

# **Rapid Commercial Cold Chain Logistics Capacity Assessment**

*of Indonesia Cold Chain Association (ARPI/Asosiasi Rantai Pendingin Indonesia)*

*National Logistics Cluster Indonesia*

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## Background

The government-led National Logistics Cluster in Indonesia continues to take part in supporting the Government of Indonesia in delivering efficient and effective COVID-19 responses.

With more than 70 stakeholders from the government, private sector, non-profits, academics, experts, and research institutes onboard the platform, the group aims to consolidate ongoing efforts following disasters in Indonesia.

Earlier this year, the National Logistics Cluster conducted rapid commercial logistics capacity assessment to provide information on available COVID-19-related logistics services provided by the private sector within the cluster: ALFI, ASPERINDO, and PT Pos Indonesia (Persero). The assessment covers the entities' capacity in fourteen 'priorities' provinces in Indonesia<sup>1</sup>.

A key finding from that assessment is that while all business entities possess massive capacities in providing logistics service<sup>2</sup>, there were limited findings on cold storage and commercial national logistics capacity to anticipate the temperature-sensitive COVID-19 vaccination in the coming months and years.

With this in mind, National Logistics Cluster, in close coordination with the Indonesia Cold Chain Association (ARPI), maps ARPI's extensive commercial capacity on cold chains relevant for vaccine and pharmaceutical purposes. Similar to its predecessor, the objective is of this report to provide updated information on the COVID-19-related cold chain logistics services provided by ARPI, as the key private sector actor connected to the National Logistics Cluster.

Similar to its predecessor, this assessment hopes to provide accessible information and reference useful in planning long-term COVID-19 cold chain logistics operations, and to allow more evidence-based decision-making process by the sub-national government in regard to receiving support from commercial resources in COVID-19 response.

## Scope

Logistics service discussed in the report include:

1. Storage, including handling, and warehouse & inventory management;
2. Transportation and distribution;
3. Other facilities to anticipate the surge demand of cold chain in the context of vaccination;
4. Est. number of trained personnel immediately available to provide technical support on cold chain management to government-led disaster response.

Please note that this assessment does not include customs clearance as ARPI is not an association of PPJK and/or appointed importers.

Information covered is available at the national and province level, with some key capacity identified in large cities.

## How to use the LCA

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<sup>1</sup> Provinces with a high number of COVID-19 positive cases.

<sup>2</sup> ALFI for forwarder and customs clearance, ASPERINDO for door-to-door and courier service, and PT Pos is noted for its last-mile coverage and small cargo.

For any queries on the capacities identified, or on accessing services mentioned in this document, please reach out to ARPI's Chairman – Hasanuddin Yasni [hsyasni@arpionline.org](mailto:hsyasni@arpionline.org) or National Logistics Cluster in Indonesia – Ikhsanuddin [ikhsanuddin@wfp.org](mailto:ikhsanuddin@wfp.org).

## Disclaimer

This LCA report may contain limited levels of details and is not comparable to other logistics assessment results published in Log Cluster which provides in-depth detail on the infrastructure in certain areas.

More comprehensive and detailed Logistics Capacity Assessment results on logistics infrastructure, services, storage, and service providers in Indonesia are available on Global Logistics Cluster's [Digital Logistics Capacity Assessment \(DLCA\) dashboard](#), although they may not include any cold chain capacity.

Note that the facilities identified in this report could be potentially compatible with the vaccine candidates likely to be disseminated in Indonesia<sup>3</sup> based on the latest development to date. However, in the future, different types of storage or required temperature might change as the clinical trial progresses and/or if any other vaccine candidates were identified.

## About ARPI

Joining the Indonesia Cold Chain Association (ARPI) are companies with cold chain systems in their operational management; from F&B industries, fresh products, pharmaceutical, and others. With over 200 members and partners, ARPI aims to develop the cold chain sector and act as a mediator between the industry and the government.

