
 - Only one out of five years
 - Two of five years
 - Three out of five years.
 - Four out of five years.
112. 15. Who/what are the greatest threats to raw material procurement for fish drying in your area today? Please select up to THREE.
Tick all that apply.
- inter-state traders
 - fish meal procuring agents
 - freezing company agents
 - Overall decline of fish availability
 - Climate change (changing rainfall pattern and fish harvesting season)
 - Don't know
113. 16. Among the following options which is most important for your livelihoods and survival .
Mark only one oval.
- Fishing
 - Dried fish processing
 - Fresh fish marketing
 - Household work
 - Others
114. 17. If you are involved in both fresh and dried fish marketing which earns you most money? Choose any one.
Mark only one oval.
- Fresh fish
 - Dried fish
115. 18.1. Whether you had any training on processing dried fish?
Mark only one oval.

- Yes
- No

116. 18.2.1. If 'yes' provide details on training received on dried fish processing, number of days of training and place of training.

117. 18.2.2. If 'yes' provide details on training received on hygiene and sanitation in fish handling , number of days of training and place of training.

118. 18.2.3. If 'yes' provide details on training received on any other aspect, number of days of training and place of training.

119. 19. Are you interested in participating in training program on dried fish processing?

Mark only one oval.

- Yes
- No

120. 20.1. Do you find enough space for drying and processing your fish?

Mark only one oval.

- Yes
- No

121. 20.2. How much space you normally require?Mention the sq. meters and the place.

122. [21.1.At](#) any points of time did you have any conflict relating to the drying space?

Mark only one oval.

- Yes
- No

123. 21.2.If yes, what was the nature of conflict?

124. 22. Apart from salting and drying what other kinds of fish products you make?

- Fish chutney powder
- Fish pickle
- Other _____
- Nothing

125. 23. What are the new products you have started making which was not done before? (Mention "NA" if there is no response)

126. 24. What are the products that you were making earlier and now you don't make? (Mention "NA" if there is no response)

127. 25. Do you give credit to the fishers for procuring fish?

Mark only one oval.

- Often
- Sometimes
- Rarely
- Never

128. 26. Do you get credit from the traders/final consumers to supply dried fish?

Mark only one oval.

- Often
- Sometimes
- Rarely
- Never

129. 27. List up to five important fish species for your business in the order of most important to less important

130. 28. Which are the best months for dried fish trading? Mention from which month to which month

131. 29. Which are the worst months for dried fish trading?Mention from which month to which month

132. 30. Which are the best months for fish procurement? Mention from which month to which month.

133. 31. Which are the worst months for fish procurement?Mention from which month to which month

134. 32. Do you like to continue in this profession?

Mark only one oval.

- Yes
- No

135. 33. If not, what other profession you feel is better for you?

136. 34. Are your children interested and ready to take up this profession?

Mark only one oval.

- Yes
- No
- Maybe

137. 35. If No, what is the other profession they are doing or interested in? and why?

138. 36. Are younger generation interested in coming to this profession of fish processing and drying?

Mark only one oval.

- Yes
- No
- Maybe

139. 37. What was the impact of COVID-19 Pandemic on your business since March?

Socio-economic profile

140. 1. Please mention your Address: Street, Village, Taluk, District

141. 2. How old are you? (mention the age in years)

142. 3. Religion

Mark only one oval.

- Hindu
- Muslim
- Christian
- Buddhist
- Other

143. 4. Caste

Mark only one oval.

- General
- Scheduled Caste (SC)
- Scheduled Tribe (ST)
- Other backward class
- other

144. 5. Ration Card

Mark only one oval.

- APL
- BPL
- Other card

No card

145. 6.1. How many adults male members are there in your family?

146. 6.2. How many adults female members are there in your family?

147. 6.3. How many male children do you have?

148. 6.3. How many female children do you have?

149. 6.4. How many earning members are there in your family?

150. 7. Number of years, household has been in dried fish processing/marketing?

Mark only one oval.

- 5 years or less
- 6-15 years
- 16-30 years
- Above 30 years

151. 8. My family income "variations" in a year is

Mark only one oval.

- Unpredictable
- Varies but predictable very little variation
- Almost No variation
- Unpredictable

152. 9. Total monthly household income

Mark only one oval.

- Less than 10,000
- Rs. 10,001 to Rs. 20,000
- Rs. 20,001 to Rs. 30,000
- Rs. 30,001 to Rs. 40,000
- Rs. 40,001 to Rs.50,000
- 50,001 and above
- Don't wish to say

153. 10.1. Do you own a house? If no mention the same, if yes mention the type of house.

Tick all that apply.

- Don't own a house
- Thatched/make-shift
- Tiled roof
- Concrete roof
- Others

154. [10.2.Do](#) you own household assets? (tick multiple options where applicable)

Tick all that apply.

- Furniture
- TV
- Two-wheeler
- Bicycle
- Other

155. 10.That concludes our survey. We thank you greatly for your help and the time you've taken. COULD YOU PLEASE TELL US WHAT ARE YOUR REQUIREMENTS TO ENHANCE THE QUALITY AND QUANTITY OF DRIED FISH AND HOW WE COULD BE OF SOME HELP IN THIS EFFORT. ALSO MENTION THREE MOST IMPORTANT CHALLENGES IN DRIED FISH PROFESSION.

This content is neither created nor endorsed by Google.

Google Forms

Appendix 2. Questionnaire used in the second round of the survey of dried fish producers.

