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KNOWLEDGE PARTNERSHIP MECHANISM FOR IMO'S TECHNICAL COOPERATION TOWARDS SUSTAINABLE DEVELOPMENT

Department of Partnerships and Projects

INTERNATIONAL MARITIME ORGANIZATION

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CHAPTER Ⅰ. INTRODUCTION

1. Background and Objectives

The International Maritime Organization (IMO), as a regulatory body in maritime sectors, is responsible for reducing technological gaps among the Member States through technical cooperation (TC) activities. Since the approval of the Strategy for resource mobilization for IMO's technical cooperation activities at the sixty-eighth session of Technical Cooperation Committee (TCC) in June 2018, efforts have been put into the implementation of the Strategy to seek necessary resources for longer-term, larger-sized and project-based resource mobilization activities while continuing with the current Integrated Technical Cooperation Programme (ITCP). These efforts are based on the knowledge partnership model suggested in the Strategy as well as IMO's current practices for major marine environment projects and maritime security-related projects.

The landscape of ODA contribution and implementation is changing considerably. While reliance on main donor countries is still significant, the donor group is being diversified with increasing contributions from the private sector. Sectoral and geographical interests of donor countries change depending on their economic and political circumstances. Needs of developing countries for development cooperation become diversified and complicated due to new international regulations on environment and safety issues as well as rapid technological development.

Therefore, in implementing the Long-term resource mobilization strategy, it became clear that a more structured and established approach, shared between the Secretariat, Member States and potential donors and recipients on the basis of the lessons learned from the implementation of the Strategy, was required. Such an approach is proposed in the document TC 69/4(a) outlining the Knowledge Partnership Mechanism (KPM) with a more specific role of IMO at each stage of the partnership and the future action for resource mobilization. However, while the document provides directions, more detailed and specific strategies are necessary for effective implementation of the KPM.

Therefore the objectives of this study are as follows: This study aims at developing strategies to effectively implement the IMO KPM. More specifically, this study develops project proposals and processes for attracting funds through international development cooperation. In addition, this study raises the profile and awareness of IMO's TC related work, so that it can be incorporated into national development plans.

2. Structure of This Study

This report is structured as shown in Figure 1.1. Chapter 2 describes the trends of development cooperation using OECD IDS database. Chapter 3 reviews the technical cooperation activities of IMO and provides strategic framework of IMO-KPM. Chapter 4 focuses on marketing strategies for major contributing countries and Multinational Development Banks (MDBs). Chapter 5 prioritize projects areas and types of TC project of IMO and provide a template of project proposal with some examples of project proposal.

Figure 1.1. Structure of this report

Contents	Activities, data and methods	Outcomes and deliverables
Ch.2 Trends of Development Cooperation	▪ Review of trends of Development Cooperation ▪ OECD IDS database	▪ Sectoral and geographical allocation of ODA Aids ▪ Implications on maritime sector
Ch.3 Strategies for Knowledge Partnership Mechanism	▪ Reviews of ITCP activities of IMO ▪ IMO documents, ITCP annual reports	▪ Understanding of Knowledge management of IMO ▪ Strategic framework of IMO-KPM
Ch.4 Contributors and Marketing Strategies	▪ Reviews of major donor countries and MDBs ▪ OECD IDS database, Development Cooperation Authorities' Websites	▪ Profiles of countries and MDBs ▪ Implications to IMO
Ch.5 Development of Potential Projects	▪ Survey and Analytical Hierarchical Process ▪ Development of project proposals	▪ Prioritization of project areas and types ▪ Templates and Examples of project proposals
Ch.6 Conclusion and suggestions	▪ Summarization ▪ Making suggestions	▪ Summary of the report ▪ Suggestions for IMO TC

CHAPTER Ⅱ. TRENDS OF DEVELOPMENT COOPERATION

International Maritime Organization, as a regulatory body in maritime sectors, is responsible Development cooperation has contributed to achieving goals of reducing economic gaps among countries in the world. Given the UN target level which is 0.7% of contribution by OECD DAC countries, the amount of official development assistance (ODA) has been continuously increasing. However, landscape of ODA contribution and implementation is considerably changing. While reliance on main donor countries is still significant, donor group is being diversified with increasing contribution from private sectors. Sectoral and geographical interests of donor countries change depending on their economic and political circumstances. Needs of developing countries for development cooperation become diversified and complicated due to new international regulations on environment and safety issues as well as rapid technological development. This report also discusses the trends and provides implication from the perspective of IMO and the Member States. Data used in this report are collected from OECD IDS database and specific data sources for each data is as below (See Table 2.1).

Table 2.1 Sources of Data used in this report

Data	Data set	Duration	Flow type	Currency
ODA flow	Total flow by donor (ODA+OOF+Private)	2011-2018	Disbursement	USD Million Constant (2017)
ODA recipient	Aid (ODA) disbursement countries and regions	2011-2018	Disbursement	
ODA Sector	Aid (ODA) by sector and Donor	2011-2018	Commitment	

2.1 Contribution by donors

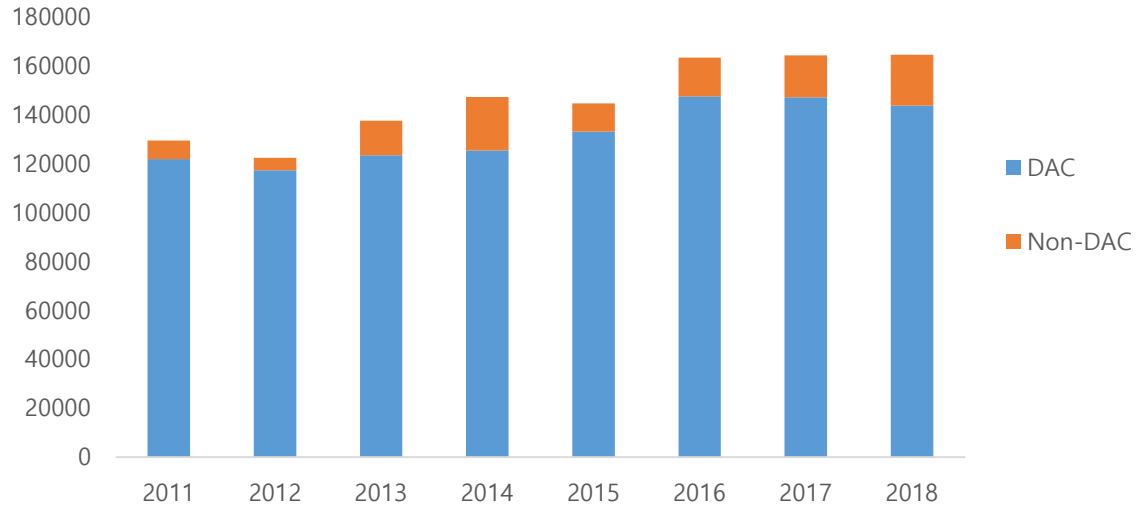
There has been an increasing trend in the amount of official development assistance (ODA) as shown in Table 2.2 and Figure 2.1. The total ODA has increased from USD 129.5 billion in 2011 to USD 164.6 billion in 2018, which shows 3% of annual growth. The contribution from DAC countries is dominant accounting for 91% on average for the last decades. DAC countries contributed USD 123.4 billion in 2011 and USD 143.7 billion in 2018 with 2% of annual growth. It is notable that the contribution from non-DAC countries have become more significant as their proportion increased from 5.9% in 2011 to 12.7% in 2018. The list of the DAC countries, non-DAC countries are presented in Appendix 1. It is also necessary to note that even though the ODA by DAC countries has increased, the UN target level which is 0.7% of GNI has not been reached.

Table 2.2. Total ODA by donor groups (million USD)

Donor	2011	2012	2013	2014	2015	2016	2017	2018
DAC								
bilateral	86822.94	82432.34	86381.15	87350.56	95665.45	105036.5	105568.5	101056.3
multilateral	35053.13	34879.09	37115.28	38125.35	37568.09	42518.33	41600.32	42668.3
ODA	121876.1	117311.4	123496.4	125475.9	133233.5	147554.8	147168.8	143724.6
% of GNI	0.298%	0.278%	0.286%	0.285%	0.294%	0.322%	0.311%	0.295%
Non-DAC								
bilateral	6749.099	4093.347	13122.17	20692.46	10575.71	13982.23	15567.58	19700.79
multilateral	912.7303	985.4178	1010.061	1134.956	934.1845	1910.257	1633.76	1222.147
ODA	7661.838	5078.765	14132.24	21827.41	11509.87	15892.49	17201.35	20922.89
Total ODA	129537.9	122390.2	137628.7	147303.3	144743.4	163447.3	164370.2	164647.5

Source: OECD IDS Database

Figure 2.1. Total ODA by donor groups (million USD)



Source: OECD IDS Database

More detailed data are provided for the contribution of DAC countries in OECD IDS database. For the further detailed analysis of trends in development cooperation, the data of DAC countries are used hereinafter. Table 2.3 shows the ODA contribution by main donor countries. There are four significant donor countries which are United States, Germany, United Kingdom and France accounting for 61% of the total ODA flow in 2018. Concentration ratio of these four countries shows increasing trends which indicates dependence of ODA flows on the four countries became more significant. It is also shown in Table 2.4 that concentration of ODA flow through multilateral channel on main countries is relatively stable although dependence on main donor countries is similarly significant.

Table 2.3. Contribution of main donor countries of ODA flow

Donor	2011	2012	2013	2014	2015	2016	2017	2018
United States	34068.54	33088.69	33169.69	34457.93	31919.78	35075.25	34731.98	33044.93
Ratio	28.0%	28.2%	26.9%	27.5%	24.0%	23.8%	23.6%	23.0%
Germany	12634.15	12358.81	12902.93	14774.35	18764.74	25603.57	25005.06	24063.03
United Kingdom	12227.66	12232.42	15656.89	15757.00	16281.84	17574.72	18103.4	18435.97
France	11021.11	10906.45	9877.079	9204.26	9264.60	9872.99	11330.86	12149.13
Sum of Top 4	69951.47	68586.36	71606.59	74193.55	76230.97	88126.52	89171.3	87693.05
CR_4	57.4%	58.5%	58.0%	59.1%	57.2%	59.7%	60.6%	61.0%
Japan	8099.537	7817.55	10372.68	9142.76	9929.84	10079.86	11462.65	9922.05
Sweden	4688.272	4528.88	4795.39	5309.32	7266.84	5006.68	5563.25	5815.44
Netherlands	5425.981	5037.26	4738.65	4850.03	5913.63	5121.34	4958.45	5246.59
Italy	3721.66	2512.61	3011.83	3489.19	4128.68	5218.63	5858.03	4799.61
Canada	4453.533	4600.82	4088.55	3684.88	4334.10	4104.32	4304.89	4544.19
Norway	3419.838	3431.03	3971.67	3867.37	4283.29	4621.02	4124.98	3952.39
Sum of Top 10	99760.29	96514.51	102585.35	104537.10	112087.35	122278.38	125443.55	121973.30
CR_{10}	81.9%	82.3%	83.1%	83.3%	84.1%	82.9%	85.2%	84.9%
Total ODA	121876.1	117311.41	123496.45	125475.89	133233.54	147554.80	147168.81	143724.6

Note: CRn-Concentration Ratio of Top n entities

Table 2.4. Contribution of main donor countries of multilateral ODA flow

Donor	2011	2012	2013	2014	2015	2016	2017	2018
United Kingdom	4737.13	4601.92	6418.62	6570.62	5998.20	6362.65	6768.18	6747.14
Ratio	13.5%	13.2%	17.3%	17.2%	16.0%	15.0%	16.3%	15.8%
Germany	4802.20	4160.01	4332.16	4438.55	4003.14	5278.26	5186.83	5822.99
France	3817.95	3716.80	3953.09	3559.08	3978.56	4084.13	4681.78	5179.27
United States	4040.90	5645.24	5205.00	5816.18	4462.03	5988.55	4725.76	3767.74
Sum of Top 4	17398.18	18123.96	19908.87	20384.43	18441.92	21713.58	21362.55	21517.13
CR4	0.50	0.52	0.54	0.53	0.49	0.51	0.51	0.50
Japan	2840.87	3097.90	2686.22	3234.20	3276.78	3259.39	3382.38	3909.34
Italy	2256.80	1939.79	2250.18	2294.88	2242.05	2735.93	2881.02	2784.96
Sweden	1633.26	1384.63	1571.25	1609.62	2318.27	1475.02	1735.82	1999.05
Spain	1568.48	942.95	1213.47	1225.08	1075.33	1734.28	1876.64	1781.33
Netherland	1717.16	1518.89	1559.29	1345.32	1613.99	1865.16	1424.69	1747.60
Canada	1099.27	1317.46	1186.50	835.79	1322.60	1325.92	1178.00	1123.09
Sum of Top 10	28514.02	28325.58	30375.79	30929.32	30290.95	34109.29	33841.10	34862.51
CR10	81.3%	81.2%	81.8%	81.1%	80.6%	80.2%	81.3%	81.7%
Total ODA	35053.13	34879.09	37115.28	38125.35	37568.09	42518.33	41600.32	42668.30

2.2. Geographical distribution

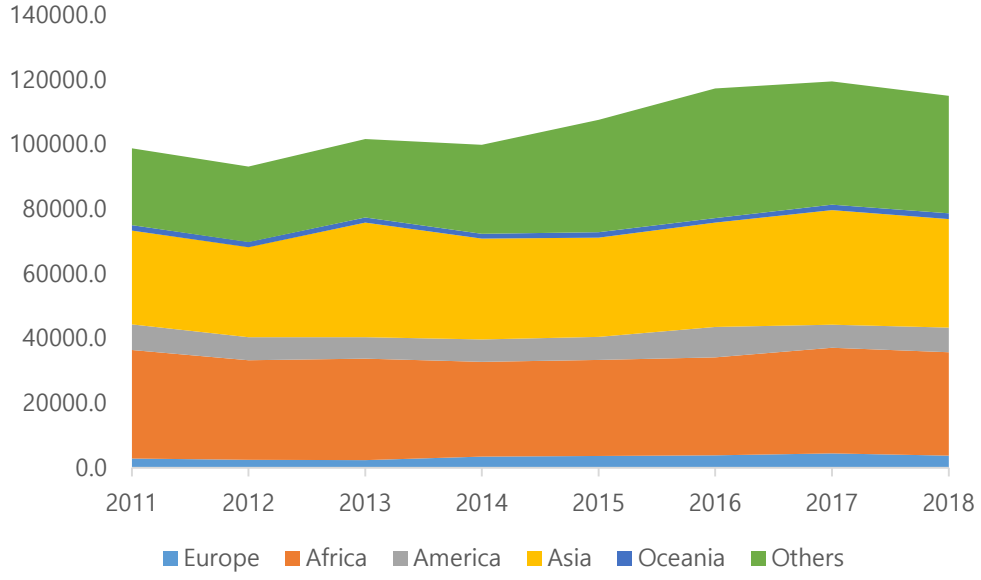
Table 2.5 presents regional distribution of recipient countries of ODA from DAC countries. This data includes bilateral and multilateral flow disbursed to developing countries and also consists of aid type of grants, loans and technical assistance. Africa and Asia have taken the considerable amount of contribution accounting for 27.9% and 29.2% respectively. It is also shown that ODA flows concentrate on South of Sahara (23%) in Africa and South and Central Asia (12.1%) in Asia.

Table 2.5. Regional distribution of recipient of ODA from DAC countries (million USD)

	2011	2012	2013	2014	2015	2016	2017	2018
Europe	2795.3	2393.6	2333.3	3410.9	3608.4	3792.7	4389.1	3667.9
Africa	33576.9	30822.6	31357.7	29319.8	29658.7	30293.4	32692.3	31963.0
North of Sahara	3222.3	2892.9	2984.5	2658.2	2568.2	3158.4	3368.0	3478.3
South of Sahara	29276.7	26720.2	27231.9	24986.1	25320.0	25542.2	27458.4	26488.7
Africa, regional	1077.9	1209.5	1141.3	1675.6	1770.5	1592.9	1865.9	1996.0
America	7944.4	7139.0	6656.6	6919.0	7155.2	9450.3	7076.5	7677.5
North & Central	4006.6	3220.1	2961.6	2803.8	2940.6	5526.5	3577.3	3408.0
South	3355.6	3493.9	3019.6	3547.1	3754.9	3358.3	3019.4	3787.9
America, regional	582.2	425.0	675.5	568.2	459.7	565.6	479.9	481.7
Asia	28971.8	27849.0	35475.7	31189.4	30733.1	32211.6	35508.9	33589.2
Far East	8459.2	8766.8	9100.3	9108.9	8709.1	8495.7	8547.2	8391.3
South & Central	14943.5	13569.8	18301.0	14072.6	13632.9	12812.4	14716.9	13892.6
Middle East	4860.2	4855.2	7294.2	7072.6	7543.4	10159.4	10950.3	10401.0
Asia, regional	708.8	657.2	780.1	935.2	847.7	744.2	1294.5	904.3
Oceania	1688.8	1607.9	1570.6	1444.8	1617.3	1413.5	1677.9	1718.0
Others*	23744.0	23298.9	24267.5	27550.1	34816.4	40125.4	38138.0	36342.9
Total	98721.2	93111.0	101661.5	99834.0	107589.1	117287.0	119482.7	114958.6

Note: Others represents amount of which destinations are not specified
Source: OECD IDS Database

Figure 2.2. Regional distribution of recipient of ODA from DAC countries (million USD)



At the country level, India has taken the most contribution followed by Indonesia, Afghanistan, Bangladesh, Syrian Arab Republic and Jordan as shown in Table 2.6. These countries benefited more than USD 2 billion in 2018 while the most recipient countries such as India and Afghanistan benefited around USD 4 billion per year in recent years. It is also shown that there are fluctuations in the amount of contribution recipient countries benefit. While the ODA flows to India, Indonesia, Bangladesh and Syrian Arab Republic considerably increased recently, that of Afghanistan significantly decreased.

Table 2.6. Recipient countries of ODA by DAC (ordered as of 2018, Million USD)

Sector	2011	2012	2013	2014	2015	2016	2017	2018	%
India	2701.7	2211.1	2683.7	2824.0	3437.9	2889.4	4112.8	3693.7	3.2%
Indonesia	1837.3	1628.5	1927.0	1821.7	1937.4	1946.9	2041.6	2954.7	2.6%
Afghanistan	5740.3	5387.8	4079.4	3889.8	3652.4	3257.7	2839.3	2582.5	2.2%
Bangladesh	1105.0	1298.1	1441.1	1393.3	1371.7	1370.2	2370.7	2435.7	2.1%
Syrian Arab Republic	133.0	477.0	1690.2	1497.9	1826.8	2514.1	2578.7	2409.1	2.1%
Jordan	656.5	1003.3	889.0	1652.2	1659.2	2014.5	2025.1	2064.1	1.8%
Ethiopia	1822.2	1732.8	1827.2	1793.7	1858.1	2114.7	2257.2	2011.0	1.7%
Iraq	1823.5	1056.7	1299.9	1089.3	1254.4	1913.8	2297.9	1977.9	1.7%
Colombia	936.9	702.0	746.8	1076.1	1349.2	1063.5	810.8	1673.2	1.5%
Nigeria	856.8	898.8	1127.9	1040.3	1103.4	1235.2	1746.0	1671.6	1.5%
Kenya	1610.9	1948.4	2061.7	1652.8	1669.7	1611.7	1702.2	1658.2	1.4%
Tanzania	1574.9	1661.4	2002.9	1359.9	1457.4	1480.6	1440.8	1470.1	1.3%
Viet Nam	2029.0	2532.5	2614.8	2780.1	2455.0	2407.7	2185.8	1433.9	1.2%
South Sudan	338.6	971.9	1055.1	1540.8	1393.1	1296.3	1697.8	1343.8	1.2%
Democratic Republic of the Congo	5576.0	1552.4	1121.0	1105.9	1462.7	1023.8	1226.4	1323.4	1.2%
Pakistan	2566.4	1586.3	1773.0	1807.4	1828.7	1819.2	1710.5	1317.4	1.1%
Yemen	294.3	390.8	620.4	497.7	556.3	771.5	1274.3	1304.2	1.1%
Mozambique	1562.9	1392.1	1609.6	1352.9	1131.3	1119.8	1255.9	1275.7	1.1%
Egypt	707.3	819.1	843.8	633.1	705.3	887.4	804.8	1235.3	1.1%
Myanmar	243.3	294.9	5840.0	1670.1	910.6	1076.1	1075.9	1225.1	1.1%
Turkey	659.2	430.2	560.9	967.2	716.4	1346.7	1948.8	1223.5	1.1%
Uganda	945.0	894.1	1015.1	1037.8	978.8	1089.1	1298.9	1219.0	1.1%
Somalia	663.6	612.4	665.2	688.2	652.5	772.7	1258.0	1102.7	1.0%
China, People's Republic of	1917.3	1723.9	1318.6	1079.5	1285.0	1251.7	1066.5	1067.1	0.9%
West Bank and Gaza Strip	1461.0	1006.9	1692.8	1307.4	938.9	1334.9	1072.1	1039.2	0.9%
Philippines	708.8	757.6	860.6	1304.1	1123.0	848.4	708.3	1002.5	0.9%
Lebanon	266.4	570.0	342.1	486.0	783.7	935.8	905.6	930.4	0.8%
South Africa	1072.5	879.2	1109.4	937.9	1106.8	1125.0	893.1	864.4	0.8%
Morocco	1000.0	1131.3	1372.9	1207.6	1018.7	1358.2	1297.9	832.8	0.7%
Mali	743.4	733.2	682.2	651.9	710.9	706.8	736.1	780.0	0.7%
Ukraine	419.4	412.2	310.4	764.3	1167.9	990.3	764.6	756.1	0.7%
Malawi	414.6	586.4	598.2	508.5	587.1	714.7	793.5	737.9	0.6%
Tunisia	600.6	573.6	374.6	401.3	403.6	483.7	616.0	686.0	0.6%
Zambia	658.4	636.8	696.0	731.7	577.1	655.1	744.6	678.0	0.6%
Cameroon	330.8	299.5	338.6	446.1	410.6	517.1	600.6	656.1	0.6%
Senegal	538.6	663.8	612.0	771.5	618.7	450.1	577.5	641.5	0.6%
Ghana	859.1	842.1	693.8	563.8	647.8	647.7	618.4	632.9	0.6%
Côte d'Ivoire	644.3	2093.8	1432.6	470.5	412.9	507.5	688.7	621.3	0.5%
Nepal	454.4	482.2	465.4	499.6	680.7	593.5	651.0	600.7	0.5%
Mongolia	235.1	245.1	285.2	385.4	388.6	246.5	216.7	311.8	0.52%

Source: OECD IDS Database

2.3. Contribution by sectors

ODA flow can be categorized by sector into 'Social infrastructure and services', 'Economic infrastructure and services', 'Production sectors', 'Multi-sectors' and the amount that are not sector-allocable. Broad categorization is presented in Table 2.7 and sub-sectors are detailed in Appendix 2. 'Social infrastructure and services' includes ODA flow concerned about health, education, water supply, population policy, government policy and reform, etc. accounting for 33.7% to 41.9%. This sector takes the most proportion by sector but its proportion has

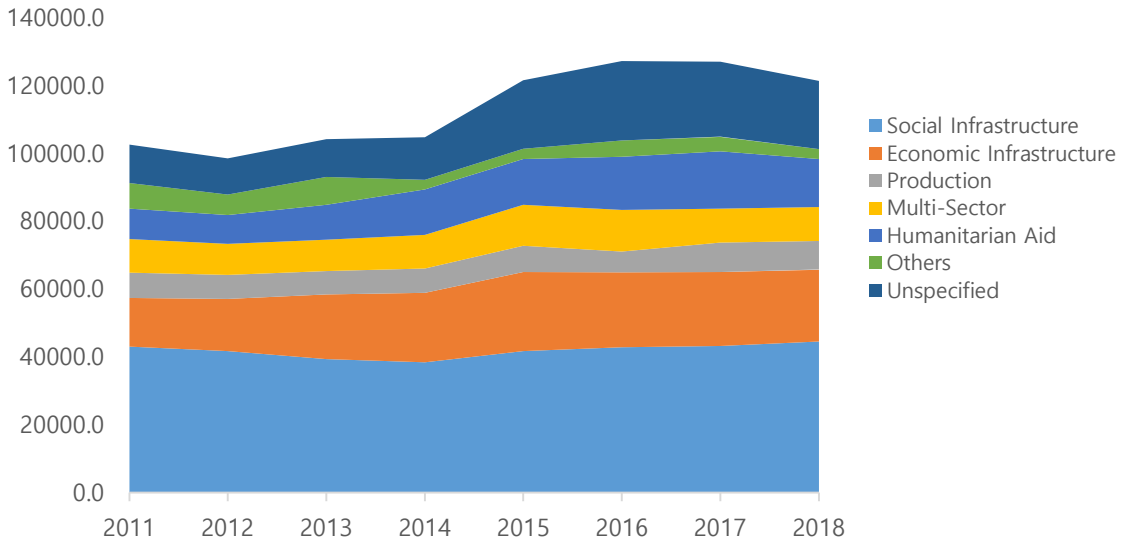
decreased. 'Economic infrastructure and services' includes ODA flows in the area of transportation, communication, energy, banking and other businesses accounting for 14% to 19.2%, which shows steady increasing trend with 5% annual growth. 'Production sectors' represents agriculture, forestry, fishing, manufacturing, construction, trade and trade policies and regulations, accounting for around 7% with steady trend. 'Multi-sector' is concerned about ODA flow across sectors and environment protection projects which accounts for 8% to 10% with a steady trend recent years.

Table 2.7. ODA flow by DAC by sectors

	2011	2012	2013	2014	2015	2016	2017	2018	CAGR
Social Infrastructure	42975.0	41653.0	39296.9	38407.6	41664.7	42837.2	43218.9	44525.7	0.4%
Proportion	41.9%	42.3%	37.7%	36.7%	34.3%	33.7%	34.0%	36.7%	
Economic Infrastructure	14393.3	15435.1	19048.6	20410.9	23310.2	22031.6	21770.6	21211.0	5.0%
Proportion	14.0%	15.7%	18.3%	19.5%	19.2%	17.3%	17.1%	17.5%	
Production Sectors	7392.8	7057.3	6929.3	7242.2	7809.2	6192.0	8677.8	8445.7	1.7%
Proportion	7.2%	7.2%	6.6%	6.9%	6.4%	4.9%	6.8%	7.0%	
Multi-Sector	9919.1	9202.3	9236.3	9863.5	12044.1	12234.4	10067.8	9981.1	0.1%
Proportion	9.67%	9.34%	8.86%	9.42%	9.90%	9.61%	7.92%	8.22%	
Humanitarian aid	9052.8	8462.3	10328.7	13405.7	13475.2	15710.9	16853.1	14163.7	
Others	7493.4	6046.5	8159.9	2858.7	3079.8	4836.9	4335.0	2962.3	
Unspecified	11328.1	10702.2	11212.2	12553.1	20213.2	23410.2	22139.6	20097.1	5.1%
Total	102554.3	98558.6	104211.9	104741.6	121596.4	127253.3	127062.8	121386.7	2.4%

Source: OECD IDS Database

Figure 2.3. ODA flow by DAC by sectors



It is necessary to examine the trends of development cooperation in transport sector to obtain implication for the maritime transport sector. Sub-sectors in 'Transport and storage' is presented in Table 2.8. The transport sector itself has increased USD 4.9 billion in 2011 to USD 10.8 billion in 2018 with 10.3% of annual growth. Majority of the ODA flows in the transport sector is disbursed in road and railway transport with the proportion of 34.9% and 42.9% on average respectively. However, the two sub-sectors show contrasting trends. Road transport sector shows decreasing trend in general with -2.3% of annual growth rate whereas railway transport sector shows increasing trend with 34.6% of annual growth rate. Water transportation sector accounts for around 8% on average of the transport sector. It has shown steady growth in 2011 to 2017 while its proportion dropped from USD 2.1 billion 2017 to USD 0.1 billion in 2018.

