

**Grant Aid Projects/Standard Indicator Reference (Fisheries)**

Examples of Setting Indicators for Each Development Strategic Objective

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
1. Effective utilization of fishery resources (stable food supply)	1-1. Increase in fishery production	1-1-2. Dissemination of appropriate fishing technologies	Vessels for skipjack pole and line fishing, fishery guidance vessels used for training, equipment for repairing outboard motors, etc.	<b>Operation indicators</b>	<b>Basic indicators</b> The monthly average operating rate of fishing vessels	(This column explains how to set each indicator, calculation standards and points to note when setting the indicators, among others.)	<ul style="list-style-type: none"> <li>The objectives of the project were to increase the catch, increase the production of value-added products and enable continuous stable business management, by introducing two additional vessels for skipjack pole and line fishing to Soltai Fishing and Processing Ltd. (SFPL) on the Solomon Islands.</li> </ul>	The Solomon Islands	The Project for Rehabilitation of the Domestic Tuna Fishery	2009
				<b>Effect indicators</b>	<b>Basic indicators</b> An increase in the handling of the catch <b>Supplementary indicators</b> An increase in the number of powered pirogues registered. An increase in the average daily number of powered pirogues in operation.			Panama	The Small-scale Fishery Development Project	2007
								Cameroon	The Project for the Improvement of Small-scale Fishery Center	2009
	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure	1-4-1. The improvement of technologies for processing and preserving the freshness of the catch	Hygiene testing laboratories	<b>Operation indicators</b>	<b>Basic indicators</b> The number of hygiene tests performed in hygiene testing laboratories The number of times workshops on HACCP (a comprehensive hygiene management system) were held		<ul style="list-style-type: none"> <li>The objective of the project was to improve fishery facilities in the Point Wharf area in Antigua and Barbuda, by repairing a quay, a revetment and a ramp as well as constructing a fish processing plant and a hygiene testing laboratory in the area.</li> <li>The objectives of the project were to improve hygiene conditions at the production and distribution stages by strengthening fish market functioning. Based on the improvement, the project aimed to supply hygienic and safe highly value-added fishery products to consumers in Kingstown and the surrounding areas.</li> </ul>	Antigua and Barbuda	The Project for Construction of Fisheries Center	2009
				<b>Effect indicators</b>	The number of those who have passed the HACCP course examination which is an examination on the food hygiene management system			St. Vincent	The Project for Re-Modeling of New Kingstown Fish Market	2008

1. Effective utilization of fishery resources (stable food supply)	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure	1-4-1. The improvement of technologies for processing and preserving the freshness of the catch	Fresh fish retailing facilities	<b>Operation indicators</b>	<b>Basic indicators</b> The utilization rate for retail booths	<ul style="list-style-type: none"> <li>The objectives of the project were to improve fishery product wholesale and retail functioning as well as the hygiene testing system in the Kenien area which neighbors a retail market directly controlled by the Conakry city authorities, by improving relevant facilities and equipment.</li> <li>The expected effects of the project were: (1) the improvement of frozen fish and fresh fish wholesale functioning, (2) the improvement of wholesale functioning for smoked fish to be supplied to the western Ratoma area, etc., (3) the improvement of fishery product retail functioning in Conakry particularly around the market; and (4) the strengthening of hygiene testing activities by the market administering agency.</li> </ul>	Guinea	The Project for Construction of Fish Market at Kenien in Conakry	2007
				<b>Effect indicators</b>	<b>Basic indicators</b> A reduction in (illegal) sales by street stalls A reduction in the amount of fish rejected due to a decline in freshness The improvement in freshness and hygiene conditions during sale				
			Freezers and refrigerators	<b>Operation indicators</b>	<b>Basic indicators</b> The amount stored The number of facility users	<ul style="list-style-type: none"> <li>The objectives of the project were to improve fishery product wholesale and retail functioning as well as the hygiene testing system in the Kenien area which neighbors a retail market directly controlled by the Conakry city authorities, by improving relevant facilities and equipment.</li> <li>The expected effects of the project were: (1) the improvement of frozen fish and fresh fish wholesale functioning, (2) the improvement of wholesale functioning for smoked fish to be supplied to the western Ratoma area, etc., (3) the improvement of fishery product retail functioning in Conakry particularly around the market; and (5) the strengthening of hygiene testing activities by the market administering agency.</li> </ul>	Guinea	The Project for Construction of Fish Market at Kenien in Conakry	2007
