

Supplementary method annex

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Chapter 1 Introduction

I tracked development assistance for health (DAH) provided and received by the Middle East and North Africa (MENA) region from 2000-2017 using methods developed by the Institute for Health Metrics and Evaluation (IHME) (1). I defined DAH as the in-kind and financial resources transferred to low- and middle-income countries with the primary goal to maintain or improve health.

My definition of the MENA region is based on the Global Burden of Disease super-region where countries were divided to seven super-regions (2). Countries included for analysis were Afghanistan, Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates, and Yemen.

To generate DAH contributed by the MENA region, I leveraged official development assistance data reported to the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD), project-level and aggregate-level government agency budgets, annual reports, as well as financial statements from key international development agencies. After initial literature review, we restricted our bilateral aid sources to Saudi Arabia, Kuwait and United Arab Emirates, as these three individual donors have been providing the majority – over 90% - of Arab's official development assistance (3). We acknowledge that other countries like Qatar and Turkey have been providing DAH through their respective bilateral agencies, however, we were unable to disaggregate the aid amount by health focus areas and recipient information for Turkey due to lack of project-level information, and we were also not able to track the health proportion of Qatar's aid. Therefore, our current estimate includes only Saudi Arabia, Kuwait and United Arab Emirates for bilateral agencies. Nonetheless, we also included aid contributions to multilateral entities such as the United Nations agencies from these three donors and other MENA countries including Qatar and Turkey. Additionally, we captured DAH disbursed through the Islamic Development Bank, among various regional financial institutions. We excluded Arab Fund for Economic and Social Development, Arab Bank for Economic Development in Africa, OPEC fund for International Development, the Arab Gulf Program for Development in our current analysis. See Chapter 5 for the reason for exclusion.

I estimated DAH received by the MENA region using data from IHME's Financing Global Health 2018 Development Assistance for Health database (1), in addition to data from the above-mentioned donors to capture the internal transfer of resources within the MENA region. Our channels of DAH included bilateral aid agencies, development banks, United Nations agencies, public-private partnerships, non-governmental organizations and foundations.

Chapter 2 Estimating DAH disbursed through Saudi Arabia’s bilateral agencies

I generated the estimate of Saudi Arabia’s bilateral DAH through aggregating health-related loans disbursed through the Saudi Fund for Development (SFD) and grants disbursed by Saudi government agency. According to literature review, all concessional loans of Saudi Arabia were disbursed through the Saudi Fund for Development (3,6).

Loans disbursed through Saudi Fund for Development

For Saudi Fund for Development loans, I extracted 2002-2017 project-level commitment data from the Fund’s annual report and website (7).

Table 2. Saudi Fund for Development health related loans

Year signed	Recipient country	Project name	Cost unit	Contribution	Project signed date	Project end date
2017	Tunisia	Construction and Equipment of Two Hospitals (Class B) in El Djem and Sbiba	SR million	150	7/27/2017	12/31/2021
2017	Kenya	Cancer Center at Kisii Hospital	SR million	37.5	4/12/2017	4/30/2020
2017	Swaziland	National Referral Hospital in the Kingdom of Swaziland	SR million	37.5	10/14/2017	10/31/2019
2017	Kyrgyzstan	Rehabilitation and Expansion of the Public Pediatric Emergency Hospital in Bishkek City	SR million	112.5	5/17/2017	12/31/2019
2017	Bangladesh	Construction of Burn and Pastic Surgery Unit	SR million	112.5	10/8/2017	12/31/2021
2016	Egypt	Development of Al Kasr Al Aini Hospital	SR million	450	4/8/2016	1/1/2020
2016	China	Reconstruction of Earthquake Affected Areas in Lushan District, Sichuan Province (support and provide health services to Lushan District)	SR million	112.5	8/30/2016	12/31/2019
2015	Sri Lanka	Epilepsy Hospital and Health Centers	SR million	45	10/30/2015	12/31/2016
2015	Vietnam	Extension of Hoa Binh Province General Hospital	SR million	39	12/3/2015	12/31/2019
2014	Guinea	Rehabilitation and Expansion of Donka Hospital in Conakry	SR million	120	6/25/2014	12/31/2016
2014	Uganda	Rehabilitation and Equipping of Yumbe and Kayunga Hospitals	SR million	56.25	8/1/2014	1/31/2019
2013	Senegal	Dalal Jamm Hospital	SR million	34	5/21/2013	12/31/2014
2013	Malawi	Phalombe District Hospital	SR million	45	8/19/2013	12/31/2016
2013	Zambia	Modernization of the University Teaching Hospital in Lusaka	SR million	75	10/22/2013	12/31/2016
2013	Mozambique	Construction and Equipping of Nampula General Hospital	SR million	33.75	11/20/2013	12/31/2015
2013	China	The Construction of the Children Hospital of Ningxia Hui Autonomous Region	SR million	93.75	5/7/2013	6/30/2014

