



# Overview

## Sustainable Aquaculture Projects

### In Southern Coastal Area of West Java Province



Designed and Proposed by  
**PT. NAYOTTAMA** Kelola Laut Indonesia, Bogor

Dedicated and Presented to  
**WJIS, 21-22 October 2021**

# Corporate Vision & Mission

“Our Vision is together Indonesian people business incorporated, to establish a World Class Aquaculture and Capture Fishery Incorporation”

“Our Mission is to planning, designing, developing and managing a competitive and sustainable aquaculture and capture fishery industry through the application of smart farming, smart industry and smart management practices”





# Sustainable Aquaculture Project

## *In Southern Coastal Area of West Java*

- Sustainable **Whiteleg Shrimp Farm – *Vannamei sp.***
  - Integrated **Spiny Lobster Farm**



# Business Prospectus at Glance

- ✓ Project # 1: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM PROJECT**  
Business Scale: 20 Ha-Farm Land Area Using Intensive Technology
- ✓ Project # 2: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM PROJECT**  
Business Scale: 60 Ha-Farm Land Area Using Intensive Technology
- ✓ Project # 3: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT**  
Business Scale: 20 Ha-Farm Land Area Using RAS Technology
- ✓ Project # 4: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT**  
Business Scale: 60 Ha-Farm Land Area Using RAS Technology
- ✓ Project # 5: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT**  
Business Scale: 320 Ha-Farm Land Area Using RAS Technology
- ✓ Project # 6: **WEST JAVA: INTEGRATED SCALLOP SPINY LOBSTER FARM ON RAS POND**  
Business Scale: 10 Ha-Farm Land Area Using RAS Technology
- ✓ Project # 7: **WEST JAVA: INTEGRATED ORNATE SPINY LOBSTER FARM ON RAS POND**  
Business Scale: 10 Ha-Farm Land Area Using RAS Technology



## List of Fishery Products exported by Indonesia 2016-2020

Unit : US Dollar thousand

No	Code	Product label	Exported value in 2016	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020	Share 2020 (%)	CAGR 2016-2019 (%/Yr)	CAGR 2020-2019 (%/Yr)
1	'0306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine, ...	1,464,399	1,689,721	1,574,130	1,428,656	1,608,548	33.35	-0.81	12.59
2	'0304	Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen	427,299	445,779	518,074	540,041	563,982	11.69	8.79	4.43
3	'0303	Frozen fish (excluding fish fillets and other fish meat of heading 0304)	388,913	471,380	381,245	427,327	529,046	10.97	3.29	23.80
4	'0307	Molluscs, fit for human consumption, even smoked, whether in shell or not, live, fresh, chilled, ...	342,946	400,868	560,281	562,280	510,195	10.58	21.32	-9.26
5	'0302	Fish, fresh or chilled (excluding fish fillets and other fish meat of heading 0304)	129,359	109,599	104,853	125,105	125,474	2.60	-1.10	0.29
6	'0305	Fish, fit for human consumption, dried, salted or in brine; smoked fish, fit for human consumption, ...	62,188	68,152	78,729	92,388	104,648	2.17	16.19	13.27
7	'0301	Live fish	70,128	69,956	74,991	67,903	49,676	1.03	-1.06	-26.84
8	'0308	Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, ...	15,371	16,017	19,613	25,102	24,651	0.51	21.10	-1.80
TOTAL NOT PROCESSED PRODUCTS			2,900,603	3,271,472	3,311,916	3,268,802	3,516,220	72.89	4.23	7.57
1	'1605	Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved (excluding smoked)	633,857	525,155	701,449	750,570	908,000	18.82	6.14	20.97
2	'1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	327,858	405,711	456,126	473,298	399,159	8.27	14.79	-15.66
3	'1603	Extracts and juices of meat, fish or crustaceans, molluscs and other aquatic invertebrates	580	547	643	972	576	0.01	22.53	-40.74
TOTAL PROCESSED PRODUCTS			962,295	931,413	1,158,218	1,224,840	1,307,735	27.11	9.09	6.77
GRAND TOTAL			3,862,898	4,202,885	4,470,134	4,493,642	4,823,955	100.00	5.44	7.35

Source: International Trade Center, 2021

## World, Indonesia and Vietnam: Marine Lobster Production (Tonnes) 2010-2019

AREA	ENVIRONMENT	OCEAN AREA	SPECIES	SCIENTIFIC NAME	2010	2014	2018	2019	Share to World 2019 (%)	Share to Respective Environment 2019 (%)	CAGR 2010-2014 (%/Yr)	CAGR 2014-2018 (%/Yr)	CAGR 2018-2019 (%/Yr)
WORLD	CAPTURE	Marine areas	All Species		284,556	308,270	304,531	308,660	99.00	100.00	2.08	-0.30	1.36
		Marine areas	Spiny lobsters	Panulirus spp	69,514	74,217	73,899	69,000	22.13	22.35	1.69	-0.11	-6.63
		Marine areas	Rock Lobsters	Jasus spp	10,493	8,560	7,906	6,577	2.11	2.13	-4.61	-1.91	-16.81
		Marine areas	Lobsters Homarus	Homarus spp	125,784	165,111	168,394	166,027	53.25	53.79	7.82	0.50	-1.41
		Marine areas	Norway lobster	Nephrops spp	66,451	55,162	49,217	59,918	19.22	19.41	-4.25	-2.69	21.74
		Marine areas		Others	12,314	5,220	5,115	7,138	2.29	2.31	-14.40	-0.50	39.55
	AQUACULTURE	Marine areas	All Species		1,042	1,615	1,760	3,122	1.00	100.00	13.75	2.24	77.39
		Marine areas	Spiny Lobster	Panulirus spp	1,040	1,606	1,760	3,122	1.00	100.00	13.61	2.40	77.39
		Marine areas	Flathead lobster	Thenus orientalis	2	9	-	-	-	-	87.50		
TOTAL					285,598	309,885	306,291	311,782	100.00		2.13	-0.29	1.79
INDONESIA	CAPTURE	Marine areas	All Species		7,651	10,086	6,934	7,110	2.28	2.30	7.96	-7.81	2.54
		Marine areas	Spiny lobsters	Panulirus spp	7,651	10,086	6,934	7,110	2.28	2.30	7.96	-7.81	2.54
	AQUACULTURE	Marine areas	All Species		311	202	556	700	0.22	22.42	-8.76	43.81	25.90
		Marine areas	Spiny Lobster	Panulirus spp	311	202	556	700	0.22	22.42	-8.76	43.81	25.90
	TOTAL					7,962	10,288	7,490	7,810	2.50		7.30	-6.80
VIETNAM	CAPTURE	Marine areas	All Species		63	63	78	241	0.08	0.08	0.00	5.95	208.97
		Marine areas	Lobsters nei	Reptantia	63	63	78	241	0.08	0.08	0.00	5.95	208.97
	AQUACULTURE	Marine areas	All Species		631	1,341	1,100	2,271	0.73	72.74	28.13	-4.49	106.45
		Marine areas	Spiny Lobster	Panulirus spp	631	1,341	1,100	2,271	0.73	72.74	28.13	-4.49	106.45
	TOTAL					694	1,404	1,178	2,512	0.81		25.58	-4.02

Source: FAOSTAT, 2021



## World: Crustaceans Production by Fishing Area, Environment and Species 2010-2019 (Tonnes)

Fishing Area	Environment	Species/Scientific name	2010	2014	2019	Share 2019 (%)	CAGR 2010-2014 (%/Yr)	CAGR 2014-2019 (%/Yr)
Marine Areas	Marine Aquaculture	Shrimps & Prawns	2,985,738	3,909,801	5,849,999	35.26	7.74	9.92
		Crabs	260,142	345,973	447,370	2.70	8.25	5.86
		Lobsters	1,042	1,614	3,122	0.02	13.72	18.69
		Miscellaneous marine crustaceans	59	15	68	0.00	-18.64	70.67
		Total Marine Aquaculture	3,246,981	4,257,403	6,300,559	37.98	7.78	9.60
	Marine Capture	Shrimps & Prawns	3,014,150	3,316,003	3,013,371	18.16	2.50	-1.83
		Crabs	1,358,379	1,680,229	1,520,406	9.17	5.92	-1.90
		Lobsters	329,517	365,231	377,979	2.28	2.71	0.70
		Miscellaneous marine crustaceans	701,086	735,409	729,471	4.40	1.22	-0.16
		Total Marine Capture	5,403,132	6,096,872	5,641,227	34.01	3.21	-1.49
	Total Marine Areas		8,650,113	10,354,275	11,941,786	71.99	4.93	3.07
Inland Waters	Inland Aquaculture	Shrimps & Prawns	597,355	655,685	705,248	4.25	2.44	1.51
		Freshwater crustaceans	1,634,455	1,840,164	3,475,440	20.95	3.15	17.77
		Total Inland Aquaculture	2,231,810	2,495,849	4,180,688	25.20	2.96	13.50
	Inland Capture	Shrimps & Prawns	78,106	76,211	93,865	0.57	-0.61	4.63
		Crabs	1,100	1,363	2,274	0.01	5.98	13.37
		Freshwater crustaceans	525,212	430,573	370,478	2.23	-4.50	-2.79
		Miscellaneous marine crustaceans	2	-	-	-	-25.00	
		Total Inland Capture	604,420	508,147	466,617	2.81	-3.98	-1.63
	Total Inland Waters		2,836,230	3,003,996	4,647,305	28.01	1.48	10.94
Grand Total		Shrimps & Prawns	6,675,349	7,957,700	9,662,483	58.25	4.80	4.28
		Crabs	1,619,621	2,027,565	1,970,050	11.88	6.30	-0.57
		Lobsters	330,559	366,845	381,101	2.30	2.74	0.78
		Freshwater crustaceans	2,159,667	2,270,737	3,845,918	23.18	1.29	13.87
		Miscellaneous marine crustaceans	701,147	735,424	729,539	4.40	1.22	-0.16
		Total Crustaceans	11,486,343	13,358,271	16,589,091	100.00	4.07	4.84

Source: FAOSTAT, 2021

## INDONESIA: Crustaceans Production by Fishing Area, Environment and Species 2010-2019 (Tonnes)

Fishing Area	Environment	Species/Scientific name	2010	2014	2019	Share 2019 (%)	CAGR 2010-2014 (%/Yr)	CAGR 2014-2019 (%/Yr)
Marine Areas	Marine Aquaculture	Shrimps & Prawns	379,326	584,801	903,200	60.10	13.54	10.89
		Crabs	9,892	13,606	39,900	2.66	9.39	38.65
		Lobsters	311	202	700	0.05	-8.76	49.31
		Total Marine Aquaculture	389,529	598,609	943,800	62.81	13.42	11.53
	Marine Capture	Shrimps & Prawns	219,675	263,047	279,900	18.63	4.94	1.28
		Crabs	73,582	86,701	198,900	13.24	4.46	25.88
		Lobsters	7,651	10,086	7,110	0.47	7.96	-5.90
		Miscellaneous marine crustaceans	1,499	1,456	1,995	0.13	-0.72	7.40
		Total Marine Capture	302,407	361,290	487,905	32.47	4.87	7.01
	Total Marine Areas		691,936	959,899	1,431,705	95.27	9.68	9.83
Inland Waters	Inland Aquaculture	Shrimps & Prawns	-	13,474	29,400	1.96	-	23.64
		Freshwater crustaceans	1,335	1,809	4,600	0.31	8.88	30.86
		Total Inland Aquaculture	1,335	15,283	34,000	2.26	261.20	24.49
	Inland Capture	Shrimps & Prawns	4,538	5,714	8,140	0.54	6.48	8.49
		Freshwater crustaceans	13,798	19,365	28,885	1.92	10.09	9.83
		Total Inland Capture	18,336	25,079	37,025	2.46	9.19	9.53
	Total Inland Capture		19,671	40,362	71,025	4.73	26.30	15.19
Grand Total		Shrimps & Prawns	603,539	867,036	1,220,640	81.23	10.91	8.16
		Freshwater crustaceans	15,133	21,174	33,485	2.23	9.98	11.63
		Crabs	83,474	100,307	238,800	15.89	5.04	27.61
		Lobsters	7,962	10,288	7,810	0.52	7.30	-4.82
		Miscellaneous marine crustaceans	1,499	1,456	1,995	0.13	-0.72	7.40
		Total Crustaceans	711,607	1,000,261	1,502,730	100.00	10.14	10.05