Understanding the Supply and Demand drivers of Dried fish value chain: A study in Karnataka Coast As part of a larger project on Dried Fish Matters-Phase 2

Brief statement of purpose of the work

You are invited "again" to participate in this survey conducted as part of a SSHRC, Canada funded study titled "Dried Fish Matter". As part of it we intend to understand the challenges faced by dried fish producers in Karnataka coast. This survey aims to identify the current dried fish production system, its challenges in procurement of raw materials, processing and marketing. An understanding of these challenges would help suggesting and designing policies and operations which is sustainable for marine ecosystem, livelihood of people (especially women) engaged in the processing and trading as well as an affordable and important source of food and nutrition for the masses. The study attempts to understand some of these aspects. The credentials and responses will be confidential, anonymized and will be used for research and research related dissemination purpose in some form of aggregated response.

Participation in this follow-up survey is completely voluntary and you have the right to withdraw at any point of time during the interview. This survey is much shorter than the previous one. We also envision repeat of this survey another time in March 2021 which will be similar or shorter than this in order to understand the seasonal characteristics of dried fish procurement, processing and trading. In those interviews also the participation would be voluntary where you have the rights to withdraw at any point of time during or before the interview.

The objectives of this research have been explained to me.

I understand that I am free to withdraw from the research at any stage.

I understand that my anonymity is guaranteed. I agree that interview will be recorded.

May you have any doubt or clarifications, you can contact any one the following individuals responsible for the survey:

Amalendu Jyotishi, Azim Premji University, Principal Investigator, Mob:9900213825

Ramchandra Bhat, Co-Principal Investigator, Mob: 9740022668

Priya Gupta, Amrita Vishwa Vidyapeetham, Co- Principal Investigator, Mob:9611924421

Narayana KA, NETFISH, mob: 9448530798 /9148533037

*Required

Untitled title

1. CONSENT TO PARTICIPATE IN RESEARCH
Tick all that apply.

- Yes
- No

2. Name of the enumerator

3. Survey code *

4. 1a. Gender of the Respondent
Mark only one oval.

- Female
- Male

5. 1b. The respondent is same person surveyed in the first phase
Mark only one oval.

- Yes
- No

6. 1c. If NO, Gender of the respondent in FIRST phase
Mark only one oval.

- Female
- Male

7. 1d. Do you belong to a fishing community *
Mark only one oval.

- Yes
- No

8. 1e. Are you "first generation" to get into fishing and fish processing activities? *
Mark only one oval.

- Yes
- My parents came into this profession
- My grand-parents came into this profession
- We have been in this profession since many generations

9. [2.1.a.Name](#) of the fish -option 1

10. 2.1.b.Season (month) of procuring fish variety-option 1

11. 2.1.c.Quantity procured during your last two months (No. Baskets) of fish-option 1
12. 2.1.d.Drying period of fish- (Days) option 1
13. [2.2.a.Name](#) of the fish -option 2
14. 2.2.b.Season (month) of procuring fish variety-option 2
15. 2.2.c.Quantity procured during your last two months (No. Baskets) of fish-option 2
16. 2.2.d.Drying period of fish- (Days) option 2
17. [2.3.a.Name](#) of the fish -option 3
18. 2.3.b.Season (month) of procuring fish variety-option 3
19. 2.3.c.Quantity procured during your last two months (No. Baskets) of fish-option 3
20. 2.3.d.Drying period of fish- (Days) option 3
21. [2.4.a.Name](#) of the fish -option 4
22. 2.4.b.Season (month) of procuring fish variety-option 4
23. 2.4.c.Quantity procured during your last two months (No. Baskets) of fish-option 4
24. 2.4.d.Drying period of fish- (Days) option 4
25. [2.5.a.Name](#) of the fish -option 5
26. 2.5.b.Season (month) of procuring fish variety-option 5
27. 2.5.c.Quantity procured during your last two months (No. Baskets) of fish-option 5
28. 2.5.d.Drying period of fish- (Days) option 5
29. [2.6.a.Name](#) of the fish -option 6
30. 2.6.b.Season (month) of procuring fish variety-option 6
31. 2.6.c.Quantity procured during your last two months (No. Baskets) of fish-option 6
32. 2.6.d.Drying period of fish- (Days) option 6
33. 3.11.Please mention the price paid by you for Working capital- Raw material (fresh fish) per day
34. 3.12.Please mention the price paid by you for Working capital- Salt (per day)
35. 3.13.Please mention the price paid by you for Working capital- Transportation (per day)

36. 3.14. Please mention the price paid by you for Working capital- Ice (per day)

37. 3.15. Please mention the price paid by you for Working capital- Labour days/cycle

38. 3.16. 1 Do the family members especially male members provide support in your work?
Tick all that apply.
- Yes
 No
39. 3.16. 2. If yes, list the activities relating to procurement, processing and marketing in which they support you *
40. 4.1.a. Which dried fish varieties did you sell to consumers (retail) in last two months? mention the names

41. 4.1.b. What was the average price you got for the dried fish you sold to consumers?

42. 4.1.c. Choose the locations where you sold dried fish.
Tick all that apply.
- Around residence
 Adjacent street
 Market place
 Weekly market
 Others
43. 4.1.d. While selling dried fish in last two months what kind of credit deals did you do with consumers? please select appropriate option.
Mark only one oval.
- Gave credit to sell fish
 Took credit and sold fish
 Neither of above
44. 4.2.a. Which dried fish varieties did you sell to Up-ghat traders in last two months? mention the names

45. 4.2.b. What was the average price you got for the dried fish you sold to up-ghat traders?