2013	China	The Construction of Hanzhong Railway Central Hospital in Shaanxi Province	SR million	93.75	5/7/2013	6/30/2014
2013	Uzbekistan	Construction and Equipping Specialized Scientific Medical Centers with Modern Medical Equipment	SR million	75	5/23/2013	12/31/2017
2012	Ghana	Construction of Trauma and Acute Care Center of Korle-Bu Teaching Hospital in Accra (phase I)	SR million	45	11/6/2012	12/31/2014
2011	Niger	Equipping of Seven Health Centres for mother and children	SR million	37.5	6/1/2011	12/31/2011
2011	Burkina Faso	Construction and equipping of Manga Regional Hospital	SR million	42	6/16/2011	6/30/2013
2011	Vietnam	Backan's General Hospital and Medical Training Center	SR million	55	11/1/2011	12/31/2014
2011	Maldives	Seenu Hithadhoo Regional Hospital	SR million	47	11/21/2011	12/31/2015
2010	Benin	Construction and Equipping Project of Safy hospital	SR million	40	11/9/2010	12/31/2013
2010	China	Construction and Equipping of three Hospitals in Gansu Province	SR million	75	4/11/2010	6/30/2013
2010	Indonesia	Construction of two University Hospitals in Sebelas Maret University and Andalas University	SR million	135	9/22/2010	12/31/2014
2010	Cuba	Rehabilitation and Equipping of a Number of Maternity Hospitals	SR million	75	4/26/2010	12/31/2012
2009	Niger	Education and Health Sector Development*	SR million	45	10/12/2009	12/31/2011
2009	Kenya	Pediatric Emergency Center and National Burn Center at Kenyatta National Hospital	SR million	24	11/14/2009	12/31/2012
2009	Tajikistan	Rehabilitation and Equipping of Maternity and Child Hospital in Khujand City	SR million	36.75	6/2/2009	12/31/2010
2009	Bosnia & Herzegovina	Completion and Equipping of Four Hospitals	SR million	93.75	7/6/2009	12/31/2011
2008	Ghana	Rehabilitation and expansion of Bolgatanga Regional Hospital	SR million	45	11/5/2008	12/31/2011
2008	Sri Lanka	Development of Health Facilities in Colombo (additional loan)	SR million	11	3/26/2008	12/31/2009
2008	Sri Lanka	Epilepsy Hospital and health care centers	SR million	75	3/26/2008	12/31/2009
2007	Senegal	Dalal Jamm Hospital	SR million	54.5	1/8/2007	12/31/2009
2007	Egypt	Building & Equipping of Primary health care units	SR million	85	12/16/2007	12/31/2011

2007	Yemen	Faculty of Medicine and Health Sciences, University of Taiz	SR million	45	11/13/2007	12/31/2010
2007	Yemen	Hudaydah Central Hospital	SR million	112.5	11/13/2007	12/31/2009
2007	Jordan	Expansion of Al-Bashir Government Hospital	SR million	82.5	12/5/2007	12/31/2010
2006	Bangladesh	Medical Institutes and Specialized Hospitals	SR million	82.5	8/1/2006	12/31/2008
2006	Jordan	AzZarqa Government Hospital	SR million	112.5	11/21/2006	12/31/2009
2005	Algeria	Construction and equipping Al-Thania Hospital At Bou Merdas State.	SR million	60	7/21/2005	12/31/2007
2005	Morocco	Construction and equipping the university hospital at Marrakech (additional loan).	SR million	60	9/24/2005	12/31/2008
2005	Morocco	Construction and equipping the university hospital at Fez (additional loan).	SR million	50	9/24/2005	12/31/2008
2005	Tajikistan	Emergency care hospital in Dushanbe	SR million	18.38	12/28/2005	12/31/2007
2004	Rwanda	Rehabilitation and Expansion of King Faisal Hospital in Kigali	SR million	45	11/1/2004	12/31/2007
2004	Jordan	Expansion of Al-Bashir Government Hospital	SR million	100	11/30/2004	12/31/2008
2003	Turkmenistan	Constructing and Equipping of Three Diagnostic Centers	SR million	37.5	5/27/2003	12/31/2004
2002	Sri Lanka	Upgrading Medical Services in Colombo	SR million	45	7/25/2002	12/31/2004
2002	Tajikistan	Rehabilitate and Furnish Maternity Hospital at Dushanbe	SR million	11.25	10/30/2002	6/30/2004

