



ASEAN-GPP-BlueDot Project

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11 August 2015

Guiding Principles to Implementation of ASCC

ASEAN SOCIO-CULTURAL COMMUNITY
BLUEPRINT (Adopted by ASEAN Leaders 2009)

ASEAN STRATEGIC FRAMEWORK ON HEALTH
DEVELOPMENT (2010-2015)

Endorsed by 10th ASEAN Health Ministers
Meeting

Endorsed Work Plans of Health Subsidiary
Groups (Working Groups, Expert Groups, Task
Forces)



ASEAN Strategic Framework on Health Development (2010-2015)

- Operationalizes the 55 health action lines of the ASCC Blueprint
- ASEAN Expert Group on Communicable Diseases (AEGCD) tasked with:
 - building ASEAN EID mechanism for surveillance, prevention, preparedness and response to EIDs
 - Address specific diseases including rabies, dengue fever, malaria and TB
 - Multi-pandemic preparedness and response



Institutionalization on ASEAN Health Development



The Global Partnership Program

- Under G8 Framework on Global Partnership against the Spread of Weapons and Materials of Mass Destruction, Canada's Global Partnership Program (GPP) is supporting Strengthening Global Biological Security (SGBS) initiatives.

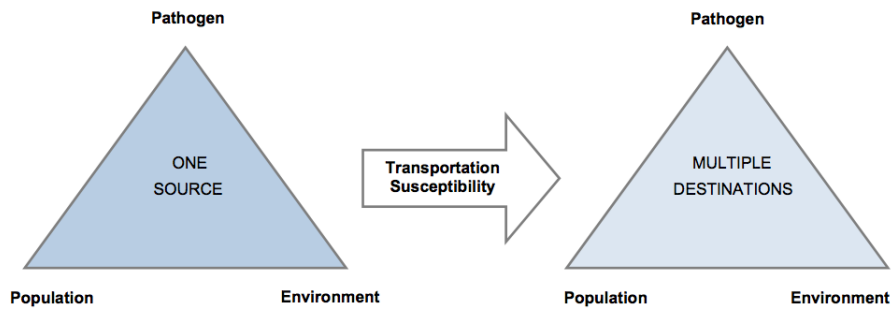


ASEAN-GPP-BlueDot Project

- Under the GPP-SGBS, Canada has partnered with ASEAN for a two-year project to strengthen disease surveillance, detection and response capacities.
- This includes establishing and utilizing the BlueDot early warning and disease surveillance system in the region (formerly called the "BioDiaspora" system).

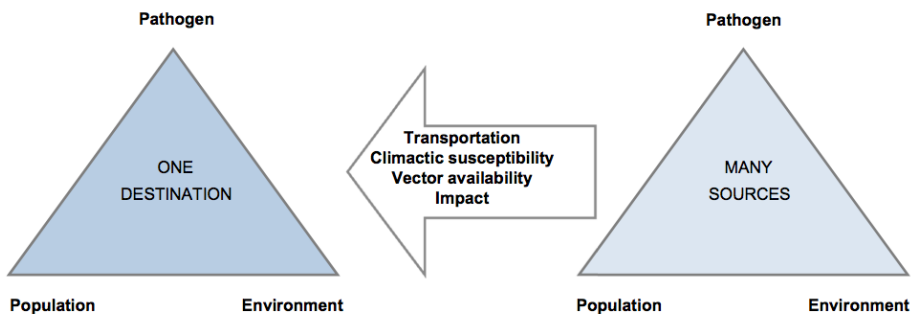


Rapid Risk Assessment



Local Risk Anticipation

Multiple Global Threats to Single Geography / Early Warning Dashboard



Horizon scanning
Event based surveillance



Data to be included

- Animal health and emergence and spread of zoonotic diseases
 - Influenza
 - MERS-CoV
 - Ebola
 - Nipah
- Dengue
- Patterns detected from laboratory surveillance data
- Food safety
- Changes in demographic, socio-economic and cultural trends
- Other potential biological threats



- BlueDot has worked with the Philippines to disseminate risk assessment for MERS-CoV and Ebola virus disease.
- The Philippine DOH has also used the BioDiaspora web application to make an analysis of the risk of importation for MERS-CoV.