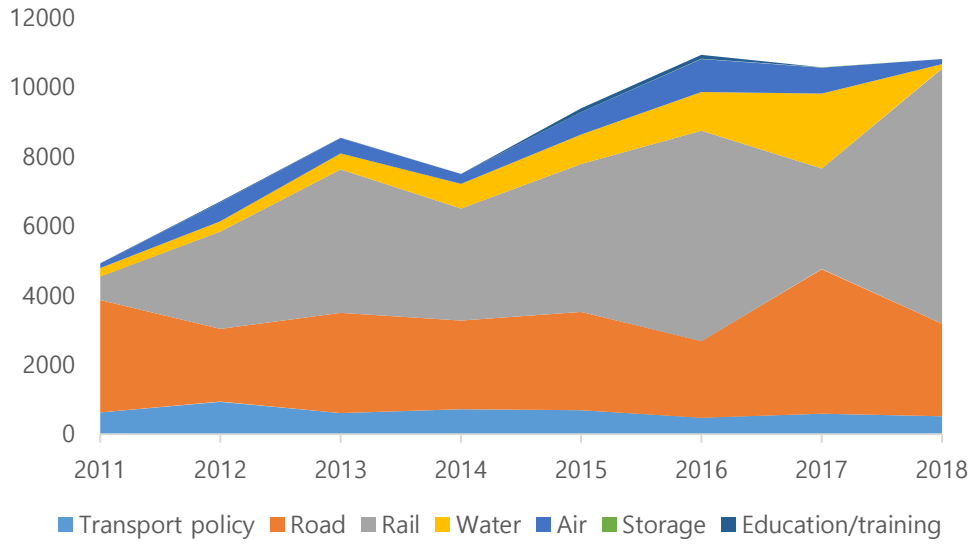
An important observation is that the proportions of 'Transport policy and administrative management' and 'Education and training' have decreased. The sectors have taken around 10% in 2011 to 2014 and began to decrease to around 6% in recent years. Especially there was remarkable drop in in the two sectors in 2018, while policy development activities such as national transport policy development and developing environmental and safety regulation and capacity-building are being considered as elements in transport sector.

Table 2.8. Disbursed ODA to transport sector (USD million)

Subsector	2011	2012	2013	2014	2015	2016	2017	2018	GACR
Transport policy and administration	625.6	932.8	600.9	709.9	687.5	470.0	585.2	507.5	-2.6%
Proportion	13%	14%	7%	9%	7%	4%	6%	5%	
Road transport	3229.5	2095.3	2889.7	2558.7	2832.6	2204.2	4164.6	2670.2	-2.3%
Proportion	65.6%	31.3%	33.9%	34.1%	30.2%	20.2%	39.4%	24.7%	
Rail transport	684.4	2799.3	4133.9	3231.2	4256.1	6061.7	2899.0	7353.7	34.6%
Proportion	13.9%	41.8%	48.4%	43.1%	45.3%	55.5%	27.4%	68.1%	
Water transport	242.1	295.7	459.0	702.3	846.0	1118.0	2159.2	126.1	-7.8%
Proportion	4.9%	4.4%	5.4%	9.4%	9.0%	10.2%	20.4%	1.2%	
Air transport	131.3	550.9	440.5	291.4	645.0	954.6	749.8	141.4	0.9%
Proportion	2.7%	8.2%	5.2%	3.9%	6.9%	8.7%	7.1%	1.3%	
Storage	0.0	0.0	3.4			2.3	1.1	1.6	-
proportion	0.00%	0.00%	0.04%	0.00%	0.00%	0.02%	0.01%	0.01%	
Education and training in transport and storage	10.5	26.5	9.2	2.3	118.8	117.4	4.8	2.5	-16.4%
Proportion	0.21%	0.40%	0.11%	0.03%	1.27%	1.07%	0.05%	0.02%	
Total	4923.4	6700.6	8536.6	7495.7	9386.1	10928.3	10563.7	10802.9	10.3%

Source: OECD IDS Database

Figure 2.4. ODA by DAC countries disbursed to transport sector (USD Million)



Source: OECD IDS Database

2.4. Summary

This chapter analyzed trends of ODA flow by OECD DAC countries from 2011 to 2018 using data collected from OECD IDS database. The overall trends of ODA flows included contributions through bilateral and multilateral channels in Section2, while Section 3 focused on the contribution of MDBs which is a part of multilateral aid. Geographical and sectoral distribution was analyzed using different sets of data which necessarily makes slight difference depending on coverage and collection system of the individual datasets. For the time series data, constant price as of 2017 was used in USD million, whereas current price was used for cross-sectional data.

Increasing trend in ODA flows with more dependence on major donor countries

It was shown that the total ODA has increased from USD 129.5 billion in 2011 to USD 164.6 billion in 2018, which shows 3% of annual growth. The contribution from DAC countries is dominant accounting for 91% on average for the last decades, while the contribution from non-DAC countries have become more significant as their proportion increased from 5.9% in 2011 to 12.7% in 2018. Concentration ratio of four countries (United States, Germany, United Kingdom and France) increased from 57% in 2011 to 61% in 2018 which indicates dependence of ODA flows on the four countries became more significant. It is also shown that concentration of ODA flow through multilateral channel on main countries is relatively stable although dependence on main donor countries is similarly significant

Concentration in South of Africa and South and Central Asia

ODA flows concentrate on South of Sahara (23%) in Africa and South and Central Asia (12.1%) in Asia. At the country level, India has taken the most contribution followed by Indonesia, Afghanistan, Bangladesh, Syrian Arab Republic and Jordan. These countries benefited more than USD 2 billion in 2018 while the most recipient countries such as India and Afghanistan benefited around USD 4 billion per year in recent years.

Increasing trend of transport sector

While social infrastructure is dominant main area in ODA contribution accounting for around 39% with decreasing trend, economic infrastructure takes considerable proportion accounting for 18% with an increasing trend. Production sectors and Multi-sector account for 7% and 9% respectively with steady trends recent years.

The transport sector in economic infrastructure has increased USD 4.9 billion in 2011 to USD 10.8 billion in 2018 with 10.3% of annual growth. Majority of the ODA flows in the transport sector is disbursed in road and railway transport with the proportion of 34.9% and 42.9% on average respectively. Water transportation sector accounts for around 8% on average of the transport sector. It has shown steady growth in 2011 to 2017 while its proportion dropped from USD 2.1 billion 2017 to USD 0.1 billion in 2018. 'Transport policy and administrative management' and 'Education and training' have decreased from around 10% in 2011 to 2014 to around 6% in recent years.

Increasing trend of multilateral aid with more proportion of non-core contribution

Total multilateral aid shows an increasing trend in general although it increased to USD 61.3 billion in 2014 and decreased to USD 53.5 billion in 2015. While core contribution is still dominant, non-core contribution has become an important part of multilateral aid system since its gross amount and its proportion have increased from USD 14.5 billion (28.5%) in 2011 to USD 22.6 billion (36.3%) in 2017 and USD 19.4 million (31%) in 2018.

Existence IMO in OECD database is less significant than it is supposed to be

The ODA flows to and through IMO have fluctuated ranging from USD 0.52 million 2017 to USD 1.82 million in 2013 and the amount is not significant. The budget and expenditure of technical cooperation reported by IMO Secretariat is much greater that that is reported in OECD database.

CHAPTER Ⅲ KNOWLEDGE PARTNERSHIP MECHANISM FOR IMO

3.1. Knowledge Management of IMO

Traditionally Knowledge Management (KM) is considered as a process that deals with the development, storage, retrieval, and dissemination of information and expertise within an organization to support and improve its business performance. However, a holistic view to knowledge management encompasses both internal and external process of activities related to capture, use and sharing knowledge by the organization (OECD, 2005; Ringel-Bickelmaier and Ringel, 2010). This includes methods and procedures not only for seeking knowledge internally and externally but also for sharing and using knowledge by establishing closer relationships with external organizations (OECD, 2005).

IMO has made efforts to store and manage knowledge within the organization and to share the knowledge with the Member States and other organizations. Knowledge of IMO can be created by activities of its committees which are Maritime Safety Committee (MSC), Marine Environment Protection Committee (MEPC), Legal Committee (LC), Facilitation Committee (FAL) and Technical Cooperation Committee (TC). Outputs from the committee activities are resolutions, conventions, protocols and various forms of information such as data, country profiles, and audit results, which are considered as explicit and tangible knowledge. Furthermore, IMO contains other forms of knowledge on networks among donor countries, the Member States, other international organizations, etc. which are considered as tacit and intangible knowledge as shown in Figure 3.1.

Figure 3.1. Knowledge structure of IMO

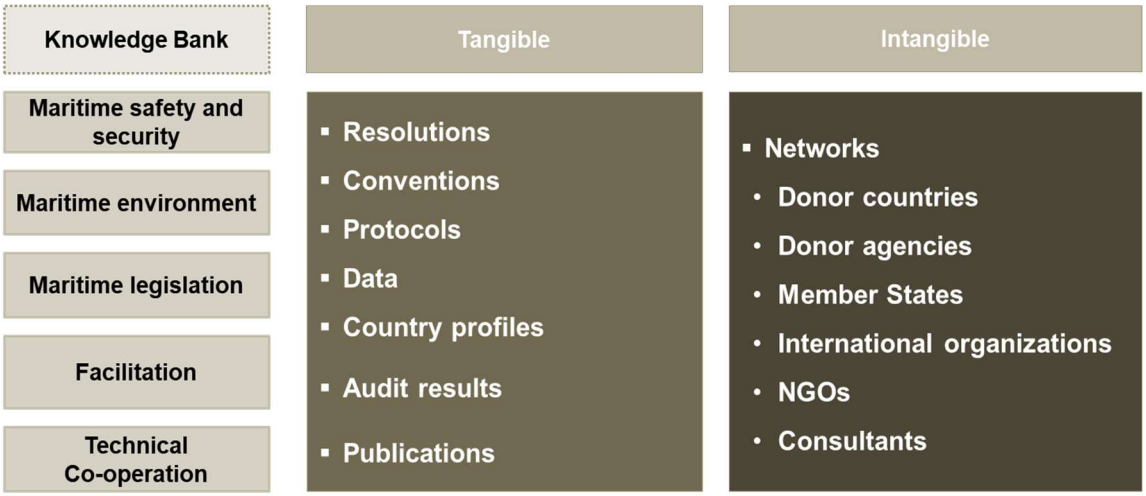
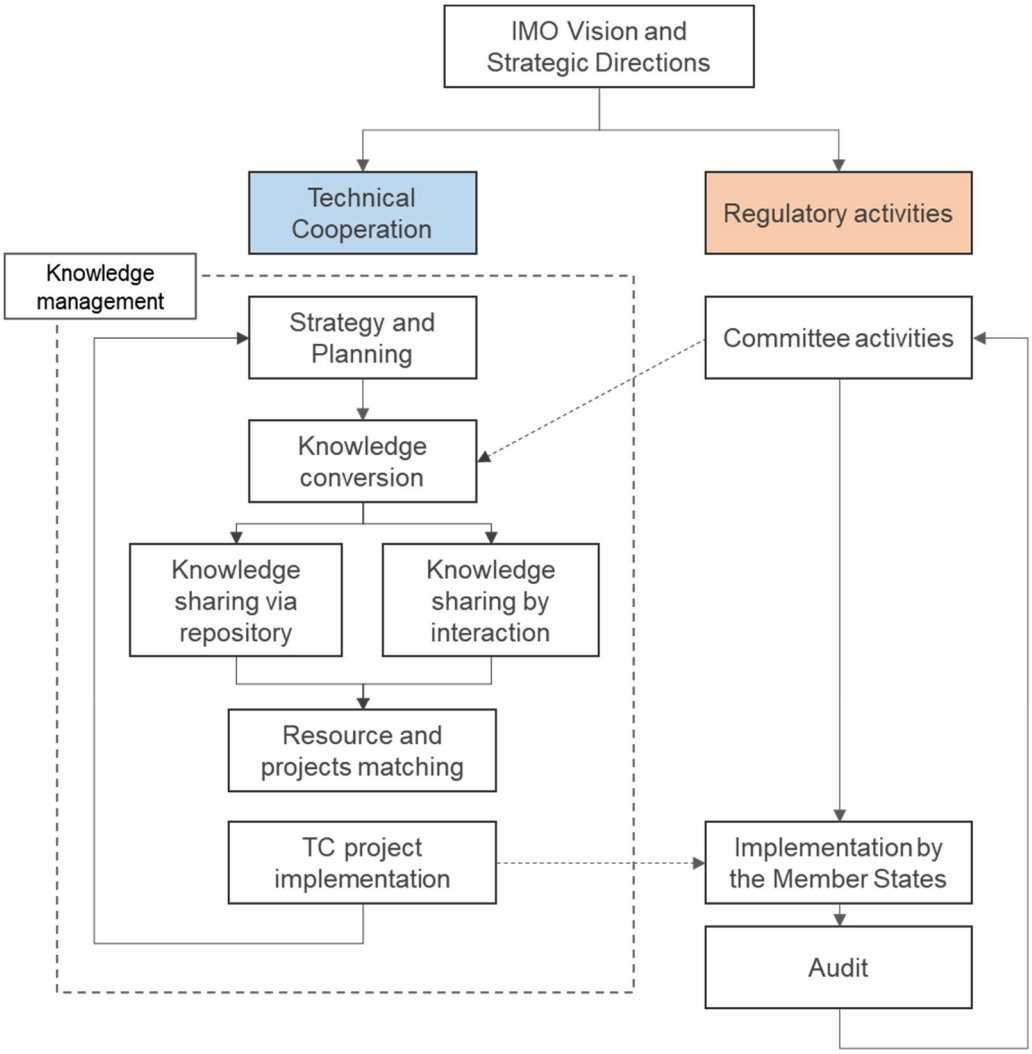


Figure 3.2 depicts knowledge management process by showing interaction between regulatory activities and TC activities. Knowledge created from the activities of committees are

converted into sharable and usable forms of knowledge. The knowledge is stored in the repository so that it can be accessed by stakeholders and public. The knowledge is shared in other form which is physical interaction activities such as hosting knowledge partnership workshops and participating in conferences of international bodies. Through knowledge sharing, donors, beneficiaries and projects are matched. Finally, TC projects in order to primarily support and facilitate the implementation of rule and regulations by the Member States. The Member States is audited to evaluate their implementation while TC activities are recently provided to support the audit.

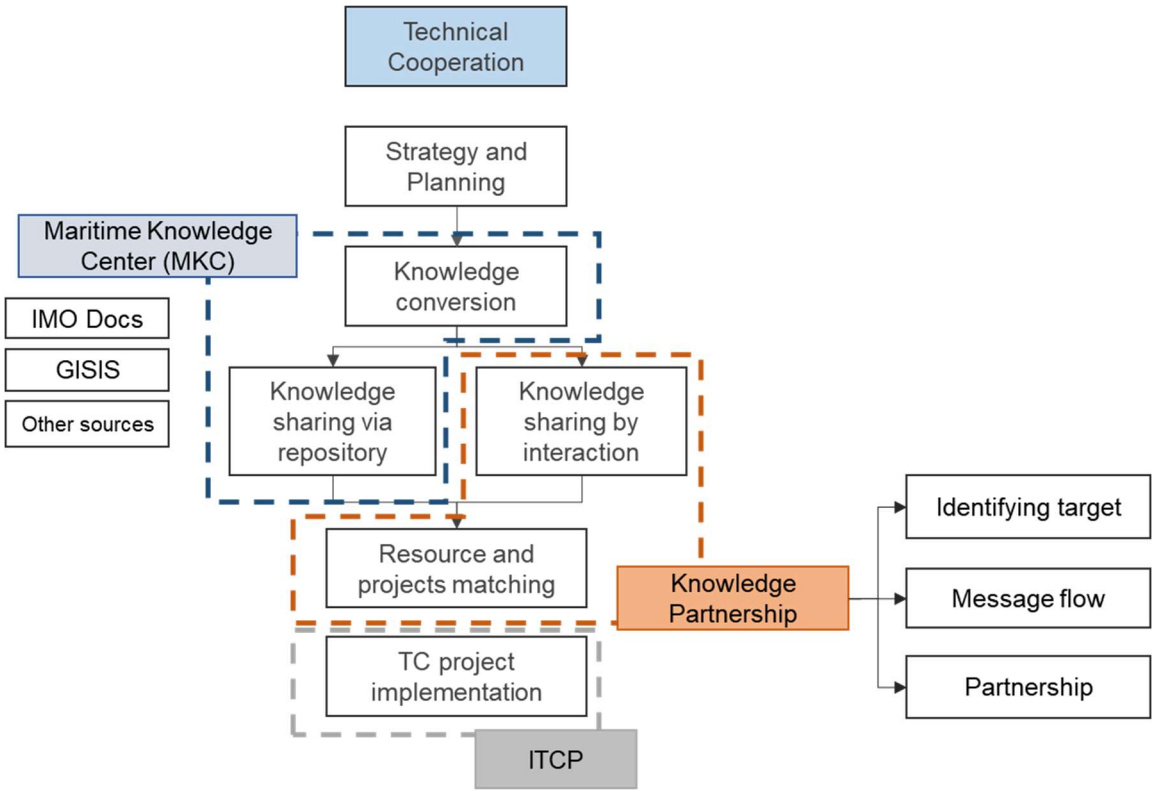
Figure 3.2. Interaction between regulatory activities and TC process in IMO



3.2. Current situation of knowledge management of IMO

Figure 3.3 depicts how processes of knowledge management in IMO is implemented in terms of organizational functions such as Maritime Knowledge Center (MKC), Knowledge Partnership and Integrated Technical Cooperation Program (ITCP).

Figure 3.3. Current knowledge management of IMO

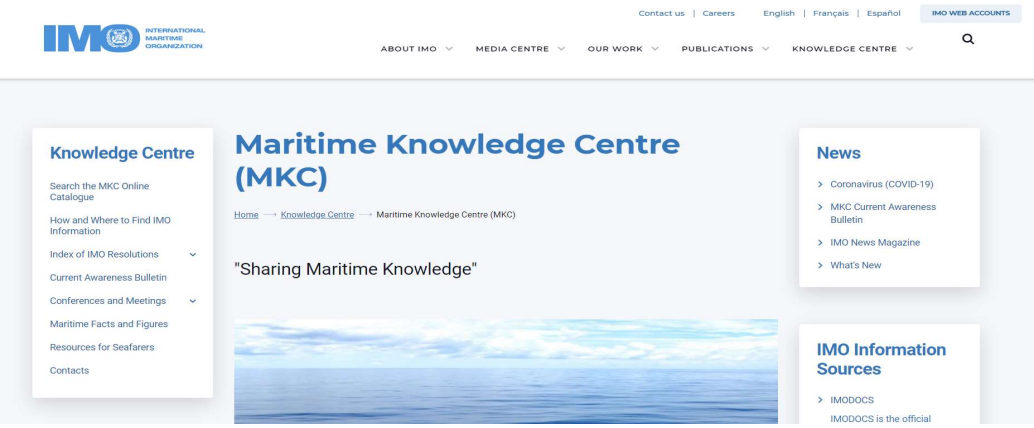


3.2.1. Knowledge conversion and sharing via repository

Knowledge of IMO is stored and accessed in the MKC in IMO website. The MKC introduces itself as below.

> *The Maritime Knowledge Centre (MKC) provides collections, information resources and services to support the IMO Secretariat, Member States, representatives and delegates. Its specialized collections comprise the archives of official documents and IMO Publications. The MKC also collects resources covering maritime affairs, shipping and other subjects relevant to the work of the Organization. The Maritime Knowledge Centre belongs to the global network of United Nations System Libraries sharing expertise, best practices, resources and reciprocal services.*

Figure 3.4. Webpage of Maritime Knowledge Centre in IMO Website



Various information is provided in MKC as shown in Table 3.1. IMO DOCS which is an official document repository of IMO and GISIS which contains information in relation to ship safety security and environment protection provided by the Member States are linked from the MKC. Linkage to other sources such as IMO Publication and conference meetings are also provided. Maritime Facts and Figures is useful, but it also provides links to resources in the internet. Materials made by IMO such as resolutions and current awareness bulletins are provided.

It can be argued that: 1) the MKC is merely an interface to provide links to other resources available in the internet and most information from commercial resources are approachable; 2) Data and information from the committee activities are not as readable and user-friendly as other similar international organizations such as UNCTAD and ICAO; 3) data and information are not readily usable for knowledge sharing via interaction to promote matching resources and projects.

Table 3.1. Knowledge in MKC

Type	Contents	Available	Remark
Information sources	IMO DOCS GISIS IMO Publications Conference and Meetings Maritime Facts and Figures	Online linkage	
Materials	Resolutions Current Awareness Bulletin	Resolution files Bulletin files	Downloadable Downloadable

3.2. Technical cooperation program implementation by IMO

3.2.1. ITCP activities of IMO

The Budget and expenditure fluctuate around USD 16 million and USD 13 million respectively without clear trends. ITCP activities are in general are undertaken in the form of advisory/assessment mission, national and regional training events as shown in Table 3.2.

Table 3.2 Annual budget, expenditure and activities of ITCP (Mil.USD, No. of activities)

	2014	2015	2016	2017	2018
Budget	18.129	16.756	15.266	16.364	16.233
Expenditure	13.767	12.999	13.798	13.831	13.519
Activities					
advisory/assessment mission	24	29	18	9	13
National training events	46	44	61	60	62
Regional training events	61	71	57	59	61
other activities	82	91	101	87	84
Sub-total	213	235	237	215	220
Trainees/fellows					
IMO-sponsored training events	3402	3367	2921	3522	3198
IMO training institutions)	15	13	22	26	36
other fellows	58	58	50	38	40
Strategy officials	1547	1079	1124	551	561
Sub-total	5022	4517	4117	4137	3835

Table 3.3. Contribution to IMO

Donor	2014	2015	2016	2017	2018	2019
TC Fund	6,843,292	7,617,578	7,457,258	7,105,691	7,560,922	6,030,856
IMO Djibouti Code of Conduct Trust Fund	5,011,035	1,951,897	619,906	1,700,576	469,847	647,234
UNEP(including external sources)	1,849,739	651,275	759,682	889,165	838,103	1,085,421
UNDP/GEF		699,975	1,561,718	1,002,703	732,792	2,294,237
GEF	775,061					
EC	428,526					3,347,692
EU		977,503	616,526	2,411,910	3,240,917	
Norad	1,161,023	1,527,530	1,634,983	543,864	310,658	616,478
Republic of Korea	406,817	351,744	491,411	105,003	405,357	295,914
IMST Fund	341,592	480,589	270,491	318,431	364,013	1,043,977
IMO West and Central Arica Maritime Security Trust Fund	141,775	1,312,581	706,565	778,950	425,151	117,684
IMO Malacca and Singapore Straits Trust Fund	329,700	256,200	179,426	35,700		
United Kingdom	197,810	77,768	92,983	46,082	124,784	99,141
International SAR Trust Fund	91,660	206,000	164,007	166,710	101,000	81,000
Norway	78,141	145,469	21,581	185,383	680,610	597,500
Research and Development Trust Fund	95,201			9,152		
GIA	86,486	109,386	62,313	110,230	257,931	493,978
France		36,359				
IMO Model Courses Development Trust Fund	167,600	63,998	16,590	49,252	198,576	438,011
LC/LP TC Trust Fund	34,996	68,985	87,165	59,535	93,450	91,096
Canada	25,337	190,379	156,433	7,863		168,308
International Transport Workers' Federation	22,241	11,300	2,444	15,753	5,141	17,804
Netherlands	10,309		60,526	113,453	142,906	102,925
Oman	31,000				8,000	25,764
Egypt		20,000				71,262
China			220,603	539,346	40,000	481,754
IMO/REMPEC Trust Fund			44,877			
Malaysia			35,218	170,000	31,225	154,699
Germany			3,997			
Australia					19200	29,040
Kingdom of Belgium					147,000	95,264
Saudi Arabia					36215	327,683
Tsunami Relief Fund						659,009
UN Trust Fund						122,766
Nigeria						50,000
Philippines						40,000
Ghana						25,000
UAE						10,000
International Ship Recycling Fund						10,750
Globallast TV documentary residual funds						14,970

Source: ITCP Annual reports-Annex 2: Overview of financial resources delivery

According to the annual reports of ITCP in 2014 to 2019, the coverage of ITCP has been widened and diversified. The number of activities has been substantially increased and member state audit and maritime training have been newly included (or re-categorized) in the activities of advisory/assessment mission and training activities. While the number of activities has increased for all type of activities, there is a noticeable increase in the sector of 'maritime environment'. In addition, the sector of maritime environment takes the most proportion in the expenditure and a steady increasing trend for the period.

Table 3.4. Sectoral disaggregation by activity

	2014	2015	2016	2017	2018
Advisory/assessment mission					
Maritime safety	6	10	5	32	64
Maritime security	6	4	3	28	28
Maritime environment	1	3	0	32	63
Maritime legislation	8	12	6	7	7
Facilitation	0	0	0	3	6
General maritime sector	3	0	3	5	48
Member state audit			1	8	4
Maritime training					1
Training activities					
Maritime safety	40	42	51	1113	841
Maritime security	15	24	12	622	478
Maritime environment	38	35	39	1036	1283
Maritime legislation	1	2	2	209	173
Facilitation	4	2	3	135	170
General maritime sector	8	10	6	115	109
Member state audit			5	172	121
Maritime training					23
Expenditure					
Maritime safety	2.536	2.394	2.671	1.518	1.778
Maritime security	4.82	3.051	1.638	2.289	1.422
Maritime environment	3.417	3.568	4.672	6.025	5.228
Maritime legislation	0.129	0.38	0.274	0.353	0.309
Facilitation	0.116	0.106	86.154	0.197	0.209
General maritime sector	2.747	3.533	4.212	1.603	2.765
Member state audit			0.242	0.196	0.251
Maritime training				1.645	1.553

Figure 3.5 Advisory/assessment mission by sector

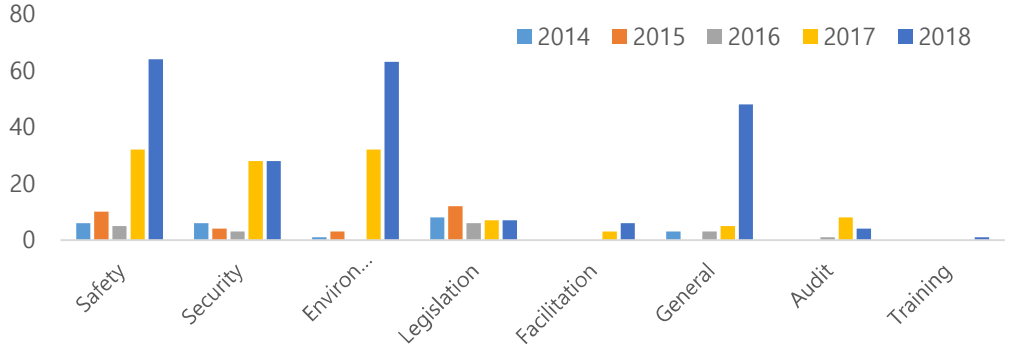


Figure 3.6 Training activities by sector

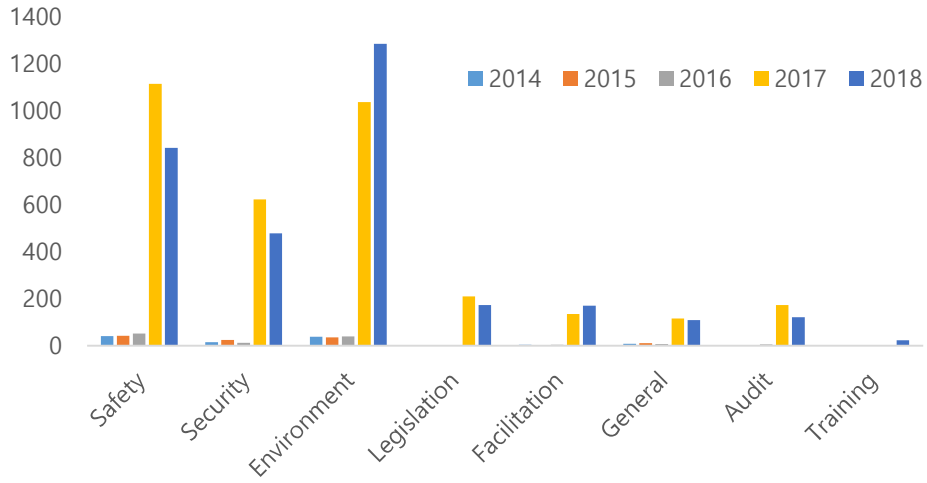
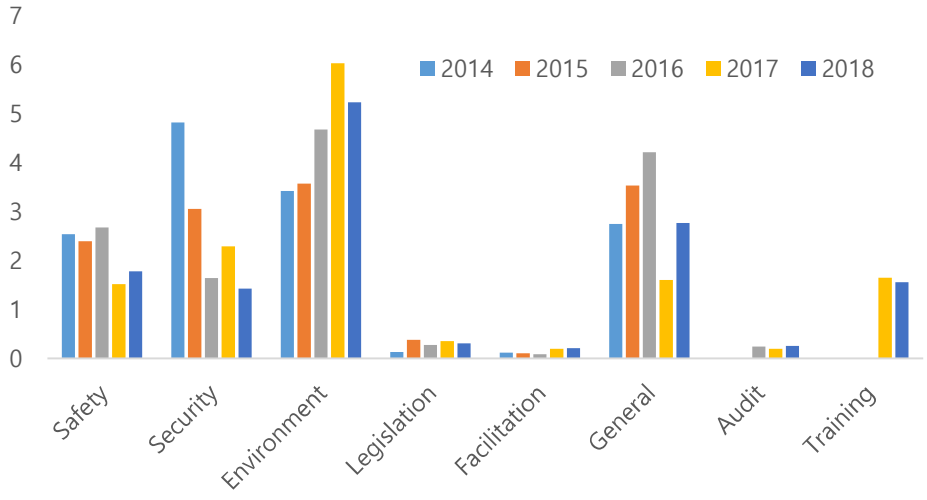


Figure 3.7 Expenditure by sector

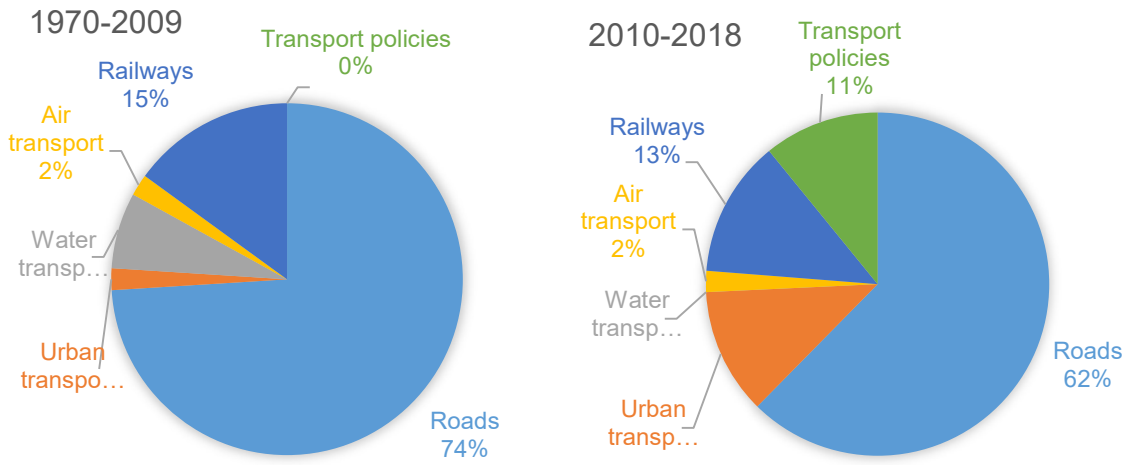


3.2.2. TC activities of other organizations

It was observed in the OECD DAC data that development cooperation activities are being diversified including policy-related activities, which is consistent with that of other data such as Asian Development Bank (ADB). Transportation sector is a main area of ADB projects accounting for 21% of all the lending of ADB in 2018. Road and rail transports have been dominant areas for development projects which require a considerable investment with the proportion of above 80% of transport sector lending as shown in Figure 3.8. Raitzer et al. (2019) highlight that whereas 'Transport policies' has not been considered as an element of projects in transport sector during three decades prior to 2010s, it takes around 11% in 2010s. This indicates, while infrastructure development to improve connectivity has traditionally been

a focus in transport sector, more attention is being drawn to transport policy so that resources are used to support developing countries who have increasing pressure from the strengthening environment and safety regulations by the international organizations and community.