Source: FAOSTAT, 2021



## WORLD: SHRIMPS AND PRAWNS PRODUCTION BY ENVIRONMENT 2018-2019 (MTs)

No	Country	AQUACULTURE					CAPTURE					TOTAL				
		2018	2019	Growth 2018-2019 (%/yr)	SHARE TO WORLD 2019 (%)	SHARE TO TOTAL SHRIMPS 2019 (%)	2018	2019	Growth 2018-2019 (%/yr)	SHARE TO WORLD 2019 (%)	SHARE TO TOTAL SHRIMPS 2019 (%)	2018	2019	Growth 2018-2019 (%/yr)	SHARE TO WORLD 2019 (%)	TOTAL SHRIMPS 2019 (%)
1	China	2,051,921	2,121,363	3.38	32.36	66.91	1,089,433	1,049,126	-3.70	33.76	33.09	3,141,354	3,170,489	0.93	52.81	100.00
2	Indonesia	907,988	932,600	2.71	14.23	76.40	280,678	288,040	2.62	9.27	23.60	1,188,666	1,220,640	2.69	12.63	100.00
3	Viet Nam	775,000	883,000	13.94	13.47	96.51	142,411	31,880	-77.81	1.03	3.48	917,411	914,880	-0.28	9.47	100.00
4	India	682,300	759,906	11.37	11.59	63.48	445,565	437,152	-1.89	14.07	36.52	1,127,865	1,197,058	6.13	12.39	100.00
5	Ecuador	560,000	679,985	21.43	10.37	98.81	10,041	8,217	-18.17	0.26	1.19	570,041	688,202	20.73	7.12	100.00
6	Thailand	374,374	383,170	2.35	5.85	86.28	48,790	60,955	24.93	1.96	13.72	423,164	444,125	4.95	4.60	100.00
7	Mexico	157,934	170,073	7.69	2.59	66.85	108,928	86,240	-20.83	2.78	33.68	266,862	256,313	-3.95	2.65	100.00
8	Bangladesh	70,979	72,913	2.72	1.11	100.00	-	-	-	-	-	70,979	72,913	2.72	0.75	100.00
9	Philippines	59,587	66,559	11.70	1.02	60.50	38,001	43,452	14.34	1.40	39.50	97,588	110,011	12.73	1.14	100.00
10	Saudi Arabia	56,100	60,800	8.38	0.93	87.59	8,770	8,616	-1.76	0.28	12.41	64,870	69,416	7.01	0.72	100.00
11	Iran	47,859	55,000	14.92	0.84	84.62	8,805	9,995	13.52	0.32	15.38	56,664	64,995	14.70	0.67	100.00
12	Brazil	45,750	54,336	18.77	0.83	62.00	33,300	33,300	0.00	1.07	38.00	79,050	87,636	10.86	0.91	100.00
13	Malaysia	45,913	53,400	16.51	0.81	33.39	115,519	106,517	-7.79	3.43	66.61	161,432	159,917	-0.94	1.66	100.00
14	Myanmar	19,042	51,796	172.01	0.79	66.86	27,703	25,674	-7.32	0.83	33.14	46,745	77,470	65.73	0.80	100.00
15	Peru	29,717	43,481	46.32	0.66	46.42	39,145	50,197	28.23	1.62	53.58	68,862	93,678	36.04	0.97	100.00
16	Honduras	31,500	32,100	1.90	0.49	97.04	1,450	979	-32.48	0.03	2.96	32,950	33,079	0.39	0.34	100.00
17	Nicaragua	29,458	29,490	0.11	0.45	95.11	1,612	1,515	-6.02	0.05	4.89	31,070	31,005	-0.21	0.32	100.00
18	Venezuela	21,500	22,000	2.33	0.34	89.90	2,635	2,635	0.00	0.08	10.70	24,135	24,635	2.07	0.25	100.00
19	Guatemala	17,273	19,500	12.89	0.30	95.29	782	964	23.27	0.03	4.71	18,055	20,464	13.34	0.21	100.00
20	Taiwan	8,533	10,656	24.88	0.16	63.60	7,683	6,098	-20.63	0.20	36.40	16,216	16,754	3.32	0.17	100.00
	Others	53,501	53,187	-0.59	0.81	5.85	1,037,839	855,683	-17.55	27.54	94.15	1,091,340	908,870	-16.72	9.41	100.00
	WORLD	6,046,229	6,555,315	8.42	100.00	67.84	3,449,090	3,107,235	-9.91	100.00	32.16	9,495,319	9,662,550	1.76	100.00	100.00

Source: FAOSTAT, 2021

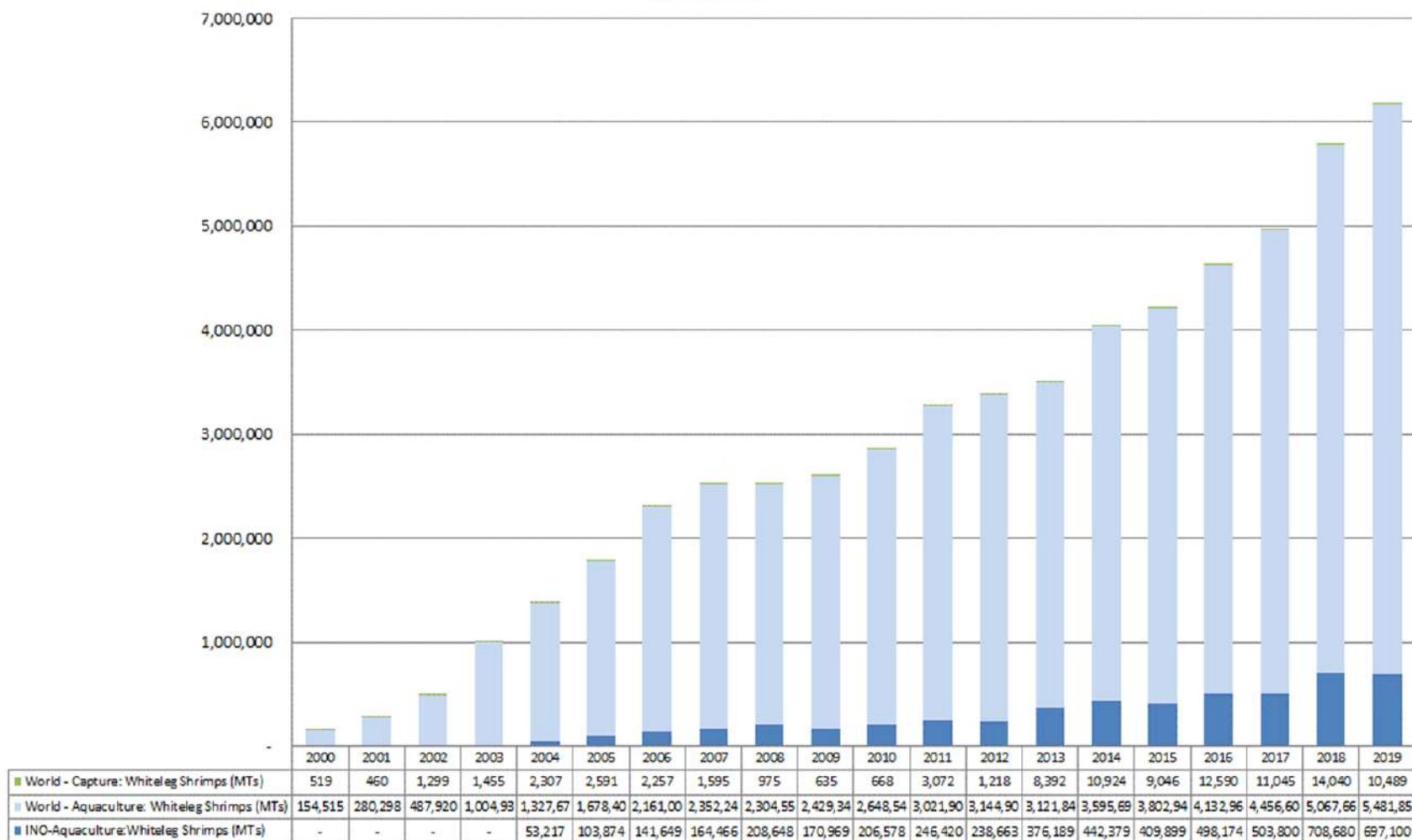
## WORLD: WHITELEG SHRIMPS PRODUCTION BY ENVIRONMENTS 2018-2019 (MTs)

No	Country	AQUACULTURE					CAPTURE					TOTAL				
		2018	2019	Growth 2018-2019 (%/yr)	SHARE TO WORLD 2019 (%)	SHARE TO TOTAL SHRIMPS 2019 (%)	2018	2019	Growth 2018-2019 (%/yr)	SHARE TO WORLD 2019 (%)	SHARE TO TOTAL SHRIMPS 2019 (%)	2018	2019	Growth 2018-2019 (%/yr)	SHARE TO WORLD 2019 (%)	TOTAL SHRIMPS 2019 (%)
1	China	1,760,341	1,815,550	3.14	33.12	100.00	-	-	-	0.00	0.00	1,760,341	1,815,550	3.14	33.06	100.00
2	India	682,300	759,906	11.37	13.86	100.00	-	-	-	0.00	0.00	682,300	759,906	11.37	13.84	100.00
3	Indonesia	708,680	697,100	-1.63	12.72	100.00	-	-	-	0.00	0.00	708,680	697,100	-1.63	12.69	100.00
4	Ecuador	560,000	679,985	21.43	12.40	99.88	-	837	unlimited	7.98	0.12	560,000	680,822	21.58	12.40	100.00
5	Viet Nam	475,000	577,000	21.47	10.53	100.00	-	-	-	0.00	0.00	475,000	577,000	21.47	10.51	100.00
6	Thailand	357,933	365,503	2.11	6.67	100.00	-	-	-	0.00	0.00	357,933	365,503	2.11	6.65	100.00
7	Mexico	157,934	170,073	7.69	3.10	94.87	13,572	9,196	-32.24	87.67	5.13	171,506	179,269	4.53	3.26	100.00
8	Saudi Arabia	56,100	60,800	8.38	1.11	100.00	-	-	-	0.00	0.00	56,100	60,800	8.38	1.11	100.00
9	Iran	47,859	55,000	14.92	1.00	100.00	-	-	-	0.00	0.00	47,859	55,000	14.92	1.00	100.00
10	Brazil	45,750	54,336	18.77	0.99	100.00	-	-	-	0.00	0.00	45,750	54,336	18.77	0.99	100.00
11	Peru	29,717	43,481	46.32	0.79	100.00	-	-	-	0.00	0.00	29,717	43,481	46.32	0.79	100.00
12	Malaysia	36,007	38,767	7.67	0.71	100.00	-	-	-	0.00	0.00	36,007	38,767	7.67	0.71	100.00
13	Honduras	31,500	32,100	1.90	0.59	100.00	-	-	-	0.00	0.00	31,500	32,100	1.90	0.58	100.00
14	Nicaragua	29,458	29,490	0.11	0.54	100.00	-	-	-	0.00	0.00	29,458	29,490	0.11	0.54	100.00
15	Venezuela	21,500	22,000	2.33	0.40	100.00	-	-	-	0.00	0.00	21,500	22,000	2.33	0.40	100.00
16	Guatemala	17,273	19,500	12.89	0.36	100.00	-	-	-	0.00	0.00	17,273	19,500	12.89	0.36	100.00
17	Philippines	12,527	19,152	52.89	0.35	100.00	-	-	-	0.00	0.00	12,527	19,152	52.89	0.35	100.00
18	Taiwan	7,979	10,072	26.23	0.18	99.64	48	36	-25.00	0.34	0.36	8,027	10,108	25.93	0.18	100.00
19	South Korea	4,480	7,542	68.35	0.14	100.00	-	-	-	0.00	0.00	4,480	7,542	68.35	0.14	100.00
20	Cuba	6,474	6,657	2.83	0.12	100.00	-	-	-	0.00	0.00	6,474	6,657	2.83	0.12	100.00
	Others	18,853	17,842	-5.36	0.33	97.70	420	420	0.00	4.00	2.30	19,273	18,262	-5.25	0.33	100.00
	Grand total	5,067,665	5,481,856	8.17	100.00	99.81	14,040	10,489	-25.29	100.00	0.19	5,081,705	5,492,345	8.08	100.00	100.00