				<b>Effect indicators</b>	<b>Basic indicators</b> A reduction in the amount of fish rejected due to a decline in freshness The stable supply of fishery products in fishery off-seasons				
			Ice making and storage facilities	<b>Operation indicators</b>	<b>Basic indicators</b> The operating rate of ice makers (amount of ice production) <b>Supplementary indicators</b> Cumulative hours of operation for emergency generators	<ul style="list-style-type: none"> <li>The objectives of the project were to improve hygiene conditions at the production and distribution stages by strengthening fish market functioning. Based on the improvement, the project aimed to supply hygienic and safe highly value-added fishery products to consumers in Kingstown and the surrounding areas.</li> </ul>	St. Vincent	The Project for Re-Modeling of New Kingstown Fish Market	2008
				<b>Effect indicators</b>	<b>Basic indicators</b> An increase in the amount of fresh fish handled The amount of frozen fish distributed to inland areas The amount of fresh fish				

1. Effective utilization of fishery resources (stable food supply)	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure	1-4-2. The improvement of fish processing technologies	Fishery processing plants	<p><b>Operation indicators</b></p> <p><b>Effect indicators</b></p>	<p>exported</p> <p><b>Supplementary indicators</b></p> <p>A drop in the price of ice (an indicator which indirectly indicates the freshness of fishery products)</p> <p>The amount of ice sold at fishing ports (an indicator for freshness preservation effectiveness)</p>	<p>catch as well as to facilitate the stable supply of fishery products to the general consumer market. The project also aimed to benefit fishermen by improving the existing storage system used for price adjustment, in order to eliminate differences in the supply and the price of fish in the fishing seasons and the off-seasons.</p> <p>• At Praia fishing port, there were mainly three problems: (i) the quay being overcrowded due to fish-landing operations and the trading of fish, (ii) inefficient and unhygienic fish-landing operations and fish trading, and (iii) declining freshness of the catch and declining fish prices. Therefore, the project aimed at the following results through providing assistance: improving fishing efficiency; increasing the catch; ensuring safety in the shipping lanes and anchorage areas of fishing vessels; preservation of the freshness of the catch; water pollution prevention at the fishing port through the appropriate treatment of the catch; and the establishment of an appropriate management and administration system.</p> <p>• The objective of the project was to reduce the loss of caught fish and increase the amount of catch handled at San Juan del Sur (SJDS) Port, by improving the fishery facilities and equipment at the port.</p>	<p>Cape Verde</p> <p>Nicaragua</p>	<p>The Project for Extension of Fishing Port Infrastructure in Praia (Phase II)</p> <p>The Project for Improvement of Fishery Facilities at San Juan del Sur Port</p>	<p>2007</p> <p>2010</p>			
					<p><b>Basic indicators</b></p> <p>The amount of fishery processing product</p>	<p>• The objective of the project was to improve fishery facilities in the Point Wharf area in Antigua and Barbuda, by repairing a quay, a revetment and a ramp as well as constructing a fish processing plant and a hygiene testing laboratory in the area.</p>	<p>Antigua and Barbuda</p>	<p>The Project for Construction of Fisheries Center</p>	<p>2009</p>			
					<p><b>Basic indicators</b></p> <p>A reduction in the amount of caught fish lost or disposed of</p> <p>An increase in the amount of processed fishery products distributed (sold)</p> <p><b>Supplementary indicators</b></p> <p>An increase in the number of items and types of processed fishery products</p> <p>An improvement in the quality of processed fishery products</p>	<p>• The objectives of the project were to streamline and stimulate distribution activities and to reduce the loss of caught fish which occurs in the distribution process, by improving the facilities within the fish market.</p>	<p>Tanzania</p>	<p>The Project for Construction of Kirumba Fish Market in Mwanza</p>	<p>2003</p>			
					<p><b>Operation indicators</b></p> <p><b>Effect indicators</b></p>	<p><b>Basic indicators</b></p> <p>The calmness of waters inside the harbor (the total number of days when the wave height was 0.3 m or less)</p> <p><b>Basic indicators</b></p> <p>A reduction in fishing vessel damage caused by stormy</p>	<p>• The objectives of the project were to increase the safety and operational efficiency of the fishing activities and to increase the freshness of the catch, by constructing fishery facilities including breakwaters, a pier, ice making and storage facilities in Soufriere and Choiseul which are the main fish-landing areas.</p>	<p>St. Lucia</p>	<p>The Project for Improvement of Coastal Fisheries Development</p>	<p>2006</p>		