46. 4.2.c. Choose the locations where you sold dried fish.
Tick all that apply.
- Around residence
 Adjacent street
 Market place
 Weekly market
 Others
47. 4.2.d. While selling dried fish in last two months what kind of credit deals did you do with up-ghat traders? please select appropriate option.
Mark only one oval.
- Gave credit to sell fish
 Took credit and sold fish
 Neither of above

48. 4.3.a. Which dried fish varieties did you sell to local traders in last two months? mention the names

49. 4.3.b. What was the average price you got for the dried fish you sold to localtraders?

50. 4.3.c. Choose the locations where you sold dried fish.
Tick all that apply.
- Around residence
 - Adjacent street
 - Market place
 - Weekly market
 - Others
51. 4.3.d. While selling dried fish in last two months what kind of credit deals did you do with local traders? please select appropriate option.
Mark only one oval.
- Gave credit to sell fish
 - Took credit and sold fish
 - Neither of above
52. 4.4.a. Which dried fish varieties did you sell to the hotels and restaurants in last two months? mention the names

53. 4.4.b. What was the average price you got for the dried fish you sold to hotels and restaurants?

54. 4.4.c. Choose the locations where you sold dried fish.
Tick all that apply.
- Around residence
 - Adjacent street
 - Market place
 - Weekly market
 - Others
55. 4.4.d. While selling dried fish in last two months what kind of credit deals did you do with hotel and restaurants? please select appropriate option.
Mark only one oval.
- Gave credit to sell fish
 - Took credit and sold fish
 - Neither of above
56. 4.5.a. Which dried fish varieties you sold to the poultry feed or other feed industry in last two months?

57. 4.5.b. What is the average price you got for selling dried fish to the poultry feed or other feed industry?

58. 4.5.c. What is the quantity of dried fish you sold to the poultry feed or other feed industry?

59. 4.5.d. Do you directly sell to the owner of poultry feed company or through traders?

Tick all that apply.

- Directly to the owners
- Through the traders
- Both
- Other

60. 4.5.e Name the location (if you know) where your dried fish goes for poultry or other feed

61. 4.6. Any other information on sale of dried fish to any other place. please mention.

62. 6.1. How frequently did you eat dried fish in last 2 months? *

Mark only one oval.

- Daily
- Weekly 3 to 5 times
- Once a week
- Infrequently

63. 6.2. How much quantity of dried fish do you generally consume in a day (in gms)?

64. 7. What are the common varieties of fish that you ate in last 2 months?

65. 8.1.a. How much loss did you suffer in dried fish business due to unexpected rain? mention quantity (in kg)

66. 8.1.b. How much loss did you suffer in dried fish business due to unexpected rain? mention monetary damage (in Rupees)

67. 8.2.a. How much loss did you suffer in dried fish business due to lack of supplies of inputs? mention quantity (in kg)

68. 8.2.b. How much loss did you suffer in dried fish business due to lack of supplies of inputs? mention monetary loss (in Rupees)

69. 8.3.a. How much loss did you suffer in dried fish business due to storage and transportation loss? mention quantity (in kg)

70. 8.3.b. How much loss did you suffer in dried fish business due to storage and transportation loss? mention monetary loss (in Rupees)

71. 8.4.b. How much loss did you suffer in dried fish business due to Loss of fishing /production ? mention monetary loss.

72. 8.5. How much loss did you suffer in dried fish business due to any other reason ?

73. 9. In your opinion what were the most important quality attributes that acted as a constraint in the maintaining the dry fish quality during the last two months. Least important-1, Most important-5

Mark only one oval.

74. 9.1 Quality of water used for washing of fish

1 2 3 4 5

75. 9.2 Duration (number of hours Procurement and transportation duration before fish is kept in salt water)
- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
76. 9.3 Hygiene and sanitation at the drying place (sand and animal excreta etc)
Mark only one oval.
- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
77. 9.4 Methods of storage, packaging, transportation in hygienic conditions
Mark only one oval.
- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
78. 9.5 Infestation by bacteria and other maggots
Mark only one oval.
- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
79. 9.6 Duration of sun-drying and method of drying
Mark only one oval.
- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
80. 9.7 Temperature
Mark only one oval.
- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
81. 9.8 Skilled labour/Expertise
Mark only one oval.
- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
82. 10. How many baskets of dried fish would you expect to procure in a week?
Tick all that apply.
- <5
 - 5-9
 - 10-14
 - 15-19
 - 20 and above
83. 15. Who/what are the greatest threats to raw material procurement for fish drying in your area today? Please select up to THREE.
Tick all that apply.
- inter-state traders
 - fish meal procuring agents
 - freezing company agents

- Overall decline of fish availability
- Climate change (changing rainfall pattern and fish harvesting season)
- Don't know

84. 16. Among the following options which is most important for your livelihoods and survival .
Mark only one oval.

- Fishing
- Dried fish processing
- Fresh fish marketing
- Household work
- Others

85. 17. If you are involved in both fresh and dried fish marketing which earns you most money? Choose any one.
Mark only one oval.

- Fresh fish
- Dried fish

86. 25. Do you give credit to the fishers for procuring fish?
Mark only one oval.

- Often
- Sometimes
- Rarely
- Never

87. 26. Do you get credit from the traders/final consumers to supply dried fish?
Mark only one oval.

- Often
- Sometimes
- Rarely
- Never

88. 27. List up to five important fish species for your business in the order of most important to less important

89. 32. Do you like to continue in this profession?
Mark only one oval.

- Yes
- No

90. 34. Are your children interested and ready to take up this profession?
Mark only one oval.

- Yes
- No
- Maybe

91. 36. Are younger generation interested in coming to this profession of fish processing and drying?
Mark only one oval.

- Yes
- No
- Maybe

92. 37. What was the impact of COVID-19 Pandemic on your business since September?

93. 38. Whether any member of your family has been admitted to hospital for Covid19?