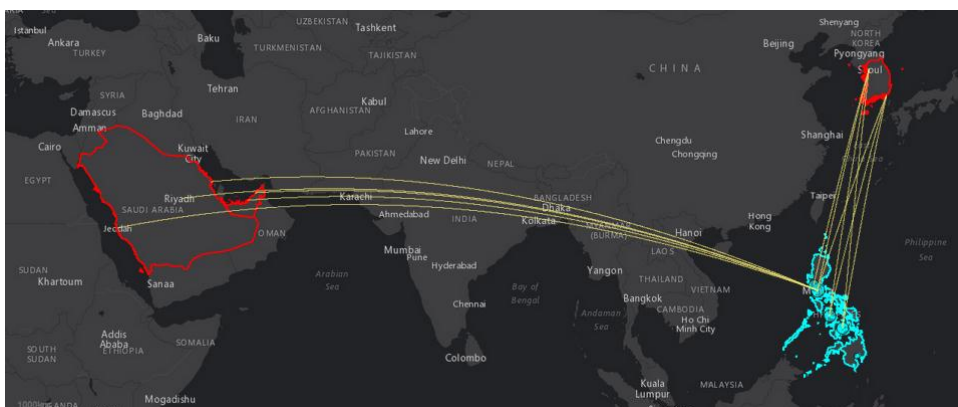


Risk of Importation of MERS-CoV into the Philippines*

June 2015

*Utilizing the BioDiaspora application

MERS-CoV can arrive from South Korea, Saudi Arabia and UAE



Number of Arrived Passengers from Origin to Point of Entry, June 2014

Origin Airport	Origin Country	Destination Airport	Total Volume	Percent
Incheon International Airport	Korea (South)	Ninoy Aquino International Airport	43,968	22.5
Incheon International Airport	Korea (South)	Mactan International Airport	23,982	12.3
Incheon International Airport	Korea (South)	Kalibo International Airport	17,637	9.0
Dubai International Airport	United Arab Emirates	Ninoy Aquino International Airport	17,541	9.0
King Fahd International Airport	Saudi Arabia	Ninoy Aquino International Airport	11,302	5.8
King Kalid International Airport	Saudi Arabia	Ninoy Aquino International Airport	10,186	5.2
Al Maktoum International Airport	United Arab Emirates	Ninoy Aquino International Airport	10,174	5.2
Abu Dhabi International Airport	United Arab Emirates	Ninoy Aquino International Airport	8,979	4.6
Gimhae International Airport	Korea (South)	Ninoy Aquino International Airport	8,657	4.4
King Abdulaziz International Airport	Saudi Arabia	Ninoy Aquino International Airport	6,408	3.3
Others			36,849	18.8
TOTAL			195,683	100.0

Source: BlueDot – IATA (International Air Transport Association)



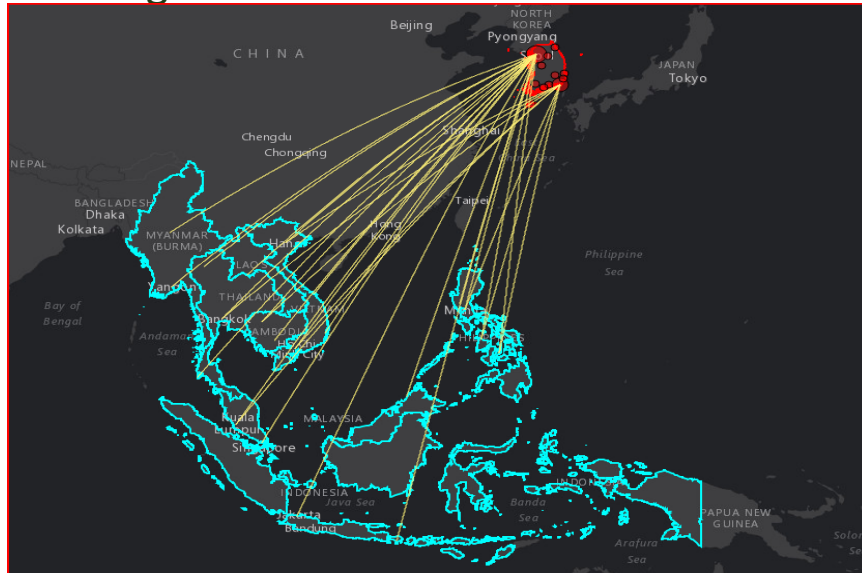
Number of Passenger Seats and Flights from Origin to Point of Entry, June 2015