					<p>1-4-3. The improvement of distribution facilities such as fishing ports and fish markets</p>	<p>Breakwaters</p>	<p><b>Operation indicators</b></p> <p><b>Effect indicators</b></p>	<p><b>Basic indicators</b></p> <p>The calmness of waters inside the harbor (the total number of days when the wave height was 0.3 m or less)</p> <p><b>Basic indicators</b></p> <p>A reduction in fishing vessel damage caused by stormy</p>	<p>• The objectives of the project were to increase the safety and operational efficiency of the fishing activities and to increase the freshness of the catch, by constructing fishery facilities including breakwaters, a pier, ice making and storage facilities in Soufriere and Choiseul which are the main fish-landing areas.</p>	<p>St. Lucia</p>	<p>The Project for Improvement of Coastal Fisheries Development</p>	<p>2006</p>

				weather An increase in the number of workable days inside the harbor (a reduction in the impact of waves on work)					
1. Effective utilization of fishery resources (stable food supply)	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure	1-4-3. The improvement of distribution facilities such as fishing ports and fish markets	Fish-landing piers	<p><b>Operation indicators</b></p> <p><b>Basic Indicators</b> The number of fishing vessels which used piers The sufficiency ratio of piers (the number of fishing vessels which used piers divided by the planned number of fishing vessels)</p> <p><b>Effect indicators</b></p> <p>A reduction in the congestion rate at the existing piers A reduction in the time required for landing fish</p> <p><b>Supplementary indicators</b></p> <p>A reduction in the number of workers needed for landing fish from small-scale fishing vessels (an indicator which indirectly indicates the improvement of fish-landing efficiency)</p>		<ul style="list-style-type: none"> <li>The objectives of the project were to increase the safety and operational efficiency of the fishing activities and to increase the freshness of the catch, by constructing fishery facilities including breakwaters, a pier, ice making and storage facilities, etc. in Soufriere and Choiseul which are the main fish-landing areas.</li> </ul>	St. Lucia	The Project for Improvement of Coastal Fisheries Development	2006
			Dredging, the installation of navigation beacons, etc.	<p><b>Operation indicators</b></p> <p><b>Basic indicators</b> The amount dredged The number of dredging operations An increase in the number of vessels which called at the port An increase in the operating rate of liners</p> <p><b>Effect indicators</b></p> <p><b>Basic indicators</b> An increase in the amount of fish-landing work The elimination of fishing vessels' offshore waiting times The number of days when fully loaded liners can use the shipping lane A reduction in the time required for liners to pass through the shipping lane</p>		<ul style="list-style-type: none"> <li>The objectives of the project were to improve the efficiency of fish-landing operations at North Dock in Peleliu State and increase the operating rate of the regular ferries, by repairing and improving North Dock through the repair of the fish-landing center for fishing vessels, dredging, the installation of navigation beacons, etc.</li> </ul>	Palau	The Project for the Improvement of North Dock of Peleliu State	2010
			The development of fishery complexes (which include storage facilities, administration offices, processing and	<p><b>Operation indicators</b></p> <p><b>Basic indicators</b> The number of facility users The number of registered fishermen The number of registered fishing vessels The number of fishermen</p> <p><b>Supplementary indicators</b> The fishermen's locker usage</p>		<ul style="list-style-type: none"> <li>At Praia fishing port, there were problems including the quay being overcrowded due to fish-landing operations and the trading of fish, inefficient and unhygienic fish-landing operations and fish trading, declining freshness of the catch and declining fish prices, etc. Therefore, the project aimed at the following results through providing assistance: improving fishing efficiency;</li> </ul>	Cape Verde	The Project for Extension of Fishing Port Infrastructure in Praia (Phase II)	2007

			handling shed, retail markets and meeting rooms), the improvement and development of facilities for fisheries centers		rate An increase in the number of corporate fishing vessels		increasing the catch; ensuring safety in the shipping lanes and anchorage areas of fishing vessels; preservation of the freshness of the catch; water pollution prevention at the fishing port through the appropriate treatment of the catch; and the establishment of an appropriate management and administration system.			