Tick all that apply.

- YES
- NO

94. 39. If yes, how many from your family were affected by this?

95. 40. What was your total expense for Covid19 related illness?

96. 41. How many man-days you lost due to covid related illness in your family?

This content is neither created nor endorsed by Google.

Google Forms

Appendix 3. Questionnaire used in the third round of the survey of dried fish producers.

Understanding the Supply and Demand drivers of Dried fish value chain: A study in Karnataka Coast As part of a larger project on Dried Fish Matters-Phase 3

Brief statement of purpose of the work

We thank you for your participation in the first two rounds of the survey. You are invited "again" to participate in this survey conducted as part of a SSHRC, Canada funded study titled "Dried Fish Matter". As part of it we intend to understand the challenges faced by dried fish producers in Karnataka coast. This survey aims to identify the current dried fish production system, its challenges in procurement of raw materials, processing and marketing. An understanding of these challenges would help suggesting and designing policies and operations which is sustainable for marine ecosystem, livelihood of people (especially women) engaged in the processing and trading as well as an affordable and important source of food and nutrition for the masses. The study attempts to understand some of these aspects. The credentials and responses will be confidential, anonymized and will be used for research and research related dissemination purpose in some form of aggregated response.

Participation in this follow-up survey is completely voluntary and you have the right to withdraw at any point of time during the interview. This survey is a continuation of the previous one. In this interviews also the participation would be voluntary where you have the rights to withdraw at any point of time during or before the interview.

The objectives of this research have been explained to me.

I understand that I am free to withdraw from the research at any stage.

I understand that my anonymity is guaranteed. I agree that interview will be recorded.

May you have any doubt or clarifications, you can contact any one the following individuals responsible for the survey:

Amalendu Jyotishi, Azim Premji University, Principal Investigator, Mob:9900213825

Ramchandra Bhat, Co-Principal Investigator, Mob: 9740022668

Priya Gupta, Amrita Vishwa Vidyapeetham, Co- Principal Investigator, Mob:9611924421

Narayana KA, Netfish, mob: 9448530798 /9148533037

*Required

1. Email address *

Dried Fish Matters: Phase-3 Survey

2. CONSENT TO PARTICIPATE IN RESEARCH *

Mark only one oval.

Yes

No

3. Name of the enumerator

4. Survey code *

Preliminary/Sociodemographic information

5. 1.a. Gender of the Respondent.

Mark only one oval.

Female

Male

6. 1.b. The respondent is same person surveyed in the first phase

Mark only one oval.

Yes

No

7. 1.c. If NO, Gender of the respondent in FIRST phase

Mark only one oval.

Female

Male

8. 1.d. Do you belong to a fishing community *

Mark only one oval.

Female

Male

9. 1.e. Which community/caste do you belong to? *

Mark only one oval.

Harikanthra

Mogaveera/Marakala/Moger

Kharvi

Ambiga

Mestha

- Daarji
- Bestha
- Gabit
- Other: _____

10. 1.f. What is your education level?

Mark only one oval.

- I did not attend any school
- Primary school
- High School
- Pre-University Certificate (PUC)
- Trade/Technical/Vocational degree (diploma etc)
- Bachelor's degree
- Master's degree or above
- Other

11. How far is your house/residence from the fish drying location? (in kilometers)

12. How far is your house/residence from the place you usually procure raw fish/landing center? (in kilometers)

13. How do you usually travel from your house to fish drying location or landing center?

Mark only one oval.

- Own vehicle
- Bus
- Walk
- Other vehicles such as tempo, rickshaw etc.
- Other: _____

14. 47.1. Approximately what percentage of your household income is generated through DRIED FISH business?

Mark only one oval.

- Zero
- 1 to 10 percent
- 11 to 20 percent
- 21 to 30 percent
- 31 to 40 percent
- 41 to 50 percent
- 51 to 60 percent
- 61 to 70 percent
- 71 to 80 percent
- 81 to 90 percent
- 91 to 99 percent
- 100 percent
- Other:

15. 47.2. Approximately what percentage of your household income is generated through FISHING/FISH-PROCESSING/FISH MARKETING? Please EXCLUDE the income from dry fish business in this.

Mark only one oval.

- Zero
- 1 to 10 percent
- 11 to 20 percent
- 21 to 30 percent
- 31 to 40 percent
- 41 to 50 percent
- 51 to 60 percent
- 61 to 70 percent
- 71 to 80 percent
- 81 to 90 percent
- 91 to 99 percent
- 100 percent
- Other:

16. 47.3. Approximately what percentage of your household income is generated through AGRICULTURE/FARMING/POULTRY/ DAIRY etc.?

These include only the value of production sold to outside market, and DO NOT INCLUDE the value of production that is consumed at your home.

Mark only one oval.

- Zero
- 1 to 10 percent
- 11 to 20 percent
- 21 to 30 percent
- 31 to 40 percent
- 41 to 50 percent
- 51 to 60 percent
- 61 to 70 percent
- 71 to 80 percent
- 81 to 90 percent
- 91 to 99 percent
- 100 percent
- Other:

17. 47.4. Approximately what percentage of your household income is generated through SALARIED JOBS? These include income from salaries or wages, pension etc.

Mark only one oval.

- Zero
- 1 to 10 percent
- 11 to 20 percent
- 21 to 30 percent
- 31 to 40 percent

- 41 to 50 percent
- 51 to 60 percent
- 61 to 70 percent
- 71 to 80 percent
- 81 to 90 percent
- 91 to 99 percent
- 100 percent
- Other:

18. 47.4. Approximately what percentage of your household income is generated through ALL OTHER NON-FISH, NONAGRICULTURE, NON-SALARY sources? These include income from business sales, trade, rent, money received through family members from abroad or within India, etc.