Source: FAOSTAT, 2021

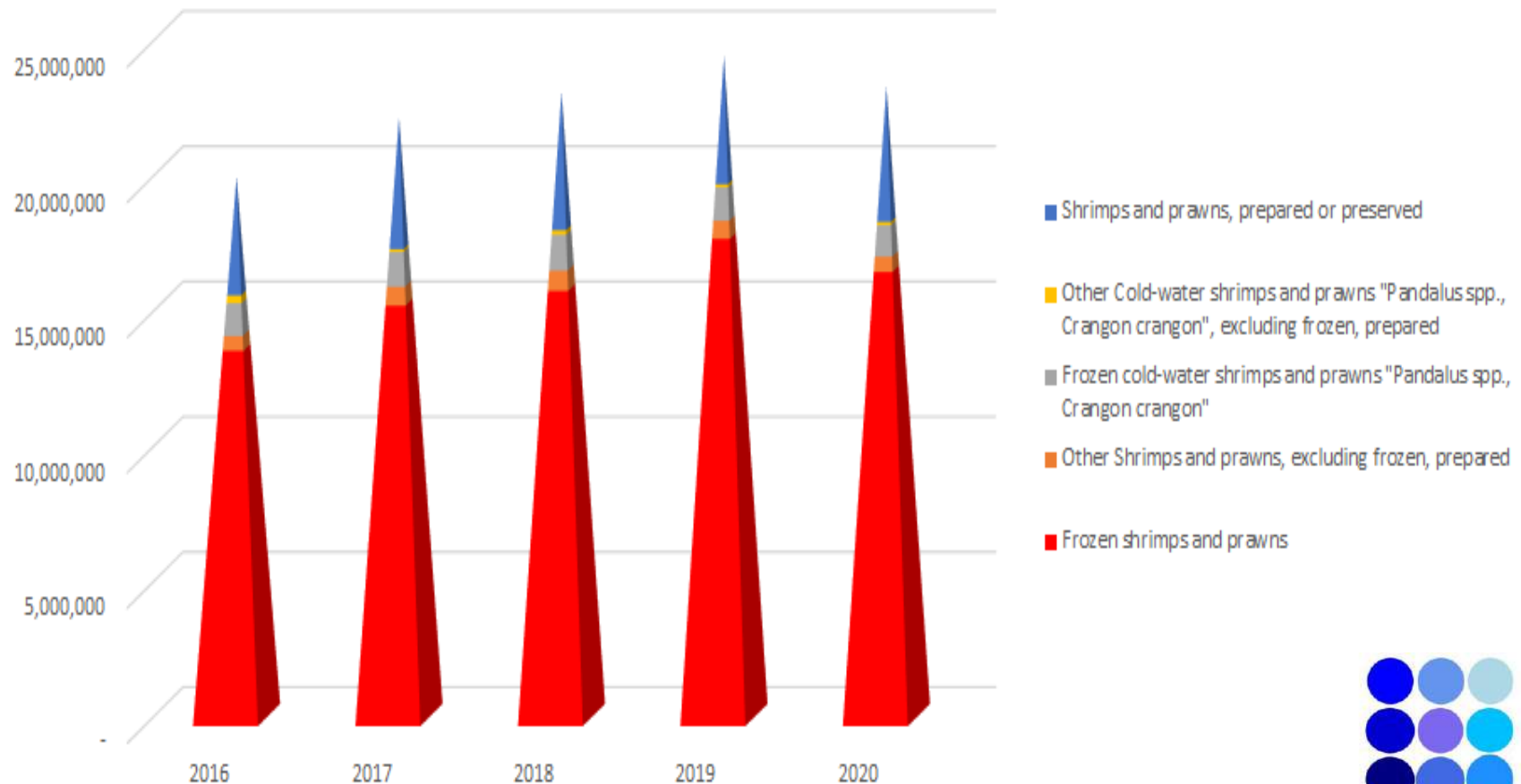


### World and Indonesia: Whiteleg Shrimp Production 2000-2019 (Tonnes)



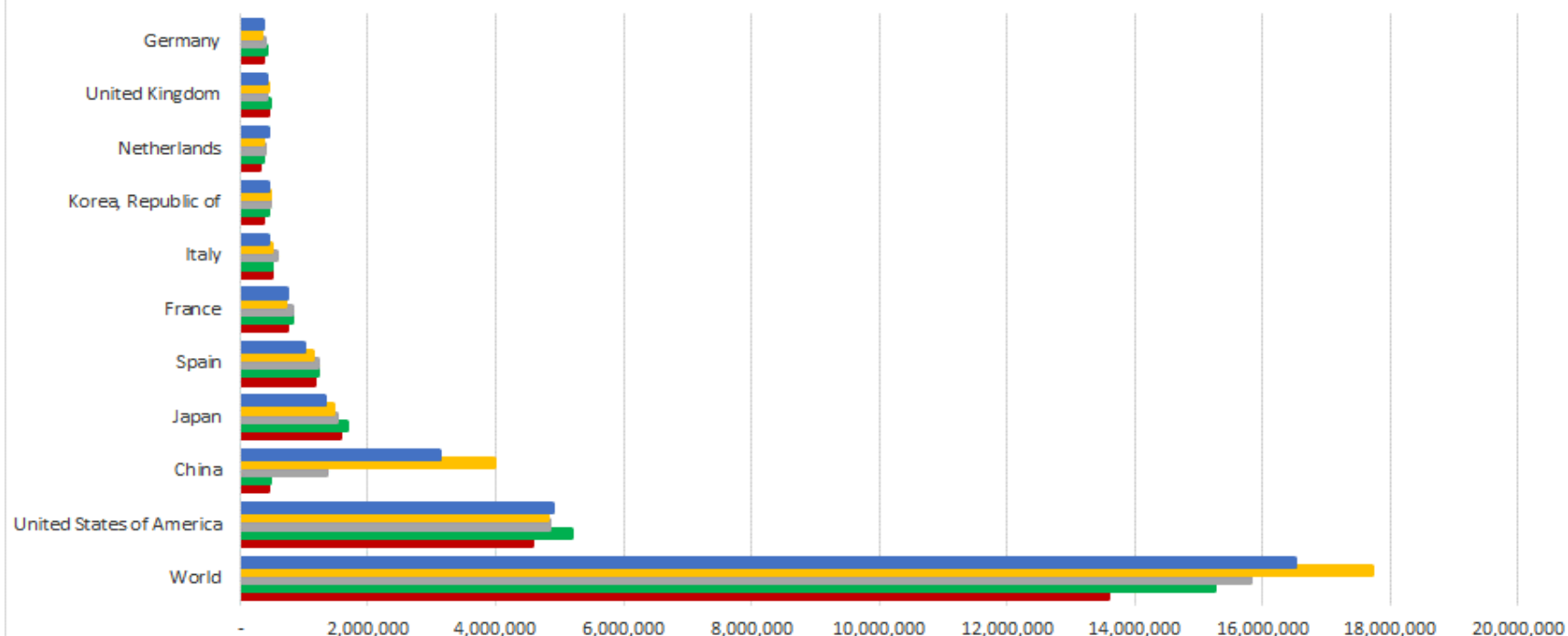


## World: Shrimps & Prawns Import by Products 2016-2020 (USD 000)



## World Top 10 Countries: Shrimps & Prawns Importers 2016-2020

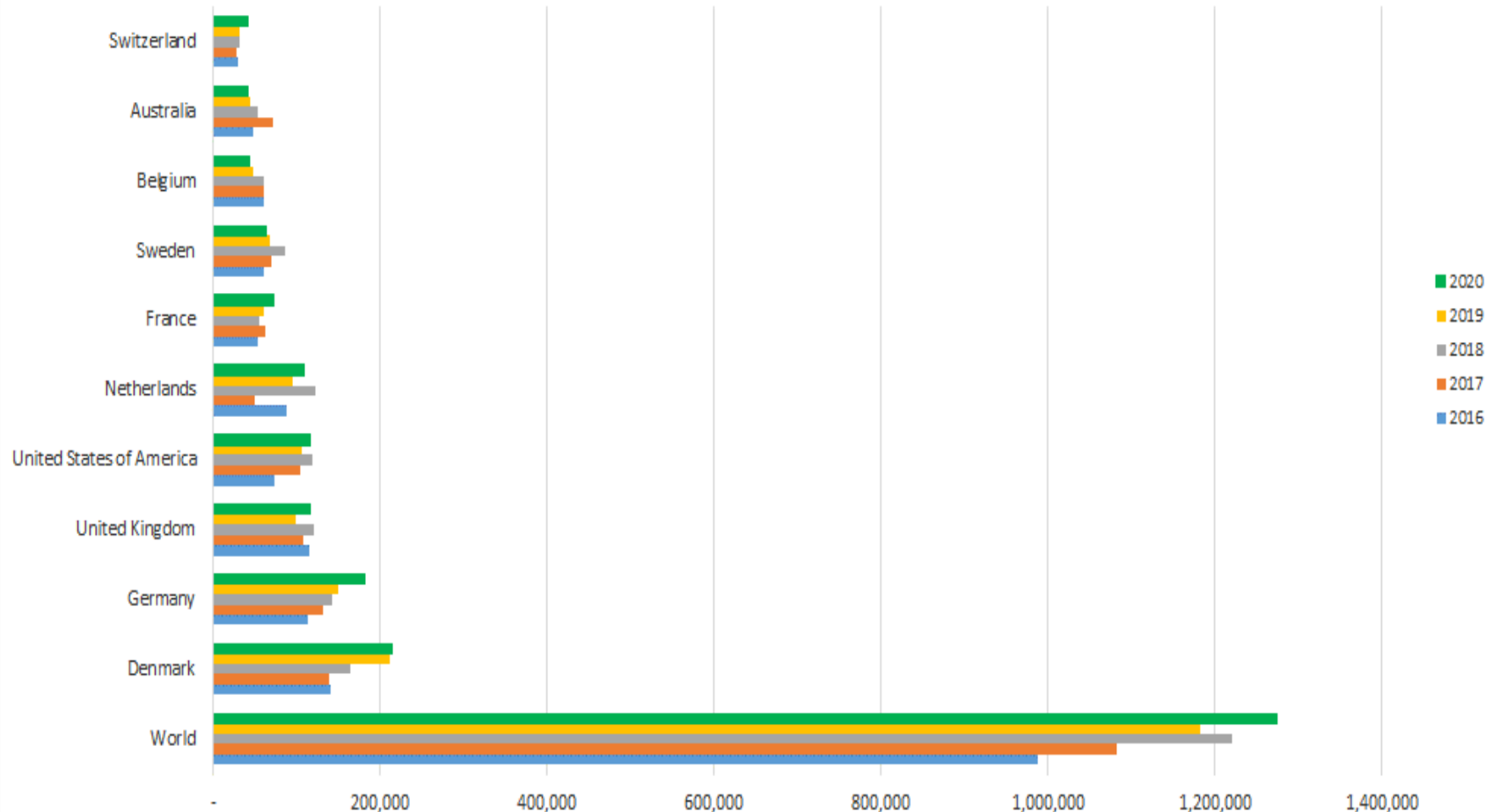
Product: 030617 Frozen shrimps and prawns, even smoked, whether in shell or not, incl. shrimps and prawns in ..  
(USD 000)



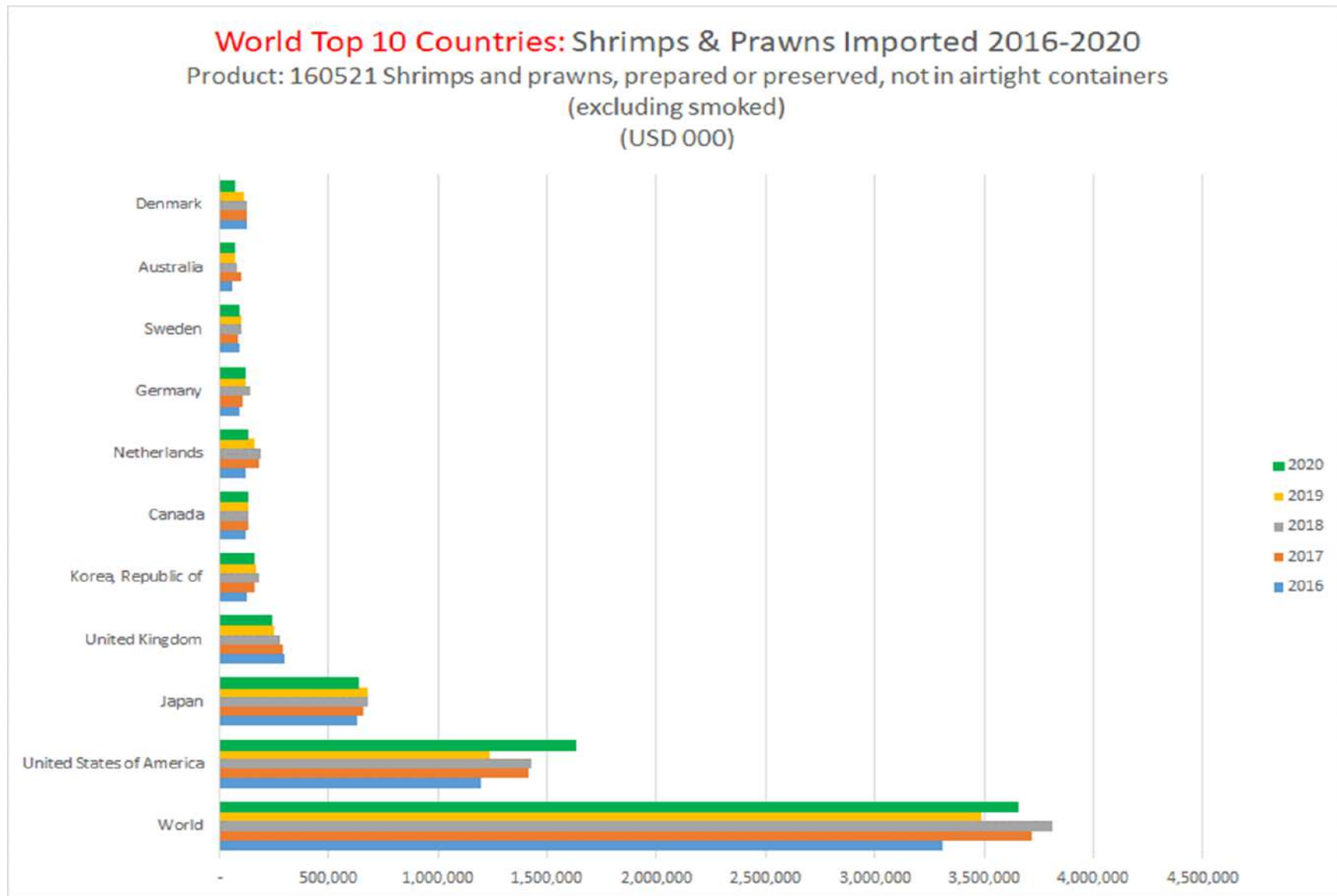
	World	United States of America	China	Japan	Spain	France	Italy	Korea, Republic of	Netherlands	United Kingdom	Germany
2020	16,500,910	4,874,656	3,103,671	1,324,693	993,900	722,006	446,219	441,702	421,764	400,058	364,206
2019	17,710,845	4,814,028	3,973,351	1,442,958	1,128,888	709,483	481,302	450,221	346,780	433,507	328,593
2018	15,804,173	4,844,219	1,355,605	1,505,497	1,209,338	803,166	555,668	460,837	372,074	416,207	369,011
2017	15,229,695	5,182,841	472,710	1,678,286	1,216,386	815,632	492,158	434,825	346,608	457,069	394,190
2016	13,571,264	4,565,437	444,814	1,563,541	1,145,777	739,560	490,604	357,362	313,330	426,198	342,488

### World Top 10 Countries: Shrimps & Prawns Imported 2016-2020

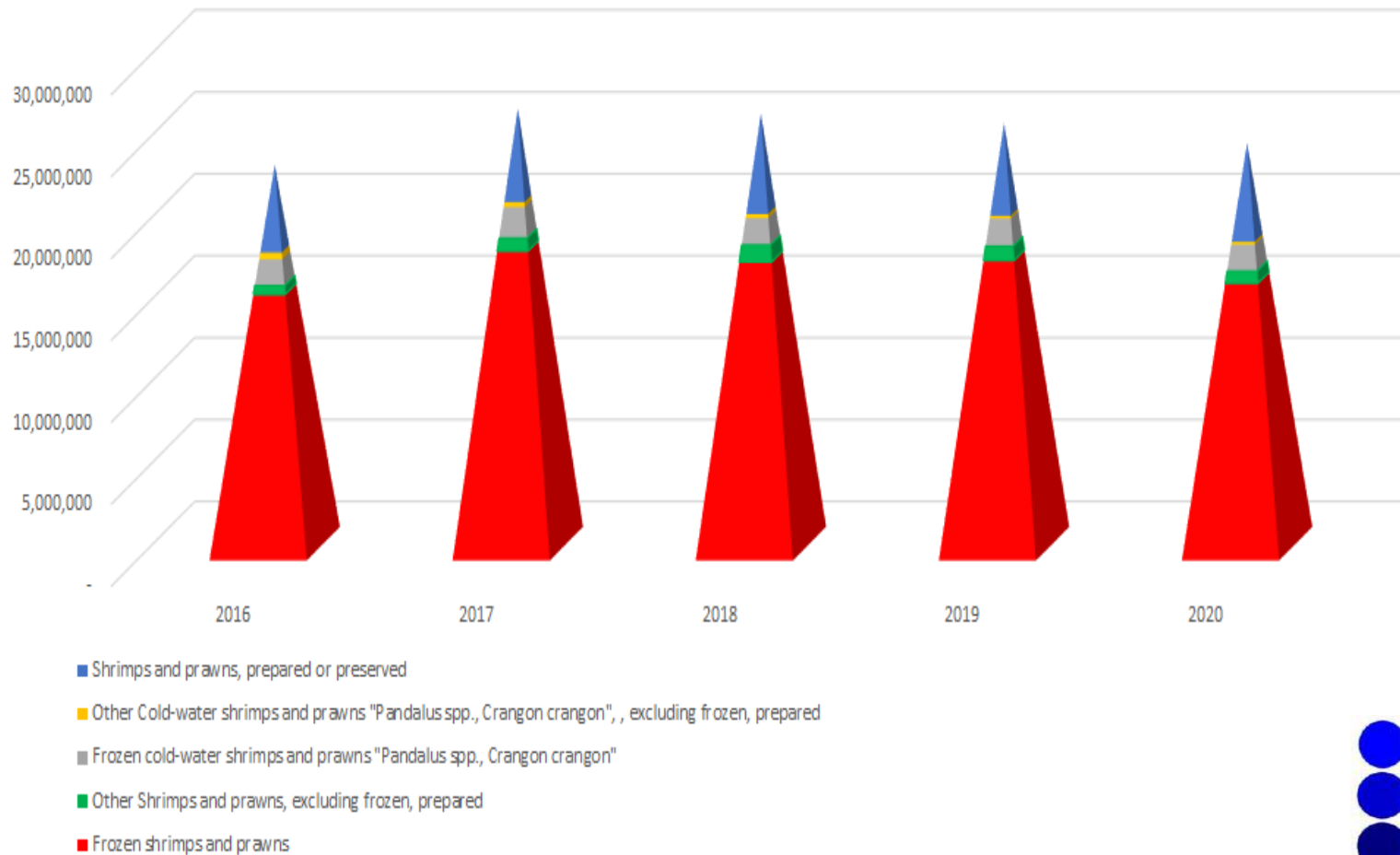
Product: 160529 Shrimps and prawns, prepared or preserved, in airtight containers (excluding smoked)  
(USD 000)