Figure 3.8. Transport sector lending by Asian Development Bank



Source: Raitzer et al. (2019)

There are recent scoping studies to promote the development cooperation in transport sectors through regional partnerships such as Central Asia Regional Economic Cooperation (CAREC) and South Asia Subregional Economic Cooperation (SASEC) (CAREC, 2018; SASEC, 2019). CAREC (2018) and SASEC (2019) propose areas of cooperation in aviation and maritime transport respectively in their corresponding subregions as shown in Table 3.5 and 3.6. The proposed areas are not limited to infrastructure and equipment development but also include policy and legislation, operating system development and capacity buildings.

Table 3.5. Cooperation in the aviation sector in CAREC

Scope	Actions needed
Policy and regulation	A gradual policy toward a more open aviation market Development of air safety and environmental regulation
Infrastructure and equipment	Investment on airport linkages to secondary cities Investment on multimodal linkage from airports to cities such as bus rapid transit and railway
Operations	Full or partial privatization of airport management using public-private partnerships Development of airfreight service system (e.g. e-cargo system)
Capacity building and financing	Provision of training sessions on regulations and policy and airport management skills Securing public and private financing sources

Table 3.6. Cooperation in the maritime sector in SASEC

Scope	Actions needed
Legal and regulatory issues	An audit to identify legislation inhibiting trade among member countries
Development of ICT and port community systems	An audit of the use of ICT, the presence of terminal operating systems Assessment of benefits of installing port community system Provision of awareness training on the systems Linkages of the systems among member countries
Development of external logistics infrastructure	Developing logistics infrastructure that links port and hinterland cities such as inland container depot
Promotion of greening technology for port operations	Developing an environmental management system for port operations Developing policies and strategies for port environmental statement and capacity building

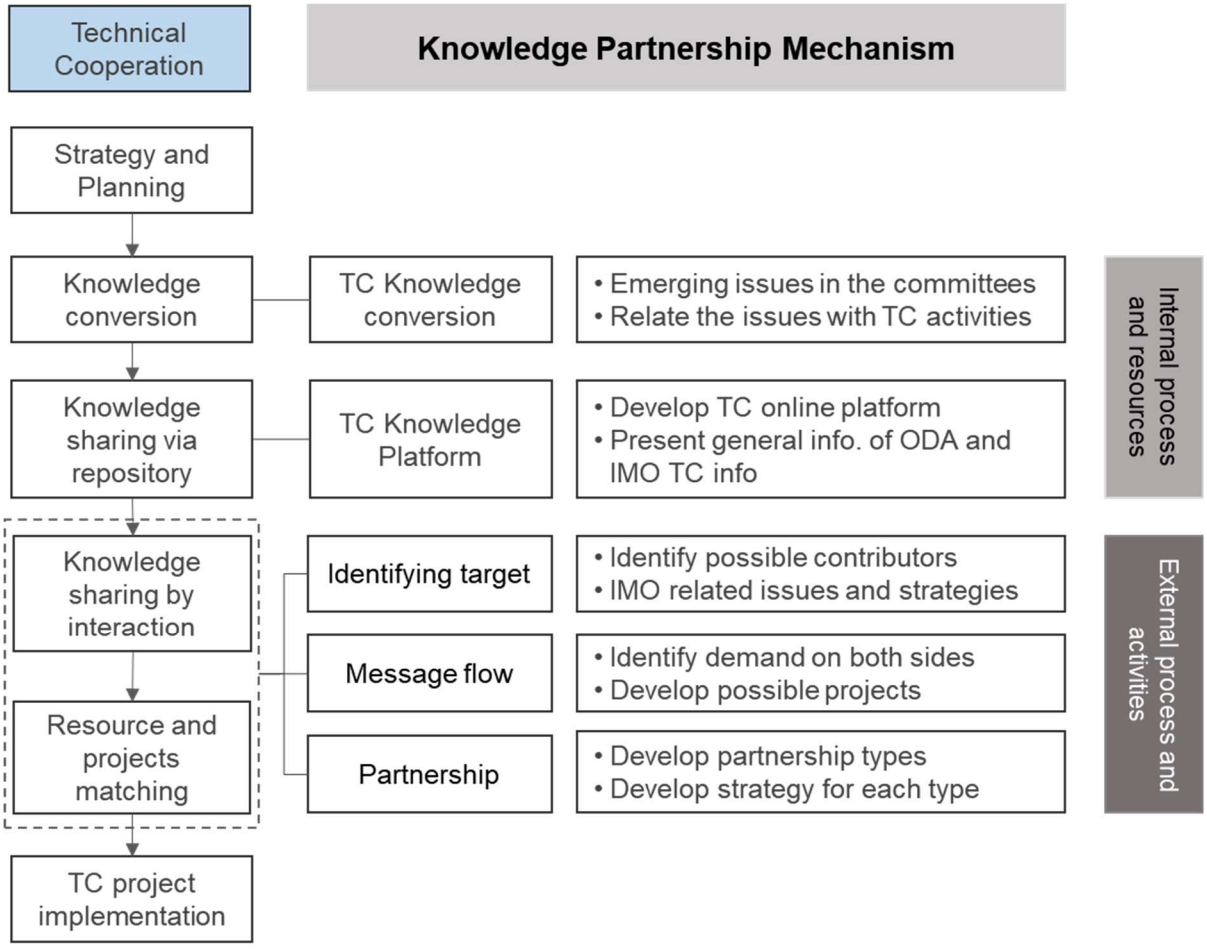
3.3. Establishment of Knowledge Partnership Mechanism

3.3.1. Approach: Integration and Being Strategic

Effective knowledge management system should be integrative with knowledge acquisition, knowledge conversion, and knowledge sharing. Current knowledge management in IMO is rather fragmented with three parts: Maritime Knowledge Center, ITCP and Knowledge Partnership. While MKC store knowledge from the committee activities, it does not convert original types of information to sharable form of information. In particular, there is no intention to lead to utilization of information for knowledge partnership and TC activities implementation. Therefore, internal process to acquire, convert and store data and information which can be engaged with knowledge partnership and TC activities needs to be set up: TC knowledge conversion and platform.

In addition, strategic approach which takes different approach and strategies depending on circumstances such as demand, resources and available projects is necessary. External process and activities of 'Identifying targets', 'Message flow' and 'Knowledge Partnership' are suggested based on the Long-term Resource Mobilization Strategy. In 'identifying targets', potential contributors are identified using various information. In 'message flow', demand of donors and recipients are identified through occasions and interaction such as knowledge partnership workshops. Subsequently the demands are prioritized by types and sectors in the form of potential projects. In 'Knowledge partnership', possible types of matching resources and projects are identified and strategies for each type is suggested as shown in Figure 3.9. While details of 'Identifying targets' and 'Message flow' are presented in Chapter 4 and 5, types of partnership are focused in this section.

Figure 3.9. Knowledge Partnership Mechanism for IMO



3.3.2. Types of Knowledge partnership and strategies

Types of knowledge partnership can be classified depending on the flow of fund among entities in the partnerships and the function of IMO. The partnerships are broadly divided into bilateral partnerships in which technological cooperation activities are undertaken between contributing countries and recipient countries and multilateral partnerships in which other organizations such as international organizations and MDBs are involved.

In the bilateral partnerships, Type 1 is a case that donors contribute to IMO and undertake TC activities under the control of IMO. In Type 2, donor countries contribute to recipient countries through consultation with IMO without inflow of fund to IMO. In Type 3, the contribution is made through IMO to recipient countries rather than directly to recipient countries, which is referred to as ear marked. In Type 4, contribution is made both directly and through IMO. In the multilateral partnerships, Type 5 is a case in which donor countries contribute to international organizations and MDBs with the cooperation with IMO to recipient countries. Type 6 is a case in which IMO participate in global ODA programs as an entity responsible for maritime

transportation sector. Type 7 is a case where there are multiple flow through international organization, MDBs and IMO.

Figure 3.10 Bilateral Partnerships

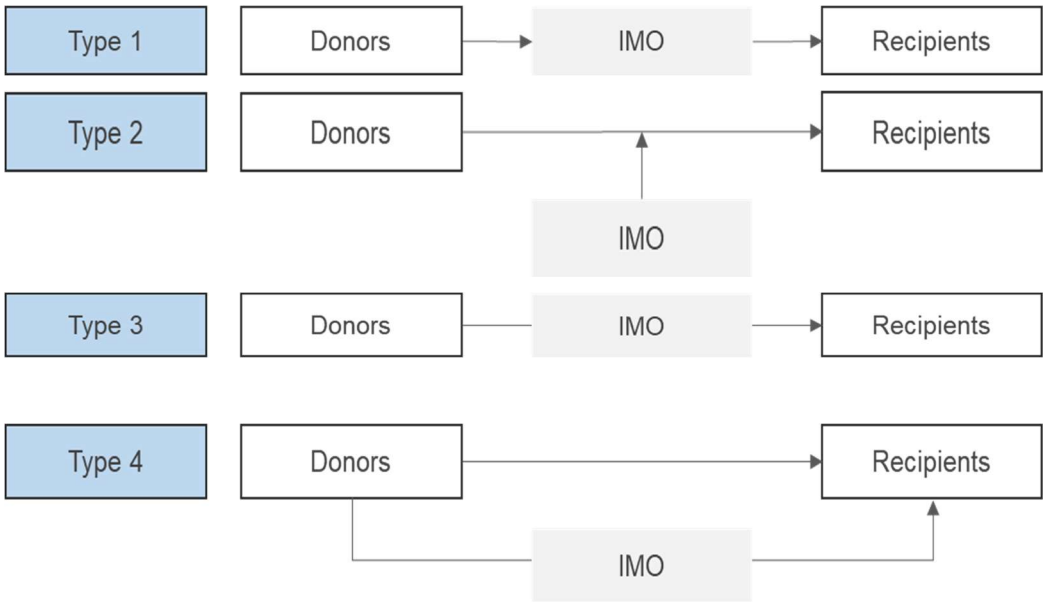
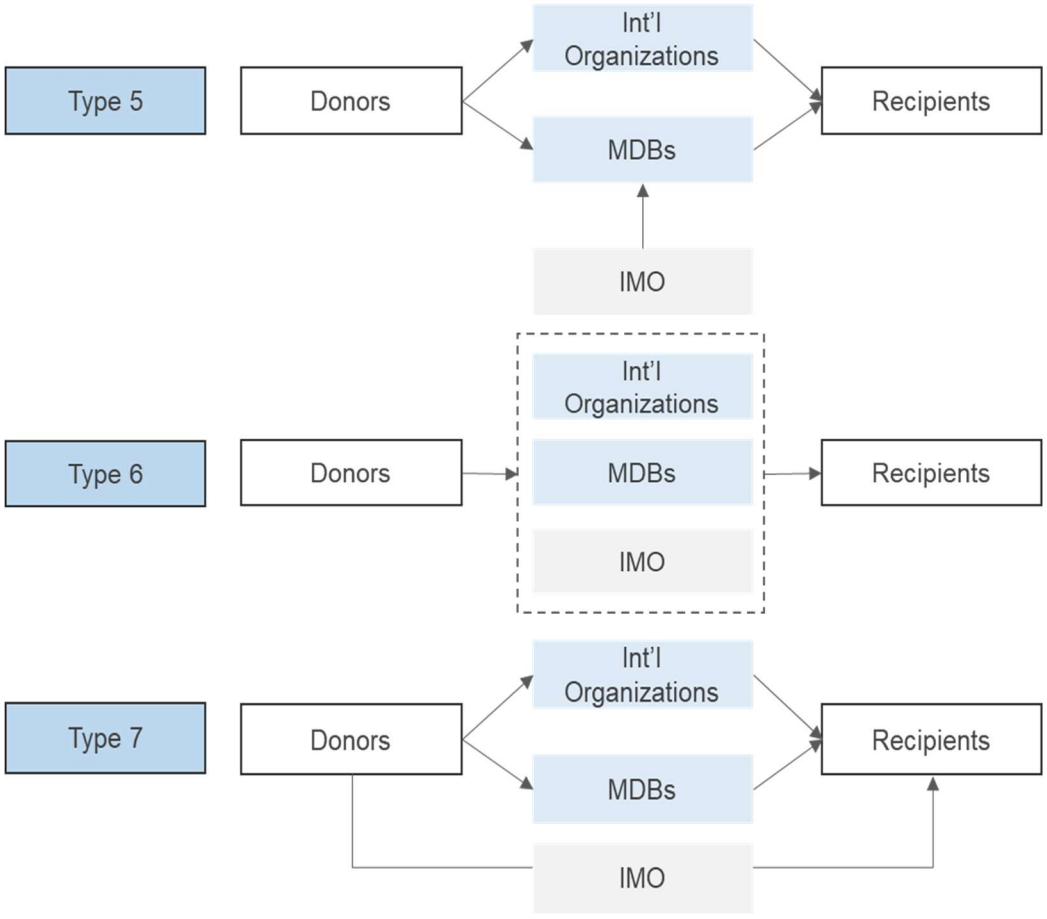


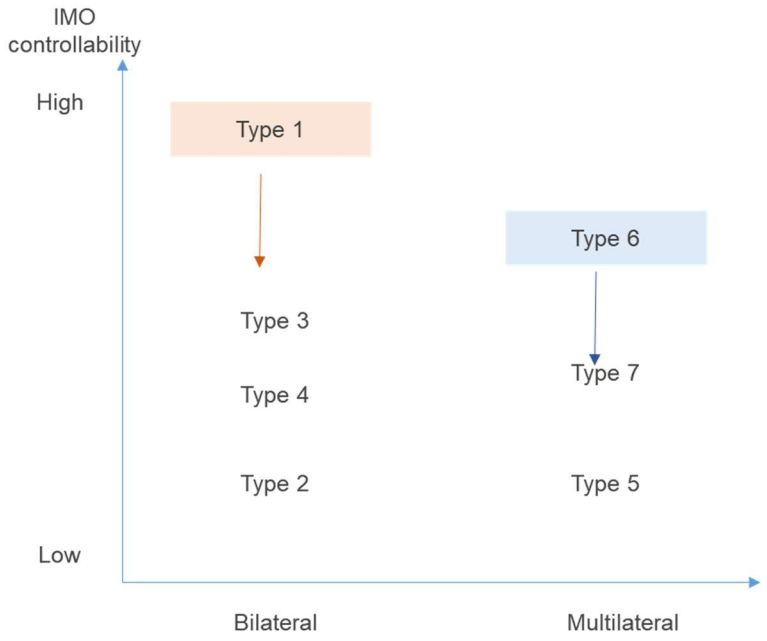
Figure 3.11 Multilateral Partnerships



If we assume that direct funding to IMO ensures its controllability over project planning and utilization of fund, it is shown from Table 3.3 that IMO has sought Type 1 funding: multi-donor funds such as TC fund, IMST fund, International SAR Trust Fund and single-donor fund from a country such as UK, Norway, Republic of Korea, Canada, Germany, Australia and so on. Recently there are emerging type of funding where IMO participate in global TC program such as UNDP/GEF which is Type 6. Type 6 may have relatively high level of controllability over the funding in that there is direct financial inflow to IMO and share overall governance of the global program.

Type 1 program can be diversified to Type 3 and 4 with the support of the National Knowledge Partnership Officers. While ODA projects are planned, a part of projects which are related to maritime transportation can be implemented through IMO (Type 3) and by IMO in parallel with the main projects (Type 4). Multilateral partnerships can be more diversified from Type 6 to Type 7 in the similar way as the bilateral partnerships.

Figure 3.12 Types of Knowledge Partnerships



CHAPTER Ⅳ COOPERATION AND PROMOTION STRATEGIES

4.1. DONOR COUNTRY STRATEGIES

UNITED STATES

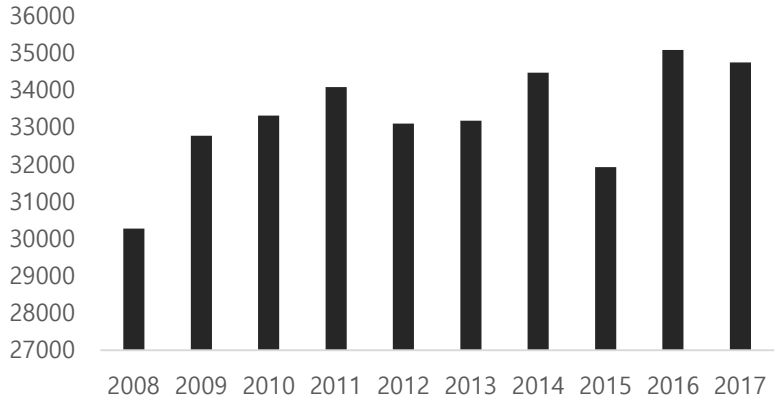
1. Development cooperation strategies

United States Agency for International Development (USAID), as an international development cooperation agency, intends to support partner countries to become self-reliant and capable of leading their own development journeys. Its focus is: reducing the reach of conflict; preventing the spread of pandemic disease; and counteracting the drivers of violence, instability, transnational crime; and other security threats. As the US Congress passed the Better Utilization of Investments Leading to Development Act of 2018, the US International Development Finance Corporation (DFC) was established in 2019 by consolidating the Overseas Private Investment Corporation (OPIC)'s and the USAID's Development Credit Authority. This aims at strengthening the American private sector in stimulating growth in lower and middle-income countries complementing grant-based international aids.

2. Contribution trend

The US is the largest bilateral donor of the DAC with the 23% of proportion of ODA flow by DAC countries in 2017. The contribution shows an increasing trend in general while there was some fluctuation in 2012 to 2015 as shown in Figure 4.1.

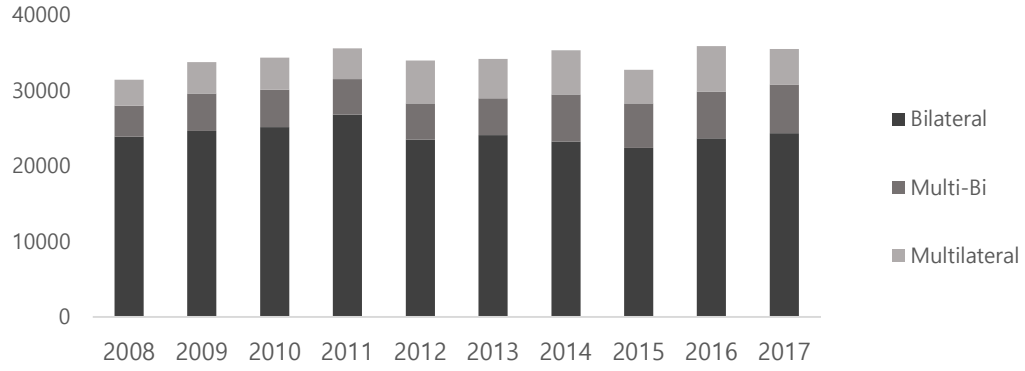
Figure 4.1. Trends of Net ODA contribution of the US (Million USD)



The US used bilateral programmes mainly for development cooperation which accounts for 68.6% in 2017 while 13.3% of ODA budget was core contribution to multilateral organizations as shown in Figure 2. Earmarked/non-core/Multi-Bi contribution which is a kind of bilateral resources channeled through multilateral agency accounted for 18.1% of the whole

contribution in 2017 (OECD, 2015). While the bilateral contribution and core multilateral contribution fluctuate, the amount and the proportion of non-core multilateral contribution has increased since 2008 from 41 billion USD (13.1%) to 64 billion USD (18.1%) in 2017.

Figure 4.2. Bilateral and multilateral ODA contribution (2017, Million USD)



3. Geographical distribution

The considerable amount of the bilateral contribution of the US was disbursed on sub-Saharan Africa which accounted for 38% in 2017 as shown in Figure 4.3. Asian countries in the Middle East and South and East Asia were allocated with 23% of the bilateral contribution. Among Top 10 recipient countries, seven countries were from sub-Saharan Africa while Afghanistan was the most recipient in 2017.

Figure 4.3. Geographical allocation (Bilateral, 2017)

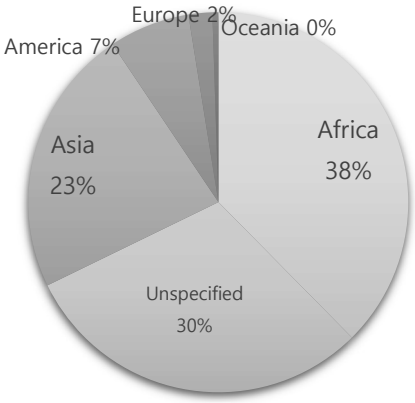
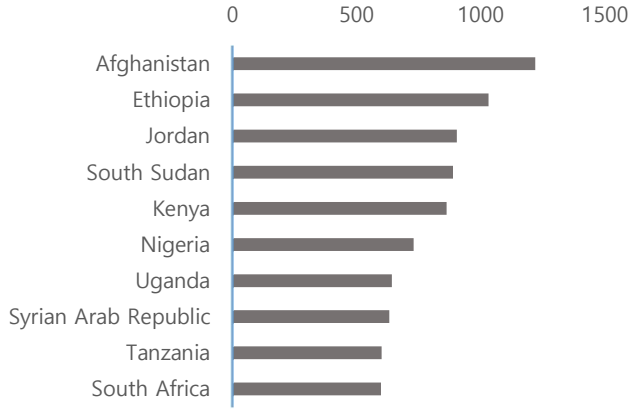


Figure 4. Top recipient countries (Bilateral, 2017)



4. Sectoral distribution

The US bilateral contribution was allocated primarily to social infrastructure and services (48%) which was followed by Humanitarian aid (27%) in 2017. Social infrastructure and services include Education, Health policy, Water and sanitation, Government and civil society, and

others. Economic infrastructure including Transport and communications, Energy, and other economic infrastructure accounted for 3.99% and production sector accounted for 4.42% of the US bilateral aid in 2017.

Figure 4.5. ODA allocation of bilateral contribution by sector (2017)

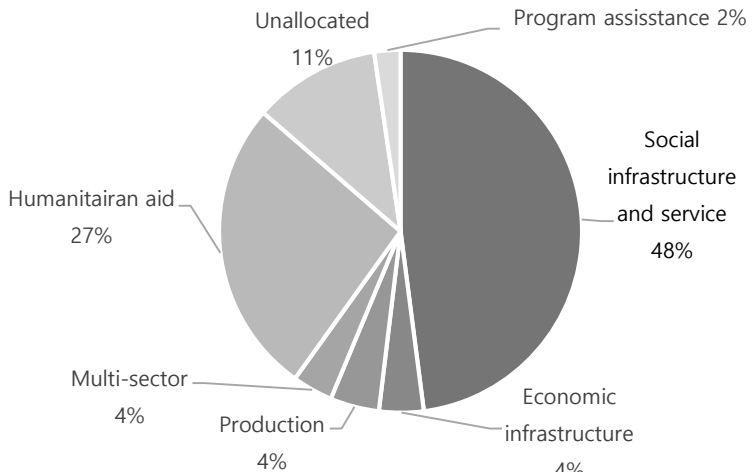
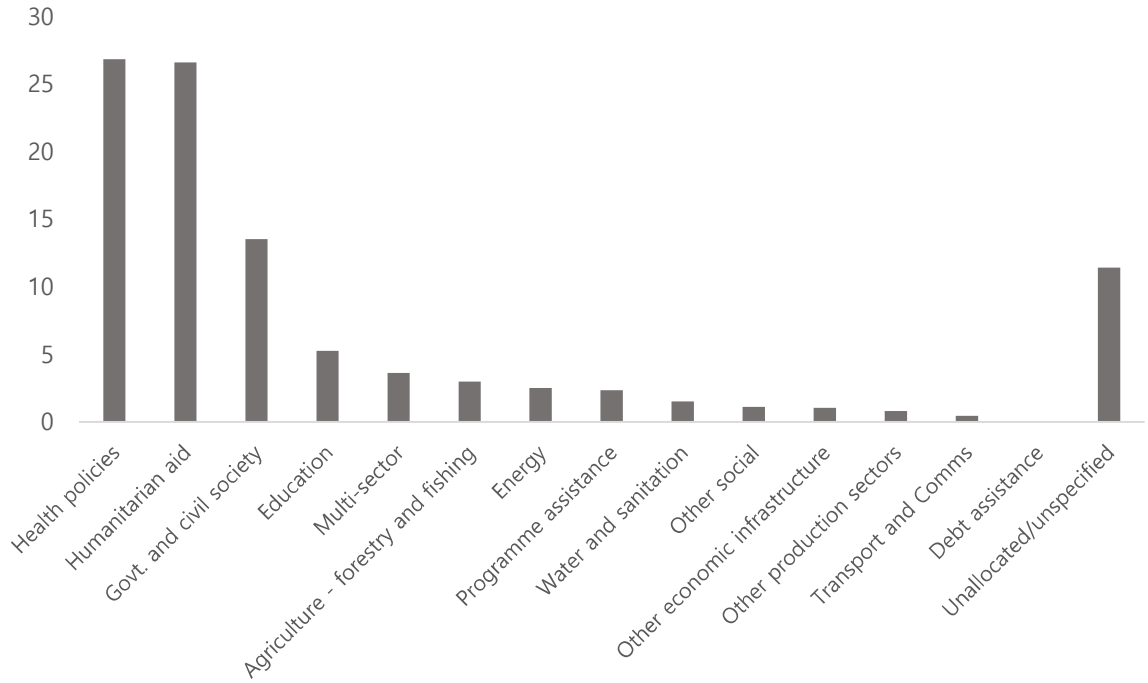


Figure 4.6. ODA allocation of bilateral contribution by sector (2017)



5. Implications to IMO

Engagement with multilateral agencies

When it comes to effectiveness of development cooperation, it is still controversial whether bilateral contribution is more effective than multilateral or vice versa (CRS, 2020). Given the controversy, the United States maintains position to continue to lead and engage in the multilateral arrangements that shape many of the rules that affect the Member States of the

multilateral organizations including IMO. It is shown that non-core contribution which is often administered in the form of trust fund and single or multi-donor trust fund, while core multilateral contribution fluctuates. It is suggested that IMO identifies themes or sectors to build up trust funds with USAID and DFC.

