The Impact of COVID-19 on DPRK's Health System and Future Inter-Korean Biomedical Cluster Cooperation in the Post-pandemic Era

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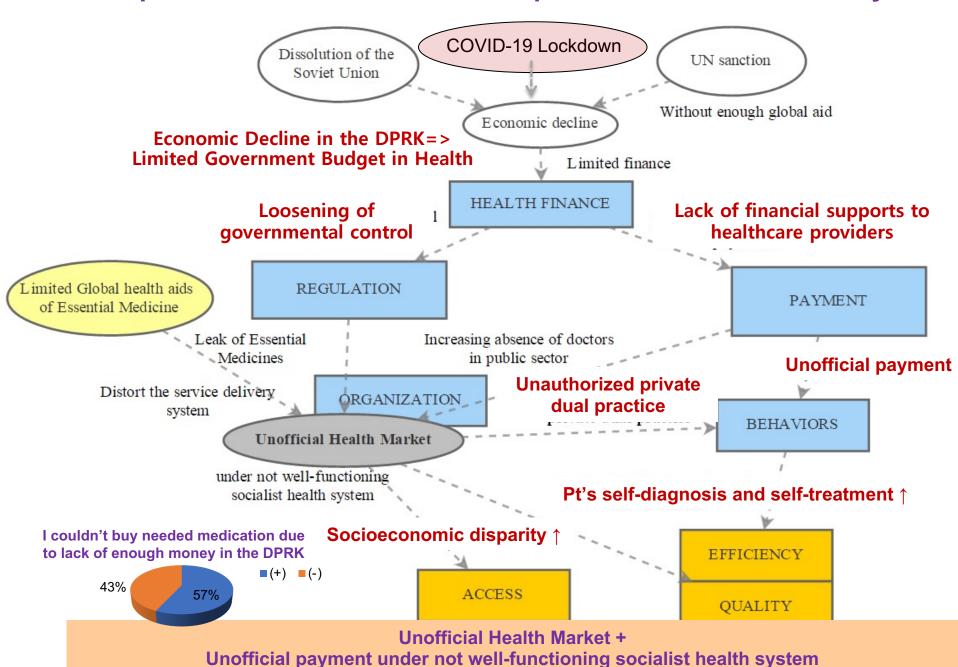




- 1. Impact of the DPRK Covid-19 Response on the DPRK's Health System
- 2. Trends in Global Health Aid to DPRK During the International Sanction and the Role of the ROK Government in the COVID-19 Pandemic Era
- 3. Future Inter-Korean Biomedical Cluster Cooperation at the Demilitarized Zone (DMZ) or Border Area in the Post-pandemic Era