Mark only one oval.

- Zero
- 1 to 10 percent
- 11 to 20 percent
- 21 to 30 percent
- 31 to 40 percent
- 41 to 50 percent
- 51 to 60 percent
- 61 to 70 percent
- 71 to 80 percent
- 81 to 90 percent
- 91 to 99 percent
- 100 percent
- Other:

COVID-19 Impacts on personal life and business.

19. 38. Whether any member of your family was infected with Covid-19?

Mark only one oval.

- Yes
- No

20. 39. If yes, how many from your family were affected by this?

21. 40. What was your total expense for Covid-19 related illness?

22. 41. How many man-days you lost due to COVID-19 related illness in your family?

23. During COVID-19, have you experienced any change in availability of raw fish for dried fish production compared to normal times?

Mark only one oval.

- Raw fish availability has increased substantially
 - Raw fish availability has increased a little
 - No change in the availability of raw fish
 - Raw fish availability has decreased a little
 - Raw fish availability has decreased substantially
 - Do not know/Cannot say.
24. During COVID-19, have you experienced shortage in labor availability for activities related to fish drying compared to normal times?
- Mark only one oval.*
- Substantial decrease in labor availability
 - Some/moderate decrease in labor availability
 - No decrease in labor availability
 - Do not know/Cannot say
25. How has demand for DRIED FISH changed during the COVID-19 period, compared to normal times?
- Mark only one oval.*
- Demand has increased substantially
 - Demand has increased a little
 - No change in demand
 - Demand has decreased a little
 - Demand has decreased substantially
 - Do not know/Cannot say.
26. How has PRICE of DRIED FISH changed during the COVID-19 period, compared to normal times?
- Mark only one oval.*
- Price has increased substantially
 - Price has increased a little
 - No change in price
 - Price has decreased a little
 - Price has decreased substantially
 - Do not know/Cannot say.
27. How has demand for FRESH FISH changed during the COVID-19 period, compared to normal times?
- Mark only one oval.*
- Demand has increased substantially
 - Demand has increased a little
 - No change in demand
 - Demand has decreased a little
 - Demand has decreased substantially
 - Do not know/Cannot say
28. How has PRICE of FRESH FISH changed during the COVID-19 period, compared to normal times?
- Mark only one oval.*
- Price has increased a little
 - No change in price
 - Price has decreased a little

- Price has decreased substantially
- Do not know/Cannot say.
- Price has increased a little

29. On a scale of 0 to 3 how much your/family DAILY LIFE/ROUTINE changed during COVID-19, compared to normal times?

A scale of zero indicates no change. A scale of 1 indicates Mild impact with changes in only one area (e.g. work, education, social life, hobbies, religious activities). A scale of 2 indicates Moderate impact showing change in two areas (e.g. work, education, social life, hobbies, religious activities). A scale of 3 indicates severe impact on work, education, social life, hobbies, religious activities.

Mark only one oval.

0 1 2 3

No change. Severe change.

30. On a scale of 0 to 3 how much your HOUSEHOLD INCOME/ EMPLOYMENT changed during COVID-19, compared to normal times?

A scale of zero indicates no change. A scale of 1 indicates a mild impact and only a small change; able to meet all needs and pay bills. A scale of 2 indicates moderate impact such as Having to make cuts in expenditure but able to meet basic needs and pay bills. A scale of 3 indicates severe impact, unable to meet basic needs and/or pay for expenses.

Mark only one oval.

0 1 2 3

No change. Severe change.

31. On a scale of 0 to 3 how much your/family ACCESS TO FOOD changed during COVID-19, compared to normal times?

A scale of zero indicates no change. A scale of 1 indicates mild impact such that there was enough food, but difficulty ingoing to stores or finding required items. A scale of 2 indicates moderate impact such that occasionally there was not enough quantity of food or good quality food. A scale of 3 indicates Severe impact; Frequently without enough food and/or good quality/healthy foods.

Mark only one oval.

0 1 2 3

No change. Severe change.

Dried fish marketing

32. Whom do you sell dried fish to? (Check all that apply)

- Directly to consumers
- Local or regional traders
- Up-ghat traders
- Hotels/Restaurants
- Poultry feed or other feed industries
- Other: _____

33. 4.1.a. Which dried fish varieties did you sell DIRECTLY TO CONSUMERS (retail) in last two months? Mention the fish names

34. 4.1.b. What was the average price you got for the dried fish you sold DIRECTLY TO CONSUMERS?

35. 4.1.c. Choose the locations where you sold dried fish DIRECTLY TO CONSUMERS.

- Around residence
- Adjacent street
- Marketplace
- Weekly market
- Other: _____

36. 4.1.d. While selling dried fish in last two months what kind of credit deals did you do with CONSUMERS? please select appropriate option.

Tick all that apply.

- Gave credit to sell fish
- took credit and sold fish
- Neither of above

37. 4.1.e. How many boxes/Kg of dried fish did you sell to consumers?

38. 4.1.f. Where are the majority of your dried fish consumers located?

Mark only one oval.

- Town/City/Urban areas
- Village/Rural areas
- I have an equal mix of rural and urban consumers
- I do not know/Cannot say

39. 4.1.f. How do you sell dried fish to consumers?

Tick all that apply.

- I move around in nearby places to sell fish directly to consumers
- I have a place in the market where I sell fish directly to consumers
- Both the above
- Other: _____

40. What is the maximum distance you travel from the drying location while selling dried fish to consumers? (in kilometers)

41. While selling dried fish to consumers, what are some of the fish species that you sell by the numbers or counts (not the weight)? Why do you sell these by the numbers and not by the weight?

