SCOR — International Council for Science — Scientific Committee on Oceanic Research
futurearth — research for global sustainability
East China Normal University
SKLEC
KOPRI — Korea Polar Research Institute
UNIMAS — Universiti Malaysia Sarawak
OCEAN FRONTIER INSTITUTE
MEOPAR
DALHOUSIE UNIVERSITY
2021 2030 United Nations Decade of Ocean Science for Sustainable Development

A Value Chain Analysis of the Dried Sardine Industry in the Philippines

Napata, R.P.[1*], Sefil, A.S.[2], Famatid, T.A.G.[3], Peralta, E.M. [2], Monteclaro, H.M. [3] , Yap, E.E.S. [2]

[1*]Institute of Fisheries Policy and Development Studies, College of Fisheries and Ocean Sciences, University of the Phillippines Visayas, Philippines

[2]Institute of Fish Processing Technology, College of Fisheries and Ocean Sciences, University of the Phillippines Visayas, Philippines

[3]Institute of Marine Fisheries and Oceanology, College of Fisheries and Ocean Sciences, University of the Phillippines Visayas, Philippines

Overview of the Philippine Sardine Industry

Volume of sardine production in the Philippines (PSA, 2021)

CONTRIBUTION TO PHILIPPINE FISHERIES INDUSTRY

27%
Commercial
(PSA, 2021)

13%
Municipal
(PSA, 2021)