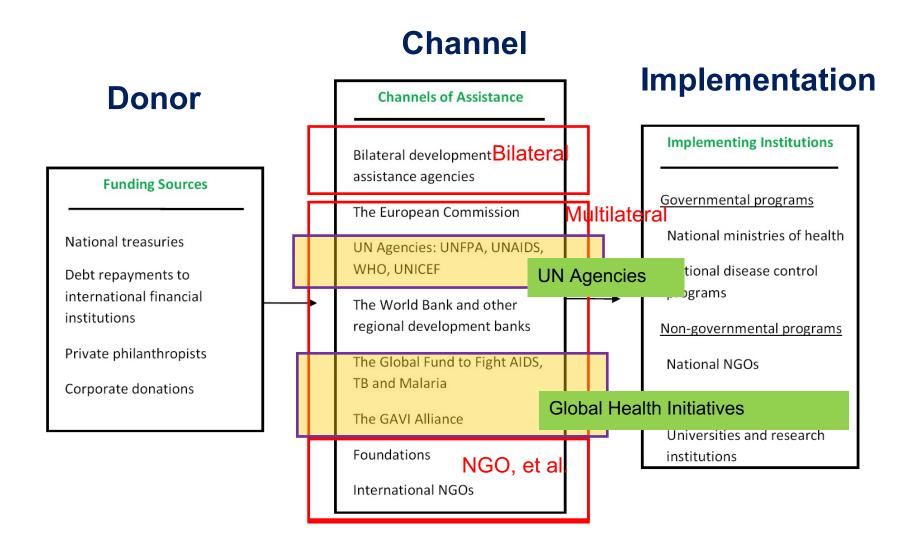
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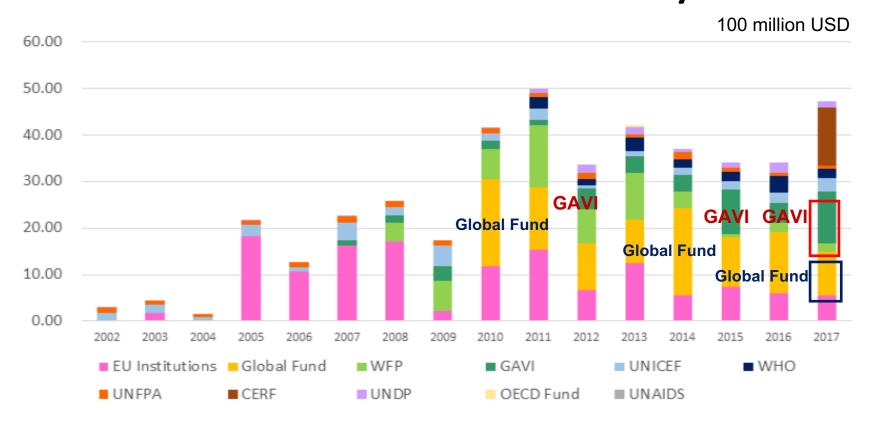


2. Trends in Global Health Aid to DPRK During the International Sanction and the Role of the ROK Government in the COVID-19 Pandemic Era

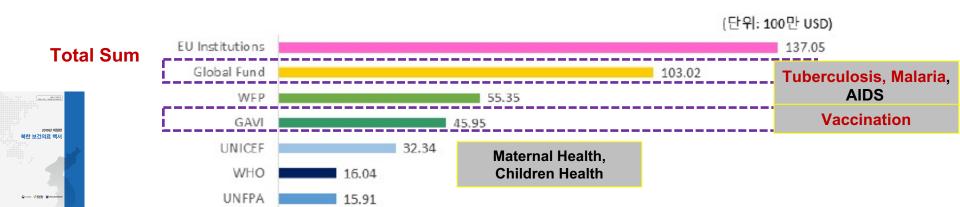
Flow of Global Assistance for Health



Trends in Global Health Aid to DPRK by Channel



[그림 2-1-22] 연도별 국제기구의 대북 보건의료 지원 총 금액



Global Health Initiatives: GAVI, Global Fund

focus on specific diseases or on selected interventions, commodities, or services

Global Alliance for Vaccines and Immunization (GAVI)

Vaccination

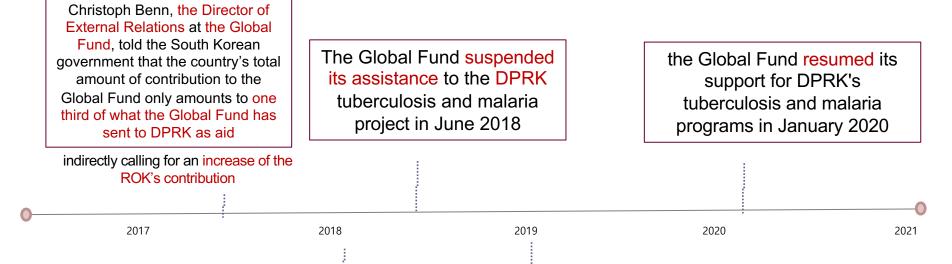
GAVI is co-leading COVAX (Covid-19 Vaccines Global Access)

Global Fund

Tuberculosis, Malaria, AIDS

- Public donors' contributions <u>cannot be earmarked</u> for specific countries or programs, and the allocation of funding is the responsibility of the Global Fund Board
- Performance based financing: inputs linked to performance