Maritime Security Sector Reform Projects

The US Government agencies including USAID developed Maritime Security Sector Reform (MSSR) Guide in 2010. The guide is a tool designed to map and assess existing system and to enable coordination to improve maritime safety and security in a country or region. It may be expected that USAID use MSSR for development cooperation projects to improve maritime security and safety in developing countries which fits in IMO's mission. Technical cooperation project consisting of policy development, governance restructuring, capacity building and facility/infrastructure development can be mutually developed for developing countries which are fragile in maritime safety and security by establishing trust fund.

Fishing Vessel Safety and Security Projects

USAID operates the USAID Oceans and Fisheries Partnership program with ASEAN countries to restore and protect ecosystems to provide sustainable harvests of fish to local communities. As a part of the program, USAID is developing an electronic traceability system in ASEAN to ensure that marine resources are legally caught and properly labeled, working in partnership with fisheries authorities and companies. USAID also participates in ASEAN Regional Forum (ARF) Maritime Security Inter-Sessional Meeting and in ASEAN Defense Ministers Meeting-Plus including in maritime exercises, as well as the Expanded ASEAN Maritime Forum (EAMF). While this program basically to protect marine environments partly by preventing illegal fishing, safety and security of fishing vessels is also important issue which can be addressed using the knowledge and experience of IMO. Therefore, collaboration projects can be developed to improve safety and security of fishing vessels in ASEAN countries.

6. Contacts

USAID Bureau for Economic Growth, Education and Environment

USAID Bureau for Asia

GERMANY

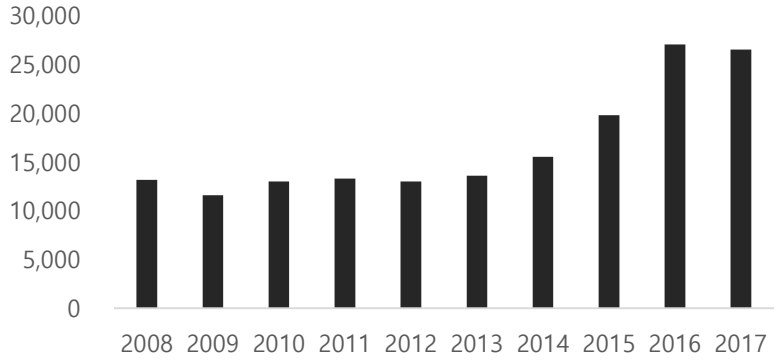
1. Development cooperation strategies

Germany establishes development policies for recipients through the Federal Ministry of Economic Cooperation and Development (BMZ). Under the responsibility of BMZ, GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH) and KfW (Kreditanstalt für Wiederaufbau) are operated to implement bilateral contributions. Recently, BMZ announced the BMZ 2030 reform strategy to execute its development policy and funding more efficiently and effectively to apply appropriately the SDGs (Sustainable Development Goals) from the 2030 Agenda. BMZ plans to concentrate on its ability on five key areas, which are peacebuilding; food security; training and sustainable growth; climate and energy; the environment and natural resources. Above all, BMZ's priority aim is to overcome hunger and poverty. Along with the design of five major areas, BMZ also forms ten initiative areas to embody its development policy effectually within a specified period. The ten initiative areas are: 1) the Marshall Plan with Africa; 2) Health, pandemic response and the One Health approach; 3) Sustainable supply chains and Green Button; 4) Population development and family planning; 5) Digicenters and digital technology; 6) Returning to New Opportunities; 7) Development and Climate Alliance; 8) Green people's energy; 9) Synthetic fuels; and 10) Sport, media and culture.

2. Contribution trend

Germany is the second-largest donor country among DAC countries, spending 26.5 billion USD on net ODA in 2017. While there was an increasing trend until 2016, the amount of net ODA slightly decreased in 2017.

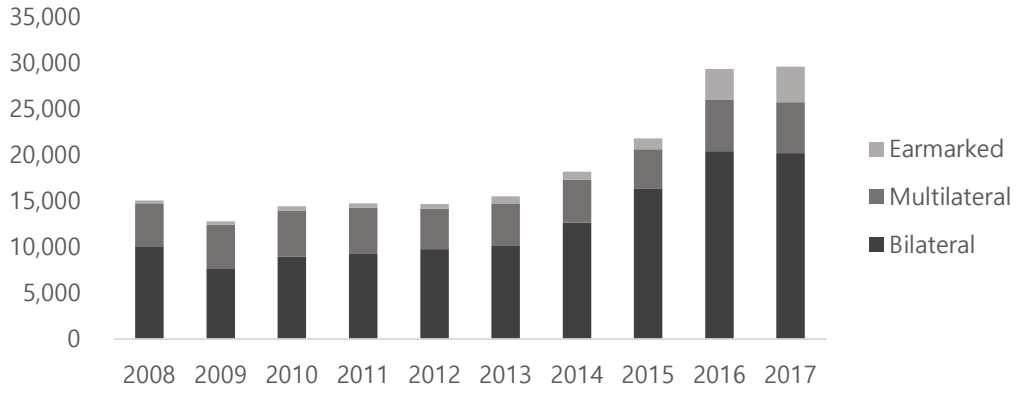
Figure 4.7. Trends of Net ODA contribution of the Germany (Million USD)



The German government has a strong preference for bilateral ODA. Germany allocated more than 60% of the ODA budget to bilateral assistance in given years, as shown in Figure 8. The

portion of the bilateral ODA accounted for 75% of total ODA in 2015, which was the highest value, but it dropped by 7% to 2.04 billion USD in 2017. The proportion trend for multilateral ODA showed a constant decline since 2009 from 37% to 19% while the amount of multilateral had increased from 4.7billion USD to 5.5 billion USD in the same period. Meanwhile, the figure illustrating bilateral ODA through multilateral organisations (Earmarked/Bi-Multi/Non-core) was reported that there was a significant growth from 0.3 billion USD (2%) to 3.8 billion USD (13%).

Figure 4.8. Bilateral and multilateral ODA contribution (2017, Million USD)



3. Geographical distribution

Figures 4.9 and 4.10 show the allocation of bilateral assistance in terms of regions and recipients. Around one-third of the bilateral contribution of Germany was disbursed to Asia in 2017. Funding to Africa was just under one fifth in the given year. Germany provided the largest share of bilateral funding to India, with 1.2 billion USD, which was followed by the Syrian Arab Republic with 0.8 billion USD. Only one country was in America among the top 10 recipients.

Figure 4.9. Geographical allocation (Bilateral, 2017)

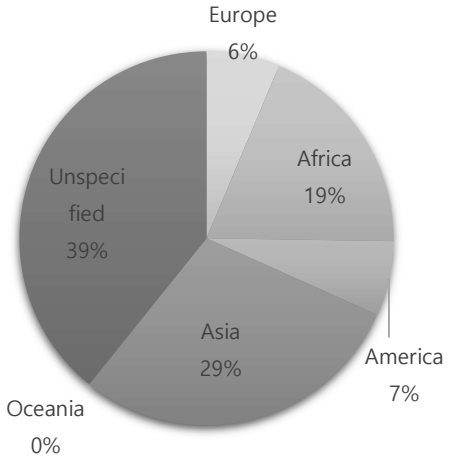
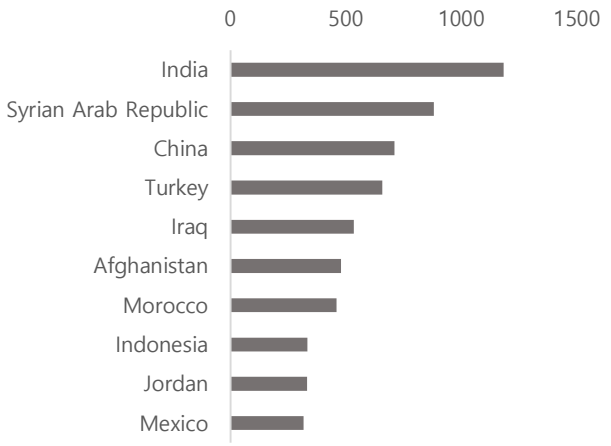


Figure 10. Top recipient countries (Bilateral, 2017)



4. Sectoral distribution

One-third of bilateral funding from the German government was focused on Social infrastructure and services in 2017 according to figure 11. The portions for education, government & civil society, energy, and multi-sector were equal as 9%, and bilateral assistance to implement humanitarian aid accounted for 11%, which was the largest proportion except for an unspecified purpose..

Figure 4.11. ODA allocation of bilateral contribution by sector (2017)

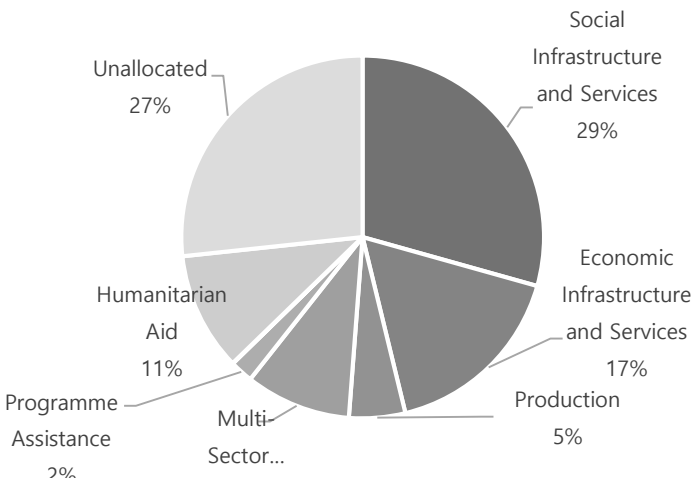
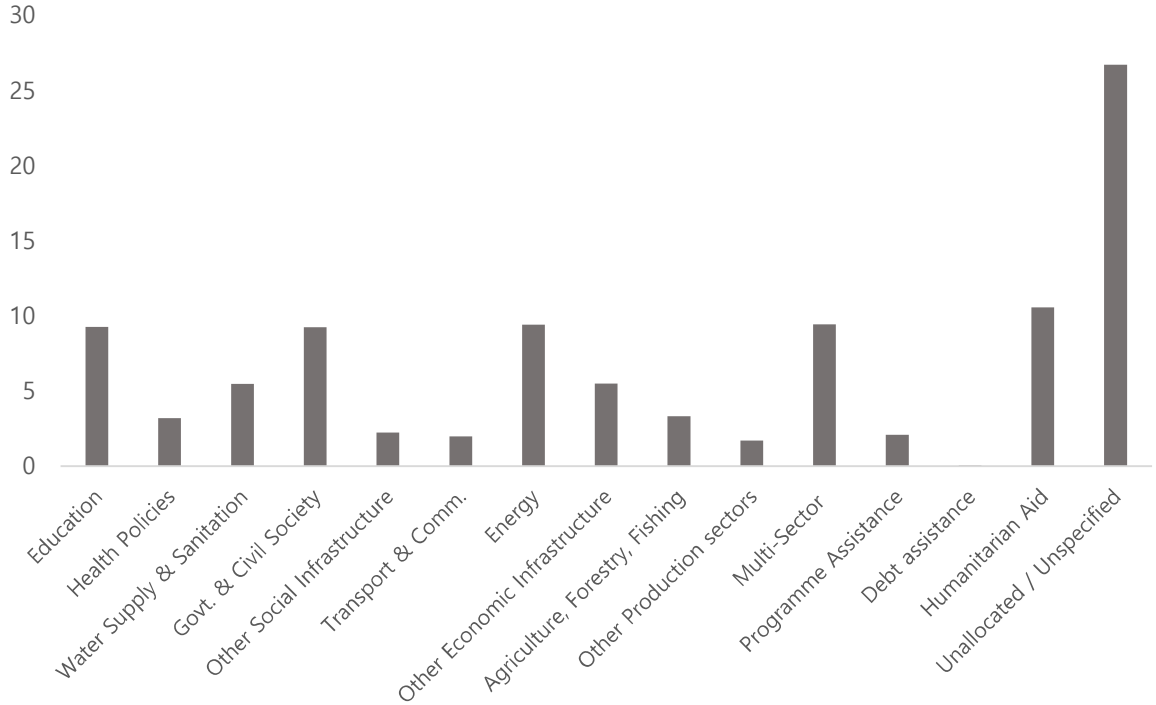


Figure 4.12. ODA allocation of bilateral contribution by sector (2017)



5. Implications to IMO

The strategic Plan 2011-2020

Over the past twenty years, the German government has expanded its attention to preserve international biodiversity to enforce the force of the Convention on Biological Diversity (CBD). BMZ and BMU (Ministry for the Environment, Nature Conservation, and Nuclear Safety) IKI (International Climate Initiative) have increased the financial contributions on bilateral and multilateral assistance for the conservation of biodiversity. The Strategic Plan 2011-2020 of Germany provides the structure to implement the CBD. Under the vision, there are five strategic goals, which have been achieved through many projects. In the specific programmes relating to the marine sectors are: 1) Coastal protection in Mauritania-preserving a unique ecosystem; 2) Conserving marine biodiversity across borders in Africa including Angola, Namibia and South Africa; 3) Expansion and effective management of protected areas in the Philippine; and 4) Coastal and marine conservation in the Caribbean.

Blue Action Fund

Oceans around the globe are a key contributor to maintain the ecosystem, provide the food and support the economic activities of humans. As climate change has intensified over the years and the marine environment has deteriorated, the movement for marine conservation, such as the 2030 Agenda for sustainable Development the Paris Agreement, has activated compared to the past. By following those needs, BMZ introduced the Blue Action Fund before the end of 2016 to protect and conserve the marine biodiversity and coastal areas. Not only for the marine environment, but the establishment of the sustainable supply chain for the fisheries sector, the prevention of illegal fishing and the reduction of negative effects caused by climate change also are supported as the key activities of the Blue Action Fund. Projects supported through this fund will be carried out by accredited, experienced German and international NGOs. Besides, to ensure and quality of the projects, BMZ works with prestigious organisations in the field of nature conservation, such as the International Union for the Conservation of Nature and Natural Resources (IUCN). Besides, the Agence Française de Développement (AFD) became a donor in 2018.

Advice and Training to the Maritime Related Industries of Timor-Leste

Although the government of Timor-Leste declared maritime transport as a core sector to implement Timor-Leste's Strategic Development Plan, it was hard to improve the quality of maritime transport in the short-term because of the lack of infrastructures and resources. To assist the aim of Timor-Leste, BMZ designed the project named "Advice and Training to the Maritime Related Industries of Timor-Leste". As followed detailed programmes in the project, which will be operated until 2021, Advisory services including the process for the

establishment of a ship inspection system, a seafarer certification system, and job training are provided to enhance the economic growth in the maritime transport. So far, 54 Timorese seafarers have been trained for the German-financed Berlin Nakroma ferry, which links between the Dili (the capital city of Timor-Leste) and Occussi, and other ships operating within the territorial waters. Also, 1,300 individuals have participated in various programmes relating to safety, marine environment, cargo handling, etc.

6. Contacts

BMZ Division 410 Environment, sustainable use of natural resources, biodiversity, marine conservation

GIZ Sector Project Implementing the Biodiversity Convention

BMZ Division for public relation; digital communications and visitor's service

JAPAN

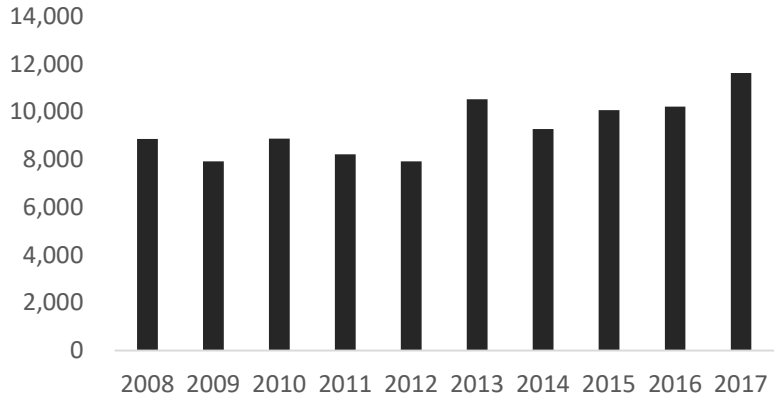
1. Development cooperation strategies

Under the responsibility of the Ministry of Foreign Affairs (MOFA), which establishes the development policy, the Japan International Cooperation Agency (JICA) has a responsibility to implement bilateral assistance through various types, such as Technical Cooperation, Finance and Investment Cooperation, and Grants. The mission of JICA is to achieve "Human Security and Quality Growth" which was undertaken in 2017. Following its mission, JICA operates its bilateral assistance based on medium-term plans in five-years cycles and now, it conducts the 4th medium-term plan (fiscal 2017-2021). JICA's development programmes for fiscal 2019 were performed according to following areas: 1) Promote "Free and Open Indo-Pacific"; 2) Strengthen the capacity of leaders in developing countries; 3) Establish a platform by enhancing domestic collaboration; 4) Promote innovation; and 5) Improve strategy and external dissemination of projects.

2. Contribution trend

Although the contribution trend from the Japanese government had been repeated an increase and decrease, it held an upward trend to 2017 with 11.6 billion USD, which was the fourth-largest donor in the world and the largest provider in Asia at the same time.

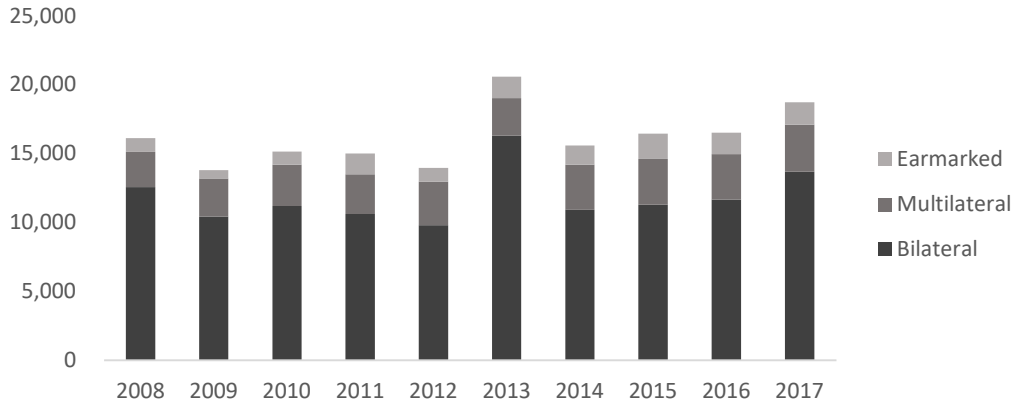
Figure 4.13. Trends of Net ODA contribution of the Germany (Million USD)



While the proportion of bilateral in the total amount of disbursement had changed in the given year, it is clear that the Japanese government sought to provide more attention to bilateral assistance than multilateral or earmarked. In 2017, the amount of bilateral assistance was 13.6 billion USD (73%). As the amount of funding has increased over the years, the volume for multilateral and earmarked assistance also has risen to 3.4 billion USD and 1.6 billion USD

respectively. While the share of multilateral assistance had declined to 18% compared with 2016, it for earmarked showed a constant state with 9%.

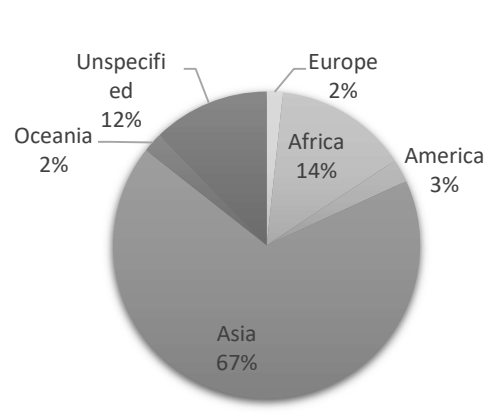
Figure 4.14. Bilateral and multilateral ODA contribution (2017, Million USD)

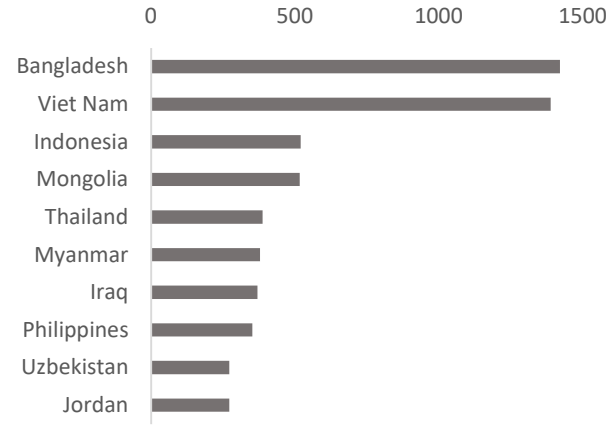


3. Geographical distribution

The majority of bilateral ODA from Japan was significantly concentrated in Asia countries, which was 67% in 2017, as shown in Figure 4.15. The bilateral funding for Africa accounted for 14%, which was the second-largest share among regions. As following a result of figure 15, figure 16 illustrates the top 10 recipient countries which are all located in Asia. Four countries belong to Far-east Asia and three countries are in South & Central Asia and the Middle East, respectively. Bangladesh was the largest recipient country from the Japanese ODA activities with 1.4 billion USD in 2017. Vietnam, which was the second-largest recipient, was also supported by a huge amount of funding from Japan with 1.3 billion USD.

Figure 4.15. Geographical allocation (Bilateral, 2017) Figure 16. Top recipient countries (Bilateral, 2017)





4. Sectoral distribution

According to Figure 4.17, The Japanese government preferred to support recipient countries relating to the economic infrastructure and services, which was around half of the total allocation of bilateral contributions. When it comes to figuring out the individual sectors in ODA, a disbursement for Transport and Communication was shared the largest proportion with 39% in 2017. The portion for energy and agriculture, Forestry & Fishing were the same as 10%.

Figure 4.17. ODA allocation of bilateral contribution by sector (2017)

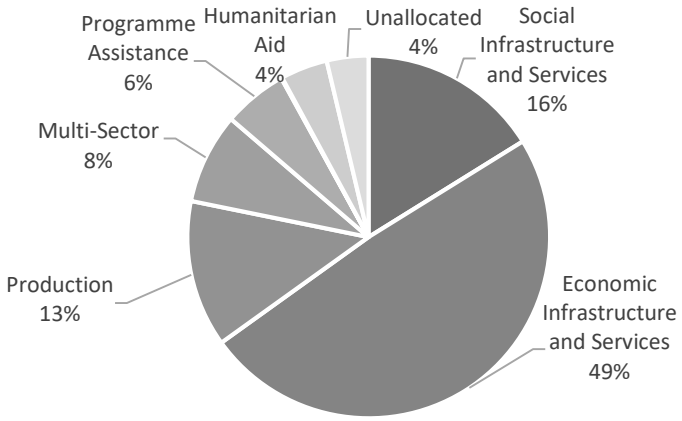
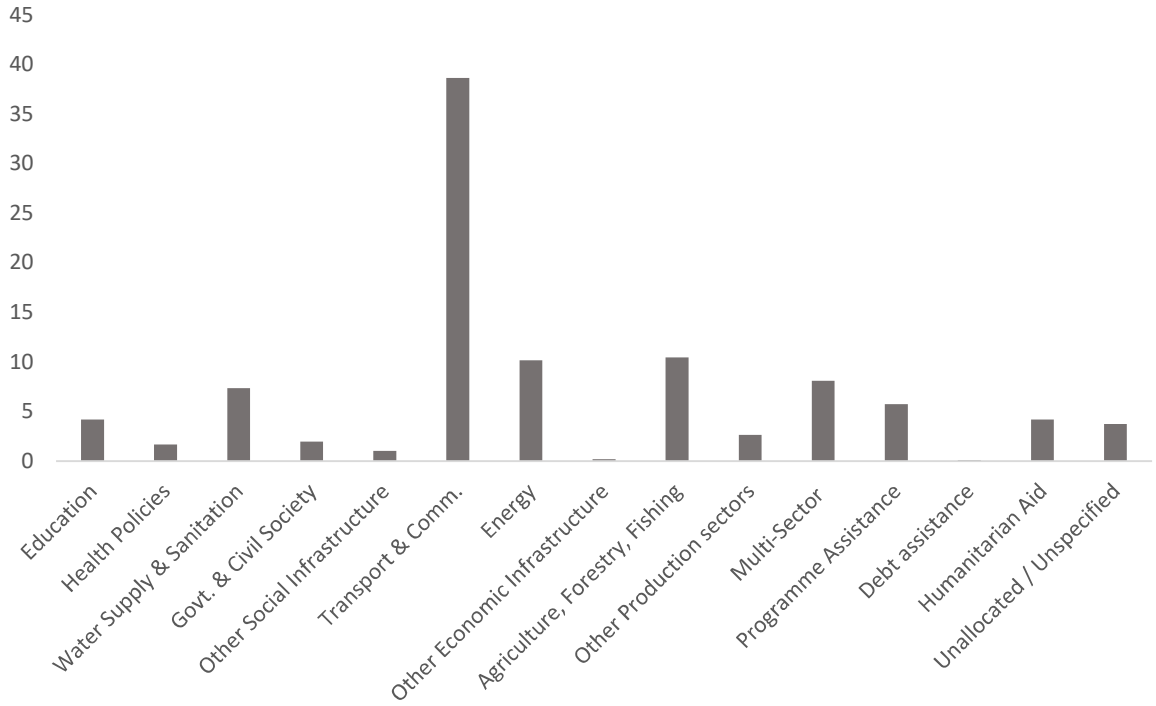


Figure 4.18. ODA allocation of bilateral contribution by sector (2017)



5. Implications to IMO

Strengthening Maritime Security and Safety

Under the vision of the Japanese government, "Free and Open Indo-Pacific", JICA has tended to promote economic contributions and connectivity with ASEAN through bilateral assistance. The Maritime Economic Corridor is the key project to enhance the relationship with ASEAN, especially focused on Malaysia, Indonesia, Philippines, Singapore, and Brunei. Activities conducted by the project were not restricted to the infrastructure sector. It also contained various areas relating to the marine sector, such as training courses for coast guard personnel or capacity development for maritime security and safety. For instance, JICA provided technical cooperation and grants to the Philippines named: Philippine Coast Guard Education and Human Resource Management System Development Project; The project for Enhancement of Communications System for Maritime Safety and Security.

The Pacific Islands Leaders Meeting

Every three years since 1997, Japan and small, isolated, and remote countries in the Pacific have held a summit-level meeting called the Pacific Islands Leaders Meeting (PALM) to discuss regional and national issues. JICA supports the 14 Pacific island countries through assistance projects based on PALM. The objectives of contribution from JICA was: to enhance maritime safety including maritime law enforcement and management of maritime resources; to promote resilient and sustainable development by developing ports, harbors, and other infrastructure; to activate a personal interchange. To embody these aims, "The project for the Promotion of the Grace of the Sea in Coastal Villages" was carried out to support the revival of the coastal area in Vanuatu where it was suffered by endangered fishery resources. Based on the technical cooperation from JICA, the community-based coastal resource management was established.

Oceanographic and Fishery Research Vessel Construction Project

The Fishery industry is an important source for Morocco because it accounted for a large portion of the economy. However, by deteriorating ocean pollution and climate change, the Morocco government needs to improve the quality of fishery and oceanographic research to maintain its valuable ecosystem. According to this request, JICA has specified the Agriculture and Fisheries Industries as a priority field of Morocco and supported through grants and technical cooperation. As a part of it, JICA has provided support for the project named "Oceanographic and Fishery Research Vessel Construction project" to improve the research capabilities and monitoring the marine environment, which will continue since January 2017. JICA provides not only loans to construct a vessel but also consulting services, including bidding assistance and construction supervision.