				<b>Effect indicators</b>	<b>Basic indicators</b> An increase in the handling of the catch Fishery output Income from facility operations (income from facility use fees, the volume of ice sales) A reduction in the time required for the handling of goods A reduction in the number of days when fish markets were suspended or closed due to rain		<ul style="list-style-type: none"> <li>The objectives of the project were to improve the operational efficiency of fishing vessels and to improve the distribution system for fishery products, by constructing and procuring fishing port facilities and equipment, including a fish-landing quay, goods handling shed and an ice maker for Cotonou Fishing Port.</li> </ul>	Benin	The Project for the Improvement of Cotonou Fishing Port	2009
					<b>Supplementary indicators</b> A reduction in the amount of fishery products imported An increase in the number of FRP (fiber reinforced plastic) fishing vessels (the number of fishing vessels in operation for each type of vessel (unit: vessels/year))		<ul style="list-style-type: none"> <li>The objectives of the project were to improve fish-landing efficiency at the fishing port and to improve the efficiency of fishery-related operations such as sales at the fish market, by repairing and improving the facilities of the fishing port, the fish markets and the fishery center at Apia Fisheries Wharf which is the hub for the fishing industry (a key industry in Samoa).</li> </ul>	Samoa	The Project for the Renovation and Extension of Apia Fisheries Wharf and Related Facilities	2010
2. Conservation and management of fishery resources	2-1. Fish stock assessment	2-1-1. The establishment of resource survey systems	The provision of research vessels	<b>Operation indicators</b>	<b>Basic indicators</b> The average annual number of voyages by research vessels The degree of the utilization of acoustic survey equipment		<ul style="list-style-type: none"> <li>By providing a research vessel, the project aimed to achieve the following results: contribute to resolving urgent issues such as “controlling the decline of coastal bottom fish stocks” and “understanding the size of coastal pelagic fish stocks”; and clarifying the factors affecting the fluctuations in the size of the fish stocks such as fishing activities and changes in the marine environment. In addition, because coastal pelagic fish stocks including sardines are distributed across northwest Africa, the project also aimed to improve the infrastructural side of the system which enables joint research with neighboring countries in addition to research within Senegal’s exclusive economic zone.</li> </ul>	Senegal	The Project for the Construction of a Fishery Research Vessel	2006
				<b>Effect indicators</b>	<b>Basic indicators</b> The improvement of fishery statistics				<ul style="list-style-type: none"> <li>The objectives of the project were to enable full-fledged research into pelagic fish stocks including sardines, thereby establishing the foundation for resources management-based fisheries, by providing a research vessel.</li> </ul>	Morocco
2. Conservation and management of fishery resources	2-1. Fish stock assessment	2-1-3. Raising resources management awareness of governments and	The construction of fishery management training facilities (which include	<b>Operation indicators</b>	<b>Basic indicators</b> The number of officials who received training dedicated to government officials engaged in fishery management		<ul style="list-style-type: none"> <li>The project aimed to achieve the objectives shown below, by constructing a fishery management and training facility (including a fishery management office and a library) and improving relevant equipment such as</li> </ul>	Mauritius	The Project for Upgrading and Renovation of the Management and Training Facilities	2008

		fishermen	fishery management offices and libraries), the improvement of relevant equipment including training equipment and workshop equipment	<b>Effect indicators</b>	<b>Basic indicators</b> The number of fishermen who switched fishing grounds from inside lagoons to outside lagoons	training and workshop equipment. (1) Encourage artisanal fishermen who have been operating inside lagoons to conduct fishing outside lagoons, by giving training on fishing technologies. (2) Conserve the marine environment and protect stocks, through thorough fishery management in fishing areas inside and outside the lagoons. (3) Give fishermen and the general public education to raise awareness about the conservation of the marine environment and the protection of stocks.		for Artisanal Fisheries	