42. 4.1.g. How do you usually transport dried fish from the drying location to the selling place/to consumers?
- Using own vehicle
 - Using bus or other public transport
 - By walk
 - Using hired vehicles
 - Other: _____
43. 4.2.a. Which dried fish varieties did you sell to UP-GHAT TRADERS in last two months? Mention the fish names
- _____
44. 4.2.b. What was the average price you got for the dried fish you sold to UP-GHAT TRADERS?
- _____
45. 4.2.c. Choose the locations where you sold dried fish to UP-GHAT TRADERS.
- Around residence
 - Adjacent street
 - Marketplace
 - Weekly market
 - Other: _____
46. 4.2.d. While selling dried fish in last two months what kind of credit deals did you do with UP-GHAT TRADERS? please select appropriate option.
- Tick all that apply.*
- Gave credit to sell fish
 - took credit and sold fish
 - Neither of above
47. 4.2.e. How many boxes/Kg of dried fish did you sell to UP-GHAT traders?
- _____
48. 4.3.a. Which dried fish varieties did you sell to LOCAL TRADERS in last two months? Mention the fish names
- _____
49. 4.3.b. What was the average price you got for the dried fish you sold to LOCAL TRADERS?
- _____
50. 4.3.c. Choose the locations where you sold dried fish to LOCAL TRADERS.
- Around residence
 - Adjacent street
 - Marketplace
 - Weekly market
 - Other: _____
51. 4.3.d. While selling dried fish in last two months what kind of credit deals did you do with LOCAL TRADERS? please select appropriate option.
- Tick all that apply.*
- Gave credit to sell fish
 - took credit and sold fish
 - Neither of above
52. 4.3.e. How many boxes/Kg of dried fish did you sell to LOCAL TRADERS?

53. _____
4.4.a. Which dried fish varieties did you sell to the HOTELS/ RESTAURANTS in last two months? Mention the fish names

54. _____
4.4.b. What was the average price you got for the dried fish you sold to HOTELS/RESTAURANTS?

55. _____
4.4.c. Choose the locations where you sold dried fish to HOTELS/RESTAURANTS.

Around residence

Adjacent street

Marketplace

Weekly market

Other: _____

56. 4.4.d. While selling dried fish in last two months what kind of credit deals did you do with HOTELS/RESTAURANTS? please select appropriate option.

Tick all that apply.

Gave credit to sell fish

took credit and sold fish

Neither of above

57. _____
4.4.e. How many boxes/Kg of dried fish did you sell to HOTELS/RESTAURANTS?

58. _____
4.5.a. Which dried fish varieties you sold to the POULTRY OR OTHER FEED industry in last two months?

59. _____
4.5.b. What is the average price you got for selling dried fish to the POULTRY OR OTHER FEED industry?

60. _____
4.5.c. What is the quantity of dried fish you sold to the POULTRY OR OTHER FEED industry?

61. _____
4.5.d. Have you directly sold to the owner of POULTRY OR OTHER FEED companies or through traders?

Tick all that apply.

Directly to the owners

Through the traders

Both

Other: _____

62. _____
4.5.e Name the location (if you know) where your dried fish goes for POULTRY OR OTHER FEED.

63. _____
4.7.a. Which marketplaces (names of the places) do you go to sell fish on a DAILY basis? Please list all the markets. Please mention if they are VILLAGE markets or TOWNS. Please also mention the DISTANCE to the market from your residence.

64. 4.7.b. Which marketplaces (names of the places) do you go to sell fish on a WEEKLY basis? Please list all the markets. Please mention if they are VILLAGE markets or TOWNS. Please also mention the DISTANCE to the market from your residence.

65. How much was the total amount spent on labor in marketing dried fish? What wage rate did you pay?
Hired labor used in marketing the dried fish.

66. How much time do you usually spend to market the fish (mention in hours)?

67. Have you observed any change in time spent in marketing fish over the years?

Mark only one oval

- It has increased
 It has decreased
 There is no change

68. How many hours per day of FAMILY LABOR did you use in MARKETING activities in this dry fish batch/cycle? How many days of labor? How many men and how many women?

Family labor used in marketing the dried fish.

69. How many hours per day of HIRED LABOR did you use in MARKETING activities in this dry fish batch/cycle? How many total days of labor? How many men and how many women?

Hired labor used in marketing the dried fish.

Entrepreneurship/Business issues

70. 42.1. Which of the following best describes your motivation to enter the dried fish business?

Mark only one oval.

- This was my only option
 My family expected me to inherit the business
 have another job; I am seeking additional opportunities here
 This business is a natural choice given my background
 This appeared to be a good business opportunity Other:
 Other: _____

71. 42.2. Compared to the time you started the dry fish business, how has the size/scale of your business changed over the years?

For example, business scale/size expansion could mean you are buying and selling substantially more fish/covering more places to sell fish/using larger area for drying fish/employing more people in the business, etc. Business scale reduction could mean the opposite of these.

Mark only one oval.

- My business has expanded over the years
- The scale of my business has remained about the same
- The scale of my business has reduced over the years
- do not know/Cannot say

72. 42.3. Do you have plans to expand your dried fish business? If yes, please share some details

Mark only one oval.

- Yes
- No
- do not know/Cannot say
- Other:

73. 42.4. Compared to the time you started the dry fish business, how do you think has the demand for dried fish changed over the years?

Mark only one oval.

- Demand has definitely grown over the years
- Demand has definitely decreased over the years
- No change in demand over the years
- I do not know/Cannot say

74. 42.5. Compared to the time you started the dry fish business, has it become difficult or easy to get raw fish for drying operations?