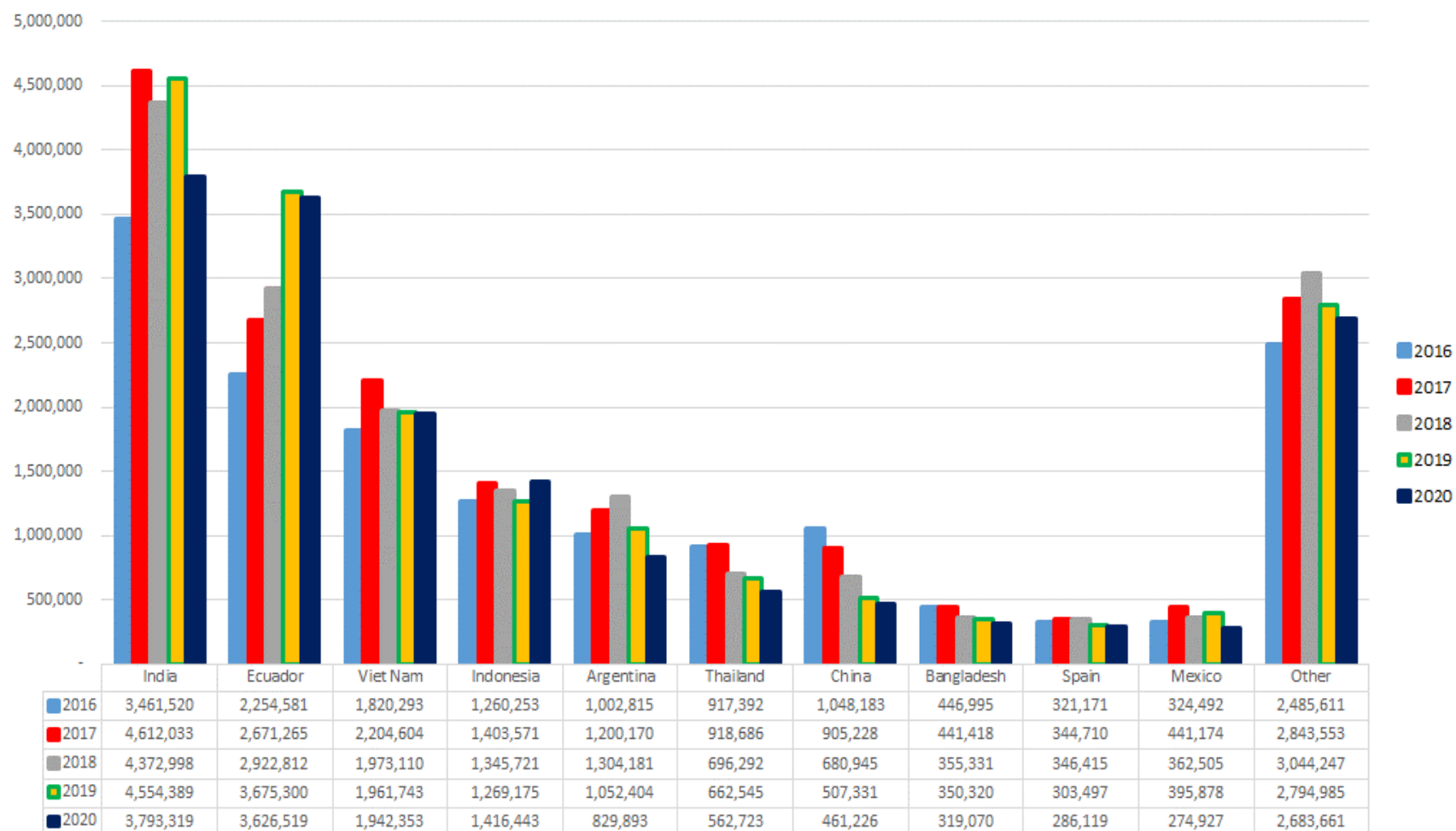


## World: Shrimps & Prawns Export by Products 2016-2020 (USD 000)



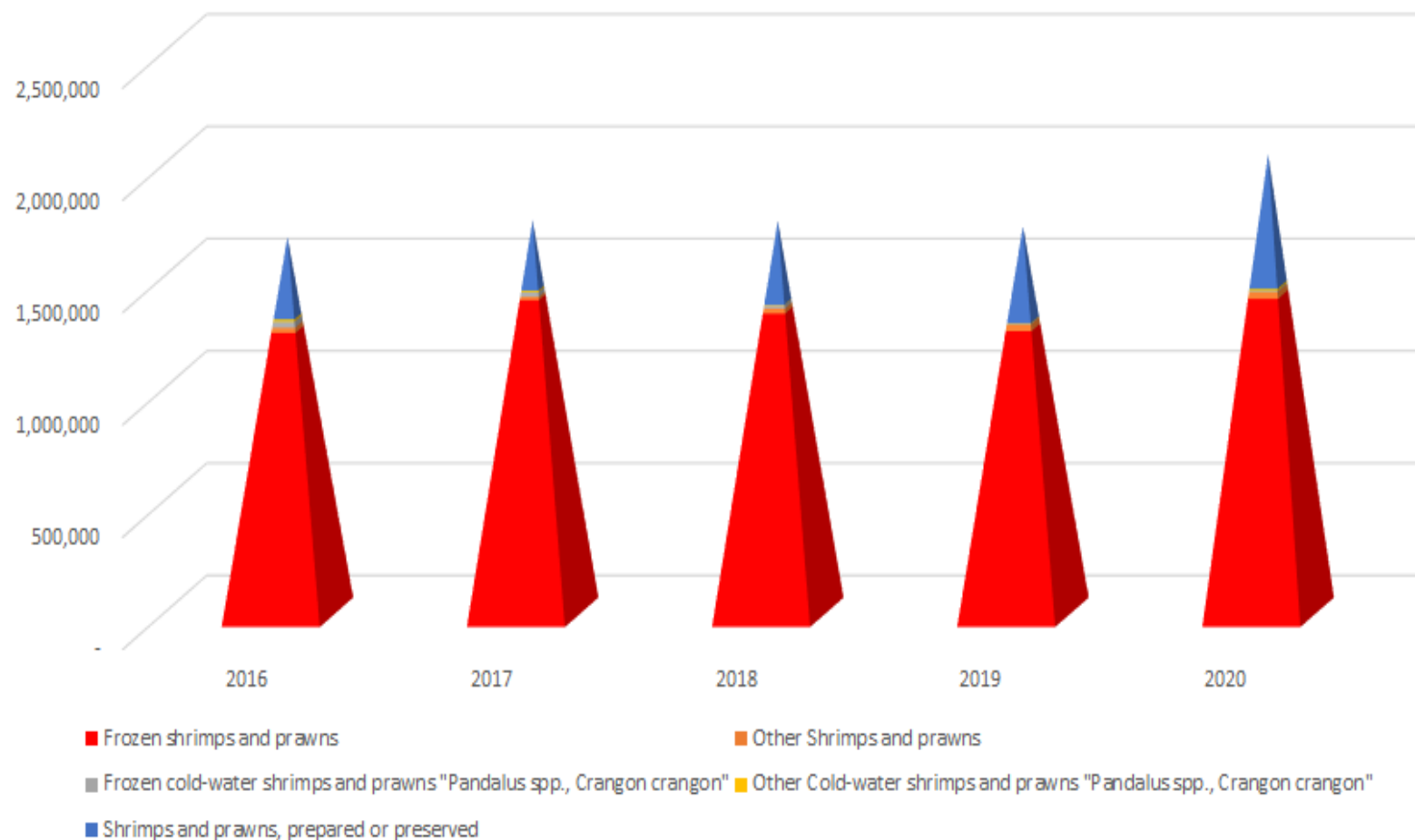
### World Top 10 Countries: Shrimps & Prawns Exporters 2016-2020

Product: 030617 Frozen shrimps and prawns, even smoked, whether in shell or not, incl. shrimps and prawns in ..  
(USD 000)



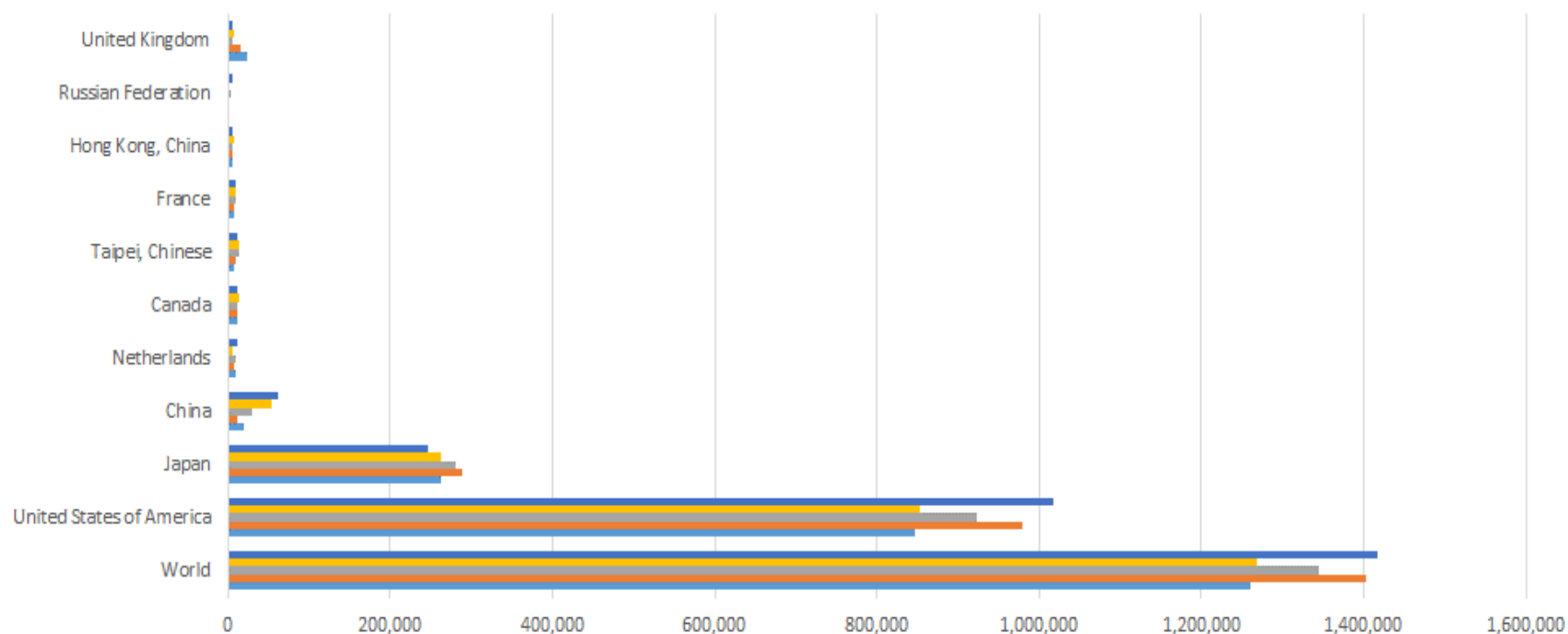


## INDONESIA: Shrimps & Prawns Export by Products 2016-2020 (USD 000)

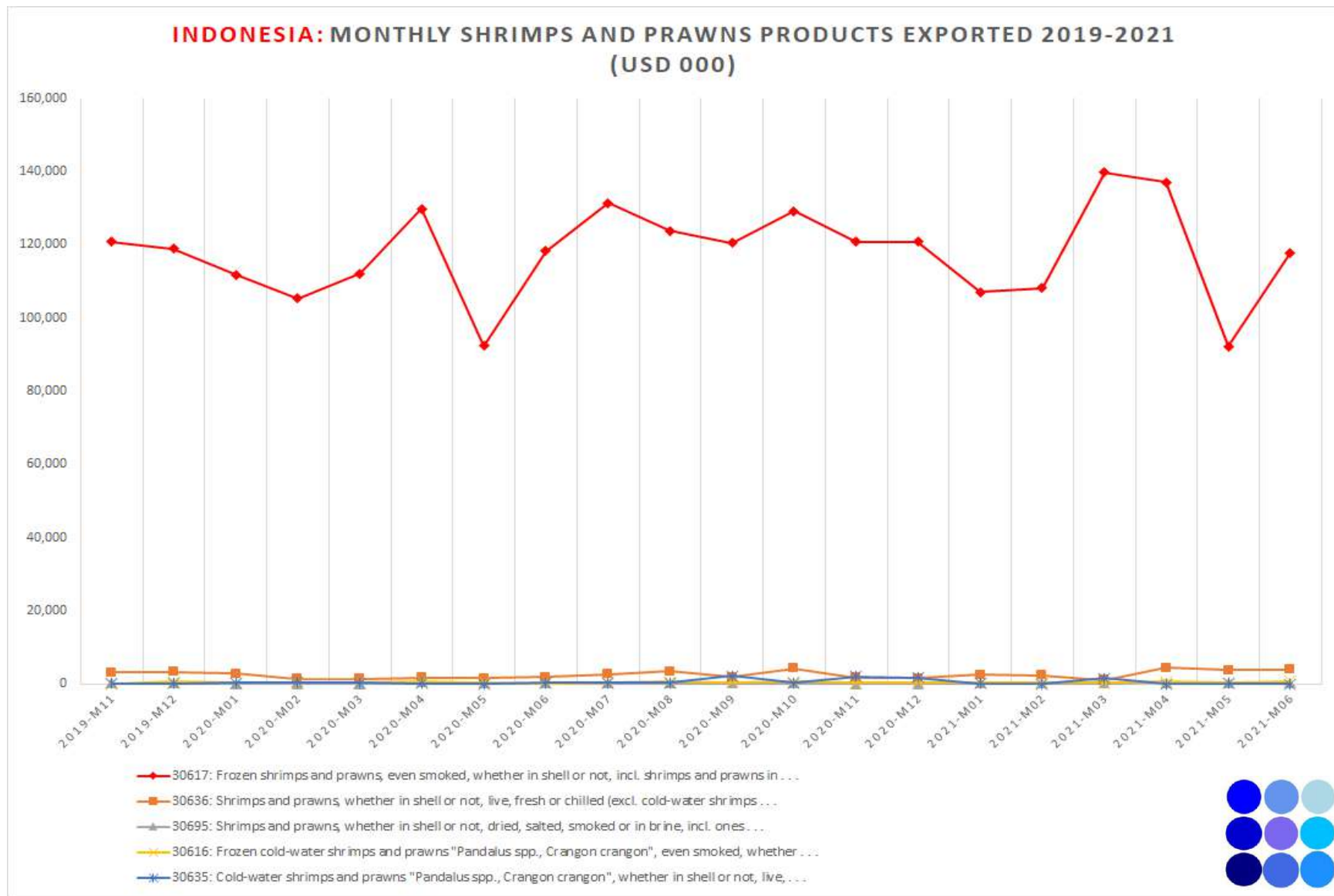


## INDONESIA: Shrimps & Prawns Export 2016-2020

Product: 030617 Frozen shrimps and prawns, even smoked, whether in shell or not, incl. shrimps and prawns in ...  
(USD 000)