6. Contacts

JICA Southeast Asia and Pacific Department

JICA Morocco Office

FRANCE

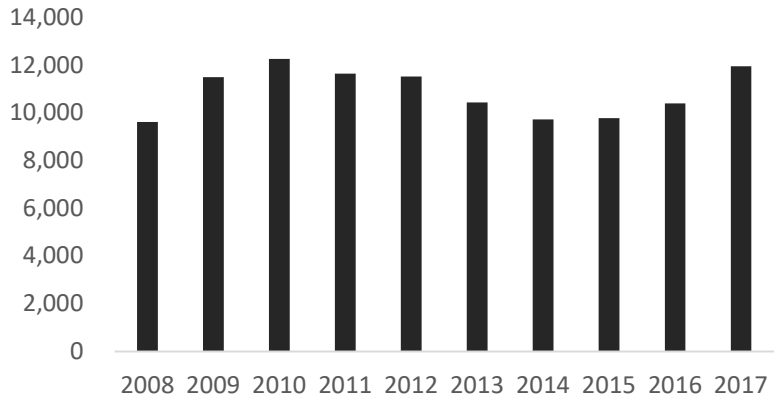
1. Development cooperation strategies

Development of the strategic priorities for official development assistance in France is complex with a chief institution - the International Committee for International Cooperation and Development (CICID) and three main actors - the Ministry for Europe and Foreign Affairs (MEAE), the Ministry of the Economy and Finance (MINEFI), and the French Development Agency (AFD). Among the three principal actors, AFD is responsible to implement plans for assistance with a dual status as a public development agency and a development bank. AFD is seeking its aims by supporting more than 4,000 projects based on five priorities which are: 1) education; 2) the climate; 3) gender equality; 4) health; and 5) crisis and fragilities. Although 46% of the total AFD commitments in 2018 was allocated to the partner countries in 2018, most of its support is provided to lower middle-income countries.

2. Contribution trend

France was the fifth-largest DAC country in 2017, spending 11.9 billion USD on net ODA. Net ODA has steadily increased over the past few years since 2014, although the trend of net ODA from the French government has fluctuated.

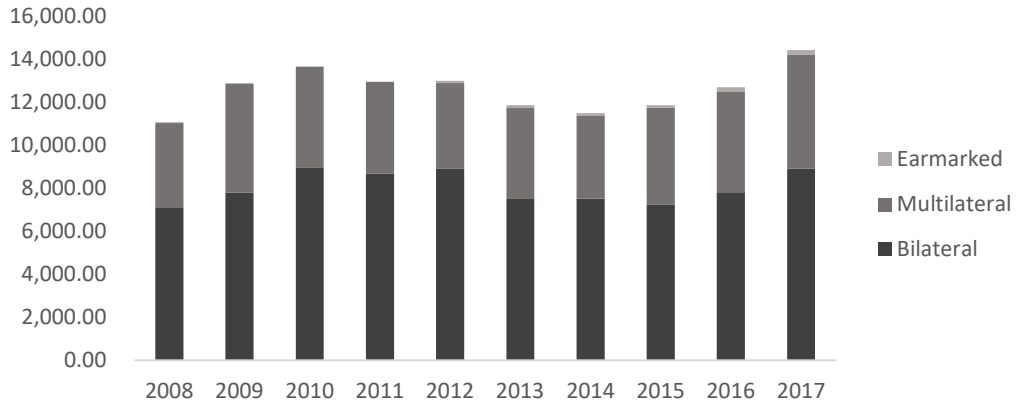
Figure 4.19 Trends of Net ODA contribution of the Germany (Million USD)



Unlike other donor countries, funding for official development assistance has mainly concentrated on the bilateral and multilateral ODA as shown in figure 20. In 2017, the amount of contribution for bilateral ODA was 8.9 billion USD, which was made up of 62% among the total disbursement. While the portion of bilateral ODA has fluctuated, the share of its share was always over two-third. The trend for multilateral ODA from the French government showed a reverse fluctuation of that for the bilateral funding. In 2017, France disbursed 5.2 billion USD

(37%) on multilateral organizations. Meanwhile, France channeled only 2% of the total amount for official development assistance, which was an increase compared with 2008 (0%).

Figure 4.20. Bilateral and multilateral ODA contribution (2017, Million USD)



3. Geographical distribution

Africa was the largest share of the bilateral ODA from France in 2017, which was two-fifth, and that for Asia was around a quarter, as shown in figure 21. The figure for the top 10 recipients shows that Turkey and Morocco received a similar amount of bilateral funding from France with a slight difference.

Figure 4.21. Geographical allocation (Bilateral, 2017)

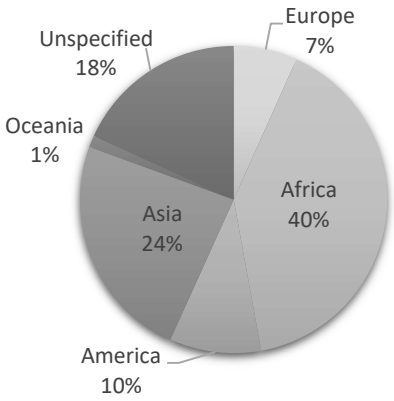
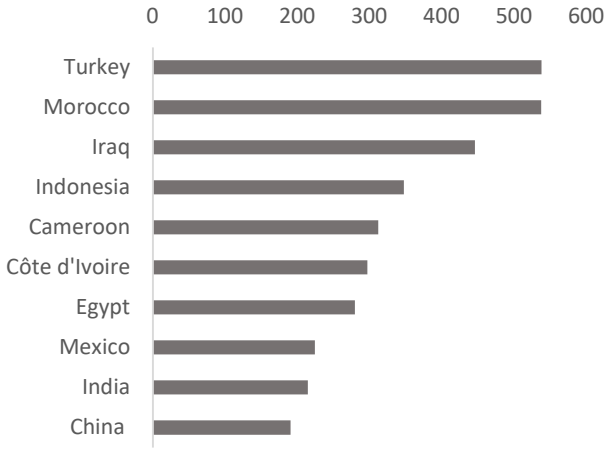


Figure 4.22. Top recipient countries (Bilateral, 2017)



4. Sectoral distribution

In 2017, Funding for the social infrastructure & services was reported as the largest portion of bilateral ODA from France, which was one-third, followed by economic infrastructure & services with 22%. The disbursement for education accounted for 13% which was the highest proportion among individual sectors. Funding for energy and multi-sector were also

constituted a large portion with 12% and 10% respectively. Meanwhile, the figures for water supply & sanitation, Transport & communication, and programme assistance were the same as 9%.

Figure 4.23. ODA allocation of bilateral contribution by sector (2017)

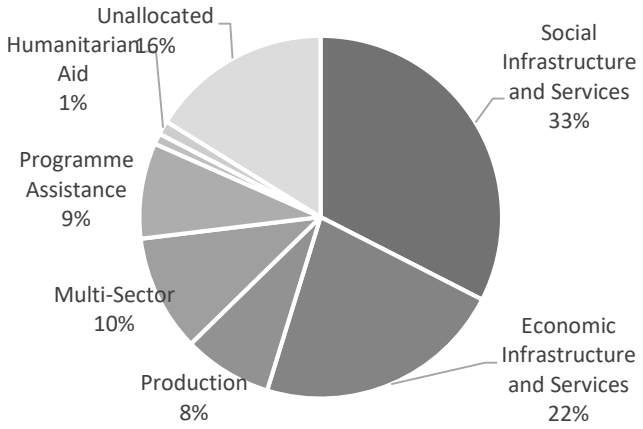
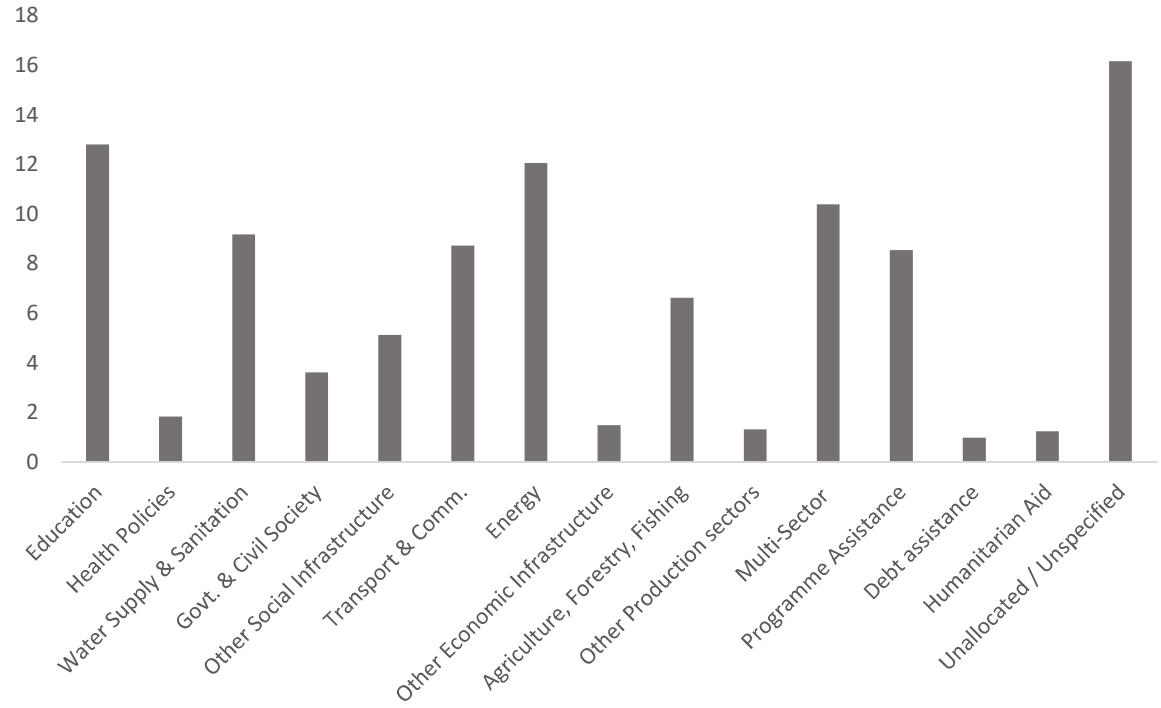


Figure 4.24. ODA allocation of bilateral contribution by sector (2017)



5. Implications to IMO

Kiwa Initiative

The Pacific Ocean is one of the most vulnerable regions by climate change. The Kiwa Initiative was introduced to intensify the resilient ecosystems, economics, and communities of Pacific countries and territories, including the three French overseas territories by supporting projects and technical assistance programmes, which would be conducted based on nature-based

solutions (NBSs). The one-stop shop for regional projects of the Kiwa Initiative is managed by AFD via the Kiwa Initiative Secretariat. The expected outcomes by implementing the Kiwa Initiative are: 1) Improve the funding access for NBSs; 2) Reduce community and ecosystem vulnerability to climate change; 3) Increase the surface of sustainably managed natural land and marine areas; and 4) Strengthen coordination between donor, Pacific countries and territories and regional organizations.

Blue Economy in Indonesia

AFD provided various bilateral assistance in the maritime and marine sectors to Indonesia to enhance the Indonesian economy and the sustainability of the marine resources. From 2013 to 2017, the INDESO project was conducted to manage marine resources and prevent the negative consequence caused by climate change by reducing illegal fishing, managing fishing stock, and monitoring marine environments. Meanwhile, AFD has supported the capacity building to the port authorities to improve the performance of maritime transport and quality of logistics together with the World Bank and KfW since 2014. According to the request from the Indonesian government, the project for upgrading the Indonesian national vessel for oceanographic research was launched to help achieve better knowledge and management of Indonesian biodiversity and its marine resources. AFD will continue to support Indonesia as it joined multilateral initiatives, such as the Clean Ocean initiative, Blue Action Fund, and PROBLUE to ensure the economic growth of Indonesia and conserve natural resources from climate change.

2019-2022 Three Oceans Strategy

In line with the commitment of the French government to reinforce the integration of overseas territories into its regional territories by supporting cooperation projects with neighboring countries, AFD identified a strategy for each ocean basin and reorganize its network. As part of the new AFD Group 2018-2020 Strategy, which was approved in 2018, the Three Ocean Department introduced its new 2019-2022 Three Ocean Strategy for the Indian, Atlantic, and Pacific basins. While AFD has set different principal priorities in three oceans, there was a common objective through the focusing priorities. AFD tended to strengthen its actions to preserve, restore, and manage sustainable ecosystems and biodiversity.

6. Contacts

AFD Pacific Ocean Regional Office (PRO)

AFD Atlantic Ocean Regional Office

Indian Ocean Regional Office (DROI)

SWEDEN

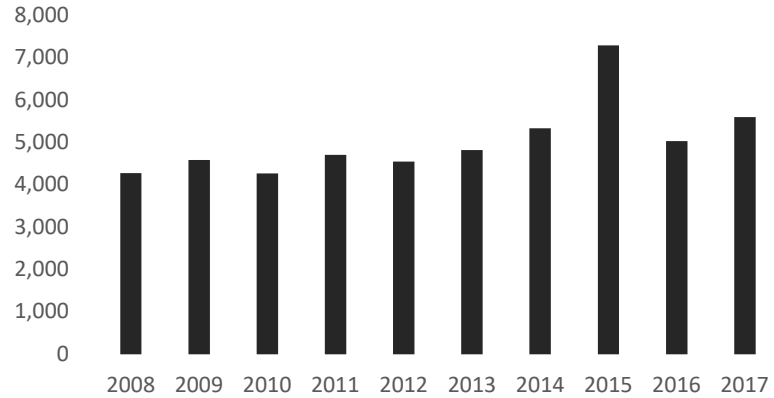
1. Development cooperation strategies

Under the direction of the Ministry of Foreign Affairs, which is responsible to establish the development policy and budget, the Swedish International Development Cooperation Agency (Sida) is operating as the institute for implementation. In 2016, the Swedish government published the Policy Framework for Swedish Development Cooperation and Humanitarian Assistance with its aim, which is to create preconditions for better living conditions for people living in poverty and under oppression. In addition, Sweden identified key areas for development cooperation: 1) human right, democracy, and the rule of law; 2) gender equality; 3) the environment and climate change and the sustainable use of natural resources; 4) peace and security; 5) inclusive economic development; 6) migration and development; 7) equal health; and 8) education and research. The Swedish government tends to support partner countries focused on least developed countries (LDCs) and the most vulnerable countries.

2. Contribution trend

Sweden was the seventh-largest donor country as it disbursed 5.5 billion USD for net ODA in 2017. The net ODA contribution from Sweden had maintained an upward trend until 2015, which was the peak point, as shown in Figure 4.25. Although the amount of net ODA had dropped in 2016, it had grown in 2017.

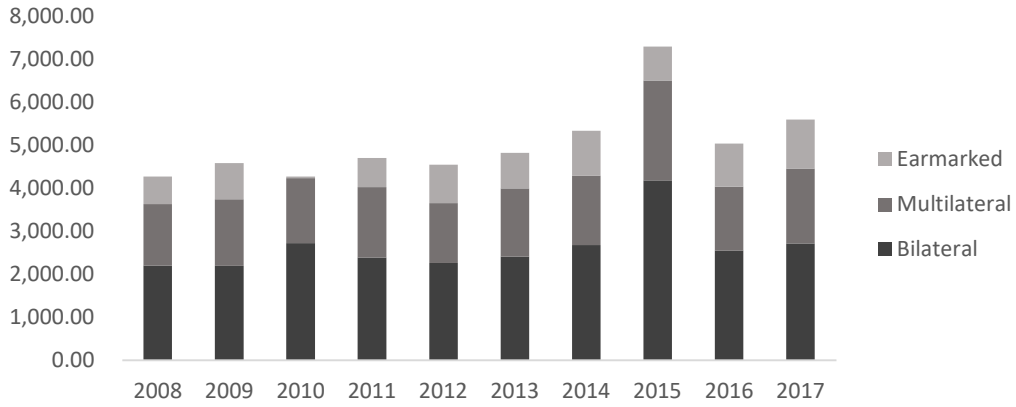
Figure 4.25. Trends of Net ODA contribution of the Germany (Million USD)



Sweden tended to consider the bilateral contribution as more important than other types of aid, while the portion of bilateral assistance had decreased compared to the past. In 2017, the amount of bilateral ODA from Sweden was 2.7 billion USD (48%). The data for earmarked assistance shows the reverse trend of bilateral contributions during the same period. While it

increased to 1.1 billion USD (31%), the volume of multilateral contributions was relatively unchanged compared to other aid types with 1.7 billion USD (31%).

Figure 4.26. Bilateral and multilateral ODA contribution (2017, Million USD)



3. Geographical distribution

Sweden's policy about bilateral ODA mainly focused on developing countries in Africa. 27% of the total bilateral contributions were allocated in Africa, which was followed by Asia (16%). Among the top 10 recipient countries, seven countries were in the Sub-Saharan region and Tanzania was the largest recipient with 0.13 billion USD in 2017.

Figure 4.27. Geographical allocation (Bilateral, 2017)

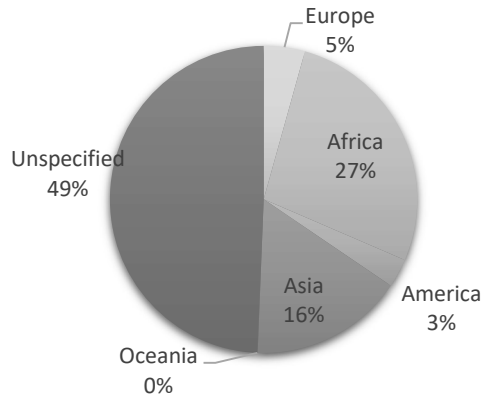
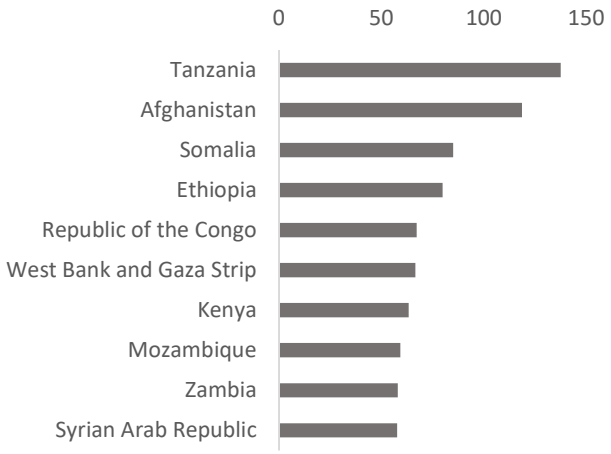


Figure 4.28. Top recipient countries (Bilateral, 2017)



4. Sectoral distribution

In 2017, the largest share of the bilateral contribution from Sweden was the social infrastructure & services with two-fifth in the total funding. In terms of individual sectors, it is clear that the Swedish government tended to focus its contributions on the government and

civil society, which was 24%. The amount of bilateral contributions on humanitarian aid accounted for 11% which was the second-largest share except un-allocated projects.

Figure 4.29. ODA allocation of bilateral contribution by sector (2017)

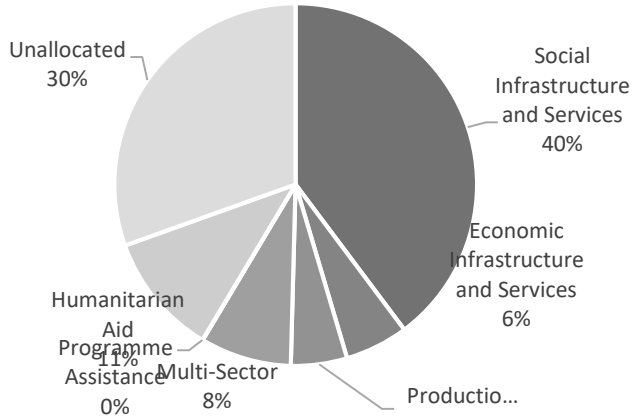
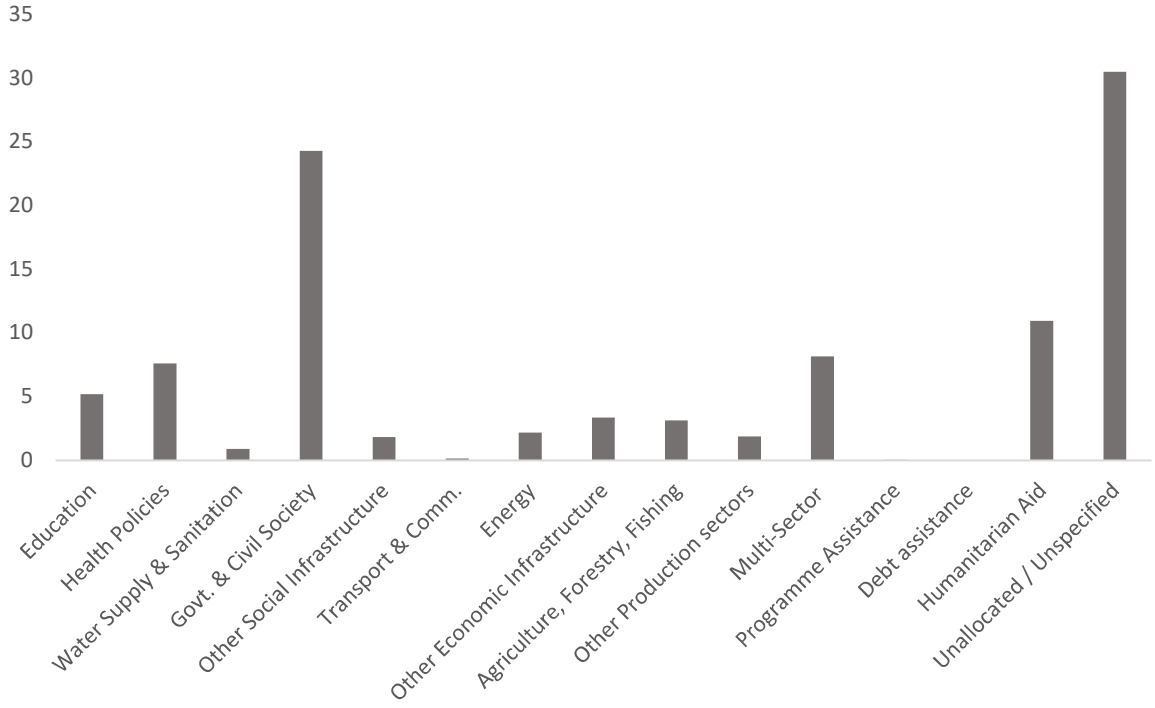


Figure 4.30. ODA allocation of bilateral contribution by sector (2017)



5. Implications to IMO

SEAFDEC-Sida Cooperation in 2013-2017

Sida had cooperated with the Southeast Asian Fisheries Development Center (SEAFDEC) with SEK 48 million funding to support fisheries and habitat management, climate change, and social well-being in Southeast Asia from 2013 to 2017. When it comes to considering the fishery sector, as workers were recruited from poorer neighbouring countries, workforce issues were problematic. In addition, deployment of small ships led to an increased possibility

of injuries and negative effects on the environment by a lack of handling knowledge about oceans and equipment. Based on the funding from Sida, SEAFDEC conducted programmes to ensure the identification by providing ID cards for undocumented workers and working conditions in collaboration with ILO. Besides, SEAFDEC promoted the registration and license activities for the fishing boats to avoid illegal fishing.

NEPAD-FAO Fish Programme (NFFP)

In 2016, Sida supported projects to reduce emissions from land-based sources, maritime litter, and enhance the development of eco-friendly management systems through the United Nations Environment Programme (UNEP). In addition, capacity building for marine research and marine management was also assisted by funding from the Swedish government. One of the projects funded by Sida was the Mangroves for the Future (MFF), which was launched to preserve the coastal ecosystem in a sustainable way in collaboration with the International Union for Conservation of Nature (IUCN) and the United Nations Development Programme (UNDP). Another programme, supported by Sida, was the NEPAD-FAO Fisheries Programme (NFFP) that was for a reduction of harmful effects from climate change and natural disasters and the establishment of an ecosystem in aquaculture of Sub-Saharan regions.

Sida's corresponding SGD14 portfolio 2018

As the tendency that coastal communities in the Least Developed Countries (LDC) and Small Island Developing States (SIDS) have suffered from various problems, such as marine pollution and climate change has become common, Sida conducted 33 programmes for those regions in accordance with SDG 14 sub-targets. Sida recognised three different thematic strategies to implement projects, which are: 1) the voluntary guidelines for small-scale fisheries; 2) improved livelihoods and resources base for poor coastal communities and their small-scale fisheries in LDCs and SIDS; and 3) decreased marine pollution in LDCs and SIDS to improve livelihoods for poor coastal communities. Also, to implement each programme, Sida collaborated with various organisations such as the Food and agriculture organisation of the United Nations (FAO), the United Nations Environment Programme (UNEP), World Wildlife Fund (WWF), and the Pacific-European Union Marine Partnership Programme (PEUMP).

6. Contacts

Sida Department for Programme Cooperation

Sida Department for Asia, North African and Humanitarian Assistance

NORWAY

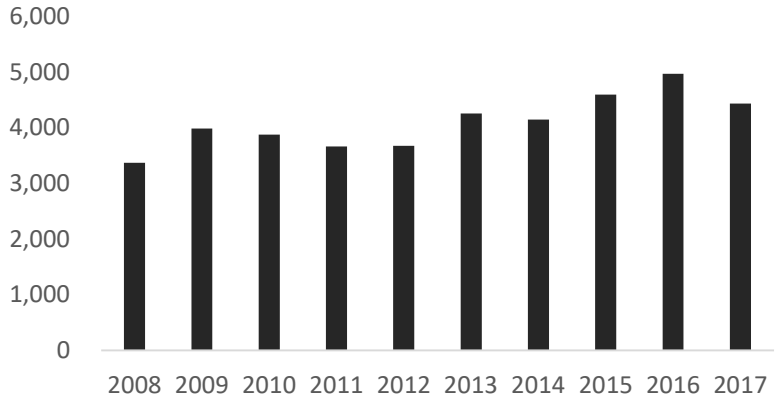
1. Development cooperation strategies

Under the direction of the Ministry of Foreign Affairs (MFA), which is responsible for setting development policy, Norad implements the development assistance for recipients. Meanwhile, Norfund, Norway's development finance institution, marshals funding from the private sector. Norway recognised that SDGs are the most important aim to establish Norway's development policy. The Norwegian government set out five strategic priorities through the action plan: 1) education; 2) health; 3) private-sector development, agriculture, and renewable development, 4) climate change, the environment, and oceans, and 5) humanitarian assistance. Also, the government identifies four cross-cutting issues for its development policy: 1) human rights, 2) women's rights and gender equality, 3) climate change and the environment, and 4) the fight against corruption.

2. Contribution trend

Norway was the tenth-largest donor country on official development assistance in the world in 2017. Despite an upward trend after 2012, the net ODA from Norway had dropped to 4.4 billion USD, as shown in figure 31.

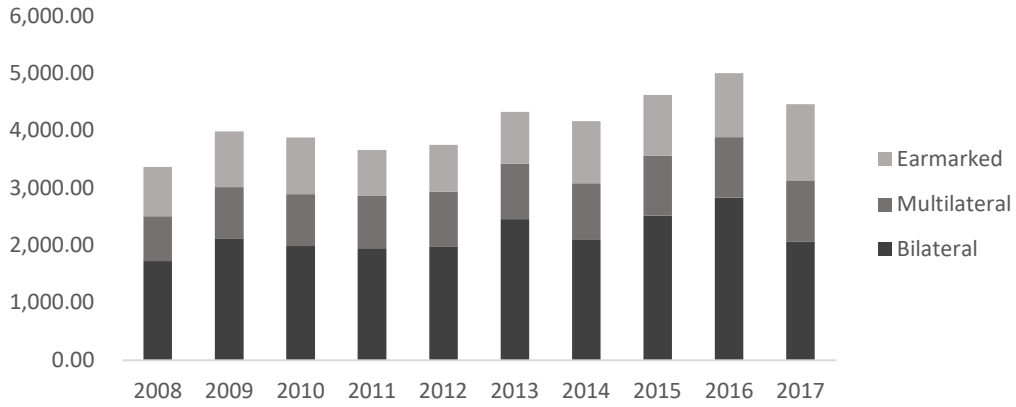
Figure 4.31. Trends of Net ODA contribution of the Germany (Million USD)



The share of bilateral assistance in the total amount of ODA from Norway, which had been maintained over 50%, had decreased to 2 billion USD (46%) in 2017. Instead of bilateral ODA, the Norwegian government tried to expand its interests on earmarked ODA over the years. As a result, the portion of bilateral ODA through multilateral organisations had grown after 2014, which the amount of it was larger than it for multilateral ODA. In 2017, Norway allocated 1.3 billion USD to earmarked ODA, which was the same amount with 30% of total funding from

Norway. Meanwhile, despite the proportion of multilateral contributions has declined, the amount disbursed for the multilateral purpose has increased to 1.07 billion USD in 2017.