Mark only one oval.

- It is now more difficult to get raw fish than earlier times
- It is now more easy to get raw fish than earlier times
- It has remained almost the same
- I do not know/Cannot say

75. 42.7. Do you see any potential in selling dried fish online using platforms such as Amazon, Flipkart etc.?

Mark only one oval.

- Yes
- No
- I do not know/Cannot say

76. Are you willing to adopt solar drying of fish?

Mark only one oval.

- Yes
- No
- Maybe

77. 43. On a scale of 1 to 5 where 1 indicates strong disagreement and 5 indicates strong agreement (ଓ ୧), please state how much do you agree/disagree with the following statements regarding future of dried fish business.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I expect the demand for dried fish to increase over the next five to ten years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I expect the price of dried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

fish to increase over the next five to ten years					
I expect the availability of raw fish for dried fish production to increase over the next five to ten years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I expect a bright future for the dried fish business in the next ten years or so	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

78. 43. On a scale of 1 to 5 where 1 indicates strong disagreement and 5 indicates strong agreement please state how much do you agree/disagree with the following statements regarding threats to dried fish business.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Competition from inter-state fish buyers is a threat to my dry fish business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competition from fishmeal factory agents is a threat to my dry fish business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competition from fish processing factories (freezing plants, surimi factories) is a threat to my dry fish business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Declining fish availability is a threat to my dry fish business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate-related factors such as changing pattern of rainfall, changing fish catch seasons) is a threat to my fish drying business.					

79. 44. Which of the following methods have you previously used to procure raw fish? Check all that apply.

Bargaining/Negotiation means bargaining with sellers, either before arriving at the landing center (through phone calls etc.), or at the landing center. A Contract means written or unwritten agreement with sellers before going for fishing; for example, may be as part of a loan repayment etc.

- Auction
- Bargaining/Negotiation
- Contract agreement
- Other: _____

80. 45. In your experience, which buying mechanism gives you the best price for a given fish species? (Pick only one)

Mark only one oval.

- Auction
- Bargaining/Negotiation
- Contract agreement
- I do not know/Cannot say
- Other: _____

Fish consumption

81. 6.1. How frequently did you eat DRIED FISH in last 2 months: *

Mark only one oval.

- Daily
- weekly 3 to 5 times
- once a week
- infrequently

82. 6.2. How much quantity of DRIED FISH do you generally consume in a day (in gms)?

83. 7.1. What are the common varieties of fish that you ate in last 2 months?

84. 7.2. How frequently do you purchase fish for consumption at home?

Mark only one oval.

- Daily
- 2-3 times a week
- Once a week
- 1 to 3 times a month
- Rarely
- Never

85. 7.3. On an average, how much fish do you buy at a time? (Kg)

86. 7.4. Which are the three most preferred variety of fish you intend to buy?

87. 7.5. Where do you purchase most of your fish for home consumption from?

- A nearby beach landing center
- A nearby harbor landing center
- A nearby fish market
- Other: _____

88. 7.6. Where are these markets located? Please mention the names.

89. 7.8. Approximately what percentage of your fish is procured locally?

Dried fish production

90. Compared to previous years, how would you rate this season (2021 January to April) for fish drying in terms of the following factors? Please indicate your ratings in terms of Best/Average/Poor.

For rainfall obstruction, use a rating of Best to indicate no obstruction.

- | | Best | Average | Poor |
|---|--------------------------|--------------------------|--------------------------|
| Price paid for purchasing raw fish this season | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Raw fish availability this season | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Price received for dried fish this season | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Obstruction to fish drying this season due to untimely rainfall | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Temperature this season for fish drying | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
91. Where do you usually get/purchase raw fish from (for dried fish production)?
- Mark only one oval.*
- A nearby beach landing center
- A nearby harbor landing center
- A nearby fish market
- Other: _____
92. How much time do you usually spend to procure fish (please mention in hours)?
- _____
93. Have you observed any change in time spent in procuring fish over the years?
- Mark only one oval.*
- It has increased
- It has decreased
- No change
94. How much time do you usually spend in processing (drying) fish (mention in hours)?
- _____
95. Have you observed any change in time spent in processing (drying) fish over the years?
- Mark only one oval.*
- It has increased
- It has decreased
- No change
96. 10. How many baskets of dried fish would you expect to procure in a week?
- Tick all that apply.*
- <5
- 5-9
- 10-14
- 15-19
- 20 and above
97. How far is the fish drying location from the fish landing center or the place of procuring raw fish? (in kilometers)
- _____
98. What do you usually do if you do not get the required raw fish (for dried fish production) at your usual place?
- Mark only one oval.*
- I will wait for some more days to get the raw fish
- I will start looking for the raw material in nearby landing centers

- It depends/Cannot say
- Other: _____
-

99. How much rent do you pay for the fish drying and curing shed?

100. On a scale of 0 to 10, how anxious (ಆತಂಕ) are you about losing the land being used by you for fish drying/curing in the future?

Mark only one oval.

0 1 2 3 4 5 6 7 8 9 10

Not worried. Absolutely anxious.

101. How much total amount did you spend on labor in the PRODUCTION (fish loading, cleaning, salting, etc.) of dried fish for this batch/cycle? What wage rate did you pay?

102. How many hours per day of FAMILY LABOR did you use in dry fish production activities in this batch/cycle? How many days of labor? How many men and how many women?

Family labor used in the full cycle (from procuring raw fish to complete drying of fish)

103. How many hours per day of HIRED LABOR did you use in dry fish production activities in this batch/cycle? How many total days of labor? How many men and how many women?