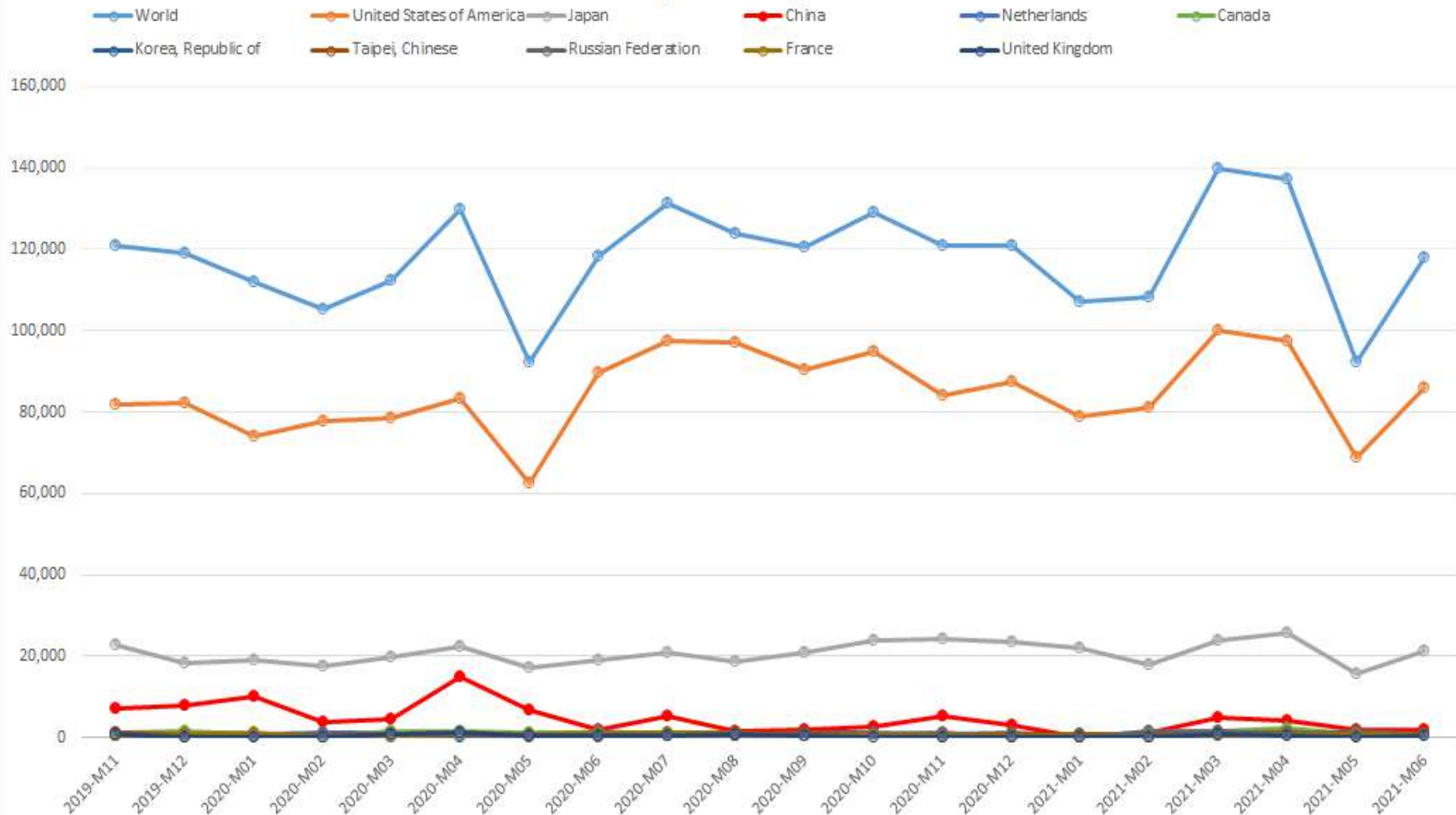
	World	United States of America	Japan	China	Netherlands	Canada	Taipei, Chinese	France	Hong Kong, China	Russian Federation	United Kingdom
■ 2020	1,416,443	1,017,676	247,309	62,189	11,893	11,850	10,664	9,473	6,468	5,733	5,527
■ 2019	1,269,175	852,159	261,846	52,810	5,434	13,200	13,237	9,741	6,958	2,220	7,867
■ 2018	1,345,721	923,787	280,064	29,273	9,853	12,255	13,332	8,682	6,576	3,092	5,492
■ 2017	1,403,571	978,867	288,008	11,771	7,356	10,911	10,379	7,317	6,076	1,643	15,818
■ 2016	1,260,253	846,575	263,118	19,228	8,796	11,066	7,272	7,948	5,854	1,083	23,137



### INDONESIA: MONTHLY SHRIMPS AND PRAWNS EXPORTED BY COUNTRY 2019-2021

PRODUCT: 030617 FROZEN SHRIMPS AND PRAWNS, EVEN SMOKED, WHETHER IN SHELL OR NOT, INCL. SHRIMPS AND PRAWNS IN ...

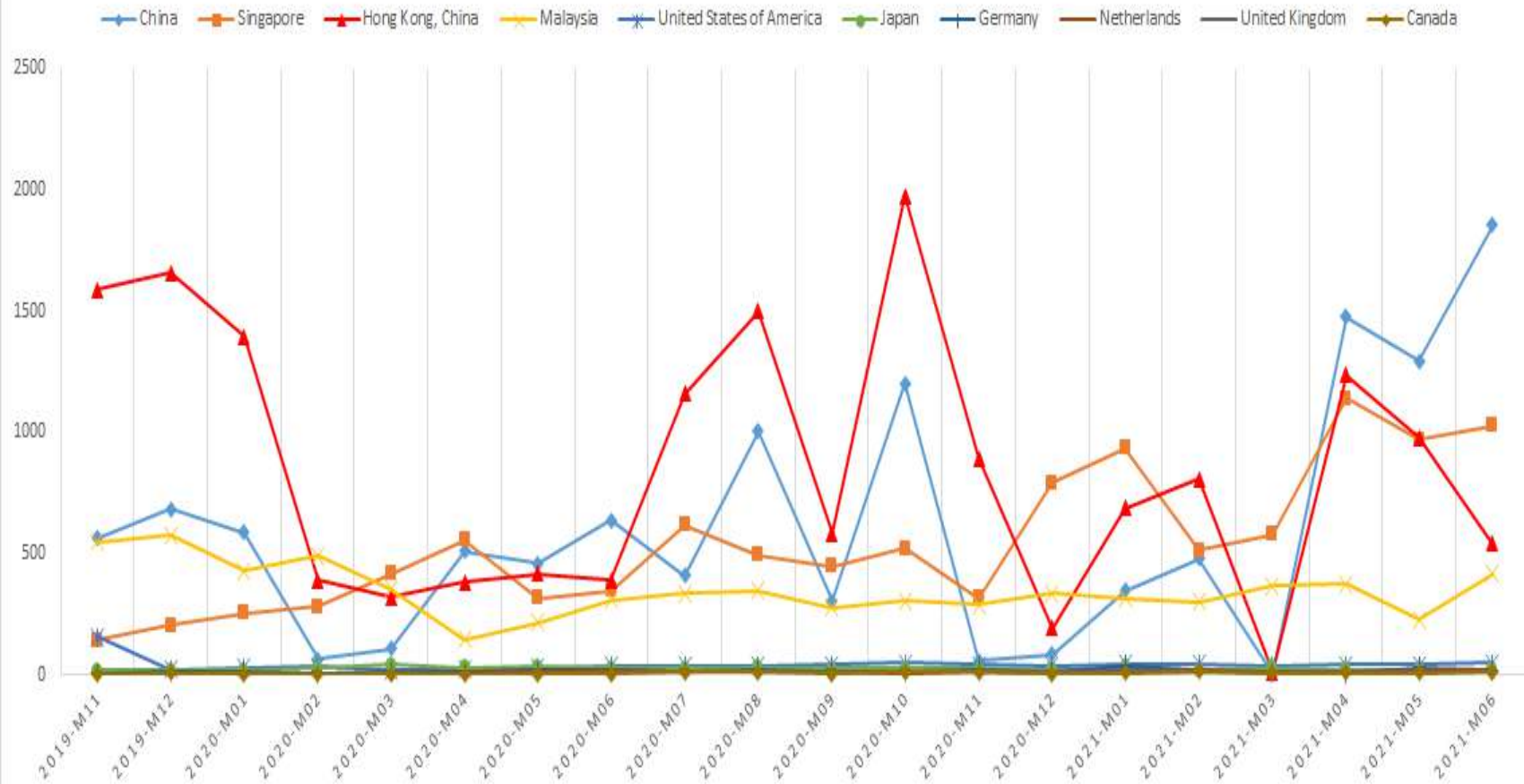
(USD 000)





## INDONESIA: MONTHLY SHRIMPS AND PRAWNS PRODUCTS EXPORTED 2019-2021

PRODUCT: 030636 SHRIMPS AND PRAWNS, WHETHER IN SHELL OR NOT, LIVE, FRESH OR CHILLED (EXCL. COLD-WATER SHRIMPS ...)  
(USD 000)



# VANNAMEI/WHITELEG SHRIMP BUSINESS ECOSYSTEM

Ministry of Energy and Mineral Resources /DisESDM

Ministry of Land Affairs/BPN

Ministry of Marine & Fishery Affairs/  
Dinas KP

Ministry of Environment & Forestry/DisLHK

Ministry of Transportations/  
Dishub

Ministry of Trade/  
Disdag

**Financing Sources:** Nat'l & Int'l Investor and Bank/ Non Bank

**Land Sources:** BUMN Co., Private Co., States and Communities

**Water Sources:** Pumping Sea Water & Freshwater

**Energy Sources:** PLN Electrical & Diesel Fuel

Local & Import  
**Broodstock Sources**

Local Sources:  
**Machineries & Equipment**

Local Sources: **Drugs & Feeds**

**Technology Sources:**  
National & International

Local **HR Sources**

Local Natural Sources:  
Seed & Broodstock

## NAYOTTAMA STRATEGIC ALIANCES (NSA)

Be Proposed  
Vannamei  
Shrimp  
Hatchery

Be Proposed  
Vannamei  
Shrimp  
Nursery

Be Proposed  
Vannamei  
Shrimp  
Processing  
Plant

Be Proposed  
Vannamei  
Shrimp  
Exporters

Proposed Vannamei  
Shrimp  
Grow-out Farms

Vannamei  
Shrimp  
Distributor/  
Retailer

Food  
Processing  
Plants

**Domestic Buyers:**

- Individuals
- Households
- Fish Shops
- Horeca
- Institutions (Fresh, Chilled, Frozen, Processed Products)

Vannamei  
Shrimp  
Hatchery

Vannamei  
Shrimp  
Nursery

Vannamei  
Shrimp  
Grow-out Farms

Vannamei  
Shrimp  
Traders

Vannamei  
Shrimp  
Processing

Vannamei  
Shrimp  
Exporters

Vannamei Shrimp  
Importers/Buyers  
(Fresh, Chilled,  
Frozen, Processed  
Products)

Vannamei  
Shrimp  
Capture

# SPINY LOBSTER BUSINESS ECOSYSTEM

Ministry of Energy and Mineral Resources /DisESDM

Ministry of Land Affairs/BPN

Ministry of Marine & Fishery Affairs/  
Dinas KP

Ministry of Environment & Forestry/DisLHK

Ministry of Transportations/  
Dishub

Ministry of Trade/  
Disdag

**Financing Sources:**  
Nat'l & Int'l Investor  
and Bank/Non Bank

**Land Sources:** BUMN  
Co., Private Co., States  
and Communities

**Water Sources:**  
Pumping Sea Water &  
Freshwater

**Energy Sources:** PLN  
Electrical & Diesel Fuel

Local Sources:  
Machineries &  
Equipment

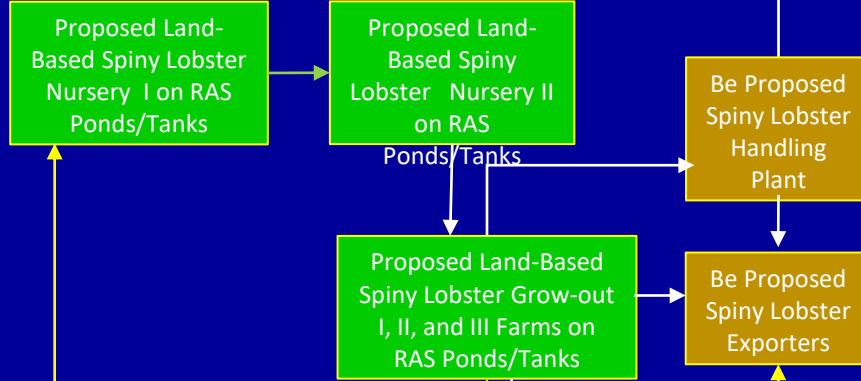
Local Sources:  
Drugs & Feeds

**Technology  
Sources:** National  
& International

Local HR Sources

Local Natural  
Sources: Pueruli  
Seed & Broodstock

## NAYOTTAMA STRATEGIC ALIANCES (NSA)



Spiny Lobster  
Distributor/ Retailer

Food  
Processing  
Plants

**Domestic Buyers:**

- Individuals
- Households
- Fish Shops
- Horeca
- Institutions (Live, Fresh, Chilled, Frozen, Processed)