Note: For projects that covered two sectors (marked *), contribution to the health sector was estimated through dividing total project contribution by two.

I calculated the health proportion of total loans, which indicated how much of their total loan projects are for health. I used a constant ratio instead of using year-specific ratio due to the fact that the proportion of commitment for health not necessarily reflect the disbursement for health. I estimated that 10.6% of SFD's loans are for health. We adjusted the commitment to disbursement amount using 2000-2014 DAC1 table (total flows by type by DAC donor) extracted from OECD database (we did not use the 2015-2017 data points due to the note which said "the 2015, 2016 and 2017 activity-level data presented for Saudi Arabia are incomplete") (4). I then generated the adjusted annual disbursement of health loans from 2000-2014. I estimated 2015-2017 data using 3-year weighted average ratio of health loans disbursement to health loans commitment. I observed that the number in 2002 had an abnormal spike, I conducted a literature search and did not find any documentation of increase in health loans in that year. The significantly large number might be due to typo in OECD DAC or increase in non-health projects, therefore I interpolated the 2002 number using 2001 and 2003 number instead.

Table 3. Saudi Fund for Development DAH estimate

Year	Health loan commitment (SR million)	Total commitment (SR million)	Proportion	Total loan disbursed (million USD)	Health loan disbursed (million USD)	DAH (million USD)
Source	SFD report	SFD report	SFD report	OECD DAC	OECD DAC	Estimate
2000				75.5	8.1	8.0
2001				59.4	6.3	6.3
2002	56.25	1271	0.1061651	1504.8	160.8	7.364#
2003	37.5	839.7	0.1061651	79.3	8.5	8.4
2004	145	716.7	0.1061651	146.4	15.6	15.5
2005	188.38	802.63	0.1061651	155.2	16.6	16.5
2006	195	1029.5	0.1061651	190.3	20.3	20.2
2007	379.5	1108.25	0.1061651	200.9	21.5	21.3
2008	131	1168.13	0.1061651	223.1	23.8	23.7
2009	177	1984.5	0.1061651	529.2	56.5	56.2
2010	325	2439.25	0.1061651	320.4	34.2	34.0
2011	181.5	2392.5	0.1061651	326.0	34.8	34.6
2012	45	4111.75	0.1061651	319.1	34.1	33.9
2013	450.25	2587.75	0.1061651	318.4	34.0	33.8
2014	176.25	2571.2	0.1061651	361.4	38.6	38.4
2015	84	2454.12	0.1061651			31.9733*
2016	562.5	4346.34	0.1061651			56.62592*
2017	450	3936.65	0.1061651			51.28831*

Note: The number “*” are predicted based on three year weighted average of disbursement over budget. The number “#” is interpolated using 2001 and 2003 data.

For each individual loans, annual disbursement was estimated by dividing the total disbursement by project length, using project-level information from the annual reports and websites of all projects. For projects without a closing date, estimates were based on the average project length. This allowed me to average out the proportion of project disbursement in each year, to calculate the health focus area and recipient for each project in each year.