Ex> Tuberculosis crisis in the DPRK



the ROK decided to double its

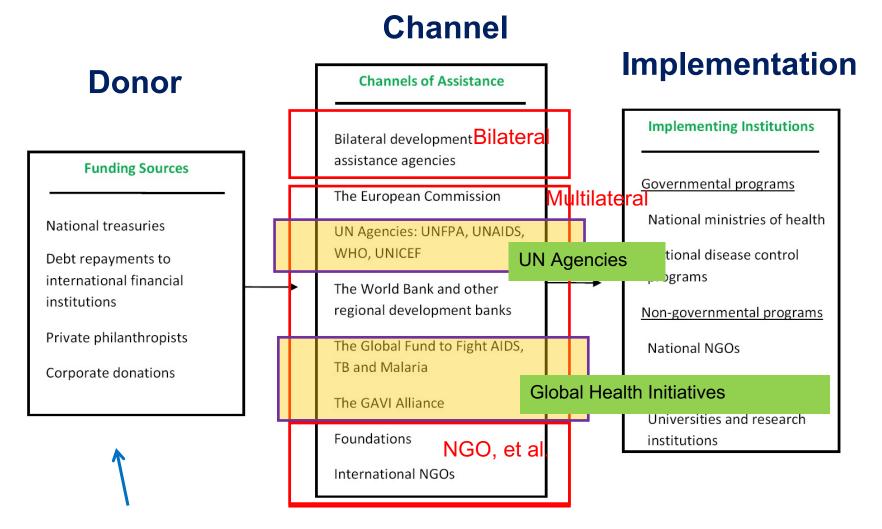
contributions to Global Fund starting from 2019

This is a classic example of how a country that financially depends on certain external organizations in tackling infectious diseases can become extremely vulnerable to international relations and political decisions.

ROK maintained its previous

level of contribution in 2018

Role of the ROK for Health Aid to the DPRK



Role of Republic of Korea

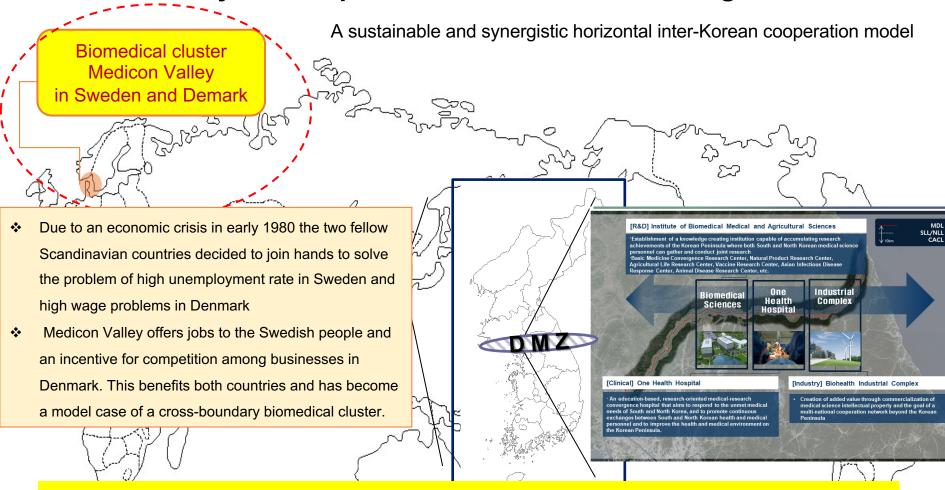
Ministry of Unification: Inter-Korean Cooperation Fund => UN Agencies
Ministry of Foreign Affairs: Global Disease Eradication Fund => GAVI, Global Fund
Ministry of Health and Welfare: Korea Foundation for International Healthcare(KOFIH)