Spiny Lobster  
Pueruli  
Collector

Spiny Lobster  
Nursery

Spiny Lobster Grow-out  
Farms (Sea Cages  
& Land-Based)

Spiny Lobster  
Importers/Buyers  
(Live, Fresh,  
Chilled, Frozen,  
Processed)

Spiny Lobster  
Traders

Spiny Lobster  
Processing

Spiny Lobster  
Exporters

Lobster  
Exporters of  
other Countries

Spiny Lobster  
Capture

# "Business Model Canvas (BMC)"

## VANNAMEI SHRIMP FARM: Intensive Technology

### Key Partners

- Investment Co.
- Kementerian KKP
- Pemda/Dinas KP
- Land Owner
- Shrimp Hatchery Farms
- Suppliers of feeds, drugs, machineries and equipments
- Partners of global processors and traders
- Local logtrans companies
- Domestic and International Research Centers

### Key Activities

- NAYOTTAMA and Investment Co. visit the proposed Project location & land owners
- Negotiation Meeting and Signing Pre-Contract Agreement between Managing Co. and Investor
- Preparing feasibility study & legal administration required for the agreed Project location
- Signing land business cooperation with Land Owner
- Preparing Project site plan for effective and efficient farm management covering aquaculture ponds, water reservoir ponds, waste water processing plants, building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing and signing Contract Agreement between Managing Co. and Investor
- Preparing DED (detailed engineering design) for aquaculture ponds, water reservoir ponds, waste water processing plants, building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing Bill of Quantity (BQ) and budgeting plan for civil works, mechanical and electrical works, and machinery and equipment facilities
- Constructions of civil works and Installation of ME works
- Procurement of machinery and equipment facilities
- Preparing shrimp aquaculture productions: human resources, SOPs, seeds, water, production inputs, production equipment and tools, risk management and mitigation instruments, monitoring systems & instruments, and reporting systems & instruments.
- Implementing and caring shrimp aquaculture productions
- Regular daily and weekly water quality and shrimp appearance
- Shrimp harvest and post harvest
- Shrimp sales and marketing

### Value Proposition

- Quality Consistency
- On Time Delivery
- Competitive Price

### Customer Relationship

- Good Sale-Purchase Relationships
- Global trading partnership

### channels

- Long-term and/or Annual Purchasing and Sales Contracts
- Spot Purchasing at Farm Gate

### Customer Segments

- 2-3 Partners of Global Processors and Traders
- Various Sizes of Fresh Whiteleg Shrimp Products

### Key Resources

- Human Resource: production farm, block farm offices, project site offices
- CAPEX and OPEX Capital: Own Capital and Investor Capital
- Business Networking, Collaborations and Partnerships: National and international organizations and individuals

### Cost Structure

- CAPEX: land cooperation, planning works, design works, preparation works, civil works, ME works, and machinery and equipment, as well as systems and certification
- OPEX: post larvae, feeds, addtve feeds, drugs, water treatment, energy, repairs and maintenance, human resource, meals & drinks, transport, operations and management, farm insurance, etc.
- COGS: shrimp farm productions, direct farm overhead costs, and farm depreciation and amortization (DA) costs
- General Operations and administrations: PSO & BFO office overhead & DA costs, economic costs, HRD costs, R&D costs, social costs, and production taxes

### Revenue Streams

- Selling various sizes of fresh Whiteleg shrimps
- Other revenues

# “Business Model Canvas (BMC)”

## VANNAMEI SHRIMP FARM: RAS Technology

### Key Partners

- Investment Co.
- Kementerian KKP
- Pemda/Dinas KP
- Land Owner
- Shrimp Hatchery Farms
- Suppliers of feeds, drugs, machineries and equipments
- Partners of global processors and traders
- Local logtrans companies
- Domestic and International Research Centers

### Key Activities

- NAYOTTAMA and Investment Co. visit the proposed Project location & land owners
- Negotiation Meeting and Signing Pre-Contract Agreement Managing Co. and Investor
- Preparing feasibility study & legal administration required for the agreed Project location
- Signing land business cooperation with Land Owner
- Preparing Project site plan for effective and efficient farm management covering aquaculture ponds, filtration ponds, water reservoir ponds, waste water processing plants, infiltration ponds, box control, RAS & building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing and signing Contract Agreement between Managing Co. and Investor
- Preparing DED (detailed engineering design) for aquaculture ponds, filtration ponds, water reservoir ponds, waste water processing plants, infiltration ponds, box control, RAS & building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing Bill of Quantity (BQ) and budgeting plan for civil works, mechanical and electrical works, and machinery and equipment facilities
- Constructions of civil works and Installation of ME works
- Procurement of machinery and equipment facilities
- Preparing shrimp aquaculture productions: human resources, SOPs, seeds, water, production inputs, production equipment and tools, risk management and mitigation instruments, monitoring systems & instruments, and reporting systems & instruments.
- Implementing and caring shrimp aquaculture productions
- Regular daily and weekly water quality and shrimp appearance
- Shrimp harvest and post harvest
- Shrimp sales and marketing

### Value Proposition

- Quality Consistency
- On Time Delivery
- Competitive Price

### Customer Relationship

- Good Sale-Purchase Relationships
- Global trading partnership

### Channels

- Long-term and/or Annual Purchasing and Sales Contracts
- Spot Purchasing at Farm Gate

### Customer Segments

- 2-3 Partners of Global Processors and Traders
- Various Sizes of Fresh Whiteleg Shrimp Products

### Key Resources

- Human Resource: production farm, block farm offices, project site offices
- CAPEX and OPEX Capital: Own Capital and Investor Capital
- Business Networking, Collaborations and Partnerships: National and international organizations and individuals

### Cost Structure

- CAPEX: land cooperation, planning works, design works, preparation works, civil works, ME works, and machinery and equipment, as well as systems and certification
- OPEX: post larvae, feeds, addtve feeds, drugs, water treatment, energy, repairs and maintenance, human resource, meals & drinks, transport, operations and management, farm insurance, etc.
- COGS: shrimp farm productions, direct farm overhead costs, and farm depreciation and amortization (DA) costs
- General Operations and administrations: PSO & BFO office overhead & DA costs, economic costs, HRD costs, R&D costs, social costs, and production taxes

### Revenue Streams

- Selling various sizes of fresh Whiteleg shrimps
- Other revenues



# "Business Model Canvas (BMC)"

# INTEGRATED SCALLOPED SPINY LOBSTER FARM: RAS Technology

## Key Partners

- Investment Co.
- Kementerian KKP
- Pemda/Dinas KP
- Land Owner
- Lobster Pueruli Seeds Catchers
- Other Lobster Nurseries & Growers
- Suppliers of feeds, drugs, machineries and equipments
- Partners of global & domestic buyers
- Local logtrans companies
- Domestic and International Research Centers

## Key Activities

- NAYOTTAMA and Investment Co. visit the proposed Project location & land owners
- Negotiation Meeting and Signing Pre-Contract Agreement between Managing Co. and Investor
- Preparing feasibility study & legal administration required for the agreed Project location
- Signing land business cooperation with Land Owner
- Preparing Project site plan for effective and efficient farm management covering aquaculture ponds, filtration ponds, water reservoir ponds, waste water processing plants, infiltration ponds, box control, RAS & building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing and signing Contract Agreement between Managing Co. and Investor
- Preparing DED (detailed engineering design) for aquaculture ponds, filtration ponds, water reservoir ponds, waste water processing plants, infiltration ponds, box control, RAS & building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing Bill of Quantity (BQ) and budgeting plan for civil works, mechanical and electrical works, and machinery and equipment facilities
- Constructions of civil works and Installation of ME works
- Procurement of machinery and equipment facilities
- Preparing lobster aquaculture productions: human resources, SOPs, seeds, water, production inputs, production equipment and tools, risk management and mitigation instruments, monitoring systems & instruments, and reporting systems & instruments.
- Implementing and caring lobster aquaculture productions
- Regular daily and weekly water quality and lobster appearance
- Handling and managing lobster harvest and post harvest
- Managing lobster sales and marketing

## Value Proposition

- Quality Consistency
- Safe & Live Whole Product Assurance
- On Time Delivery

## Customer Relationship

- Good Sale-Purchase Relationships
- Global trading partnership

## Channels

- Long-term and/or Annual Purchasing and Sales Contracts
- Spot Purchasing at Farm Gate

## Customer Segments

- 2-3 Partners of Global Buyers: Live Scalloped Spiny Lobsters: Size > 500 g/tail
- 2-3 Partners of Domestic Buyers: Live Scalloped Spiny Lobsters: Size 150-250 g
- Own & Other Farm Seeds: Live Scalloped Spiny Lobsters: 150-250 g, 30-50 g and 5 g per tail

## Key Resources

- Human Resource: production farm and project site offices
- CAPEX and OPEX Capital: Own Capital and Investor Capital
- Business Networking, Collaborations and Partnerships: National and international organizations and individuals

## Cost Structure

- CAPEX: land cooperation, planning works, design works, preparation works, civil works, ME works, and machinery and equipment, as well as systems and certification
- OPEX: seeds, feeds, addtve feeds, drugs, water treatment, energy, repairs and maintenance, human resource, meals & drinks, transport, operations and management, farm insurance, etc.
- COGS: lobster farm productions, direct farm overhead costs, and farm depreciation and amortization (DA) costs
- General Operations and administrations: PSO office overhead & DA costs, economic costs, HRD costs, R&D costs, social costs, and production taxes

## Revenue Streams

- Selling various sizes of live lobsters and lobster seeds
- Other revenues

# “Business Model Canvas (BMC)”

# INTEGRATED ORNATE SPINY LOBSTER FARM: RAS Technology

## Key Partners

- Investment Co.
- Kementerian KKP
- Pemda/Dinas KP
- Land Owner
- Lobster Pueruli Seeds Catcher
- Other Lobster Nurseries & Growers
- Suppliers of feeds, drugs, machineries and equipments
- Partners of global & domestic buyers
- Local logtrans companies
- Domestic and International Research Centers

## Key Activities

- NAYOTTAMA and Investment Co. visit the proposed Project location & land owners
- Negotiation Meeting and Signing Pre-Contract Agreement between Managing Co. and Investor
- Preparing feasibility study & legal administration required for the agreed Project location
- Signing land business cooperation with Land Owner
- Preparing Project site plan for effective and efficient farm management covering aquaculture ponds, filtration ponds, water reservoir ponds, waste water processing plants, infiltration ponds, box control, RAS & building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing and signing Contract Agreement between Managing Co. and Investor
- Preparing DED (detailed engineering design) for aquaculture ponds, filtration ponds, water reservoir ponds, waste water processing plants, infiltration ponds, box control, RAS & building supporting facilities, infrastructures, green areas, and agricultural areas.
- Preparing Bill of Quantity (BQ) and budgeting plan for civil works, mechanical and electrical works, and machinery and equipment facilities
- Constructions of civil works and Installation of ME works
- Procurement of machinery and equipment facilities
- Preparing lobster aquaculture productions: human resources, SOPs, seeds, water, production inputs, production equipment and tools, risk management and mitigation instruments, monitoring systems & instruments, and reporting systems & instruments.
- Implementing and caring lobster aquaculture productions
- Regular daily and weekly water quality and lobster appearance
- Handling and managing lobster harvest and post harvest
- Managing lobster sales and marketing

## Value Proposition

- Quality Consistency
- Safe & Live Whole Product Assurance
- On Time Delivery

## Customer Relationship

- Good Sale-Purchase Relationships
- Global trading partnership

## Channels

- Long-term and/or Annual Purchasing and Sales Contracts
- Spot Purchasing at Farm Gate

## Customer Segments

- 2-3 Partners of Global Buyers: Live Ornate Spiny Lobsters: Size > 1kg/tail
- 2-3 Partners of Domestic Buyers: Live Ornate Spiny Lobsters: Size 500-600 g & 200-300 g
- Own & Other Farm Seeds: Live Ornate Spin Lobsters: Size of 500-600 g, 200-300 g, 30-50 g and 5 g per tail

## Key Resources

- Human Resource: production farm and project site offices
- CAPEX and OPEX Capital: Own Capital and Investor Capital
- Business Networking, Collaborations and Partnerships: National and international organizations and individuals

## Cost Structure

- CAPEX: land cooperation, planning works, design works, preparation works, civil works, ME works, and machinery and equipment, as well as systems and certification
- OPEX: seeds, feeds, addtve feeds, drugs, water treatment, energy, repairs and maintenance, human resource, meals & drinks, transport, operations and management, farm insurance, etc.
- COGS: lobster farm productions, direct farm overhead costs, and farm depreciation and amortization (DA) costs
- General Operations and administrations: PSO office overhead & DA costs, economic costs, HRD costs, R&D costs, social costs, and production taxes

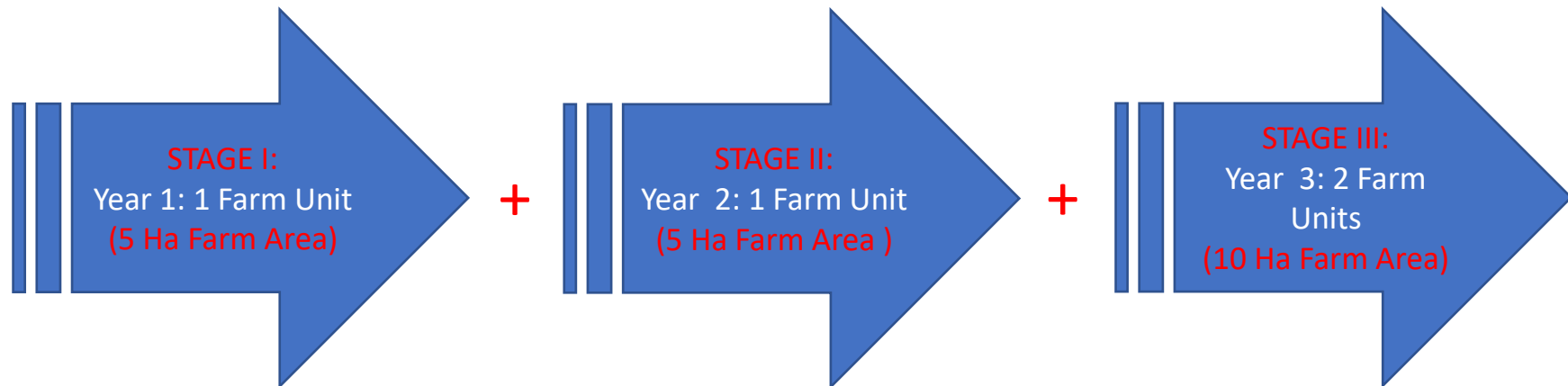
## Revenue Streams

- Selling various sizes of live lobsters and lobster seeds
- Other revenues

## FARM ESTABLISHMENT STAGE

Project # 1: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM PROJECT**

Business Scale: 20 Ha-Farm Land Area Using Intensive Technology



### Business Set-up (5 Ha Farm Area)

System Set-up  
HR Selection & Placement  
Locally Best Practices Applied  
Research Locally Technology  
Applied Research