	2-4. The production and release of eggs and fingerling	2-4-1. The establishment of aquaculture technologies	The improvement of facilities and equipment for conducting aquaculture research and technological development	<b>Operation indicators</b>	<b>Basic indicators</b> The operating rate of research equipment	<ul style="list-style-type: none"> <li>The objective of the project was to promote research and technological development for sea fish aquaculture including technologies for the mass production of fingerling, by improving the facilities and equipment for research and technological development for sea fish aquaculture which had been insufficient.</li> <li>Through the promotion of the aquaculture industry, in the medium- and long-term, the project was expected to contribute to the diversification of job opportunities and the reduction of poverty for small-scale fishermen, the protection of marine resources and the stable supply of marine products to Vietnamese nationals.</li> </ul>	Vietnam	The Project for Construction of Marine Culture Research and Development Center in Nha Trang	2007
				<b>Effect indicators</b>	<b>Basic indicators</b> The number of brood fish raised The number of fingerling raised An increase in the hatching rate An increase in the survival rate				
3. Poverty reduction for fishermen and fishing villages (the promotion of vital fishing villages)	3-1. Increasing fishery income	3-1-1. Increasing the catch	The construction of facilities for small-scale fisheries (the construction of fish markets, ice making facilities, fishing gear warehouses and security light fittings, the provision of equipment such as ice makers, ice tanks, generators, etc.)	<b>Operation indicators</b>	<b>Basic indicators</b> The utilization rate of fish markets The utilization rate of ice making facilities The operating rate of generators	<ul style="list-style-type: none"> <li>At Praia fishing port, there were problems including the quay being overcrowded due to fish-landing operations and the trading of fish, inefficient and unhygienic fish-landing operations and fish trading, declining freshness of the catch and declining fish prices, etc. Therefore, the project aimed at the following results through providing assistance: improving fishing efficiency; increasing the catch; ensuring safety in the shipping lanes and anchorage areas of fishing vessels; preservation of the freshness of the catch; water pollution prevention at the fishing port through the appropriate treatment of the catch; and the establishment of an appropriate management and administration system.</li> <li>The objectives of the project were to improve the freshness of the catch, improve the system for ice production and supply and increase the operating rate of pirogues, by constructing small-scale fishery facilities (CECOPAK) and procuring goods handling equipment and repair tools for the Mboa-Manga fish-landing center in Kribi City, the Ocean Division, the South Province</li> </ul>	Cape Verde	The Project for Extension of Fishing Port Infrastructure in Praia (Phase II)	2007
				<b>Effect indicators</b>	<b>Basic indicators</b> An increase in the handling of the catch An increase in fishermen's income			Cameroon	The Project for the Improvement of Small-scale Fishery Center

3. Poverty reduction for fishermen and fishing villages (the promotion of vital fishing villages)	3-1. Increasing fishery income	3-1-2. Normalization of the price of the catch and increase in its value	The improvement of fish-landing and distribution facilities and facilities for supporting fishermen's activities, the improvement of storage for price adjustment	<b>Effect indicators</b>	<b>Basic indicators</b> An increase in the price of fish by the efficient, hygienic and fair trading of fish (auction) An increase in fishermen's income	in the Republic of Cameroon.	• The objectives of the project were to increase fishery production through improving the efficiency of fishing activities and to preserve the freshness of the landed catch as well as to facilitate the stable supply of fishery products to the general consumer market. The project also aimed to benefit fishermen by improving the existing storage system used for price adjustment, in order to eliminate differences in the supply and the price of fish in the fishing seasons and the off-seasons.	St. Lucia	The Project for Construction of Vieux Fort Fishery Complex	1997	