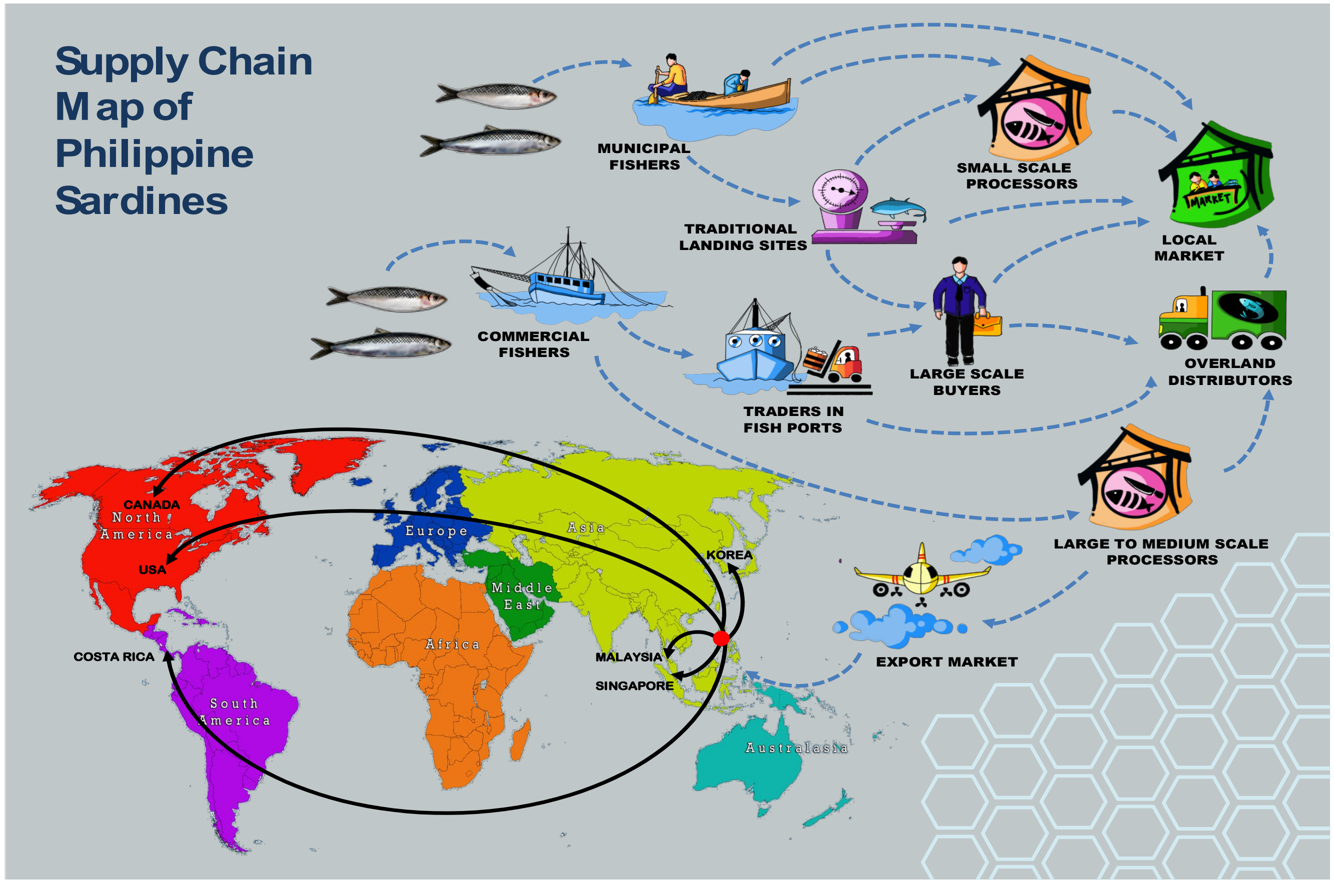
CONTRIBUTION TO PHILIPPINE FOOD INDUSTY