Grants disbursed through other Saudi Arabia government agencies

In order to identify the grant-disbursing agencies, we conducted a literature and data search. I found that a number of agencies that work on health are mostly humanitarian activities (6). I was unable to generate a complete list of agencies through literature search, so based on the Creditor Reporting System (CRS) (4), I extracted the following grant-disbursing agencies for further investigation. These agencies include the King Abdullah International Foundation for Humanitarian Activities, King Salman Humanitarian Aid and Relief Center, Saudi Campaigns, Saudi Red Crescent Authority and other governmental entities. I acknowledged that the list in CRS is incomplete, while this is by far the most comprehensive list we could get. I identified seven agencies that participated in health related development work, while their project descriptions are all humanitarian-related work, including establishing mobile clinics, providing health assistance for the needy community, etc. These agencies do not have a project-level database and mostly do not have annual reports. Since the data in CRS is incomplete, therefore, we decided to use the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) Financial Tracking Service website (8), which has a longer time-series and more detailed project-level information to track the humanitarian health-related grants.

Table 4. List of health related grant-disbursing agencies in Saudi Arabia 2015-2017

Agency name	Number of projects	Aid type	Total commitment (millions of USD)	Total disbursement (millions of USD)	Any health project	Number of health projects	DAH commitment (millions of USD)	DAH disbursement (millions of USD)	Projects keywords
King Abdullah International Foundation for Humanitarian Activities	4	grant	526	0	Y	2	301	0	Mobile clinics, help needy communities
King Salman Humanitarian Aid and Relief Center	363	grant	0	1122.544	Y	85	0	220.931	Basic health care
Ministry of Education	13	grant	0	66.58	Y (Typo)	1	0	0.05	Scholarship
Other Governmental Entities	7	grant	0	108.0104	Y	5	0	1.49	Medical equipment
Saudi Campaigns	28	grant	0	12.02229	Y	5	0	0.77	Humanitarian aid
Saudi Development Fund	109	loan	4057.5	344.345	Y	12	307	0	All different kind
Saudi Red Crescent Authority	6	grant	0	0.41379	Y	6	0	0.414	Hospitals
Ministry of Foreign Affairs	30	grant	0	30.33	N				Multilateral agency share
Miscellaneous	6	grant + loan	604.43	6953.067	N				"Semi-aggregate data"

We included only health projects that marked as “paid contribution” and excluded “commitment” or “pledged”. We also dropped the projects where destination organizations are United Nations agencies since we have already included them in our multilateral channels. After the data cleaning, the source organization only included the Government of Saudi Arabia, and the recipient of the projects included recipient country governments, recipient country Red Crescent societies, foundations as well as the King Salman Humanitarian Aid and Relief Center (projects carried out in Jordan, Somalia, occupied Palestinian territory). We kept the contribution amount as DAH disbursement, and ran keyword search on project description to allocate the health focus area. See chapter 6 for health focus area keyword search. Since UNOCHA only captures the humanitarian projects, our estimate of Saudi Arabia’s DAH is a very modest estimate. We finally aggregated the loans and grants to produced our Saudi Arabia bilateral DAH.

Administrative expenses for Saudi Arabia bilateral and other bilateral agencies

As with all bilateral agencies in IHME’s Financing Global Health 2018 study, we also calculated administrative expenses for Saudi Arabia, Kuwait and United Arab Emirates. We defined administrative expenses as the costs associated with administering grants and loans. Due to the lack of agency-specific data, we used the average administrative cost ratio of selected development assistance agencies with more available administrative cost information (United States, United Kingdom, Japan, Norway and Sweden) as a proxy for all the bilateral agencies, which was 12.8% (1). We acknowledge that the administrative expense-ratio of the Arab countries might be different with other development agencies.

Chapter 3 Estimating DAH disbursed through Kuwait's bilateral agencies

The Kuwait Fund for Arab Economic Development is the only aid-disbursing agency in Kuwait, providing loans and also administering government grants (3). I extracted 2000-2017 project-level commitment data from the Fund's annual report and website (9).

Table 5. Kuwait Fund for Arab Economic Development health related loans and grants