Departure Airport	Arrival Airport	Airline	Airline Code	Seats	Flights	Fly Time
Dubai International Airport	Ninoy Aquino International Airport	Emirates	EK	33,570	90	8h 50m
Abu Dhabi International Airport	Ninoy Aquino International Airport	Etihad Airways	EY	22,140	60	9h 0m
Incheon International Airport	Ninoy Aquino International Airport	Korean Air Lines	KE	20,280	60	3h 52m
Incheon International Airport	Ninoy Aquino International Airport	Asiana Airlines	OZ	17,281	60	3h 55m
Incheon International Airport	Ninoy Aquino International Airport	Philippine Airlines	PR	16,680	60	4h 10m
Dubai International Airport	Ninoy Aquino International Airport	CEBU Pacific Air	5J	13,080	30	8h 30m
Dubai International Airport	Ninoy Aquino International Airport	PAL Express	2P	12,420	30	9h 10m
Dubai International Airport	Ninoy Aquino International Airport	Philippine Airlines	PR	12,420	30	9h 10m
King Kalid International Airport	Ninoy Aquino International Airport	Saudi Airlines	SV	11,884	30	9h 55m
Abu Dhabi International Airport	Ninoy Aquino International Airport	Philippine Airlines	PR	11,610	30	8h 40m
Others				154,357	739	
TOTAL				325,722	1,219	

Source: BlueDot – IATA (International Air Transport Association)



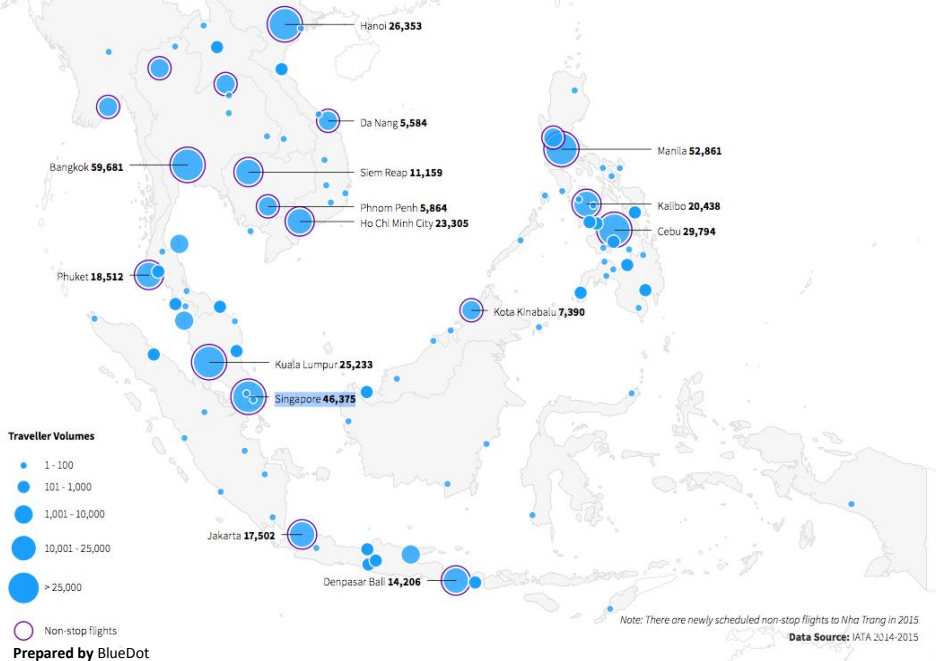
Flights from South Korea to ASEAN



Source: BlueDot – IATA (International Air Transport Association)



Final destinations of travellers into the ASEAN region from South Korea June 2014



Number of Arrivals from South Korea to Philippines*

January to December 2014

Airport Name	Airport Code	City	Total Volume	Percent
Incheon International Airport	ICN	Seoul	670,088	83.66
Gimhae International Airport	PUS	Busan	128,472	16.04
Jeju International Airport	CJU	Jeju	1,080	0.13
Yeosu/Suncheon Airport	RSU	Yeosu	394	0.05
Ulsan Airport	USN	Ulsan	368	0.05
Daegu International Airport	TAE	Daegu	287	0.04
Gwangju Airport	KWJ	Gwangju	123	0.02
Gimpo International Airport	GMP	Seoul	82	0.01
Pohang Airport	KPO	Pohang	50	0.01
Wonju Airport	WJU	Won-ju	2	0
TOTAL			800,947	

Source: BlueDot – IATA (International Air Transport Association)



Arrivals from South Korea

- **Number of Arrivals from South Korea to Philippines - June 2014: 110,945**
- **Number of Seats from South Korea to Philippines - June 2015: 170,840**
- **Number of Flights from South Korea to Philippines - June 2015: 825**

Source: BlueDot – IATA (International Air Transport Association)