Canned/ bottled
(fresh and dried)

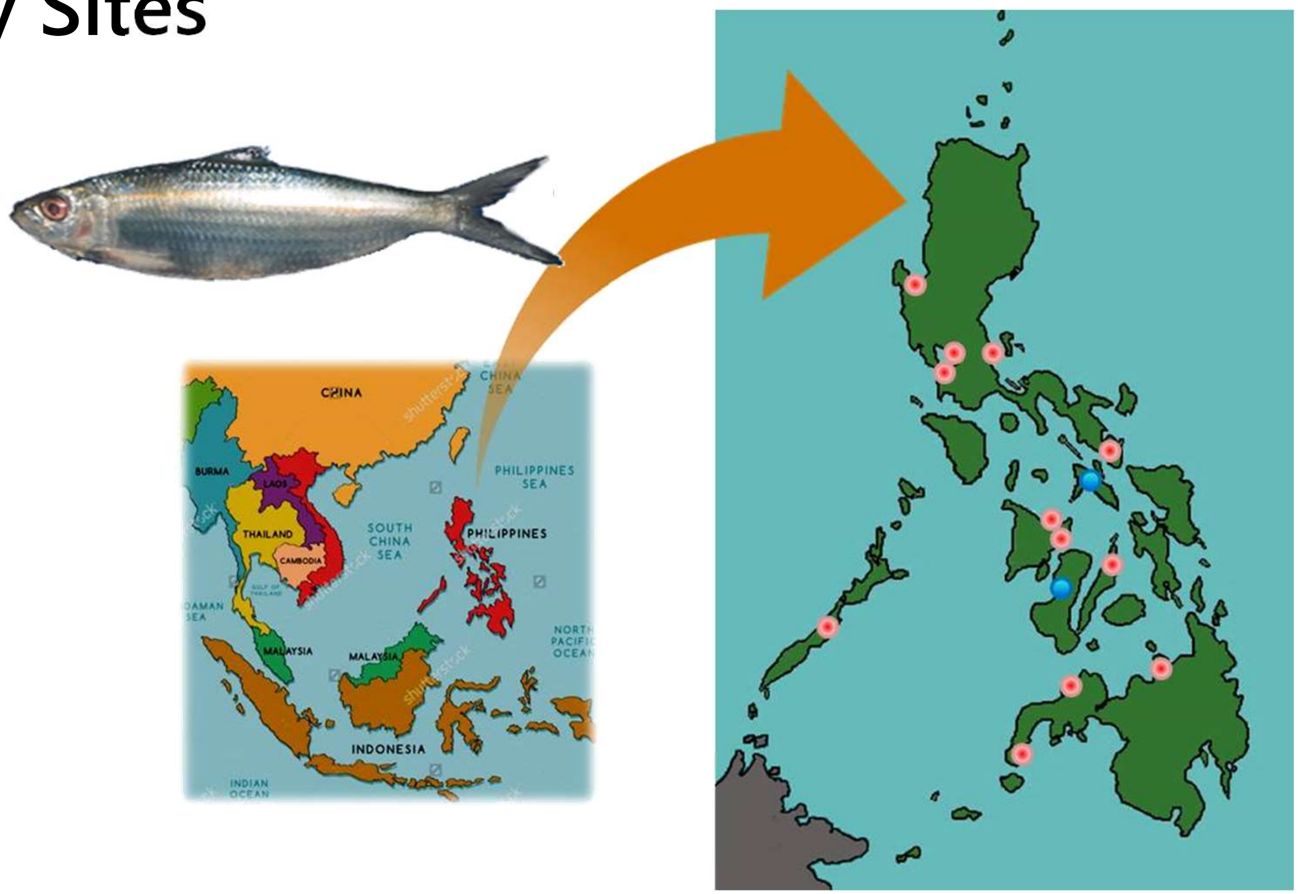
Dried
(whole)