Figure 4.32. Bilateral and multilateral ODA contribution (2017, Million USD)



3. Geographical distribution

In 2017, Norway geographically focused on Africa and Asia to provide its bilateral contributions, which were respectively 24% and 23%. Four countries among the top 10 recipient countries are in the South of Sahara and Asia respectively, and two belong to South America. The Syrian Arab Republic was the largest recipient in 2017 with 0.1 billion USD, which was sharply higher than other recipients.

Figure 4.33. Geographical allocation (Bilateral, 2017)

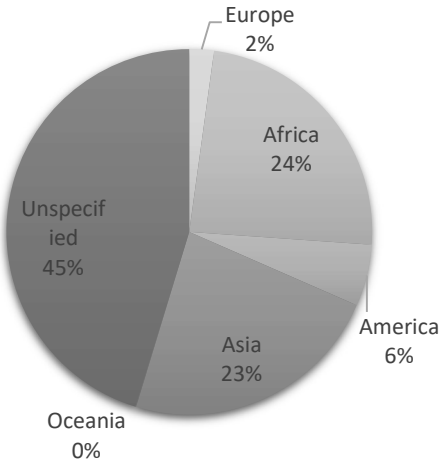
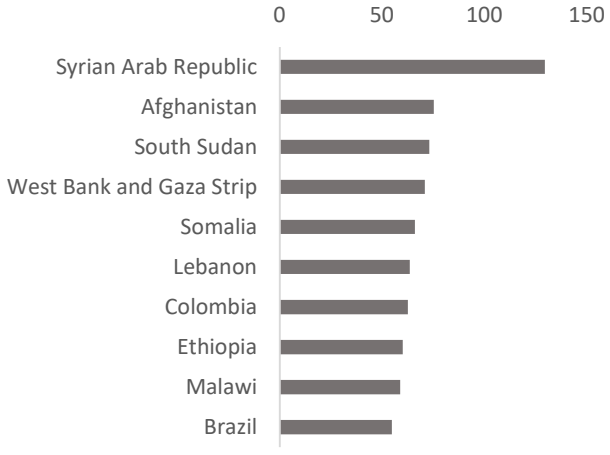


Figure 4.34. Top recipient countries (Bilateral, 2017)



4. Sectoral distribution

The Norwegian government put its priority on bilateral contribution to the social infrastructure & services than other categories in 2017with 34%, which was the largest portion. The share for bilateral assistance on multi-sector and humanitarian aid also made up of higher numbers

with 17% and 15% respectively. Meanwhile, the social infrastructure & service sector comprises five different individual sectors. The contributions to government & civil society and education were distinguished from other individual sectors as 13% and 11%.

Figure 4.35. ODA allocation of bilateral contribution by sector (2017)

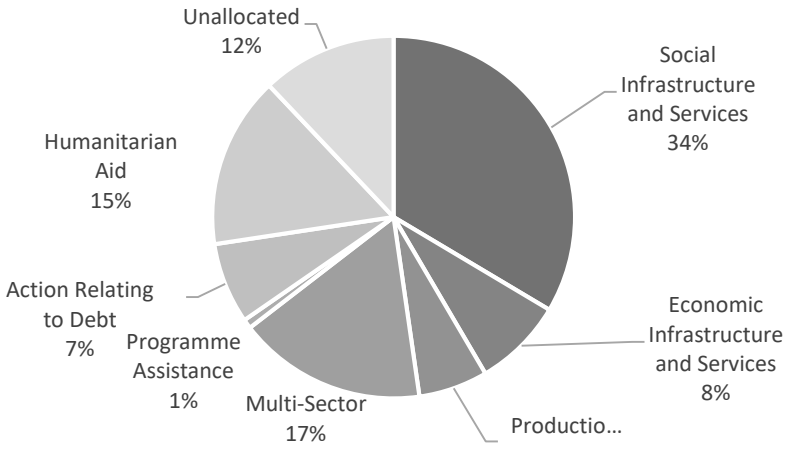
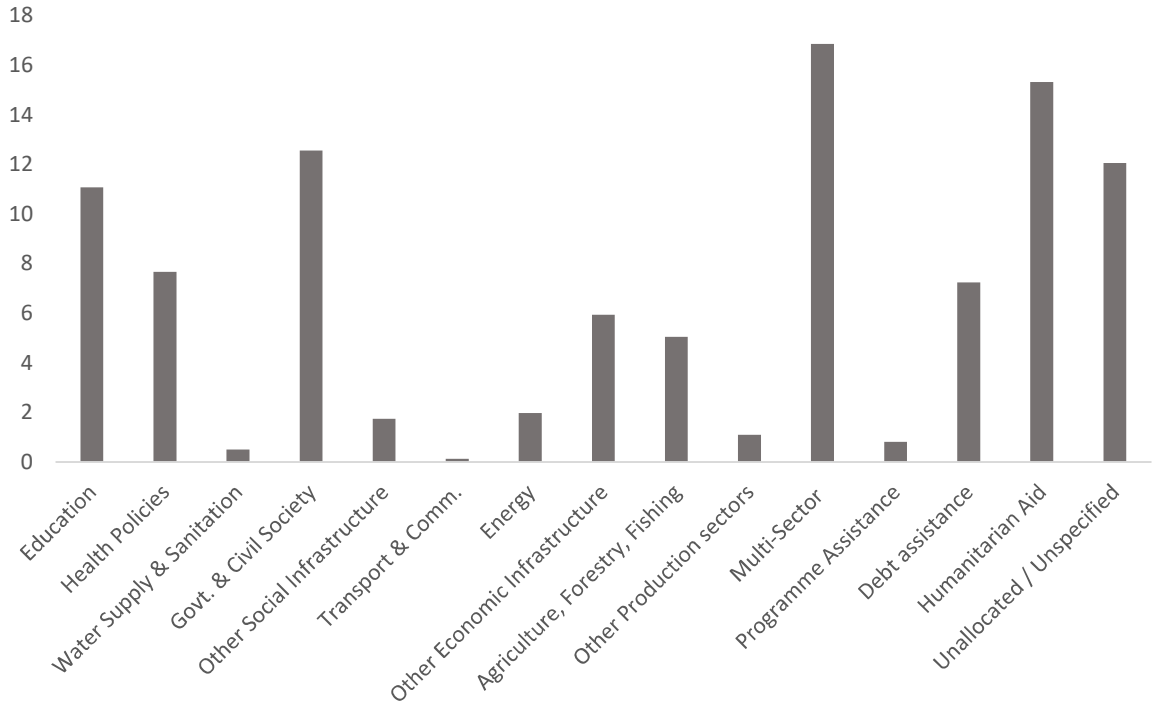


Figure 4.36. ODA allocation of bilateral contribution by sector (2017)



5. Implications to IMO

The Fish for Development Programme

Norway introduced the Fish for Development Programme (FfD) in 2015 and in the second half of 2016, the FfD Secretariat was established in Norad. FfD was launched to support projects relating to fisheries and aquaculture. The programme will continue over a five-year period that began in 2016. The strategic priorities of FfD are: 1) resource management, legislation, and

the prevention of illegal fishing and fisheries-related crime; 2) research and education including the DAF Nansen Programme and 3) private sector development including aquaculture. The key partner countries of FfD are Columbia, Ghana, and Myanmar. Other countries, which are Angola, China, Cuba, Indonesia, Malaysia, Mauritius, Mozambique, Nigeria, Sri Lanka, Sudan, Thailand, and Vietnam also have cooperated with Norad to achieve advice and knowledge to maintain sustainable fisheries and aquaculture under the FfD scheme.

Namibia and Norway - achievements from long-term collaboration in fisheries and maritime sectors

Since 1990, Norway and Namibia have cooperated in the field of fisheries and maritime sector, starting with the deployment of the research vessel and the Nanshen Programme. Most of the bilateral assistance between 1991 to 2004 was provided to support capacity building and education for Namibia. Henceforth, the Norwegian government continued its contributions to enhance the competence of the Namibian government such as monitoring control and surveillance training, fisheries research, and institutional development. After 15 years of assistance from Norway, the Namibian government fully presented its ability to handle all tasks regarding marine search and management as Namibia is recognised as one of the well-known countries in the sustainable fisheries management sector.

The Norwegian Development Programme to Combat Marine Litter and Microplastics

In 2018, Norway introduced a new development programmes, which is appropriate to SDGs 14.1, to protect the marine environment from marine pollution. Following the aim of the programmes, funding is allocated focused on four outputs: 1) Management of plastic wastes in partner countries is improved; 2) Selected coastal areas and rivers are cleared of waste and the waste is sustainably managed; 3) Private sector performance regarding sustainable production and use, and responsible waste management, is improved; and 4) Global commitments and national and regional instruments to prevent marine litter are strengthened. In 2019, the Norwegian government disbursed 26 million USD to 34 projects. Recipients of these programmes also include multilateral organisations such as the World Bank, non-government organisations(NGOs), and research institutes. Main focusing areas to implement programmes are economically growing countries in Asia with long coastlines, where the marine litter is discharged the most. Besides, countries in Africa and small developing island states also receive contributions from Norway to reinforce waste management systems and ensure the clean coastal areas.

6. Contacts

NORAD Section for knowledge programs

NORAD Section for Environment and Food Security

SPAIN

1. Development cooperation strategies

While the Secretary of State for International Cooperation (SECI) is responsible to establish, monitor, and appraise the development policy of Spain, the major institution which takes charge of implementation is the Spanish Agency for International Development Cooperation (AECID). The Spanish government has announced the master plan for the Spanish Cooperation every four years. According to the recent plan which was launched in 2018, Spain highlighted the four priorities for development policy: 1) human rights; 2) gender equality; 3) cultural countries; and 4) environmental sustainability. In addition, the Spanish government also identified seven strategic goals in line with SDGs, which are 1) zero hunger; 2) good health and well-being; 3) quality education; 4) gender equality; 5) clean water and sanitation; 6) decent work and economic growth; and 7) peace. Traditionally, Spain tended to cooperate with Latin American countries such as Peru and Colombia, which are included in middle-income countries. Meanwhile, the existing Master Plan for development indicated sub-Saharan Africa as a focusing area.

2. Contribution trend

The trend of net ODA from Spain showed a downward trend over the years. Although the amount of net ODA in 2016 had suddenly increased to 4.6 billion USD, it has declined to 2.7 billion USD in the next year.

Figure 4.37. Trends of Net ODA contribution of the Germany (Million USD)

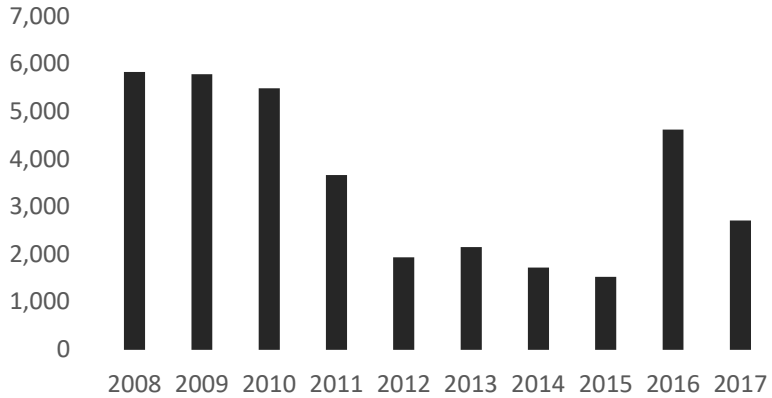
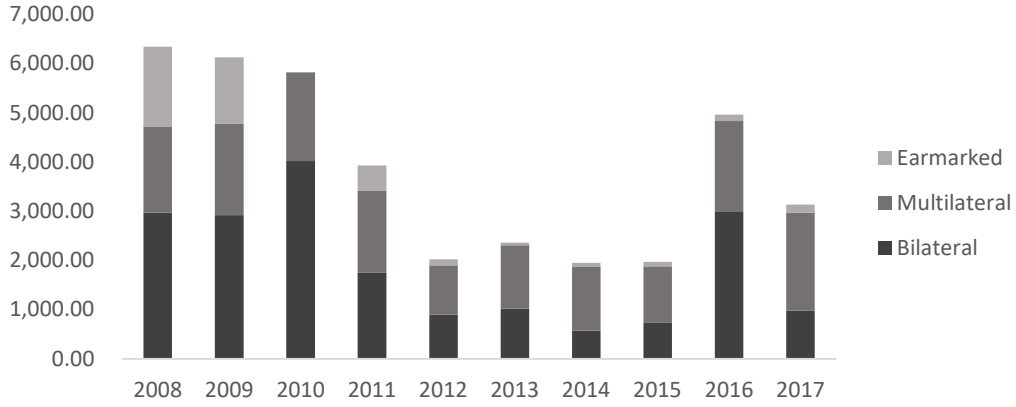


Figure 38 shows the allocation of ODA from Spain. Spain spent the majority of its contributions to multilateral ODA. In 2017, the amount disbursed for multilateral ODA was 1.9 billion USD, which was much more than those for bilateral (0.9 billion USD) and earmarked contributions (0.1 billion USD). Although the share of multilateral ODA in the total amount had significantly

dropped to 37% in 2016, it had increased to 63% in the next year. Meanwhile, the volume for bilateral contributions from Spain had continuously changed and the trend which had been declining for several years began to increase as of 2016.

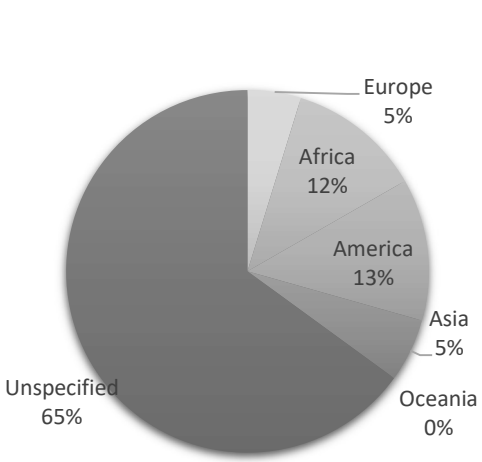
Figure 4.38. Bilateral and multilateral ODA contribution (2017, Million USD)

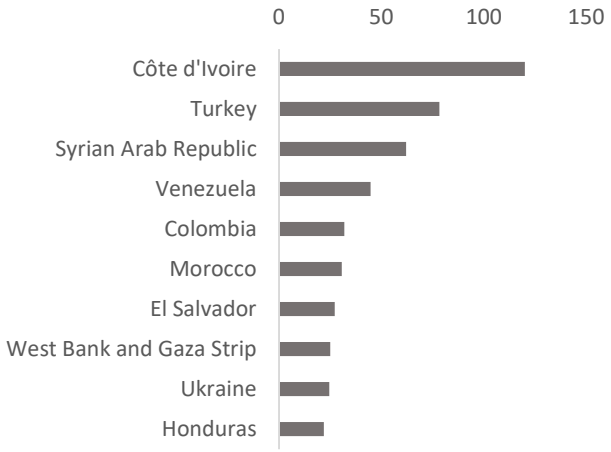


3. Geographical distribution

In 2017, America accounted for the largest share in terms of geographical allocation except for the data of unspecified developing countries with 13%. The portion of Asia also was made up of a similar number with America as 12%. Spain tended to provide bilateral contributions to recipients in America, which were Venezuela, Colombia, El Salvador, and Honduras. In spite of this preference, Cote d'Ivoire was the priority country for bilateral ODA from Spain in 2017.

Figure 4.39. Geographical allocation (Bilateral, 2017) Figure 4.40. Top recipient countries (Bilateral, 2017)





4. Sectoral distribution

Spain sought to allocate its bilateral funding to social infrastructure & services, as shown in figure 41. The share of social infrastructure & services was 24%, which was the largest share excluding un-allocated projects (42%) followed by multi-sector (15%). When it comes to considering individual sectors, the government & civil society sector was 11%.

Figure 4.41. ODA allocation of bilateral contribution by sector (2017)

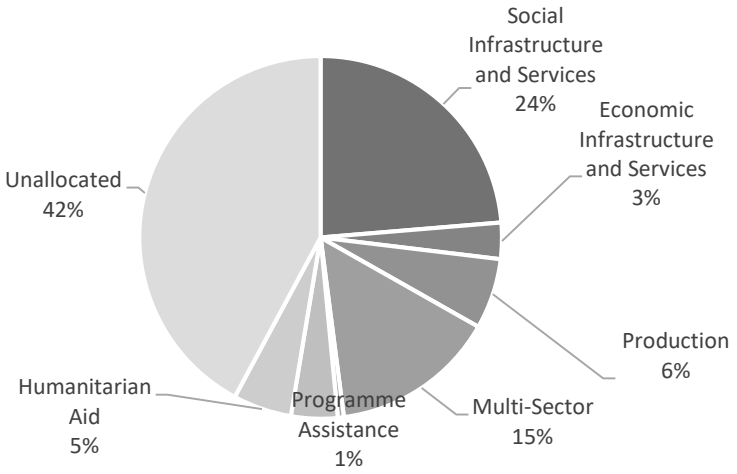
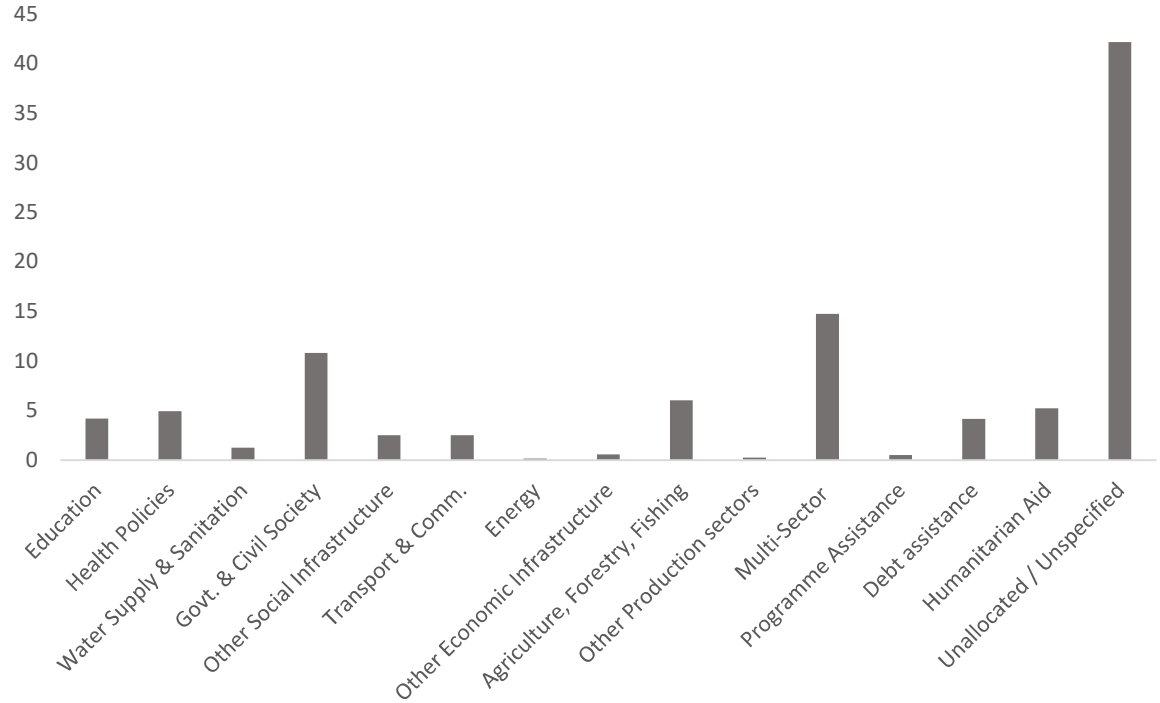


Figure 4.42. ODA allocation of bilateral contribution by sector (2017)



5. Implications to IMO

Fisheries Support Programmes for Namibia

Spain has been a key partner to Namibia by supporting more than 30 programmes, mainly for the fishery industry and research. One of the noticeable projects was the Programme for

strengthening the Namibian Maritime and Fisheries Institute to improve the quality of fisheries technology by training. In addition, AECID paid attention to the Research Programme of the National Marine Information Research Centre for intensified decision-making in managing fishery resources. Both projects were established to enhance the capacity building in fisheries policy and administrative management. Another project was operated to promote the quality of fish consumption by reinforcing the Namibian Fish Consumption Trust. The consequence of these programmes showed a positive result as the consumption and distribution of fish products in rural communities have risen more than 250%.

Towards a Representative Network of Mediterranean Marine Managed Areas (NEREUS)

As the Mediterranean Sea owns valuable biodiversity with various marine fauna and flora, NEREUS project was designed to figure out information about the marine environment in the Mediterranean Sea and arrange the conservation priorities. The project was prepared within the scope of the Med-Ras project (Mediterranean Representative Areas and Species) financed by AECID and other organizations. The geographical target areas were divided into two categories: 1) North Africa: Algeria, Egypt, Libya, Morocco and Tunisia; and 2) Eastern Mediterranean: Lebanon and Turkey. The fundamental aim of this project was to conserve the Mediterranean by identifying and networking the representative sites at the national, sub-regional, and regional levels.

PROMOPECHE

AECID supports the local government of Nouadhibou in Mauritania, where fishing is the fundamental business to coastal communities with other agencies through the PROMOPECHE project (2018-2022). The goal of this project is to improve the quality of fishery products by establishing sustainable artisanal fishing, providing training for young fishermen, and inspiring awareness of the needs of the marine environment. In addition, the project will emphasise and settle the lack in the storage and transport of the catch. The scope of the project will also pay attention to the condition of female workers in the fishing and fishing processing industry. By implementing PROMOPECHE, it is expected that 13,500 fishermen from Nouadhibou will benefit and 1,800 retailers and 800 processors will be assisted as the project will optimize the sustainable management of the fishing industry. Participating agencies are supporting not only the fishing industry but also the development of other economic activities.

6. Contacts

AECID

4.2. Multilateral Agencies and MDBs Strategies

International Maritime Organization, as a regulatory body in maritime sectors, is responsible for reducing technological gaps among the Member States through technical cooperation activities. For the effective technical cooperation, the understanding global trends of development cooperation is essential. While the trends of main donor group which is OECD DAC countries are of primary importance, multilateral development banks (MDBs) gains IMO's attention recently. As MDBs enhance knowledge management activities to share and transfer knowledge among countries in their target regions, they need to explore sectors and projects which are beneficial to their target countries. Since maritime sector is one of the potential sectors in which attractive projects are identified and developed, IMO needs to pay attention to the trends of MDBs' involvement in development cooperation activities to build up collaborative relationship with MDBs.

This section explores and summarizes the trends of development cooperation of OECD DAC countries and global and regional MDBs such as World Bank, Asian Development Bank (AsDB), European Bank of Reconstruction and Development (EBRD), Development Bank of Latin America (CAF) and African Development Bank (AfDB). This report also discusses the trends and provides implication from the perspective of IMO and the Member States. Data used in this report are collected from OECD IDS database and relevant sources of each MDBs.

4.2.1. Overview of multilateral aid

Multilateral organizations are referred to as international institutions with governmental membership that carry out developmental activities. The DAC maintains a list of multilateral organization which are eligible for ODA and they can be categorized into United Nations agencies including IMO, European Union Agencies, International Monetary Fund, World Bank Group, World Trade Organization, Regional Development Banks, and Others as shown in Table 4.1 (OECD, 2015).

Total multilateral aid shows an increasing trend in general although it increased to USD 61.3 billion in 2014 and decreased to USD 53.5 billion in 2015. There is a flow of contribution from the DAC countries 'to multilateral organizations' which is expressed as core contributions while there is another flow of resources 'through multilateral organizations' which is expressed as non-core/earmarked/multi-bi contributions. Donors maintains some extent of control over resources of non-core contributions in terms of disposal of the resources for a specific country, sector or topic (OECD, 2015). Non-core contribution has become an important part of multilateral aid system since its gross amount and its proportion have increased from USD

14.5 billion (28.5%) in 2011 to USD 22.6 billion (36.3%) in 2017 and USD 19.4 million (31%) in 2018.

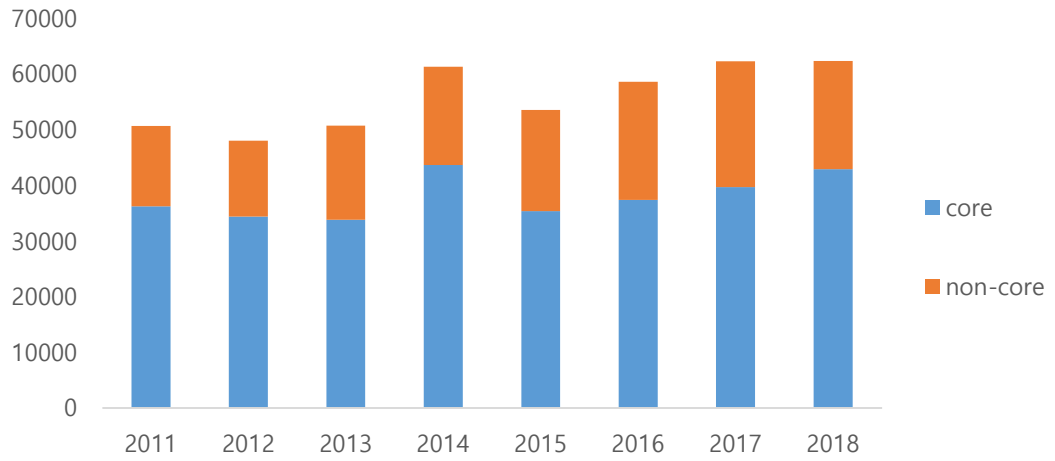
Table 4.1. Total use of multilateral aid system by DAC countries (USD million)

	2011			2012			2013			2014		
	to	through	total	to	through	total	to	through	total	to	through	total
Multilateral Organisations	36254.94	14457.28	50712.21	34421.79	13630.55	48052.34	33836.38	16934.37	50770.75	43681.14	17633.72	61,314.86
United Nations (UN)	4832.35	8538.45	13370.80	6222.18	8030.19	14252.37	5023.94	10990.44	16014.38	6723.63	11721.99	18445.62
(IMO)	(0.49)	(0.75)	(1.24)	(1.43)	(0.39)	(1.82)	(0.79)	(0.39)	(1.18)	(0.45)	(0.31)	(0.76)
European Union Institutions	12335.07	562.14	12897.20	11721.36	133.49	11854.84	12348.28	132.32	12480.61	13018.53	147.64	13166.17
International Monetary Fund	231.05	73.94	304.99	176.03	37.03	213.06	435.78	105.72	541.50	248.23	202.55	450.78
World Bank Group	8729.28	2545.69	11274.98	7218.42	3119.78	10338.19	6775.62	2917.84	9693.46	12657.78	2947.31	15605.09
World Trade Organisation	21.38	20.75	42.13	48.41	9.42	57.84	52.43	15.44	67.88	32.52	18.48	51.01
Regional Development Banks	4669.78	730.22	5400.00	2809.99	597.20	3407.20	3721.81	900.21	4622.02	3945.51	991.89	4937.40
Other multilateral institutions	5437.35	1866.70	7304.05	6221.18	1179.86	7401.04	5498.85	1371.73	6870.57	7054.93	1565.05	8619.98

	2015			2016			2017			2018		
	to	through	total	to	through	total	to	through	total	to	through	total
Multilateral Organisations	35403.50	18171.21	53574.71	37390.26	21243.77	58634.02	39684.38	22624.99	62309.37	42,934.2	19,437.9	62,372.0
United Nations (UN)	6343.33	12154.58	18497.91	5922.44	13941.46	19863.90	5789.84	14840.36	20630.20	6,374.4	15,116.4	21,490.8
(IMO)	(0.59)	(0.52)	(1.12)	(0.52)	(0.00)	(0.52)	(0.51)	(0.00)	(0.51)	(1.73)	(0.00)	(1.73)
European Union Institutions	11732.91	205.10	11938.01	12708.77	1505.76	14214.52	13127.07	1013.83	14140.90	14,293.0	459.3	14,752.3
International Monetary Fund	224.48	82.94	307.42	604.85	108.35	713.20	949.34	81.37	1030.71	122.8	55.3	178.1
World Bank Group	6993.26	2517.90	9511.16	6357.36	2246.88	8604.24	7646.66	2964.18	10610.84	10,719.9	2,250.4	12,970.3
World Trade Organisation	27.70	29.78	57.48	30.79	20.88	51.68	34.02	32.87	66.89	27.8	25.0	52.9
Regional Development Banks	2264.54	960.52	3225.06	4138.13	999.68	5137.82	4859.12	1562.54	6421.66	4,062.9	969.0	5,031.9
Other multilateral institutions	7817.28	2191.76	10009.04	7627.91	2373.09	10001.00	7366.97	2091.49	9458.46	7,333.4	562.4	7,895.8

Source: OECD IDS CRS data

Figure 4.43. Multilateral aid by DAC countries (Million USD)



Source: OECD IDS CRS data

Largest contribution is provided to UN agencies with USD 20.6 billion in 2017 which is 33% of all the multilateral aid. While around 72% of multilateral contribution is concentrated on UN agencies, EU agencies and World Bank groups, it is also necessary to note that MDBs including World Bank Group and regional Development Banks, which are focus of this section, account for 29% of the total multilateral aid in 2018.