Year signed	Recipient country	Project name	Aid modality	Cost unit	Contribution	Project signed date	Project end date
2018	Mauritius	Flacq Teaching Hospital Project	Loan	KD million	7.5	6/21/2018	12/31/2020
2017	Tanzania	Rehab., Expansion & Equipping Hospital In Zanzibar	Loan	KD million	4	9/21/2017	12/31/2021
2017	China	Development Of Hospital In Ningxia Wuzhong	Loan	KD million	9	12/21/2017	12/31/2020
2017	Tunisia	Construction And Equipping Four Regional Hospitals	Loan	KD million	24	11/16/2017	12/31/2020
2016	Sao Tomo & Principe	Central Hospital	Loan	KD million	5	11/22/2016	12/31/2020
2016	Sri Lanka	Building Complex For The Faculty Of Health-care Sciences	Loan	KD million	10	3/24/2016	12/31/2019
2016	Uzbekistan	Equipping Urological & Hemodialysis Facilities	Loan	KD million	7	3/15/2016	12/31/2020
2016	Kyrgyzstan	Const. & Equip. Neurosurgical Center-national	Loan	KD million	6	3/11/2016	12/31/2020
2016	Vietnam	Chu Doc General Hospital In An Giang Province	Loan	KD million	3.4	3/11/2016	.
2016	South Sudan	Kuwait Hospital For Women And Children	Loan	KD million	3.5	12/12/2016	.
2015	Eswatini	The National Referral Hospital Project	Loan	KD million	4.5	2/19/2016	12/31/2019
2015	Benin	Health Centers In Tchaourou	Loan	KD million	5	7/31/2015	12/31/2019
2015	Uzbekistan	Equipping Clinics Of Medical Higher Schools	Loan	KD million	6.5	3/19/2015	12/31/2017
2014	Nicaragua	Construction And Equipment Of Chinandega Hospital	Loan	KD million	8.5	10/17/2014	12/31/2017
2014	China	Luohe Medical College Expansion	Loan	KD million	9	6/3/2014	12/31/2017
2013	Cape Verde	Rehabilitation Of Health Services	Loan	KD million	4	11/17/2013	12/31/2017
2013	Rwanda	Munini Hospital	Loan	KD million	3.6	11/12/2013	12/31/2017
2013	Ghana	Trauma And Acute Care Centre At Korle-bu Hospital	Loan	KD million	4.5	3/7/2013	12/31/2020
2011	Burkina Faso	Manga Regional Hospital	Loan	KD million	3.3	10/14/2011	12/31/2019
2011	Sierra Leone	Health Services	Loan	KD million	4.25	5/30/2011	12/31/2019
2009	Kenya	New Wajir Distric Hospital	Loan	KD million	2	3/3/2009	12/31/2017
2008	Uzbekistan	The Heart Surgery National Center	Loan	KD million	3.373611	7/21/2008	6/30/2011
2006	China	Ningxia Hospital	Loan	KD million	10	9/14/2006	12/31/2009
2006	Uzbekistan	Emergency Medical Departments	Loan	KD million	6	6/22/2006	6/30/2011
2005	Jordan	New Aqaba Hospital	Loan	KD million	15	12/21/2005	6/30/2012
2017	Tunisia	Feasibility study for building and equipping of the cancer disease center	Grant	KD million	0.3	.	.
2016	Palestine	Completion of H.H. Sheikh Sabah Alahmad Aljaber Alsabab Health Science Compound	Grant	KD million	0.6126	.	.
2014	Zimbabwe	Construction of 2 general hospitals in Harare city.	Grant	KD million	0.3	.	.
2010	Swaziland	Feasibility studies and detailed design for the national hospital in Mbabane	Grant	KD million	0.15	.	.
2006	Bahrain	the construction of a new health center in Abu Maher	Grant	KD million	3	.	.

2006	Morocco	Financing the Expansion of a Hospital and Retirement House in the City of Assila	Grant	KD million	1	.	.
2005	Ghana	Preparation of the Feasibility Study for the Children's and maternity wards in the korle bu teaching hospital	Grant	KD million	0.17	.	.
2004	Moldova	Feasibility study for diabetic medical center	Grant	KD million	0.15	.	.
2004	Maldives	Feasibility study for a new hospital in the Holow Mali Island	Grant	KD million	0.256	.	.
Projects before 2000 (not included, for reference only)							
1999	Lebanon	Health facilities To finance the construction of health facilities	Grant	KD million	0.153885	.	.
1996	Lebanon	Program for rehabilitating medical centers. To cover part of the cost of rehabilitating the medical centers in the country.	Grant	US million	7	.	.

Similar with Saudi Arabia, I calculated the health proportion of total loans and grants, which indicated how much of their total projects are for health. I calculated the total across 2000 to 2017 instead using year-specific ratio due to the fact that the proportion of commitment for health not necessarily reflect the disbursement for health. I estimated that 5.2% of KFAED's loans are for health. I adjusted the commitment to disbursement amount using 2000-2017 DAC1 table extracted from OECD database (4). I then generated the adjusted annual disbursement of health loans and grants from 2000-2017.