Fermented
(sauce and paste)

Value Chain Analysis



Study Sites


CHINA
BURMA
LAOS
THAILAND
CAMBODIA
SOUTH CHINA SEA
PHILIPPINES SEA
PHILIPPINES
MALAYSIA
MALAYSIA
INDONESIA
INDIAN OCEAN

The Philippine sardine drying industry

Sardinella lemuru

Sardinella gibbosa

Sardinella fimbriata

Amblygaster sirm

Photo source: www.fishbase.org

The Philippine sardine drying industry

73 Total Respondents

RESPONDENTS' PROFILE

86% Sole owners

84% employs 1-10 personnel

51% with 11-30 years experience

81% Has <5 regular personnel

The Philippine sardine drying industry

Dried Fish Production

PEAK SEASON		LEAN SEASON	
30%	151-1000 kilograms	25%	<25 kilograms
47%	Processing everyday	29%	Processing 2-3x a week

The Philippine sardine drying industry

Raw materials

RESPONSES

51%

Uses pure sardines species

73% **Consider quality as one of the requirements**

85% **Sourced within the municipality**

The Philippine sardine drying industry

Marketing: Season

PEAK SEASON	LEAN SEASON
44%	66%
Market daily even in other municipalities	**Marketing done within the municipality only**

The Philippine sardine drying industry

Marketing: Practices

RESPONSES

90% **Have regular buyers**

47% ***retailers***

41% ***wholesalers***

12% ***Traders/ neighbors***

Dried products are either delivered or picked up

The Philippine sardine drying industry

Policy and Government support awareness

RESPONSES

18% **Have knowledge of government support**

64% **Familiar with some fisheries laws and regulations**

59% **Aware of the closed season policy**

The Philippine sardine drying industry

Price flow

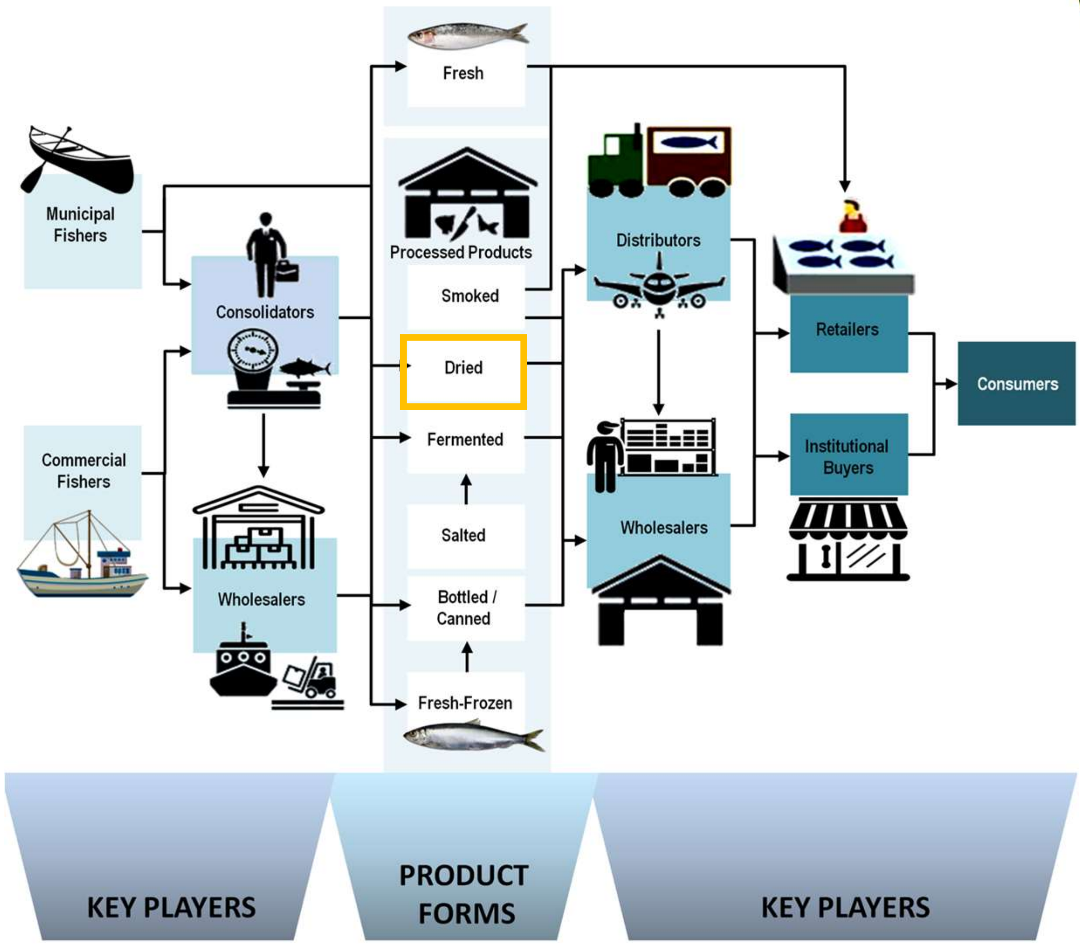
USD 0.22-0.50/kg

Fresh sardines

USD 1.20-4.60/kg

Dried sardines

Trading process flow



Losses and wastes

PRODUCTION → PRIMARY TRADING → PROCESSING → MARKETING → CONSUMPTION

LOSSES due to:

PRODUCTION	PRIMARY TRADING	PROCESSING	MARKETING	CONSUMPTION
Use of inappropriate fishing gears; delay in transport from fishing ground to landing sites	Delay in transport to trading facilities; temperature abuse during post-harvest handling and trading	Delay in processing / pre-processing; inappropriate processing practices; temperature abuse	Delay in transport from processing facilities; temperature abuse during transport and storage; rejection	Delay in food preparation; inappropriate thawing method; temperature abuse