Trends in Global Health Aid to DPRK by Donor Countries

														_									
	Source Location	2000	2001	2002	2003	2004	2005	2006	2007	2008 20	009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	계	%
1	Australia	6.66	2.89	3.39	1.74	7.44	7.	0.78	1.98	-	-	-	5.51	2.02	1.50	-	_	-	_	_		33.91	2.73%
2	Austria	12	-	-	-	0.06	2	-	-	-	-	-	-	-	-	(42)	-	2	-	1/2	120	0.06	0.00%
3	Brazil	12	-	-	-	-	21	-		-	-	0.20	-	4.12	-	-		-	-	-		4.32	0.35%
4	Canada	It io v	1001	imno	rtont	for H	- C		11	nitos	1 C+	otoo	on	4 ۸	hor	dar	205	2011	n tri	20.1		29.04	2.34%
5	China	IL IS V	/ery	mpo	rtant	ior u	и г	(Ur	V, U	niteo	1 Ot	ales	and	J OL	nei	aoi	101	Cou	ritri	esi	.0	5.21	0.42%
6	Cuba	main	tain	its di	rect a	and it	ndir	ect	fina	ncia!	SU	nnoi	t in	ord	ler t	O C	ontr	'ihu'	te to	0		1.40	0.11%
7	Czech Renubli																					0.10	0.01%
8	Denmark	DPR	K's r	<u>iealtr</u>	h and	med	lica	ca	re, ı	nclu	ding	g Co	VID-	-19	test	s, tr	reat	me	nts,	, an	d	6.60	0.53%
9	Finland	Vacc	inac	throu	ugh va	oriou	ic m	aulti	loto	ralo	raa	niza	tion	c in	cni	toc	of (4iffi,	oulti	OC.	in	6.22	0.50%
10	France				_						_										11 1	0.51	0.04%
11	Germany	UN s	anct	ions	, inter	-Kor	ean	CO	ope	ratio	n ai	nd D	PR	K's	Cov	vid-	19 I	ock	dov	vn.		11.81	0.95%
12	Greece		C	,						C. . .		. — —						~~				0.04	0.00%
13	Hungary	-	_	-	-	0.12	-	-	-	-	-	-	0.02		_	_	_		-	2	_	0.14	0.01%
14	India	-	-	-	-	-	-	- 5	- 5	-	-	- 5	1.00	-	95K	1573	50	1.00	- 55	- 15	1050	2.00	0.16%
15	Indonesia	-	0.70	-	-	3.7	-	-	-	-	-	-	(7)	2.00	-	-	- 5	2	-	-	-	2.00	0.16%
16	Ireland	0.22	15	-	0.09	3.10	-	0.64		-	-		-	0.25	-		7.5	7.0	-	(7	17.0	4.30	0.35%
17	Italy	2.30	7.08	-	6.52	3.66	-	-	1.35	0.93	-	-	0.77	-	0.26	-		- 7	-	17	1.5	22.87	1.84%
18	Japan	95.66	104.89	0.00		46.70			-						170	0.70	-			7		247.25	19.92%
19	Japan Korea, Republic of		15.79	16.24	16.83	52.40	0.03	7.28	12 31	11 24 14	4.21			4.39	12.08	6.57	4.00	4 00				178.84	14.41%
20	Liechtenstein	0.47	13.75	10.24	10.85	32.40	0.03	7.20	-	-	4.21	-	0.20	0.11	0.11	0.57	0.10	4.00	-	-		0.52	0.04%
21	Luxembourg	-	10-10	0.56	0.44	0.81	_	_	0.10	- 1	0.35	-	0.64	0.33	0.48	-	-	-	_	-	-	3.71	0.30%
22	Netherlands	3-	0.10	-	2.20	0.22	2	-	-	-	-	-	0.0	-	-	0-0	-	-	-	-	0-0	2.52	0.20%
23	New Zealand	0.11	-	0.05	0.20	0.87	-	0.19	-	-	_	-	-	1 14	-	-	-	-	-	-	-	1.42	0.11%
24	Norway	1.70	1.58	0.74	2.62	2.76	2	2.43	4.65	2.86 4	4.70	0.78	0.88	1.77	0.86	1.00		-	_	1.74	0.43	31.50	2.54%
25	Poland	-	-	-	0.02	-	2		-	-		_					20	2	_	72		0.02	0.00%
26	Russian Federation	0.01	-	-	10.00	17-3	2	-	0.51	-	-	-	-	5.00	3.00	-	-	3.00	-	8.00	-	29.52	2.38%
27	Saudi Arabia	-	100	-	-	-	-	2	-	8.48	0.56	_	-	-	-	-	-	-	_	-	-	9.04	0.73%
28	Singapore	12	172	20	ੂ	- 2	2	্ৰ	0.04	-	2	ੂ	-		820	W20	28	2	2	92	121	0.04	0.00%
29	South Africa	72	-	-	-	_	-	-	0.08	2	_	-	0.14	0.12	-	-	2	-	2	-	-	0.34	0.03%
30	Sweden	1.21	0.62	0.97	2.26	6.04	1.81		1.00	-	_	-	3.83	-	1.69	-	0.64	1.23	0.56	2.65	1.08	25.59	2.06%
31	Switzerland	0.89	2.22	-	0.35	0.10	0.23	2	0.45	-	2	-	4.95	4.91	7.95	-	-	4.59	_	5.32	5.99	37.95	3.06%
32	United Kingdom	0.07	1.71	1.71	2	1.89	2	2	1.01	2	2	-	-	-	2	700	-		ੁ	-	1.2	6.39	0.51%
33	United States	29.23	102.70	63.49	31.52	19.30		2	_		2	2	_	-	0	700	2	2	1.00	-	-	247.24	19.92%
34	국가 제외 기관	7.08	1.25	25.75	45.39	25.8	1.12	0.45	29.91	17	7.85	11.1	42.49	20.49 1	15.84	2.99	7.18	11.38	12.35	10.25		288.67	23.26%
	계	149.83	247.41	118.34	130.42	184.83	4.75	11.77	55.27	23.51 3	7.67	12.08	61.70	54.67	45.75	11.46	12.47	27.22	13.91	29.82	8.21	1241.09	100.00%