Table 6. Kuwait Fund for Arab Economic Development DAH estimate

Year	Health loan and grant commitment (KD million)	Total loan and grant commitment (KD million)	Proportion	Total loan disbursed (million USD)	Health loan disbursed (million USD)	DAH (million USD)
Source	KFAED report	KFAED report	KFAED report	OECD DAC	OECD DAC	
2000	.	120.2	0.0521	431.2	22.5	22.5
2001	.	197.7	0.0521	385.5	20.1	20.1
2002	.	126.7	0.0521	322.0	16.8	16.8
2003	.	112.7	0.0521	453.8	23.7	23.7
2004	0.4	200.4	0.0521	412.1	21.5	21.5
2005	15.2	201.3	0.0521	555.9	29.0	29.0
2006	17.0	142.9	0.0521	466.2	24.3	24.3
2007	0.0	75.1	0.0521	487.3	25.4	25.4
2008	3.4	199.1	0.0521	662.4	34.5	34.5
2009	2.0	200.3	0.0521	527.7	27.5	27.5
2010	0.2	200.2	0.0521	616.8	32.2	32.2
2011	7.6	212.4	0.0521	495.3	25.8	25.8
2012	12.1	212.0	0.0521	451.4	23.5	23.5
2013	17.8	261.0	0.0521	495.5	25.8	25.8
2014	16.0	246.7	0.0521	549.9	28.7	28.7
2015	35.5	299.5	0.0521	631.7	32.9	32.9
2016	37.3	326.5	0.0521	1354.1	70.6	70.6
2017	7.5	284.7	0.0521	848.5	44.2	44.2

For each individual loan and grant project, annual disbursements were estimated by dividing the total disbursement by the project length. All grants projects did not have a reported start and closing date so we assumed that the projects were disbursed in the year that they were signed since these grants were usually small and mostly feasibility or pilot grants.

Chapter 4 Estimating DAH disbursed through United Arab Emirates' bilateral agencies

United Arab Emirates (UAE) became an OECD DAC participant country in 2014 and we extracted UAE's bilateral DAH contribution from reported estimates in the IHME's Financing Global Health 2018 Development Assistance for Health database (1). In the Financing Global Health 2018 analysis, project-level disbursement data was extracted from the OECD Creditor's Reporting System (CRS) from 2009 to 2017 as with other traditional bilateral agencies like the United States. For earlier years' (2000-2008) project disbursement, data was provided through personal correspondence from the Ministry of Foreign Affairs (10).

Please refer to IHME's Financing Global Health 2018 Supplementary Methods Annex at

http://www.healthdata.org/sites/default/files/files/policy_report/FGH/2019/FGH2018_Methods-Annex.pdf

Chapter 5 Estimating DAH disbursed through multilateral organizations and public-private partnerships

We used data from IHME’s Financing Global Health 2018 Development Assistance for Health database to estimate DAH contributions from the MENA country donors to multilateral aid agencies (1). Our multilateral aid agencies of interest include UN agencies (the World Health Organization, the United Nations Population Fund (UNFPA), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Children’s Fund (UNICEF)), the World Bank, the Global Fund, regional development banks including the African Development Bank and the Islamic Development bank, as well as non-governmental organizations.

We also identified a number of regional organizations that participate in development assistance (3,4). After data and literature review, we excluded the majority of multilateral agencies (Arab Monetary Fund, Arab Fund for Economic and Social Development, Arab Bank for Economic Development in Africa, OPEC fund for International Development, the Arab Gulf Program for Development) due to their relative small size in DAH and lack of sufficient project-level information for 2000-2017, and only included the Islamic Development Bank Ordinary Capital Resources (OCR), which disburses concessional loans with 15-25 years’ maturity and 3-7 years’ grace period, with a service fee up to 1.5%.