The ODA flows to and through IMO belong to UN institutes as shown in Table 4.1. The ODA flow of IMO has fluctuated ranging from USD 0.52 million 2017 to USD 1.82 million in 2013, which is not significant. However, the budget and expenditure of technical cooperation reported by IMO Secretariat is much greater than that of OECD database (see Table 4.2).

Table 4.2 Technical Cooperation budgets and activities of IMO (USD Million)

	2014	2015	2016	2017	2018
Budget	18.129	16.756	15.266	16.364	16.233
Expenditure	13.767	12.999	13.798	13.831	13.519
Activities					
advisory/assessment mission	24	29	18	9	13
National training events	46	44	61	60	62
Regional training events	61	71	57	59	61
other activities	82	91	101	87	84

Source: Tabulated from ITCP Annual reports

4.2.2. Role and function of MDBs

Given the significant proportion of the MDBs, the role of the MDBs has diversified from primarily supporting reconstruction, development and regional integration of developing countries to incorporating achieving the Sustainable Development Goals (Engen and Prizzon,

2018). Furthermore, the MDBs are expected to assist policymakers address global issues such as climate change which requires solutions applied across multiple countries. Therefore, the MDBs not only enhance knowledge management activities internally but also strengthen collaboration with other multilateral organizations with expertise and knowledge in a specific topic or region. Due to strong economic development in some developing countries, in addition, the number of recipient countries eligible for aids is less and recipient countries have more financial options than before, which makes recipient countries more selective. Therefore, MDBs are required to identify or build up platforms to collaborate with other multilateral organizations to utilize sectoral and regional knowledge and expertise. In this regard, it is necessary to understand how the MDBs' sectoral and geographical interests have evolved for effective implementation of multilateral development cooperation.

MDBs can be broadly categorized to global, regional and sub-regional institutes according to their geographical coverage as shown in Table 4.3. While Global MDBs tend to have wider geographical scope across regions, Regional development banks extend their scope across one entire regions and sub-regional development banks cover sub-set of countries within a region. Geographical and sectoral distribution is presented for the MDBs of which data are available in OECD IDS CRS database among the MDBs in Table 4.3.

Table 4.3 MDBs by geographical coverage

Regional groups	MDBs
Global development banks	European Investment Bank (EIB) International Fund for Agricultural Development (IFAD) International Investment Bank (IIB) New Development Bank (NDB) OPEC Fund for International Development (OFID) World Bank Group
Regional development banks	African Development Bank (AfDB) Asian Development Bank (AsDB) Asian Infrastructure Investment Bank (AIIB) Council of European Development Bank (CEB) European Bank for Reconstruction and Development (EBRD) Inter-American Development Bank (IADB) Islamic Development Bank (IsDB)
Sub-regional banks	Arab Bank for Economic Development (BADEA) Arab Fund for Economic and Social Development (AFESD) Black Sea Trade and Development Bank (BSTDB) Caribbean Development Bank (CDB) Central American Bank for Economic Integration (CABEI) Development Bank of the Central African States (BDEAC) Development Bank of Latin America (CAF) East African Development Bank (EADB) Eastern and Southern African Trade and Development Bank (TDB) Economic Cooperation Organization Trade and Development Bank (ETDB) ECOWAS Bank for Investment and Development (EBID)

	Eurasian Development Bank (EDB)
	West African Development Bank (BOAD)

Source: Engen and Prizzon (2018)

While financial assistance is provided to developing countries primarily in the forms of Loans and grants, MDBs lending facilities include equity investment, loan guarantees, lines of credit and technical assistant. Loans are provided for investment projects for large infrastructure projects and policy-based projects. Loans can be concession or non-concessional. Concessional loan is financial assistance offered at below market-based terms with lower interest rates and longer repayment period to low-income country governments. Non-concessional loan is on market-terms and extended to middle-income governments and private sectors in developing countries. Table 4.4 presents financial instruments that the MDBs provides. While loans (concessional or non-concessional) are commonly offered, other instruments are variably offered.

Table 4.4. Financial instruments of the MDBs

MDBs		Loans	Grants	Lines of Credit	Technical assistance	Guarantees	Equity
Global	EIB	*v*		*v*	*v*	*v*	*v*
	IFAD	*v*	*v*				
	IIB	*v*		*v*		*v*	
	NDB	*v*					
	OFID	*v*	*v*				
	World Bank	*v*	*v*		*v*	*v*	*v*
Regional	AfDB	*v*	*v*	*v*	*v*	*v*	*v*
	AIIB	*v*				*v*	*v*
	AsDB	*v*	*v*	*v*	*v*	*v*	*v*
	CEB	*v*			*v*		
	EBRD	*v*		*v*	*v*	*v*	*v*
	IADB	*v*	*v*	*v*	*v*	*v*	*v*
	IsDB	*v*	*v*		*v*		*v*
sub-regional	AFESD	*v*	*v*				*v*
	BADEA	*v*	*v*		*v*		
	BDEAC	*v*	*v*	*v*			*v*
	BOAD	*v*				*v*	*v*
	BSTDB	*v*		*v*		*v*	*v*
	CABEI	*v*		*v*	*v*		*v*
	CAF	*v*		*v*	*v*	*v*	*v*
	CDB	*v*	*v*		*v*	*v*	
	EADB	*v*		*v*	*v*	*v*	*v*
	EBID	*v*			*v*	*v*	
	EDB	*v*	*v*		*v*	*v*	*v*
	ETDB	*v*				*v*	*v*

TDB	*v*					*v*	*v*

Source: Adapted from Engen and Prizzon (2018)

4.2.3. Geographical distributions of MDBs

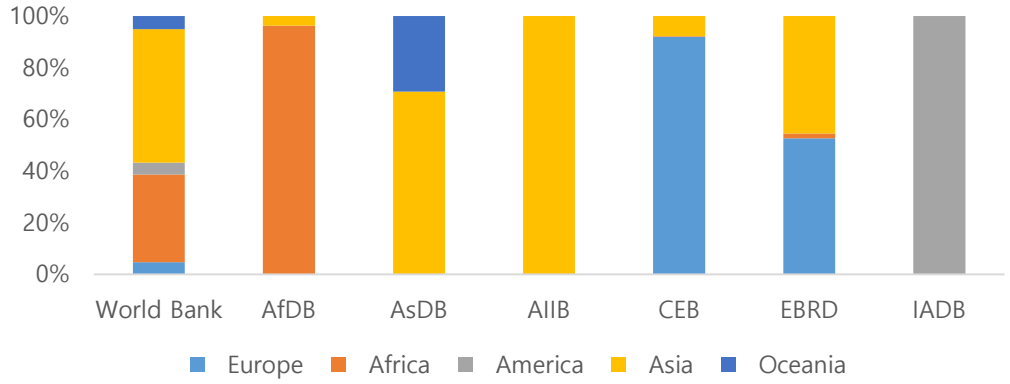
Table 4.5 and 4.6 show the MDBs' contribution which is disbursed by region in 2018. It is shown that the contribution of the global MDB is allocated across regions while regional and sub-regional MDBs focus on their geographical scope. When it comes to the contribution of World Bank, relatively more financial resources were provided to Africa (USD 530 million) and Asia (USD 807 million) than Europe (USD 71 million) and America (USD 72 million) in 2018. The contribution of AfDB focused on Africa for the region-specified contribution while majority of its contribution is not region specified. Asian regional MDBs such as AsDB and AIIB allocated financial resources to Asia and European regional MDBs such as CEB and EBRD to European countries. Accordingly, the contribution of IADB concentrated on America.

Table 4.5 Geographical distribution of MDBs' contribution (2018, Million USD)

Regions	World Bank	AfDB	AsDB	AIIB	CEB	EBRD	IADB
Europe	71.12				1.80	47.38	
Africa	530.77	115.75				1.67	
North of Sahara	3.36	0.15				1.67	
South of Sahara	305.54	28.13					
Africa, regional	221.88	87.48					
America	72.41						110.78
North & Central America	26.49						20.75
South America	6.44						69.76
America, regional	39.48						20.27
Asia	807.43	4.53	86.01	23.76	0.15	41.02	
Far East Asia	59.43		8.26		0.15		
South & Central Asia	479.27		65.34			15.29	
Middle East	169.92	4.53				25.73	
Asia, regional	98.80		12.42	23.76			
Oceania	79.89		35.70				
Unspecified	11408.73	2156.08	756.49	1084.71	0.51	23.89	90.84
Total	12970.35	2276.37	878.20	1108.47	2.48	113.95	201.62

Source: OECD IDS CRS data

Figure 4.44. Geographical distribution of MDBs (2018, Million USD)



Source: OECD IDS CRS data

Table 4.6 Geographical distribution of MDBs' contribution (2018, Million USD)

	BSTDB	CDB	CABEI	CAF	TDB	BOAD
Europe	81.27					
Africa					25.99	88.96
North of Sahara						
South of Sahara						88.96
Africa, regional					25.99	
America		114.76		79.12		
North & Central America		114.76				
South America						
America, regional				79.12		
Asia						
Far East Asia						
South & Central Asia						
Middle East						
Asia, regional						
Oceania						
Unspecified	3.23	22.37				0.54
Total	84.50	137.13		113.67	25.99	89.50

Source: OECD IDS CRS data

4.2.4. Sectoral distributions of MDBs

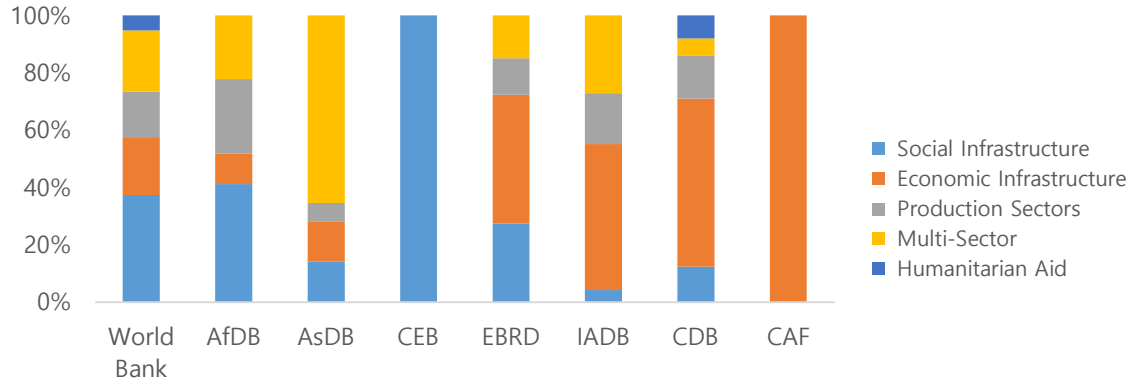
Table 4.7 presents the contribution of MDBs made by sector in 2018. OECD IDS database categorizes sectors that the contributions are disbursed to social infrastructure; economic infrastructure; production; multi-sector; and humanitarian aid with sub-sectors of each category (see Table 2.5). It should be noted that the proportion which is not allocated or unspecified considerable for some MDBs such as World Bank, AfDB, AsDB and BSTDB, which may limit valid interpretation of sectoral distribution from the information. Given the limitation, it is shown that, while 'Social infrastructure' take the most proportion of World Bank contribution, other sectors such as 'Economic infrastructure' and 'Multi-sector' take similar or more proportion of regional and sub-regional MDBs. This tendency is more distinctive in the some regional and sub-regional MDBs. 'Economic infrastructure' takes 34% and 44% of proportion

of EBRD and IADB respectively and 54% and 56% for CDB and CAF respectively.

Table 4.7 Sectoral distribution of MDBs' contribution (2018, Million USD)

	World Bank	AfDB	AsDB	CEB	EBRD	IADB	BSTDB	CDB	CAF
Total All Sectors	13068.96	1420.25	681.49	1.99	108.92	325.52	3.23	46.42	83.93
Total Sector Allocable	1797.93	66.98	126.56	1.79	84.11	282.94		39.52	47.29
Social Infrastructure	709.03	27.51	17.78	1.79	23.00	11.86		5.30	0.00
Economic Infrastructure	376.98	7.11	17.61		37.81	143.94		25.22	47.29
Production Sectors	306.74	17.48	8.23		10.70	50.40		6.48	
Multi-Sector	405.18	14.88	82.94		12.60	76.74		2.52	
Humanitarian Aid	100.33							3.49	
Others	37.27								
Unallocated / Unspecified	11133.43	1353.27	554.93	0.21	24.81	42.58	3.23	3.40	36.64

Figure 4.45. Sectoral distribution of MDBs (2018, Million USD)



4.2.5. Summary and Implications to IMO

Significant role of MDBs in multilateral aid

MDBs including World Bank Group and regional Development Banks account for 29% of the total multilateral aid in 2018. While financial assistance is provided to developing countries primarily in the forms of Loans and grants, MDBs lending facilities include equity investment, loan guarantees, lines of credit and technical assistant. While loans (concessional or non-concessional) are commonly offered, other instruments are variably offered.

World Banks covers globally and regional MDB focus on their region

The contribution of the global MDB is allocated across regions while regional and sub-regional MDBs focus on their geographical scope. When it comes to the contribution of World Bank, relatively more financial resources were provided to Africa (USD 530 million) and Asia (USD 807 million) than Europe (USD 71 million) and America (USD 72 million) in 2018. Asian regional MDBs such as AsDB and AIIB allocated financial resources to Asia and European regional MDBs such as CEB and EBRD to European countries. Accordingly, the contribution of IADB concentrated on America.

World Banks with more focus on Social infrastructure and regional banks with more attention to economic infrastructure

Social infrastructure sector takes the most proportion of World Bank contribution and other sectors such as 'Economic infrastructure' and 'Multi-sector' take more proportion of regional and sub-regional MDBs. This tendency is more distinctive in the some regional and sub-regional MDBs. 'Economic infrastructure' takes 34% and 44% of proportion of EBRD and IADB respectively and 54% and 56% for CDB and CAF respectively.

CHAPTER Ⅴ. DEVELOPMENT OF POTENTIAL PROJECTS

5.1. Prioritization of project areas and types

5.1.1. Introduction of the Analytic Hierarchy Process (AHP)

Decisions include many tangible or intangible values that need to access the tradeoff. Thus, people tend to decide opinions based on scientific methods when they encounter intertwined problems in their lives. To help those actions, the Analytic Hierarchy Process (AHP), which was originally developed by Prof. Thomas L. Saaty in the 1970s, is used as one of the most popular tools among multi-criteria decision-making methods. The AHP enables people to make a reasonable judgement derived from numerous decision-makers through a survey based on a ratio scale from both discrete and continuous pair-wise comparisons as the same process when people make a decision. In other words, the AHP is a tool in which, when the objectives or evaluation criteria of a decision are complex, stratifies them, decomposes major elements and detailed factors that constitute major elements, and calculates priorities (weight) by stages using the pair-wise comparison of those factors. While a hierarchy structure of the AHP is similar to the decision tree, which is one of the decision-making methods, the hierarchy structure of the AHP includes the goal, criteria, and alternatives. The AHP is widely applied in various fields such as planning, choosing the best alternative, resource allocation, settling a conflict, and optimisation (Vaidya and Sushil, 2006). The basic procedures of the AHP (Vaidya and Sushil, 2006; Saaty, 2008) are shown below.

1) Identify the problem.
2) Broaden the goal of the problem or consider all factors, objectives, and its consequences.
3) Identify the problems in a hierarchy of different levels consist of a goal, criteria, sub-criteria, and alternatives.

The number of levels and criteria are varied according to the problem. The levels and criteria in each level should be detailed enough to figure out the problem at a glance. Thus, the AHP allows people to identify the problem accurately by compiling common and similar elements in a corresponding level. While Saaty suggested that the number of criteria at a corresponding level should not exceed 9, it is not a prerequisite. The basic structure of the AHP model is shown in Figure 1.

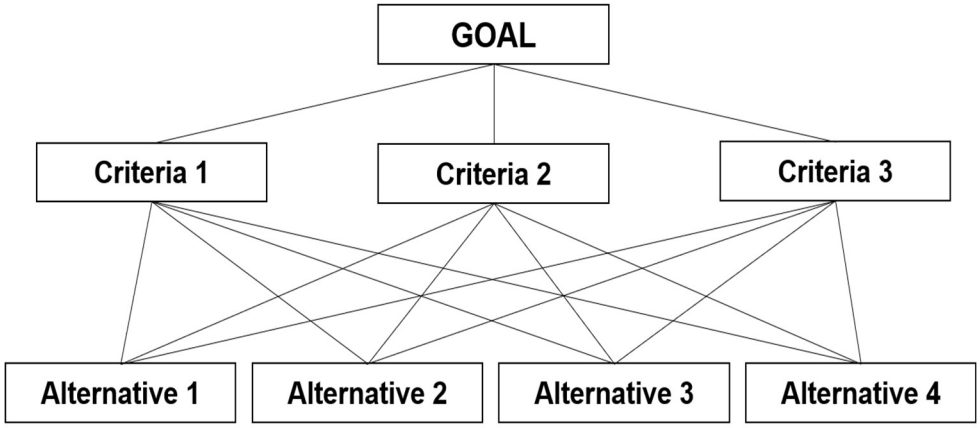


Figure 5.1 The hierarchy structure of AHP

4) Compare each element in the corresponding levels and calibrate them on the numerical scale.

The judgements of decision-makers for criteria are measured in numerical scale through a survey which mainly contains the 1-9 liner scales as shown in table 1. By applying 9 scales when respondents record their opinion in the survey, the AHP provides the methods to design a priority needed to be considered solving the problem and measure the qualitative values as numerical figures. It is difficult to understand the intertwined problem without consideration in both intangible and qualitative perspectives. The key is that the AHP enables these viewpoints can be logically reflected in the process for decision-making. In addition, the AHP allows the various viewpoints and judgements of the majority of the respondents to derive a comprehensive final alternative through the integration of significance or numerical values.

Table 5.1. The fundamental scale

scale	Degree of preference	Explanation
1	Equal importance	Two criteria contribute equally to the goal
3	Moderate importance of one over another	Experience and judgment strongly favor one activity over another
5	Essential or strong importance	Experience and judgment strongly favor one activity over another
7	Very strong importance	An activity is strongly favored and its dominance demonstrated in practice
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation
2, 4, 6, 8	Values for inverse comparison	When compromise is needed

Source: R. W. Saaty (1987), THE ANALYTIC HIERARCHY PROCESS - WHAT IT IS AND HOW IT IS USED.

5) Design the pairwise comparison using the result of the survey.

If the number of criteria is two, weight or relative importance is calculated by comparing them at once. However, when there are multiple criteria, it is difficult to determine weights at once, taking into account both relative importance and weight. Thus, the AHP draws two elements and compares them in pairs. The outcome of the pair-wise comparison is illustrated by $n \times n$ matrix. In other words, matrix A is a reciprocal matrix that diagonal elements are '1' and other elements will be reciprocals of the earlier comparisons. For instance, if $a_{ij} = 3$, $a_{ji} = 1/3$ because the matrix $A = (a_{ij})$ satisfies the reciprocal property $a_{ji} = 1/a_{ij}$.

$$A = \begin{bmatrix} 1 & a_{12} & \dots & a_{1n} \\ 1/a_{21} & 1 & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ 1/a_{n1} & 1/a_{n2} & \dots & 1 \end{bmatrix} \quad (1)$$

6) Calculate relative priorities(weights) using the Eigenvalue method.

After developing the matrix A, the relative weight (w_i) of criteria is estimated using the values obtained from the pairwise comparison based on the Eigenvector method. The final priorities of criteria (w_i) should be normalized.

$$\begin{bmatrix} w_1/w_1 & w_1/w_2 & \dots & w_1/w_n \\ w_2/w_1 & w_2/w_2 & \dots & w_2/w_n \\ \vdots & \vdots & \ddots & \vdots \\ w_n/w_1 & w_n/w_2 & \dots & w_n/w_n \end{bmatrix} \times \begin{bmatrix} w_1 \\ w_2 \\ \vdots \\ w_n \end{bmatrix} = \begin{bmatrix} nw_1 \\ nw_2 \\ \vdots \\ nw_n \end{bmatrix} \quad (2)$$

$$A \times w = n \times w \quad (3)$$

$$A \times w = \lambda_{max} \times w \quad (4)$$

7) Calculate the Consistency Index (CI) and the Consistency Ratio (CR).

For example, if a respondent prefers that i is more important as x times than j, and j is important than k as y times, he or she considers i is important than k as $x \times y$ times. However, this consistency is difficult to comply with the actual answer. Therefore, the Consistency Index and Consistency Ratio are used as tools to increase the reliability of the outcome by verifying the logical consistency of respondents. If CR is 0.1 or less, it indicates that the respondent performed a pair-wise comparison with complete consistency.

$$Consistency\ Index\ (CI) = \frac{\lambda_{max} - n}{n - 1} \quad (5)$$

Table 5.2 Random consistency index (RI)

n	1	2	3	4	5	6	7	8	9	10
Random consistency index	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49

Source: R. W. Saaty (1987), THE ANALYTIC HIERARCHY PROCESS - WHAT IT IS AND HOW IT IS USED.

$$Consistency\ Ratio\ (CR) = \frac{CI}{RI} \quad (6)$$

8) If the maximum Eigenvalue, CI, and CR are satisfactory then calculate the weighted average rating for each decision alternative and select the alternative with the highest score.

5.1.2 Application of the AHP

A lack still exists in development assistance although many development assistance programmes have launched for recipient countries to enhance the growth of the nation in various fields such as economy, education, gender equality or environment. The lack could be derived from the adherence to the traditional theme of programmes or difficulty to reflect the practical needs in developing projects. Besides, these viewpoints are also stated in the maritime sector. Participants of official development assistance have craved for the new type of assistance as following the rapid change of surrounding environment like increased awareness in the marine environment, improvement of maritime technique or implementation of enhanced management systems. As they want to operate the programmes with consideration not only effectiveness but also agility, the departments, who develop and execute the assistance projects, seek to take account of tangible and intangible values, which could be realized in development activities, in the planning stage of ODA programmes. Under these demands, the research using the AHP model was designed to measure the perspectives of officers on the IMO's potential Technical Cooperation (TC) project. The main purpose of this research is to help the development of an effective and efficient knowledge partnership mechanism by recognizing the priority among elements which might be taken into account when development policies are produced. The results of this study might be used as the basic guideline by applying actual needs that would increase the participation of countries by attracting both the interest of the donors and the needs of recipients when exploring international development activities.

Research Model

Before implementing the AHP analysis, the questionnaire was designed with three parts based on the AHP model as shown in Figure 5.2. Section 1 is asked about the general information of respondents such as the affiliation of the respondent or work period. Section 2 is comprised of two tiers to achieve opinions about the potential TC projects based on 9 scales, which are made up of extreme, very strong, strong, moderate, and equal. Respondents are required to answer that which value should be more reflected when developing TC projects and the criteria are described in Table 5.3. Tier 1 is made up of four values which are urgency, strategic fit, feasibility, and benefits. Besides, each value in tier 1 has three elements by stratifying with a detailed explanation, which might be a reason to select the value in tier 1 criteria.

Section 3 is designed to evaluate TC activities and TC programmes which are corresponded to alternatives in the structure of the AHP on five scales using the values defined in tier 1 criteria. To evaluate it, five scales are used such as very agree, disagree, neutral, agree, and very agree. The activities and programmes to be accessed are shown in Table 5.4 and 5.5.

Figure 5.2 The AHP model

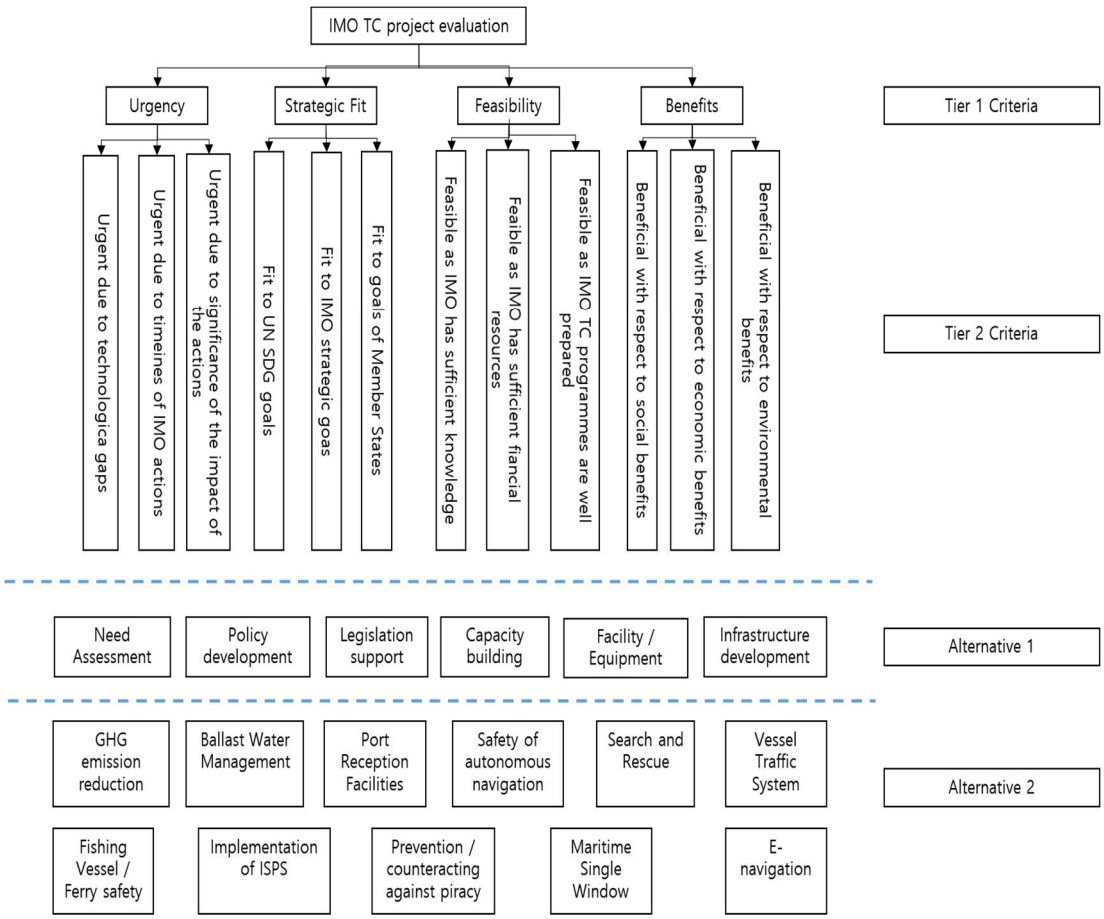


Table 5.3 The hierarchy structure of the AHP model

Tier 1	Tier 2	
Urgency	U1	Urgent due to technological gaps
	U2	Urgent due to timelines of IMO actions
	U3	Urgent due to significant impact
Strategic fit	S1	Fit to UN SDG goals
	S2	Fit to IMO strategic goals
	S3	Fit to goals of Member states
Feasibility	F1	Feasible as IMO has sufficient knowledge
	F2	Feasible as IMO has sufficient financial resources
	F3	Feasible as IMO TC programmes are well prepared
Benefits	B1	Beneficial with respect to social benefits
	B2	Beneficial with respect to economic benefits
	B3	Beneficial with respect to environmental benefits

Table 5.4 The description of alternative 1

TC activities	Description
Need assessment	A process to determine what it needs to do to improve ODA programmes in the maritime sector.
Policy evaluation	An action to identify the existing policies in the maritime sector.
Legislation	Activities for legislation related to the maritime transportation sector.
Capacity building	A process by which recipient countries obtain, improve, and retain the skills, knowledge, tools, equipment, and other resources needed in the maritime sector.
Facility/Equipment	Activities to reduce the technological gap in facility or equipment in the maritime sector.
Infrastructure	Activities to improve infrastructure in the shipping sector such as port terminals.