Implications

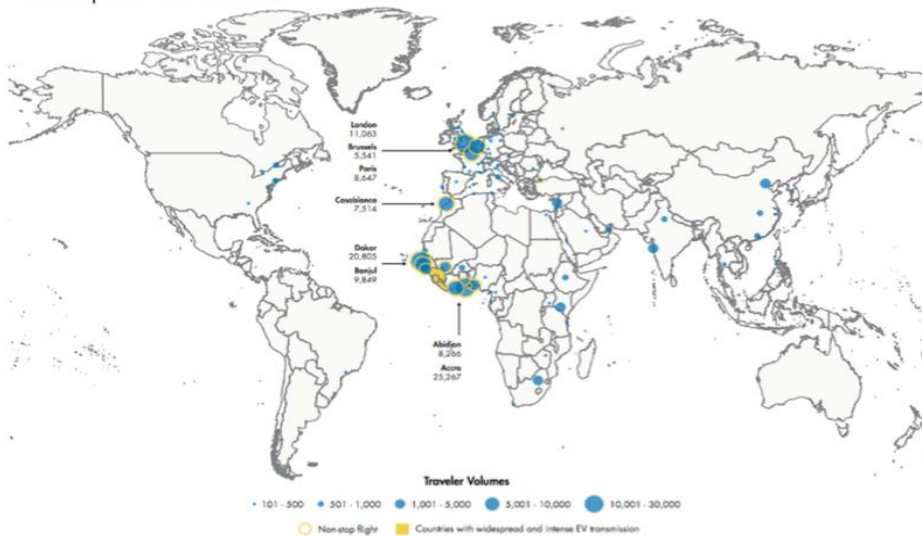
- Risk assessment for importation of cases of Emerging Infectious Diseases
- Facilitates health system vigilance:
 - Quarantine
 - Disease surveillance
 - Clinical management
 - Program management
- “Heads-up approach” to anticipating monthly/seasonal variations in traveler arrivals



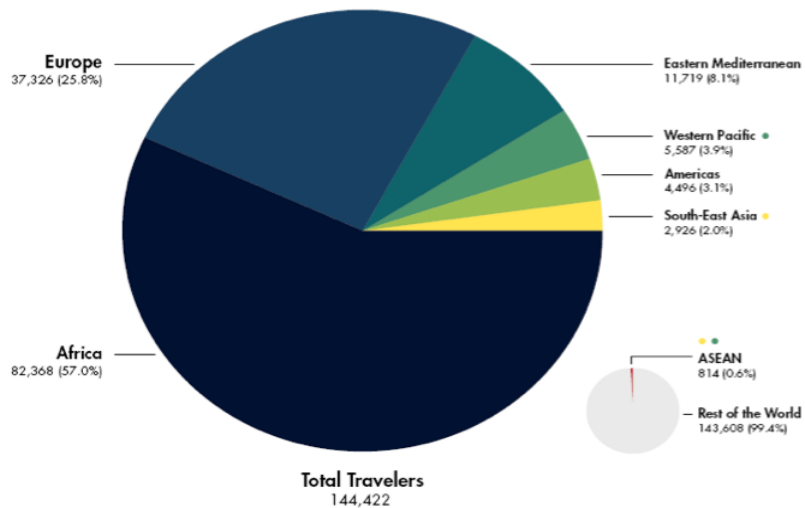
Assessing the Risk for International Dissemination of
Ebola Virus to ASEAN Countries during the
2014 West African Outbreak