				<b>Effect indicators</b>	<b>Basic indicators</b>			• The objectives of the project were to: (1) improve the safety and efficiency of fishing activities, (2) improve the distribution system for the catch, and (3) reduce the labor needed and the costs for fishing activities, by developing fish-landing and distribution facilities and facilities for supporting fishermen's activities, in a fishery village in Sidi Hsaine which faces the Mediterranean.	Morocco	The Project for Developing an Artisanal Fishery Village in Sidi Hsaine (Phase I and Phase II)	2002
				<b>Operation indicators</b>	<b>Basic indicators</b> The fishing port utilization rate by small-scale fishing vessels			• The catch for Ghanaian food supply will increase and employment opportunities in fishery will increase.	Ghana	The Project for Construction of Sekondi Fishing Port	2006
	<b>Effect indicators</b>	<b>Basic indicators</b> A reduction in vessel body repair costs An increase in fishery income due to a reduction in the vessel body repair costs An increase in fishermen's income									
	<b>Effect indicators</b>	<b>Basic indicators</b> An increase in fishermen's income	• The objective of the project was to promote research and technological development for sea fish aquaculture including technologies for the mass production of fingerling, by improving the facilities and equipment for research and technological development for sea fish aquaculture which had been insufficient. Through the promotion of the aquaculture industry, in the medium- and long-term, the project was expected to contribute to the diversification of job opportunities and the reduction of poverty for small-scale fishermen, the protection of marine resources and the stable supply of marine products to Vietnamese nationals.	Vietnam	The Project for Construction of Marine Culture Research and Development Center in Nha Trang	2002					
	3-2. Income source diversification	3-2-1. Income increase through aquaculture	The improvement of facilities and equipment for conducting aquaculture research and technological development	<b>Effect indicators</b>	<b>Basic indicators</b> An increase in fishermen's income	• The objective of the project was to promote research and technological development for sea fish aquaculture including technologies for the mass production of fingerling, by improving the facilities and equipment for research and technological development for sea fish aquaculture which had been insufficient. Through the promotion of the aquaculture industry, in the medium- and long-term, the project was expected to contribute to the diversification of job opportunities and the reduction of poverty for small-scale fishermen, the protection of marine resources and the stable supply of marine products to Vietnamese nationals.	Vietnam	The Project for Construction of Marine Culture Research and Development Center in Nha Trang	2002		

4. Capacity development	4-1. Fishery administration	4-1-1. Enhancing the abilities of fishery administrative officers	The construction of fishery management training facilities (which include fishery management offices and libraries), the improvement of relevant equipment including training equipment and workshop equipment	<b>Operation indicators</b>	<b>Basic indicators</b> The number of officials who received training dedicated to government officials engaged in fishery management	<ul style="list-style-type: none"> <li>The project aimed to achieve the objectives shown below, by constructing a fishery management and training facility (including a fishery management office and a library) and improving relevant equipment such as training and workshop equipment.</li> <li>(1) Encourage artisanal fishermen who have been operating inside lagoons to conduct fishing outside lagoons, by giving training on fishing technologies.</li> <li>(2) Conserve the marine environment and protect stocks, through thorough fishery management in fishing areas inside and outside the lagoons.</li> <li>(3) Give fishermen and the general public education to raise awareness about the conservation of the marine environment and the protection of stocks.</li> </ul>	Mauritius	The Project for Upgrading and Renovation of the Management and Training Facilities for Artisanal Fisheries	2007
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