Table 5.5 The description of alternative 2

TC programmes	Description
GHG Emission from ships	Actions to reduce GHG emissions from international shipping and to phasing them out as soon as possible.
Ballast Water Management	A treaty adopted by the International Maritime Organization (IMO) in order to help prevent the spread of potentially harmful aquatic organisms and pathogens in ships' ballast water.
Port reception facilities	A place that international shipping ports must provide to collect residues, oily mixtures, and garbage generated from an ocean-going vessel.
Safety of Autonomous navigation	To ensure the safety of ships which has autonomous navigation based on machine learning algorithms.
Search and rescue	Implementing search and rescue action based on an international maritime SAP plan, adopted at a 1979 Conference in Hamburg.
Vessel traffic system	Shore-side systems which range from the provision of simple information messages to ships.
Fishing vessel/Ferry safety	Comprehensive range of activities through the TC programme with other partner organizations to ensure safety of fishing ships and ferry.
Implementation of ISPS	A comprehensive set of measurements for international security by prescribing responsibilities to government authority, port authority, shipping companies and seafarers.
Prevention and counteracting against piracy	Actions to make trade and travel by sea as safe and secure as possible.
E-navigation	The harmonized collection, integration, exchange, presentation and analysis of marine information on board and ashore by electronic means to enhance berth to berth navigation and related services for safety and security at sea and protection of the marine environment.

Source: IMO (https://www.imo.org/en/OurWork/Safety/Pages/Fishing%20Vessels-Default.aspx)

Descriptive statistics

Table 5.6 shows the descriptive statistics from the survey result. While all respondents belong to a member state, around 67% of respondents took part in as a donor country in TC programmes. One third of surveyed people are primarily involved with MEPC (Marine Environment Protection Committee), followed by MSC (Maritime Safety Committee) and TC (Technical Cooperation Committee) with 26.67% and 20% respectively. Although half of the respondents have worked more than 10 years in the maritime transportation sector, people who have worked more than 10 years in relation to IMO is around 33%. Meanwhile, while all surveyed people have no experience in the development of TC project of IMO, that for the participation of TC programmes of IMO is just over one third.

Table 5.6 The descriptive statistics

Question	Parameter		Percentage (%)
Q1	Group	Member state	100
		IMO Secretariat	0
		Other international Organization	0
		MDBs	0
Q1-a	Position in TC programmes	Donor	33.33
		Beneficiary	66.67
		Both	0
Q2	Member states	MSC	26.67
		MEPC	33.33
		LC	6.67
		FAL	13.33
		TC	20.00
Q3	Work period in maritime transportation sector	1~5 years	33.33
		6~10 years	16.67
		10 above	50.00
Q4	Work period in relation to IMO	less than 1	16.67
		1~5 years	33.33
		6~10 years	16.67
		10 above	33.33
Q5	Experience in development of TC project of IMO	yes	0
		No	100
Q6	Experience in participating in TC programs of IMO	Yes	33.33
		No	66.67

5.1.3 Empirical Result

Table 5.7 shows the pairwise comparison and result of the estimation of weight (priority) for criteria in tier 1. During the estimation of pairwise comparison matrix, the geometric mean is used to calculate the priorities from multiple answers and the missing values in the survey are

estimated by using the Harker method[1] which is used when incomplete pairwise comparison exists. Urgency is in the first position due to its greatest weight among four main criteria with 0.308, followed by strategic fit and benefits at 0.272, 0.238. However, the proportion of feasibility among priorities in tier 1 has the lowest at 0.181.

Table 5.7 Pairwise comparison and estimated weight for tier 1

Tier 1	Urgency	Strategic fit	Feasibility	Benefits	Weight	Rank
Urgency	1	1.089	1.886	1.201	0.308	1
Strategic fit	0.918	1	1.383	1.201	0.272	2
Feasibility	0.530	0.723	2	0	0.181	4
Benefits	0.833	0.833	0	2	0.238	3

The relative weight for sub-criteria in tier 2 also estimated using the geometric mean from the result of the survey. The result of the estimation is illustrated in Table 8. While the local weight is relative weight within each main criterion, the global weight suggests the priority among all values in tier 2. The global weight is calculated by the weighted average of the relative priority of criteria at the lower level and those estimated at a higher level. First, when it comes to considering the relative priority in local weight, the portion of significant impact accounts for 0.484 among three sub-criteria in the urgency factor, followed by technological gaps at 0.362. In other words, respondents thought that substantive factors, which might be realized by implementing ODA programmes are more important when international organisations or governments plan the assistance programmes. Meanwhile, the goals of Member states, which constitutes 0.17, are more significant than UN SDG goals or IMO strategic goals. This fact might be led to the action to reflect the needs of donor or recipient countries. Within the importance of sub-criteria for feasibility, surveyed people judged that when IMO TC programmes are well prepared, feasibility could be realized than just qualified with sufficient knowledge or financial resources as shown in the result (F3=0.395). Furthermore, environmental benefits should be realized the most in realizing profits through the implementation of the assistant project than social benefits or economic benefits. This means that the interest in environmental issues has increased recently, and these opinions should be led to assistance programmes.

[1] For those questions which were not answered, let $c_{ij} = w_i/w_j$.

Meanwhile, the relative importance for S3 (fit to goals of Member states) is the highest score at 0.17 in the global weight, followed by U1 (urgent due to technical gaps) and U3 (urgent due to significant impact) at 0.149 and 0.111 respectively. In contrast, the lowest priority in the global weight is S1 (fit to UN SDG goals) with 0.038.

Table 5.8 Pairwise comparison and estimated weight for tier 2

Tier 2	Pairwise comparison				Local Weight	Global Weight	Rank
Urgency	U1	1.000	3.000	0.585	0.362	0.111	3
	U2	0.333	1.000	0.405	0.154	0.047	11
	U3	1.710	2.466	1.000	0.484	0.149	2
Strategic fit	SI	1.000	0.460	0.277	0.138	0.038	12
	S2	2.172	1.000	0.306	0.239	0.065	7
	S3	3.608	3.271	1.000	0.623	0.170	1
Feasibility	F1	1.000	0.918	0.918	0.312	0.057	8
	F2	1.089	1.000	0.637	0.293	0.053	9
	F3	1.089	1.570	1.000	0.395	0.072	6
Benefits	B1	1.000	0.480	0.693	0.222	0.053	10
	B2	2.083	1.000	0.553	0.336	0.080	5
	B3	1.442	1.809	1.000	0.441	0.105	4

The results of the consistency test are illustrated in Table 9. the AHP model has reasonable consistency because the consistency index and consistency ratio for all criteria are under 0.1.

Table 5.9 The result of consistency test

		CI	CR
Tier 1		0.002	0.003
Tier 2	Urgency	0.030	0.052
	Strategic fit	0.026	0.044
	Feasibility	0.011	0.020
	Benefits	0.052	0.089

Alternative Measurement

To estimate the relative importance of each activity, a survey was designed with a five-point Likert scale (Very disagree, Disagree, Neutral, Agree, Very agree). Respondents had to answer how much they agreed with the fact that the criteria in tier 1 were needed for each activity. The result of the survey is estimated by averaging scores. The relative importance of each activity is calculated by adding the values obtained from the relative weight from tier 1 multiplied by the mean values. For instance, needs assessment is calculated by multiplying

4.167 by 0.308 then the final score is obtained by adding all values in needs assessment (4.124=1.283+1.119+0.689+0.953). Table 5.10 and 5.11 show the result of the estimation. The capacity building is the most important activity among the six with 4.175, followed by needs assessment and legislation while the lowest score is policy evaluation.

Table 5.10 The average values for alternative 1

Activities	urgent	strategic fit	feasible	beneficial
Needs assessment	4.167	4.400	3.800	4.000
Policy evaluation	4.000	4.000	3.400	3.667
Legislation	4.400	4.000	3.667	4.000
Capacity building	4.333	4.400	3.800	4.000
Facility/equipment	3.833	3.600	3.000	3.600
Infrastructure	3.833	3.600	3.000	3.600

Table 5.11 The result for alternative 1

Activities	urgent	strategic fit	feasible	beneficial	Sum	Rank
Needs assessment	1.283	1.199	0.689	0.953	4.124	2
Policy evaluation	1.231	1.090	0.617	0.874	3.812	6
Legislation	1.354	1.090	0.665	0.953	4.063	3
Capacity building	1.334	1.199	0.689	0.953	4.175	1
Facility/equipment	1.180	0.981	0.544	0.858	3.563	4
Infrastructure	1.180	0.981	0.544	0.858	3.563	4

The same method was applied to calculate the relative weight of programs. Programmes for GHG emission from ships and Ballast Water Management are taken into account as the most reasonable project when people consider the new type of ODA programmes in the maritime sector. Subsequently, E-navigation, Maritime single window and implementation of ISPS were shown as important themes with 3.940, 3.914, and 3.701 respectively. Overall, the outcome indicates that when considering plans for ODA programme, people should consider projects related to the environment at first and secondly, themes for technical elements. Meanwhile, the result shows that there is the lowest interest in prevention and counteracting against piracy.

Table 5.12 The average values for alternative 2

Programs	urgent	strategic fit	feasible	beneficial
GHG Emission from ships	4.333	4.200	3.800	4.200
Ballast Water Management	4.333	4.000	3.800	4.200
Port reception facilities	3.833	3.400	3.800	3.800
Safety of Autonomous navigation	3.667	3.600	4.000	3.800
Search and rescue	4.200	3.333	3.800	3.800
Vessel traffic system	4.000	3.167	3.800	3.800
Fishing vessel/Ferry safety	3.500	3.800	3.800	3.800
Implementation of ISPS	3.800	3.800	3.833	3.800
Prevention and counteracting against piracy	3.500	3.400	3.600	3.400
Maritime single window	4.000	4.167	3.800	3.600
E-navigation	4.000	4.000	4.000	3.750

Table 2 The result for althernative 2

Programs	urgent	strategic fit	feasible	beneficial	Sum	Rank
GHG Emission from ships	1.334	1.144	0.689	1.001	4.168	1
Ballast Water Management	1.334	1.090	0.689	1.001	4.114	2
Port reception facilities	1.180	0.926	0.689	0.905	3.701	9
Safety of Autonomous navigation	1.129	0.981	0.726	0.905	3.741	7
Search and rescue	1.293	0.908	0.689	0.905	3.796	6
Vessel traffic system	1.231	0.863	0.689	0.905	3.689	10
Fishing vessel/Ferry safety	1.077	1.035	0.689	0.905	3.708	8
Implementation of ISPS	1.170	1.035	0.695	0.905	3.806	5
Prevention and counteracting against piracy	1.077	0.926	0.653	0.810	3.467	11
Maritime single window	1.231	1.135	0.689	0.858	3.914	4
E-navigation	1.231	1.090	0.726	0.893	3.940	3

5.2. Development of Project Proposal Template

5.2.1. Project proposal form

PROJECT PROPOSAL FORM

Project outline

1. Basic Data			
Project Title			
Sector		Subsector	
Nature of Activity	1.	2.	3.
Country		Implementing Agency	
2. Project information			
Objectives			
Components			
3. Financial information			
Total project cost			
Financing instrument			

1. Introduction

1.1. Background and rationale
(Note: Background and rationale for the project proposal is presented in specification with IMO resolutions and regulations.)

1.2. Geographical context
(Note: Regional or country context in relation to this project is presented to justify the project from the geographical perspective)

1.3. Sector context
(Note: Sectoral context in relation to this project is presented to justify the project from the sectoral perspective)

2. Project description

2.1. Project objectives
(Note: Objectives of this project is clearly stated in accordance with background, geographical and sectoral contexts stated above)

2.2. Project scope and method
(Note: Activities to achieve the objectives of the project is broadly presented including methods if necessary)

2.3. Project component and detailed activities
(Note: Details of activities are presented in terms of components and individual activities)

Component 1
Component 2
Component 3

2.3. Expected outcomes and deliverables

3. Project implementation

3.1. Financial estimates and proposed financing arrangement

Component	Activity	Financial estimates			
		Period 1	Period 2	Period 3	Total
Component 1	1.1.				
	1.2				
Component 2	2.1				
	2.2				
Component 3	3.1				
	3.2				

3.2. Project implementation arrangement

Governance of Project

Possible strategic partnership

3.3. Project timeline

Component	Activity	Implementation timeline			
		Period 1	Period 2	Period 3	Total
Component 1	1.1.				
	1.2				
Component 2	2.1				
	2.2				
Component 3	3.1				
	3.2				

Contact

IMO:

Country of Operations:

Implementing agency:

Appendix 1. Main components in document in the stage of project identification and preparation (MDBs)

World Bank[1]	EBRD[2]	AsDB[3]	AFDB[4]
Basic information Basic project data Project financing data			
Introduction and Context Country Context Sectoral and institutional Context	Introduction Project background Proposing organization information (if necessary)	Justification	Strategic context and rationale Institutional background, country issues and strategy Sector issues Rationale for bank involvement Alignment of Sponsor's corporate governance
Project objective	Project objectives	Major outputs and activities	Project description Project goals and objectives
Project description Component 1 Component 2 Component 3	Project description Scope of work Expected deliverables	Cost estimate and proposed financing arrangement Consulting services	Project development outcomes Target beneficiaries Project components Component 1 Component 2 Component 3 Project communication methodology
Project implementation	Project schedule Project timeline Project member (if necessary) [Financial proposal] Summary of Costs Breakdown of Costs Payment information Payment Schedule	Implementation arrangement	Implementation and evaluation Project management Institutional and implementation arrangement Overall timelines Monitoring and evaluation of outcomes Financing plan
Contact point World bank Borrower/client/recipient Implementing agencies			Procurement arrangement

Note: 1. Project Information Document, 2. Technical proposal and Financial proposal forms, 3. Technical assistance request, 4. Technical assistance request

Appendix 2. Main components in document in the stage of project identification and preparation (Donor countries)

Note: 1. USAID proposal guidelines, 2. Foreign and Commonwealth Office, Proposal forms, 3. KSP proposal form, 4. JAICA Project proposal form

US[1]	UK[2]	Republic of Korea[3]	Japan[4]
Basic information Basic project data Project financing data	Basic information Project Title/Purpose Short Project Summary Cost/Timing Implementing Agency/Partner	Project outline Title / Organization Region / Country Objectives / Activities Sector / Duration Budget requested	Basic information Title / Project owner Sector / Location / Budget / Duration
Problem Statement Project background (Nature of problem, causes of problem) Justification for intervention and needs assessment summary (why here, now, this intervention, your organization and USAID)	Project Plan Project Purpose/Objective	Project Background Current situation and challenges Relevant country development strategies Relevant Development Cooperation programs	Background
Project Description Overview (Goals and strategy)	Project objectives Indicators	Project details Objectives	Framework Overall goal/project goal/outputs
Sectors Sector name and objective Dollar amount Geographical area Sector level coordination Technical Design	Output 1 Activities linked to output1 Output 2 Activities lined to output 2 …..	Description of Activities Budget plan Expected outputs	Planned activities Activities for each output Inputs in conducting activities
Cost Proposal Detailed/Itemized Budget Budget Narrative (Justification of proposed expenses)			Cost estimation Total cost Cost break down by year
	Sustainability Risks Stakeholders		Project sustainability Operations and Maintenance plan Organizational sustainability Financial sustainability

5.2.2. Project Concept Paper

PROJECT CONCEPT PAPER

(Note: This concept paper is prepared prior to presenting a complete proposal. This paper overviews of proposed project by presenting background, objectives, objectives and activities, and preliminary budget.)

1. Project background

(Note: this section justifies proposed project by presenting relevant regulations by IMO and other organizations, relevant current situation of proposing country, gap between regulations and current situation)

2. Project objectives and activities

(Note: This section provides structure of project by presenting objectives and activities to achieve the objectives)

3. Project Implementation

3.1. Preliminary budget

3.2. Duration

3.3. Implementing agency

4. Expected outputs

CHAPTER Ⅵ. CONCLUSION AND SUGGESTIONS

Implications and suggestions

Uncertainty exists and more stable flow should be secured

Despite increasing trend of ODA flows, deepening dependence on major donor countries may provide uncertainty depending on the geo-political circumstances. An example is US of which proportion is steadily decreasing recent years. Multilateral agencies which utilize the ODA resources including IMO need to secure stable inflow of resources.

Focus should be diversified

Although main focus might be maritime transportation which is a part of transport sector, knowledge management and technical cooperation activities are not limited to resources of maritime transport sector. Potential resources can be explored in various sector such as education in social infra and services and environment projects in multi-sector.

Extension toward non-core channel

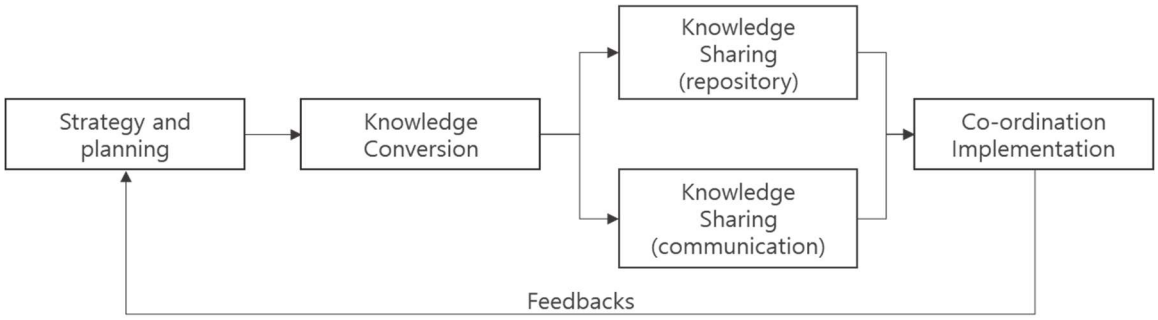
Balance efforts should be made to secure resources for both core and non-core contribution. Interests of donor countries and multilateral agencies has shifted from traditional mandates which are supporting reconstruction, development and regional integration of developing countries to achieving the Sustainable Development Goals (SDGs). Achieving the SDGs requires solutions and actions which are applied and implemented across multiple countries. Due to the limit of donor countries and MDBs in knowledge and expertise in specific region and sector, donor countries and MDBs are required to identify or build up platforms to collaborate with other multilateral organizations to utilize their sectoral and regional knowledge and expertise. In this regard, non-core/earmarked contribution can be a promising channel to effectively implement development cooperation. Multilateral agencies, IMO in particular, need to put more attention to non-core contribution as well as core contribution.

Structured approach should be taken

For multilateral agencies such as IMO to serve as platform to co-ordinate cross-border projects incorporating resources from multiple donor countries and MDBs, an effective knowledge management mechanism should be established with a structured approach. A structured approach may take several steps of action. Strategies should be first developed encompassing knowledge to be shared, geographical and sectoral focus, countries and agencies to communicate with, methods of implementation, and financial and human resources to be utilized. Traditional forms of knowledge in IMO should be converted and re-produced into the sharable form of knowledge with stakeholders and public. The converted

knowledge should be exposed and shared in both ways: using knowledge management tool and repository such as statistics databases, research reports, annual reports; and physical communications such as donor-recipient workshops, MDB conferences, etc. Once resources and projects are identified and secured, activities are coordinated and implemented. Lessons and experiences from the implementation are feed-backed to be considered in strategy and planning.

Figure 6.1. Structured approach to knowledge partnership mechanism for IMO



Efficient platform should be developed

IMO needs to endeavor to develop and provide attractive projects and efficient and user-friendly platform for sharing knowledge in partnership mechanism. The platform should include database for ODA commitment and disbursement of the member states, general information and progress of individual projects, document forms that member states can use.

Collaboration with donor and recipient countries of IMO member states

IMO needs to collaborate with donor and recipient countries so that they can help IMO secure more stable financial resources. Donor and recipient countries should have communication with their ODA agencies to utilize IMO knowledge partnership mechanism in their projects in general areas such as safety and security, national policy development, environmental protection, etc. In this regards, national knowledge partnership officers (NKPOs) can make significant contribution to promote Knowledge Partnership Mechanism.

Collaboration with MDBs

IMO needs to establish collaboration with MDBs that are proactive in knowledge management activities and keen on achieving SDGs in transportation sector. Good example is IMO-EBRD which signed the MOU in 2018 and developed several projects in maritime sectors in progress. Focus should be comprehensive including regional and sub-regional MDBs as well as global MDBs such as World Bank since regional and sub-regional MDBs put more focus on economic development.

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Appendix 1. List of DAC and Non-DAC countries

DAC	Non-DAC
Austria	Cyprus
Belgium	Malta
Denmark	Turkey
France	Croatia
Germany	Liechtenstein
Italy	Bulgaria
Netherlands	Romania
Norway	Estonia
Portugal	Latvia
Sweden	Lithuania
Switzerland	Russian Federation
United Kingdom	Algeria
Finland	Libya
Iceland	Mexico
Ireland	Iraq
Luxembourg	Israel
Greece	Kuwait
Spain	Qatar
Slovenia	Saudi Arabia
Czechia	United Arab Emirates
Slovakia	Azerbaijan
Hungary	Kazakhstan
Poland	Thailand
Canada	Timor-Leste
United States	
Japan	
Republic of Korea	
Australia	
New Zealand	
EU Institutions	

Appendix 2. Sectoral distribution of ODA by DAC countries

Sector	2009	2010	2011	2012	2013	2014	2015	2016	2017
I. Social Infrastructure & Services	44889.5	42445.2	42975.0	41653.0	39296.9	38407.6	41664.7	42837.2	43218.9
I.1. Education	8787.1	8730.7	8522.4	7977.8	7424.6	8273.2	8256.0	8859.5	9103.3
I.1.a. Education, Level Unspecified	2215.5	1886.7	1981.9	1671.7	1617.2	1694.7	1579.1	1499.9	1692.2
I.1.b. Basic Education	2356.9	2240.7	2211.3	2156.0	1689.5	1956.7	2154.8	2713.8	2326.4
I.1.c. Secondary Education	909.4	920.1	692.6	937.8	927.9	1093.8	1121.0	1248.1	1328.5
I.1.d. Post-Secondary Education	3305.4	3683.1	3636.6	3212.4	3190.0	3528.1	3401.2	3397.7	3756.2
I.2. Health	4903.1	4971.8	5550.5	5638.9	5496.2	5001.5	6242.3	6482.7	6039.8
I.2.a. Health, General	1249.8	2014.6	1740.4	1659.1	1780.0	1289.7	1676.3	1975.4	2167.3
I.2.b. Basic Health	3653.4	2957.2	3810.1	3979.9	3716.2	3711.7	4566.0	4507.3	3872.6
I.3. Population Policies/Programmes & Reproductive Health	7697.0	7182.2	8468.2	7666.3	7528.2	7006.4	8026.3	8203.6	7833.8
I.4. Water Supply & Sanitation	5772.0	4576.0	4251.4	5859.1	5066.5	4093.0	5297.2	4515.2	5284.5
I.5. Government & Civil Society	13589.5	13980.0	13708.4	12276.8	11648.9	12024.8	12171.4	12085.3	12635.5
I.5.a. Government & Civil Society-general	10512.8	10912.0	11093.8	9770.1	9277.9	9788.8	9595.9	9099.3	9369.7
I.5.b. Conflict, Peace & Security	3076.7	3068.0	2614.6	2507.5	2371.0	2236.0	2575.5	2985.9	3265.8
I.6. Other Social Infrastructure & Services	4140.8	3004.7	2474.0	2234.2	2132.6	2008.8	1671.5	2691.0	2322.0
II. Economic Infrastructure & Services	14493.7	17590.0	14393.3	15435.1	19048.6	20410.9	23310.2	22031.6	21770.6
II.1. Transport & Storage	6923.6	7342.4	4998.2	6907.3	8548.4	7517.3	9388.6	10920.1	10566.6
II.2. Communications	435.0	325.7	291.6	421.9	291.0	330.9	347.1	241.8	174.1
II.3. Energy	3517.8	6969.3	5513.2	5129.4	6813.6	8019.4	9645.0	7506.5	7496.0
II.4. Banking & Financial Services	2514.3	1671.4	1970.1	2062.6	2240.7	2620.1	2668.8	1918.6	2143.7
II.5. Business & Other Services	1103.0	1281.3	1620.1	913.9	1154.9	1923.2	1260.8	1444.6	1390.2
III. Production Sectors	6488.7	7726.9	7392.8	7057.3	6929.3	7242.2	7809.2	6192.0	8677.8
III.1. Agriculture, Forestry, Fishing	4801.2	5562.4	4813.0	4897.5	4706.9	5091.7	5256.0	4692.9	6474.2
III.1.a. Agriculture	4010.2	4694.3	3691.4	4181.7	4226.8	4441.3	4782.5	4000.9	5525.0
III.1.b. Forestry	394.0	620.5	939.5	577.7	292.3	495.0	310.9	390.9	513.4
III.1.c. Fishing	397.0	247.7	182.1	138.1	188.0	155.4	162.6	301.1	435.9
III.2. Industry, Mining, Construction	1001.4	1303.9	1689.0	1348.5	1303.5	1352.1	1876.2	891.3	1358.4
III.2.a. Industry	929.7	925.0	1444.2	646.1	1090.1	1204.4	1664.9	771.6	1243.2
III.2.b. Mineral Resources & Mining	53.0	360.0	199.8	687.9	177.4	120.7	191.4	107.5	97.7
III.2.c. Construction	18.7	18.9	45.1	14.5	36.1	27.1	20.0	12.2	17.5
III.3.a. Trade Policies & Regulations	550.4	801.5	805.2	745.5	841.8	755.4	626.5	552.5	799.2
III.3.b. Tourism	135.6	59.1	85.6	65.9	77.1	43.1	50.5	55.2	45.9
IV. Multi-Sector / Cross-Cutting	8684.2	13193.0	9919.1	9202.3	9236.3	9863.5	12044.1	12234.4	10059.3
IV.1. General Environment Protection	3139.2	4785.8	3846.4	3996.5	3196.1	3482.6	4044.3	3371.6	3711.7
IV.2. Other Multisector	5545.0	8407.3	6072.7	5205.8	6040.1	6380.9	7999.8	8862.9	6347.6
V. Total Sector Allocable (I+II+III+IV)	74556.0	80955.1	74680.1	73347.7	74511.1	75924.2	84828.2	83295.2	83726.5
VI. Commodity Aid / General Programme Assistance	4784.4	3753.0	3484.5	3241.4	4955.9	2283.0	2647.1	2382.6	3664.8
VI.1. General Budget Support	2963.2	2293.1	1752.7	1622.3	3656.2	1053.2	1194.9	835.4	2384.9
VI.2. Development Food Assistance	1462.0	1228.0	1321.5	1238.1	949.7	944.5	1268.2	1383.8	1126.1
VI.3. Other Commodity Assistance	359.3	231.9	410.2	381.0	350.0	285.3	184.0	163.4	153.8
VII. Action Relating to Debt	2449.1	3784.2	4008.9	2805.1	3204.0	575.7	432.6	2454.4	670.3
VIII. Humanitarian Aid	9498.7	10279.6	9052.8	8462.3	10328.7	13405.7	13475.2	15710.9	16853.1
VIII.1. Emergency Response	8415.7	9295.2	8010.0	7431.8	9440.0	11859.3	12244.5	13996.3	15026.8
VIII.2. Reconstruction Relief & Rehabilitation	644.3	691.0	613.4	430.8	316.8	1093.7	678.3	1115.1	1007.0
VIII.3. Disaster Prevention & Preparedness	438.7	294.2	429.3	599.7	571.8	452.7	552.4	599.5	819.2
IX. Unallocated / Unspecified	11003.5	10185.6	11328.1	10702.2	11212.2	12553.1	20213.2	23410.2	22139.6
Total (V+VI+VII+VIII+IX)	102291.6	108957.6	102554.3	98558.6	104211.9	104741.6	121596.4	127253.3	127054.2