3. Future Inter-Korean Biomedical Cluster Cooperation at the Demilitarized Zone (DMZ) or Border Area in the Post-pandemic Era

Inter-Korean Biomedical Cluster Cooperation could be accompanied by the Cooperative Threat Reduction Program



- A model of coexistence in which research, clinic, education, and production are intertwined in an interdisciplinary network, based on a model of economic cooperation that builds upon the notion of "One Health"
- DMZ would no longer remain a symbol of the Korean war, but a symbol of life and peacebuilding

Inter-Korean Biomedical Cluster at the DMZ or Border Area

Biomedical-Agricultural One Health Industrial Complex Science R+D Hospital Mobile care hospital (X-ray, ultrasound, clinical Basic Medicine Convergence Department of Clinical Medicine pathology set) Natural Product Research Center Clinical pathology, electronic diagnostic medical Infectious Disease Hospital equipment basic research Cardiocerebrovascular Hospital Research Center Medical equipment, medical consumables Etiology investigation Cancer hospital Digital healthcare, software Al industry New drug from Development of diagnostic methods Dental hospital Medical device service and training natural products Development of treatments Education training Medical Device Complex Center Health and welfare Services General Hospital Medical equipment Data Science, Al Pharmaceutical Asian Infectious Peace Economy Multidisciplinary new drug GMP facility Disease Response Centery Community collaboration Vaccine Medicine Vaccine New drug from natural South-North Korea Inter-Korean Biomedical Establishment of life products research One Health Hospital Science Research health industrial complex Institute Animal-human Veterinary hospital Agricultural industry Business Platform Infectious disease Zoonotic disease **Botanical hospital** Agricultural Life Farm animals Product promotion and . Plant Quarantine Research on zoonotic Smart Greenhouse Education training Research Center Plant factory (GMP crops) infectious diseases Center Intellectual property Greenhouse Healing & Animal clinical sample Genetic resource collection Plant crop pests Support Healing Space resources bank Breed improvement DMZ Plaza Plant-borne diseases **Bio Venture Company** Food and drug research Education training Agricultural life science and technology Response to new infectious diseases Inter-Korean Biomedical Cluster Development Project Team

Administrative, financial, and legal promotion for inter-Korean joint R&D

Thank you