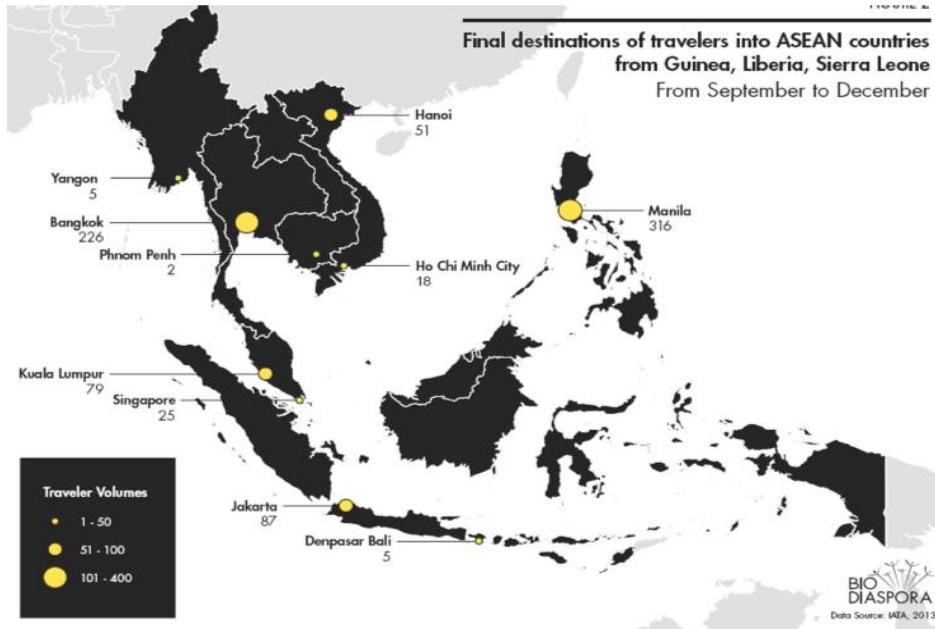
FIGURE 2

Final Destinations and Volumes of Travelers from Guinea, Liberia, and Sierra Leone From September to December



Final Destinations of Travelers from Guinea, Liberia, and Sierra Leone By WHO Region from September to December





Final destinations within ASEAN region of individuals initiating air travel from within Guinea, Liberia and Sierra Leone

Rank	Destination Country	Traveler Volume				Total*	% Total Volume
		September	October	November	December		
1	Philippines	118	81	64	53	316	38.8%
2	Thailand	68	64	57	37	226	27.8%
3	Indonesia	43	9	12	28	92	11.3%
4	Malaysia	14	34	12	19	79	9.7%
5	Vietnam	25	0	38	6	69	8.5%
Total							96.1%



City of last transition or embarkation before entering ASEAN member country (by point of entry city) of individuals initiating air travel in Guinea, Liberia and Sierra Leone

Top 10 Points of Entry into ASEAN region		Last International stop from before entering ASEAN member country and the number of travelers transiting through each stop					% of travelers from Ebola Affected Countries
Country	Point of Entry	City/Airport	City/Airport	City/Airport	City/Airport	City/Airport	
Philippines	Manila (MNL)	Bangkok (185)	Dubai (69)	Hong Kong (29)	Abu Dhabi (21)	Guangzhou (11)	99%
Thailand	Bangkok (BKK)	Addis Ababa (139)	Nairobi (47)	Dubai (23)	Doha (4)	Amsterdam (4)	96%
Indonesia	Jakarta (CGK)	Dubai (26)	Bangkok (21)	Abu Dhabi (18)	Amsterdam (12)	Doha (6)	95%
Malaysia	Kuala Lumpur (KUL)	Dubai (34)	Addis Ababa (17)	Paris (16)	Bangkok (8)	Abu Dhabi (2)	97%
Singapore	Singapore (SIN)	London (6)	Frankfurt (6)	Paris (6)	Dubai (5)	Bangkok (2)	100%
Viet Nam	Ho Chi Minh City (SGN)	Dubai (9)	Paris (6)	Bangkok (3)	-	-	100%
Viet Nam	Hanoi (HAN)	Paris (28)	Doha (23)	-	-	-	100%
Indonesia	Denpasar Bali (DPS)	Singapore (5)	-	-	-	-	100%
Myanmar	Yangon (RGN)	Bangkok (5)	-	-	-	-	100%
Cambodia	Phnom Penh (PNH)	Doha (2)	-	-	-	-	100%



Efficiency of airport-based interventions to screen international travelers arriving from Guinea, Liberia and Sierra Leone [Note: there are no direct flights to ASEAN from the 3 countries].

Rank	City (Airport)	Screening Efficiency		
		Number of International travelers (with a final destination within the same country)	Number of International travelers originating in the 3 countries	Number of travelers needed to screen to assess one traveler with potential exposure to EV
1	Manila (MNL)	2,466,871	316	7,807
2	Bangkok (BKK)	6,026,784	226	26,667
3	Jakarta (CGK)	2,346,193	87	26,968
4	Kuala Lumpur (KUL)	4,666,770	79	59,073
5	Hanoi (HAN)	925,966	51	18,156
6	Singapore (SIN)	7,261,325	25	290,453
7	Ho Chi Minh City (SGN)	1,546,654	18	85,925
8	Denpasar Bali (DPS)	1,193,043	5	238,609
9	Yangon (RGN)	501,555	5	100,311
10	Phnom Penh (PNH)	438,142	2	219,071
Total:		27,373,303	814	1,073,040



Key next steps in the Project

- Working with project focal points within each ASEAN country
- Deciding on highest value datasets
- Training of technical personnel from each ASEAN country
- Utilization of the BlueDot system for the assessment of potential threats (e.g. MERS-CoV, Ebola)
- Customized of application based on user needs and experience



Thank you