Hired labor used in the full cycle (from procuring raw fish to complete drying of fish)

104. 2.1.a. Name of the most important fish for your business in the last two months (Fish Option-1). Please name only one fish species.

105. 2.1.b. Season (month) of procuring Fish option 1

106. 2.1.c. Quantity (No. of Baskets) procured during last two months of Fish Option 1

107. 2.1.d. Drying period (No. of Days) of Fish Option 1

108. 2.1.e. Whom did you buy raw fish from? Fish Option-1

109. 2.1.f. What was the buying price/cost of raw fish? Fish Option 1

110. 2.1.g. Quantity of dried fish sold: Fish Option 1

- 111. 2.1.h. Whom did you sell dried fish to? Fish Option-1

- 112. 2.1.i. At what price did you sell dried fish? Fish Option-1

- 113. 2.2.a. Name of the second most important fish for your business in the last two months (Fish Option-2). Please name only one fish species.

- 114. 2.2.b. Season (month) of procuring Fish Option-2

- 115. 2.2.c. Quantity (No. of Baskets) procured during last two months of Fish Option-2

- 116. 2.2.d. Drying period (No. of Days) of Fish Option-2

- 117. 2.2.e. Whom did you buy raw fish from? Fish Option-2

- 118. 2.2.f. What was the buying price/cost of raw fish? Fish Option-2

- 119. 2.2.g. Quantity of dried fish sold: Fish Option-2

- 120. 2.2.h. Whom did you sell dried fish to? Fish Option-2

- 121. 2.2.i. At what price did you sell dried fish? Fish Option-2

- 122. 2.3.a. Name of the third most important fish for your business in the last two months (Fish Option-3). Please name only one fish species.

- 123. 2.3.b. Season (month) of procuring Fish Option-3

- 124. 2.3.c. Quantity (No. of Baskets) procured during last two months of Fish Option-3

- 125. 2.3.d. Drying period (No. of Days) of Fish Option-3

- 126. 2.3.e. Whom did you buy raw fish from? Fish Option-3

- 127. 2.3.f. What was the buying price/cost of raw fish? Fish Option-3

128. 2.3.g. Quantity of dried fish sold: Fish Option-3

129. 2.3.h. Whom did you sell dried fish to? Fish Option-3

130. 2.3.i. At what price did you sell dried fish? Fish Option-3

131. 2.4.a. Name of the fourth most important fish for your business in the last two months (Fish Option-4). Please name only one fish species.

132. 2.4.b. Season (month) of procuring Fish Option-4

133. 2.4.c. Quantity (No. of Baskets) procured during last two months of Fish Option-4

134. 2.4.d. Drying period (No. of Days) of Fish Option-4

135. 2.4.e. Whom did you buy raw fish from? Fish Option-4

136. 2.4.f. What was the buying price/cost of raw fish? Fish Option-4

137. 2.4.g. Quantity of dried fish sold: Fish Option-4

138. 2.4.h. Whom did you sell dried fish to? Fish Option-4

139. 2.4.i. At what price did you sell dried fish? Fish Option-4

140. 2.5.a. Name of the fifth most important fish for your business in the last two months (Fish Option-4). Please name only one fish species.

141. 2.5.b. Season (month) of procuring Fish Option-5.

142. 2.5.c. Quantity (No. of Baskets) procured during last two months of Fish Option-5.

143. 2.5.d. Drying period (No. of Days) of Fish Option-5.

144. 2.5.e. Whom did you buy raw fish from? Fish Option-5.

145. 2.5.f. What was the buying price/cost of raw fish? Fish Option-5.

146. 2.5.g. Quantity of dried fish sold: Fish Option-5.
147. 2.5.h. Whom did you sell dried fish to? Fish Option-5

148. 2.5.i. At what price did you sell dried fish? Fish Option-5

149. 2.6.a. Name of the fourth most important fish for your business in the last two months (Fish Option-6). Please name only one fish species.

150. 2.6.b. Season (month) of procuring Fish Option-6

151. 2.6.c. Quantity (No. of Baskets) procured during last two months of Fish Option-6

152. 2.6.d. Drying period (No. of Days) of Fish Option-6.

153. 2.6.e. Whom did you buy raw fish from? Fish Option-6

154. 2.6.f. What was the buying price/cost of raw fish? Fish Option-6.

155. 2.6.g. Quantity of dried fish sold: Fish Option-6.
156. 2.6.h. Whom did you sell dried fish to? Fish Option-6

157. 2.6.i. At what price did you sell dried fish? Fish Option-6.

158. 8.1.a. How much loss did you suffer in dried fish business due to unexpected rain? mention quantity (in kg)

159. 8.1.b. How much loss did you suffer in dried fish business due to unexpected rain? mention monetary damage (in Rupees)

160. 8.2.a. How much loss did you suffer in dried fish business due to lack of supplies of inputs? mention quantity (in kg)

161. 8.2.b. How much loss did you suffer in dried fish business due to lack of supplies of inputs? mention monetary loss (in Rupees)

162. 8.3.a. How much loss did you suffer in dried fish business due to storage and transportation loss? mention quantity (in kg)

163. 8.3.b. How much loss did you suffer in dried fish business due to storage and transportation loss? mention monetary loss (in Rupees)

164. 8.4.a. How much loss did you suffer in dried fish business due to Loss of fishing /production ? mention quantity.

165. 8.4.b. How much loss did you suffer in dried fish business due to Loss of fishing /production ? mention monetary loss.

166. 8.5.a. How much loss did you suffer in dried fish business due to any other reason? (in Kgs)

167. 8.5.b. How much loss did you suffer in dried fish business due to any other reason? (in Rupees)

This content is neither created nor endorsed by Google.

Google Forms