### Business Development (10 Ha Farm Area)

System Development  
HR Selection, Placement & Development  
Locally Best Practices Development  
Locally Technology Development

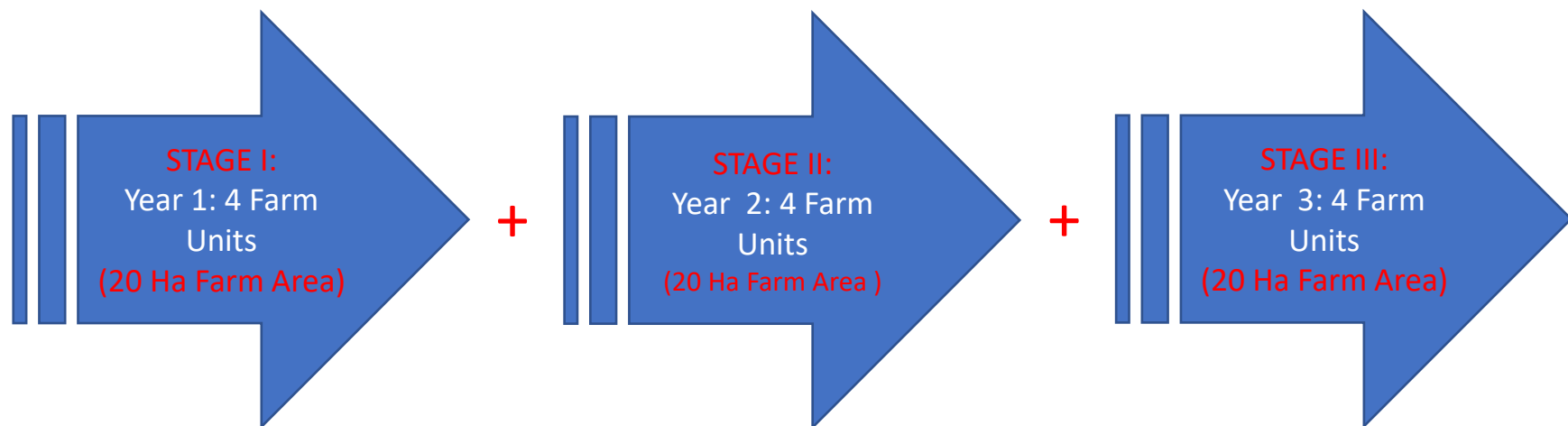
### Business Scaling-up (20 Ha Farm Area)

System Strengthening  
HR Selection, Placement & Development  
Locally Best Practices Strengthening  
Locally Technology Strengthening

## FARM ESTABLISHMENT STAGE

### Project # 2: **WEST JAVA:** SUSTAINABLE WHITELEG SHRIMP FARM PROJECT

Business Scale: 60 Ha-Farm Land Area Using Intensive Technology



Business Set-up (20 Ha Farm Area)  
System Set-up  
HR Selection & Placement  
Locally Best Practices Applied  
Research Locally Technology Applied  
Research

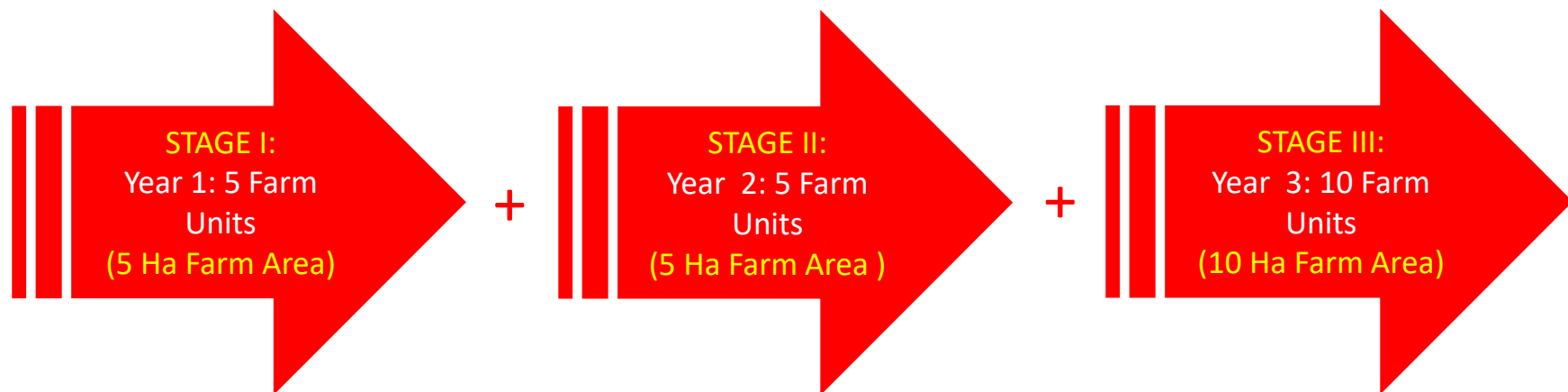
Business Development (40 Ha Farm Area)  
System Development  
HR Selection, Placement & Development  
Locally Best Practices Development  
Locally Technology Development

Business Scaling-up (60 Ha Farm Area)  
System Strengthening  
HR Selection, Placement & Development  
Locally Best Practices Strengthening  
Locally Technology Strengthening



## FARM ESTABLISHMENT STAGE

Project # 3: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT**  
 Business Scale: 20 Ha-Farm Land Area Using RAS Technology



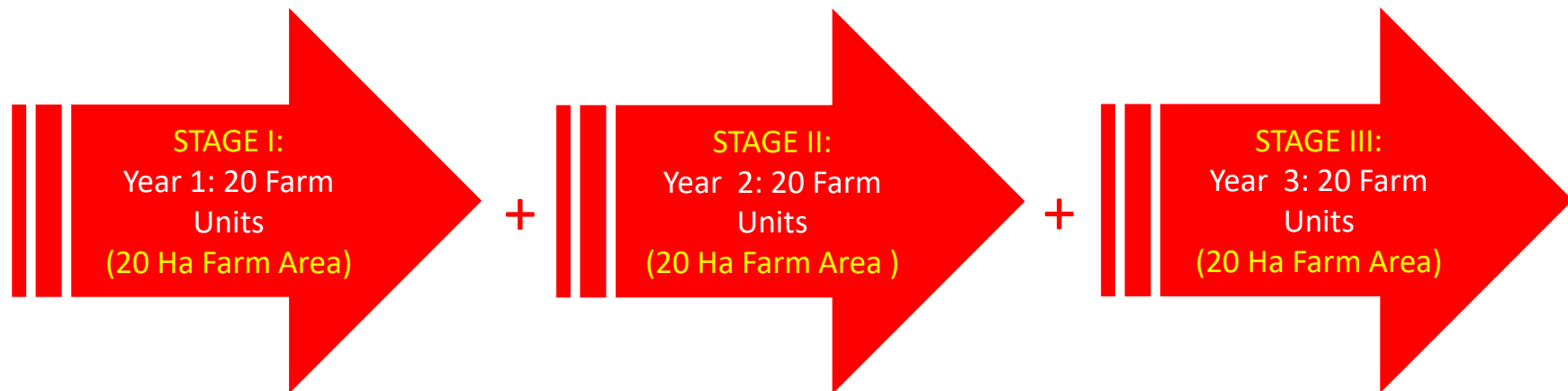
Business Set-up (5 Ha Farm Area)  
 System Set-up  
 HR Selection & Placement  
 Locally Best Practices Applied  
 Research Locally Technology  
 Applied Research

Business Development (10 Ha Farm Area)  
 System Development  
 HR Selection, Placement & Development  
 Locally Best Practices Development  
 Locally Technology Development

Business Scaling-up (20 Ha Farm Area)  
 System Strengthening  
 HR Selection, Placement & Development  
 Locally Best Practices Strengthening  
 Locally Technology Strengthening

## FARM ESTABLISHMENT STAGE

Project # 4: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT**  
 Business Scale: 60 Ha-Farm Land Area Using RAS Technology



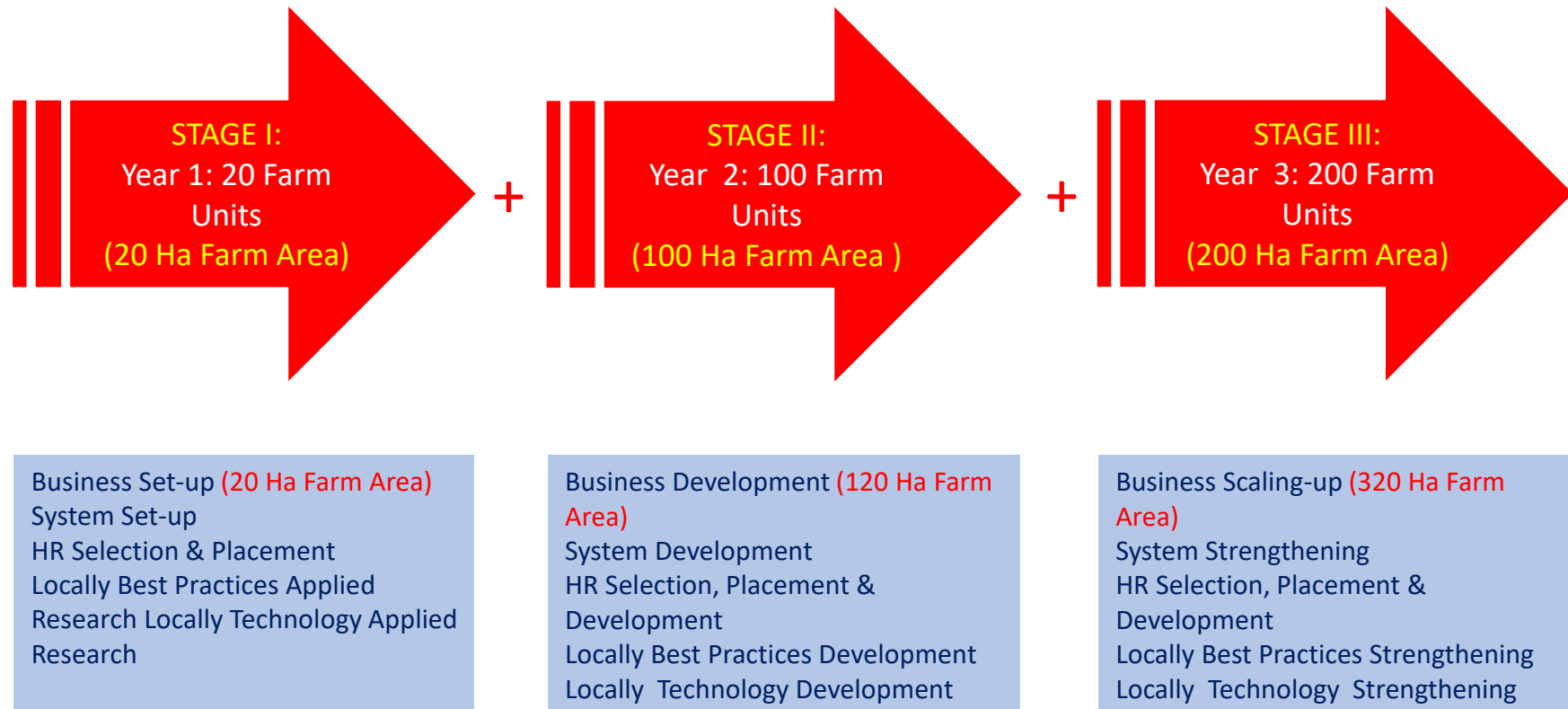
Business Set-up (20 Ha Farm Area)  
 System Set-up  
 HR Selection & Placement  
 Locally Best Practices Applied  
 Research Locally Technology Applied  
 Research

Business Development (40 Ha Farm Area)  
 System Development  
 HR Selection, Placement & Development  
 Locally Best Practices Development  
 Locally Technology Development

Business Scaling-up (60 Ha Farm Area)  
 System Strengthening  
 HR Selection, Placement & Development  
 Locally Best Practices Strengthening  
 Locally Technology Strengthening