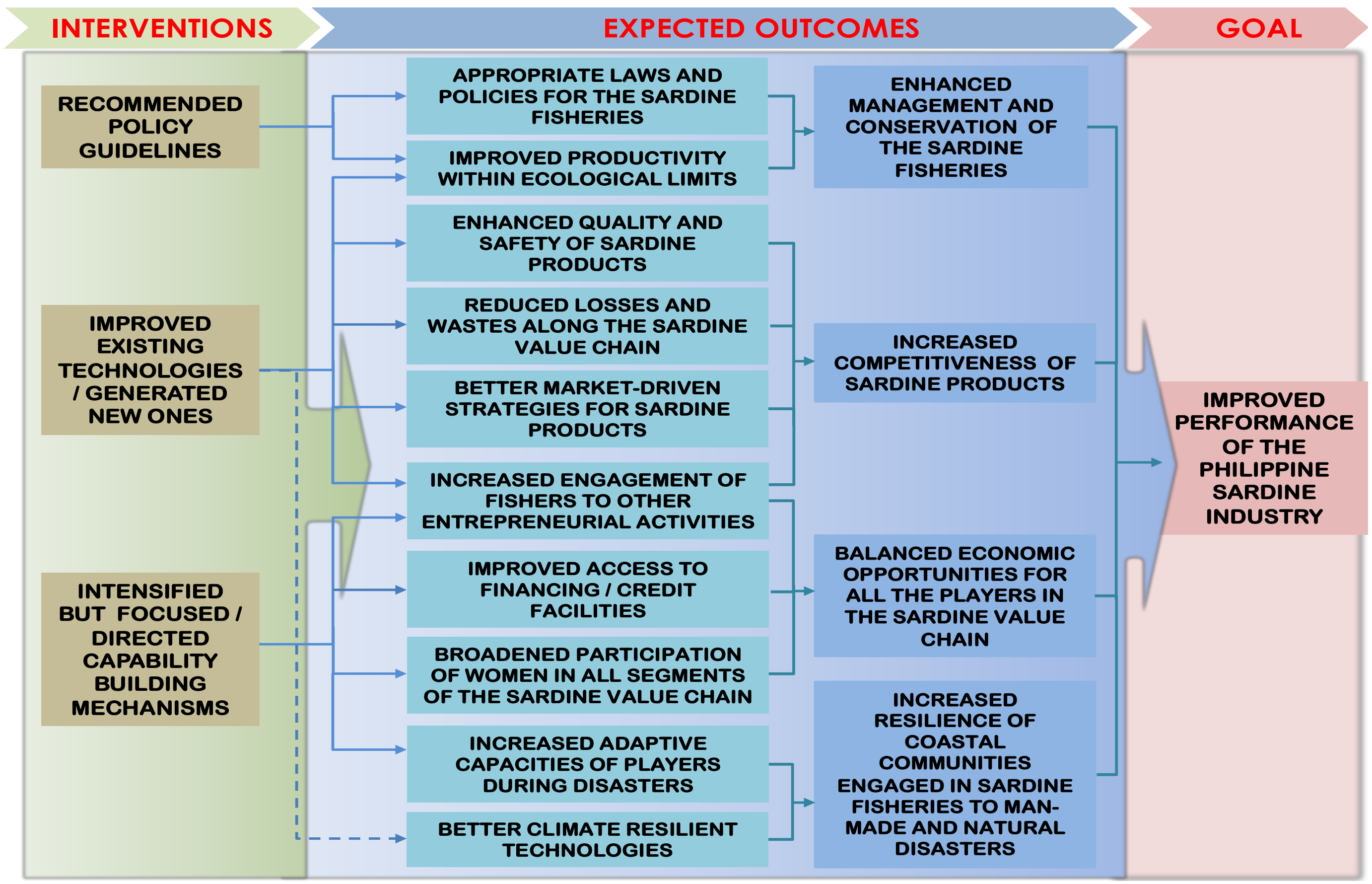
WASTES due to:

PRODUCTION	PRIMARY TRADING	PROCESSING	MARKETING	CONSUMPTION
Discards / by-catch	Physically damaged fish in landing sites	Non-utilization of some body parts	Product deterioration due to prolonged storage	Non-consumption of some product parts

Strengths and Challenges

Strengths / Opportunities	VC Nodes	Challenges / Bottlenecks
Popularity of traditional sardine products among consumers	CONSUMPTION	Limited access to an array of sardine products due to limited value added sardine products available in the market
Presence of institutional markets that have distribution channels (e.g. supermarket chains) Presence of industry association (SCA)	MARKETING / DISTRIBUTION	Non-competitiveness of sardine products Only targets existing traditional markets for fishery products
Availability of different processing methodologies for sardines; presence of large sardine canning facilities	PROCESSING	Non-standardized processes (drying, smoking) Limited facilities for large scale production of sardine products Losses due to non-utilization of processing waste
Availability of public and private fish ports and other trading facilities	PRIMARY TRADING	Post-harvest losses due to unavailability of IPCS facilities in some areas Fluctuating prices of sardines Mishandling; non-observance of GMP
Implementation of the National Sardine Management Plan Strong sardine producers association	PRODUCTION	High volume, low value of sardines Low income of small fishers Site specific implementation of closed season policy Competition in fishing grounds
Implementation of the National Sardine Management Plan Strong sardine producers association	INPUT SUPPLY	Limited access to formal lending institutions for the purchase of inputs

Intervention Framework



THANK YOU