Table 7. MENA regional development agencies and reasons for exclusion

Agency	Reason for exclusion
Arab Monetary Fund	Financial institution that does not provide DAH (11)
Arab Fund for Economic and Social Development	Total DAH disbursement in 2017 was \$2.18 million according to OECD CRS (4)
Arab Bank for Economic Development in Africa	Total DAH disbursement in 2014 was \$ 10.98 million according to OECD CRS, and no data after 2014 (4)
Islamic Development Bank Special account resources WAQF fund	No project related information and not official development assistance (12)
Islamic Solidarity Fund for Development	Started project disbursement in 2012 and till the end of 2016, only two health projects were disbursed with a total of \$18.9 million according to annual report
OPEC fund for International Development	Total DAH disbursement in 2017 was \$5.0 million according to OECD CRS (4)
The Arab Gulf Program for Development	Arab countries’ contribution to the United Nations agencies (3,7), which are already captured in the IHME Financing Global Health 2018 dataset

Estimating DAH through the Islamic Development Bank

As mentioned above, among various regional financial institutions that potentially work on health sector, we only included the Islamic Development Bank (IsDB). Our estimates of IsDB also restricted to the Ordinary Capital Resources (OCR) and did not include the Special account Waqf Fund or Islamic Solidarity Fund for Development as mentioned in table 7. We extracted project-level commitment data for IsDB from the CRS database and adjust the commitment to disbursement amount using total gross disbursement data extracted from OECD DAC2a table (ODA disbursements (i.e. actual expenditures) by donor (donor country or multilateral organisation) to each recipient country, along with a breakdown of certain types of aid (grants, loans, technical cooperation, developmental food aid, humanitarian aid) (4).

Table 8. Islamic Development Bank DAH estimate

Year	Total ODA disbursement (\$US million)	Total ODA commitment (\$US million)	Disbursement to commitment ratio	DAH commitment (\$US million)	DAH disbursement (\$US million)
Source	OECD DAC	OECD CRS		OECD CRS	
2000	7.1	206.1	0.0344	7.6	0.3
2001	133.7	221.4	0.6038	25.7	15.5
2002	106.2	262.5	0.4045	46.2	18.7
2003	26.2	387.0	0.0676	31.4	2.1
2004	227.0	262.6	0.8644	18.6	16.0
2005	225.3	366.6	0.6146	73.0	44.9
2006	307.4	464.3	0.6621	17.9	11.9
2007	271.4	382.4	0.7097	49.7	35.3
2008	253.4	394.6	0.6422	25.4	16.3
2009	484.7	407.5	1.1892	40.5	48.2
2010	383.9	370.6	1.0358	29.7	30.8
2011	378.7	365.3	1.0367	17.2	17.8
2012	279.6	453.4	0.6167	76.6	47.2
2013	236.9	462.5	0.5122	48.0	24.6
2014	245.9	327.7	0.7503	66.1	49.6
2015	194.9	428.8	0.4545	53.2	24.2
2016	347.5	440.7	0.7886	56.5	44.6
2017	339.0	254.2	1.3335	15.1	20.2

Chapter 6 Disaggregating DAH by health focus area and recipient

For each individual channel as described above, we also included an analysis of the composition of health funding by health focus area. Health focus areas of interest include those used in previous research, including HIV/AIDS, malaria, tuberculosis, reproductive and maternal health, newborn and child health, other infectious diseases, non-communicable diseases, health system strengthening/sector-wide approaches, and other. We conducted a keyword search for each individual project description to disaggregate the health focus area using the same methodology as in Chang et al.(52). We also disaggregated DAH channeled through each individual channel by recipient information. For the bilateral channels, recipient country information was extracted from project-level data.

For a more detailed step-by-step explanation of how health focus area are assigned, please refer to IHME's Financing Global Health 2018 Supplementary Methods Annex at Page 49

http://www.healthdata.org/sites/default/files/files/policy_report/FGH/2019/FGH2018_Methods-Annex.pdf

Chapter 7 Comparing DAH provided and received by the Middle East and North Africa

We compared DAH provided by the three largest donor countries in the MENA region (United Arab Emirates, Kuwait and Saudi Arabia) and their relative gross domestic product and government spending to analyze the relative trends and association. Data for gross domestic product and government spending were extracted from IHME's Financing Global Health 2018 dataset (1).

Finally, we compared DAH contributions from the MENA region to DAH received in the MENA region using data extracted from the Financing Global Health 2018 database (1). We calculated DAH provided and received by each individual country in 2017, annualized rate of change from 2010-2017, as well as the three largest channels of DAH provided/received in 2017.

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