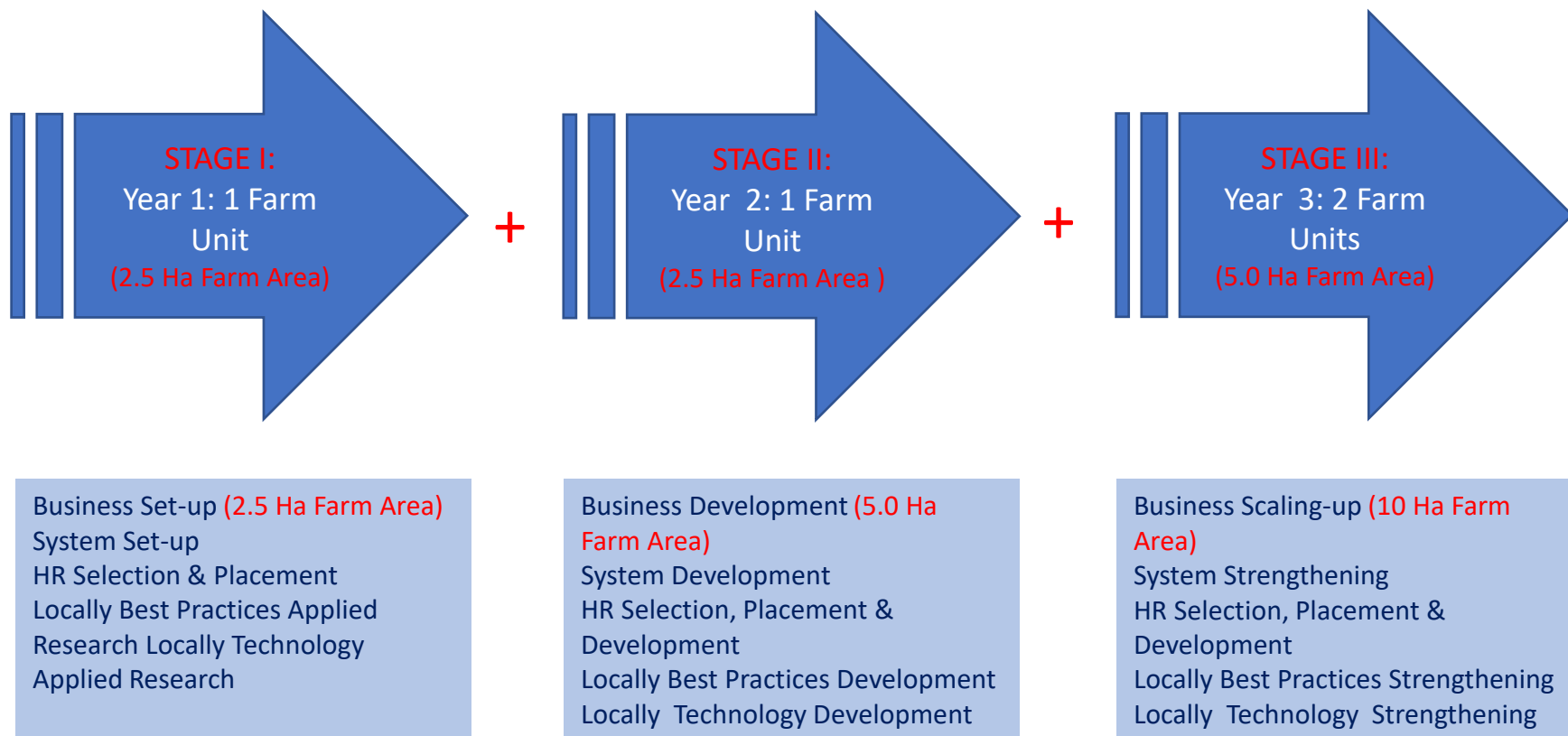
## FARM ESTABLISHMENT STAGE

Project # 5: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT**  
 Business Scale: 320 Ha-Farm Land Area Using RAS Technology



# FARM ESTABLISHMENT STAGE

## INTEGRATED ORNATE/SCALLOPED SPINY LOBSTER FARM ON RAS PONDS





## INVESTMENT AND FINANCIAL ANALYSIS

## Project # 1: WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM PROJECT

Business Scale: 20 Ha-Farm Land Area Using Intensive Technology

Project Currency Used	in USD	in IDR
Project Period Analysis	10 Years	10 Years
Land Farm Area	20.00 Ha	20.00 Ha
Aquaculture Pond Area	12.0 Ha	12.0 Ha
Total Capital: CAPEX & OPEX	3,445,532	49,960,221,170
Total CAPEX Capital	2,165,258	31,396,235,120
Total OPEX Capital	1,280,275	18,563,986,051
Average Income per Year	5,251,952	76,153,308,878
Average Total COGS per Year	2,981,364	43,229,781,422
Average Gross Profit per year	2,270,588	32,923,527,456
Gross Profit Margin to Income (%/Yr)	43.44	43.44
Gross Profit Margin to COGS (%/Yr)	76.82	76.82
Average Total Costs after FPT Tax per year	3,666,379	53,162,491,424
Average Net Profit After FPT Tax per Year	1,585,574	22,990,817,454
Net Profit Margin after FPT Tax to Income (%/Yr)	28.92	28.92
Net Profit Margin after FPT Tax to Total Costs (%/Yr)	41.04	41.04
Average Retained Earning per Year	317,115	4,598,163,491
Average Distributed Earning per Year	1,268,459	18,392,653,963
Average Return of Equity/ROE ( %/Yr)	79.63	79.63
Net Present Value (NPV) DF 12%	6,921,760.37	100,365,525,334
Financial Internal Rate of Return: IRR (%)	162.23	162.23
Benefit Cost (B/C) Ratio DF 12%	1.41	1.41
Capital Payback Period (Yr)	2.17	2.17

Note: 1 USD = IDR 14,500

## INVESTMENT AND FINANCIAL ANALYSIS

## Project # 2: WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM PROJECT

Business Scale: 60 Ha-Farm Land Area Using Intensive Technology

Project Currency Used	in USD	in IDR
Project Period Analysis	10 Years	10 Years
Land Farm Area	60.00 Ha	60.00 Ha
Aquaculture Pond Area	36.0 Ha	36.0 Ha
Total Capital: CAPEX & OPEX	12,243,096	177,524,891,140
Total CAPEX Capital	6,268,354	90,891,137,104
Total OPEX Capital	5,974,742	86,633,754,035
Average Income per Year	16,226,882	235,289,793,048
Average Total COGS per Year	9,231,489	133,856,591,968
Average Gross Profit per year	6,995,393	101,433,201,080
Gross Profit Margin to Income (%/Yr)	43.29	43.29
Gross Profit Margin to COGS (%/Yr)	76.35	76.35
Average Total Costs after FPT Tax per year	10,979,177	159,198,061,167
Average Net Profit After FPT Tax per Year	5,247,706	76,091,731,881
Net Profit Margin after FPT Tax to Income (%/Yr)	32.23	32.23
Net Profit Margin after FPT Tax to Total Costs (%/Yr)	47.56	47.56
Average Retained Earning per Year	1,049,541	15,218,346,376
Average Distributed Earning per Year	4,198,165	60,873,385,505
Average Return of Equity/ROE ( %/Yr)	78.63	78.63
Net Present Value (NPV) DF 12%	25,080,606.42	363,668,793,084
Financial Internal Rate of Return: IRR (%)	309.77	309.77
Benefit Cost (B/C) Ratio DF 12%	1.48	1.48
Capital Payback Period (Yr)	2.33	2.33

Note: 1 USD = IDR 14,500

## INVESTMENT AND FINANCIAL ANALYSIS

Project # 3: **WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT**  
 Business Scale: 20 Ha-Farm Land Area Using RAS Technology

Project Currency Used	in USD	in IDR
Project Period Analysis	10 Years	10 Years
Land Farm Area	20.00 Ha	20.00 Ha
Aquaculture Pond Area	10.06 Ha	10.06 Ha
Total Capital: CAPEX & OPEX	6,816,967	98,846,018,269
Total CAPEX Capital	4,477,425	64,922,659,294
Total OPEX Capital	2,339,542	33,923,358,975
Average Income per Year	9,733,726	141,139,026,604
Average Total COGS per Year	5,424,528	78,655,654,090
Average Gross Profit per year	4,309,198	62,483,372,513
Gross Profit Margin to Income (%/Yr)	44.31	44.31
Gross Profit Margin to COGS (%/Yr)	79.58	79.58
Average Total Costs after FPT Tax per year	6,499,632	94,244,658,542
Average Net Profit After FPT Tax per Year	3,234,094	46,894,368,062
Net Profit Margin after FPT Tax to Income (%/Yr)	32.54	32.54
Net Profit Margin after FPT Tax to Total Costs (%/Yr)	48.36	48.36
Average Retained Earning per Year	646,819	9,378,873,612
Average Distributed Earning per Year	2,587,275	37,515,494,450
Average Return of Equity/ROE ( %/Yr)	82.43	82.43
Net Present Value (NPV) DF 12%	14,937,408.62	216,592,424,966
Financial Internal Rate of Return: IRR (%)	201.76	201.76
Benefit Cost (B/C) Ratio DF 12%	1.48	1.48
Capital Payback Period (Yr)	2.11	2.11

Note: 1 USD = IDR 14,500

## INVESTMENT AND FINANCIAL ANALYSIS

## Project # 4: WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT

Project Currency Used	in USD	in IDR
Project Period Analysis	10 Years	10 Years
Land Farm Area	60.00 Ha	60.00 Ha
Aquaculture Pond Area	30.17 Ha	30.17 Ha
Total Capital: CAPEX & OPEX	19,524,020	283,098,294,637
Total CAPEX Capital	13,286,334	192,651,849,126
Total OPEX Capital	6,237,686	90,446,445,511
Average Income per Year	30,068,540	435,993,824,756
Average Total COGS per Year	16,757,249	242,980,116,165
Average Gross Profit per year	13,311,290	193,013,708,590
Gross Profit Margin to Income (%/Yr)	44.31	44.31
Gross Profit Margin to COGS (%/Yr)	79.56	79.56
Average Total Costs after FPT Tax per year	19,764,560	286,586,125,216
Average Net Profit After FPT Tax per Year	10,303,979	149,407,699,540
Net Profit Margin after FPT Tax to Income (%/Yr)	34.17	34.17
Net Profit Margin after FPT Tax to Total Costs (%/Yr)	51.92	51.92
Average Retained Earning per Year	2,060,796	29,881,539,908
Average Distributed Earning per Year	8,243,183	119,526,159,632
Average Return of Equity/ROE ( %/Yr)	83.55	83.55
Net Present Value (NPV) DF 12%	49,141,287.89	712,548,674,370
Financial Internal Rate of Return: IRR (%)	289.22	289.22
Benefit Cost (B/C) Ratio DF 12%	1.52	1.52
Capital Payback Period (Yr)	1.90	1.90
Note: 1 USD = IDR 14,500		



## INVESTMENT AND FINANCIAL ANALYSIS

## Project # 5: WEST JAVA: SUSTAINABLE WHITELEG SHRIMP FARM ON RAS POND PROJECT

Project Currency Used	in USD	in IDR
Project Period Analysis	10 Years	10 Years
Land Farm Area	320.00 Ha	320.00 Ha
Aquaculture Pond Area	160.93 Ha	160.93 Ha
Total Capital: CAPEX & OPEX	104,732,342	1,518,618,952,328
Total CAPEX Capital	70,296,003	1,019,292,039,738
Total OPEX Capital	34,436,339	499,326,912,590
Average Income per Year	149,957,204	2,174,379,459,358
Average Total COGS per Year	76,190,309	1,104,759,487,431
Average Gross Profit per year	73,766,895	1,069,619,971,928
Gross Profit Margin to Income (%/Yr)	48.70	48.70
Gross Profit Margin to COGS (%/Yr)	95.07	95.07
Average Total Costs after FPT Tax per year	91,187,375	1,322,216,943,126
Average Net Profit After FPT Tax per Year	58,769,829	852,162,516,232
Net Profit Margin after FPT Tax to Income (%/Yr)	38.35	38.35
Net Profit Margin after FPT Tax to Total Costs (%/Yr)	62.42	62.42
Average Retained Earning per Year	11,753,966	170,432,503,246
Average Distributed Earning per Year	47,015,863	681,730,012,985
Average Return of Equity/ROE ( %/Yr)	86.84	86.84
Net Present Value (NPV) DF 12%	251,754,090	3,650,434,307,172
Financial Internal Rate of Return: IRR (%)	326.77	326.77
Benefit Cost (B/C) Ratio DF 12%	1.62	1.62
Capital Payback Period (Yr)	1.78	1.78

Note: 1 USD = IDR 14,500

## INVESTMENT AND FINANCIAL ANALYSIS

Project # 6: **WEST JAVA: INTEGRATED SCALLOP SPINY LOBSTER FARM ON RAS POND**

Business Scale: 10 Ha-Farm Land Area Using RAS Technology

Project Currency Used	in USD	in IDR
Project Period Analysis	10 Years	10 Years
Land Farm Area	10.00 Ha	10.00 Ha
Aquaculture Pond Area	3.14 Ha	3.14 Ha
Total Capital: CAPEX & OPEX	5,217,957	75,660,376,719
Total CAPEX Capital	2,216,456	32,138,616,739
Total OPEX Capital	3,001,501	43,521,759,980
Average Income per Year	15,697,718	227,616,910,714
Average Total COGS per Year	8,410,386	121,950,596,075
Average Gross Profit per year	7,287,332	105,666,314,639
Gross Profit Margin to Income (%/Yr)	40.79	40.79
Gross Profit Margin to COGS (%/Yr)	76.20	76.20
Average Total Costs after FPT Tax per year	9,636,776	139,733,258,450
Average Net Profit After FPT Tax per Year	6,060,942	87,883,652,264
Net Profit Margin after FPT Tax to Income (%/Yr)	31.61	31.61
Net Profit Margin after FPT Tax to Total Costs (%/Yr)	53.42	53.42
Average Retained Earning per Year	1,214,026	17,603,382,918
Average Distributed Earning per Year	4,846,915	70,413,531,673
Average Return of Equity/ROE ( %/Yr)	113.37	113
Net Present Value (NPV) DF 12%	28,582,836	414,451,124,680
Financial Internal Rate of Return: IRR (%)	293.12	293.12
Benefit Cost (B/C) Ratio DF 12%	1.53	1.53
Capital Payback Period (Yr)	0.86	0.86

Note: 1 USD = IDR 14,500

## INVESTMENT AND FINANCIAL ANALYSIS

Project # 7: **WEST JAVA: INTEGRATED ORNATE SPINY LOBSTER FARM ON RAS POND**

Business Scale: 10 Ha-Farm Land Area Using RAS Technology

Project Currency Used	in USD	in IDR
Project Period Analysis	10 Years	10 Years
Land Farm Area	10.00 Ha	10.00 Ha
Aquaculture Pond Area	4.40 Ha	4.40 Ha
Total Capital: CAPEX & OPEX	8,239,245	119,469,049,638
Total CAPEX Capital	2,695,564	39,085,673,544
Total OPEX Capital	5,543,681	80,383,376,094
Average Income per Year	32,471,927	470,842,939,286
Average Total COGS per Year	19,714,773	285,864,204,693
Average Gross Profit per year	12,757,154	184,978,734,593
Gross Profit Margin to Income (%/Yr)	34.72	34.72
Gross Profit Margin to COGS (%/Yr)	57.26	57.26
Average Total Costs after FPT Tax per year	21,903,918	317,606,817,145
Average Net Profit After FPT Tax per Year	10,568,008	153,236,122,141
Net Profit Margin after FPT Tax to Income (%/Yr)	26.96	26.96
Net Profit Margin after FPT Tax to Total Costs (%/Yr)	41.12	41.12
Average Retained Earning per Year	2,115,495	30,674,682,034
Average Distributed Earning per Year	8,452,513	122,698,728,135
Average Return of Equity/ROE ( %/Yr)	121.91	121.91
Net Present Value (NPV) DF 12%	49,654,645	719,992,359,177
Financial Internal Rate of Return: IRR (%)	351.33	351.33
Benefit Cost (B/C) Ratio DF 12%	1.41	1.41
Capital Payback Period (Yr)	0.78	0.78
Note: 1 USD = IDR 14,500		





Thank you ...