ARPI has recently participated in meetings and platforms organised by the BNPB-led National Logistics Cluster.

## Assessment results

### ***Storage: Existing capacity relevant for COVID-19 context***

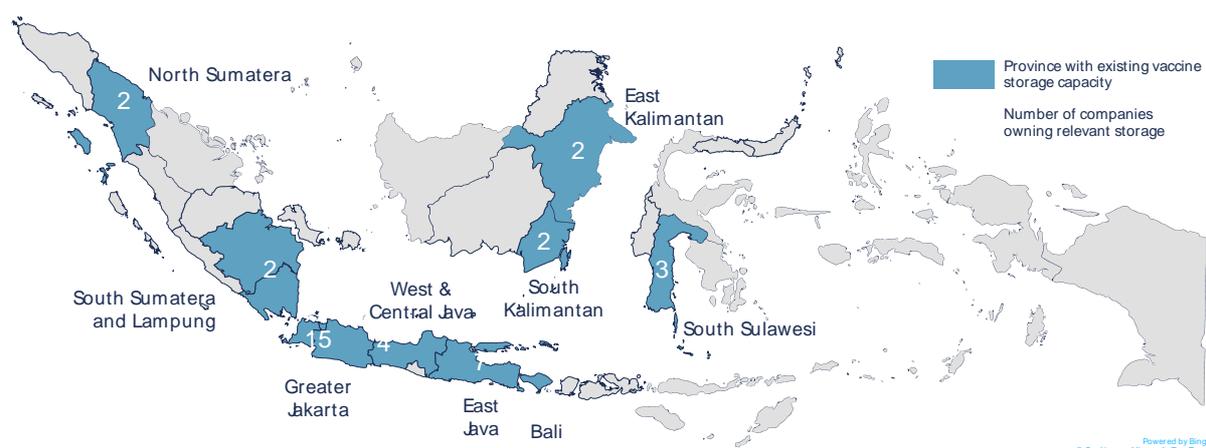
ARPI has access to temperature-controlled rooms with cumulative storage capacity up to 2,4 million pallets, each holding 750-1,000 kg of goods. However, not all is relevant for the context of storage for vaccines, which requires a specific range of temperature.

ARPI has identified facilities relevant for the context of vaccine storage and handling as below. The capacity in each province/area might differ from one another, and the size of bubbles indicates total companies which are able to provide storage for vaccines.

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<sup>3</sup> Possible est. temperature required: 2-6 Celsius degree, -15 to -25 Celsius degree, or over -60 Celsius degree.

## Provinces where ARPI's vaccine-compatible storage are available



### Closer look into five key facilities

This section will contain additional information on a number of facilities: three in Greater Jakarta, one in East Java, and one in Bali.<sup>4</sup>

#### Storage

Capacity – storage with temperature control only

Storage	Estimated total areas of storage (in sqm)	Temperature	Storage strategy	Available loading / unloading facility	Availability of Cold Chain Mgmt., incl. Quality Control and Maintenance
Greater Jakarta 1	18,000 sqm	Up to 5 Celsius degree	<ul style="list-style-type: none"> <li>Refrigerated container</li> <li>Temperature-controlled room with racking</li> </ul>	<ul style="list-style-type: none"> <li>Loading / unloading daily workers</li> <li>Forklift</li> </ul>	Yes
Greater Jakarta 2	17,000 sqm	Up to 5 Celsius degree	<ul style="list-style-type: none"> <li>Refrigerated container</li> <li>Temperature-controlled room with racking</li> </ul>	<ul style="list-style-type: none"> <li>Loading / unloading daily workers</li> <li>Forklift</li> </ul>	Yes
Greater Jakarta 3	22,000 sqm	Up to 5 Celsius degree	<ul style="list-style-type: none"> <li>Refrigerated container</li> <li>Temperature-controlled room with racking</li> </ul>	<ul style="list-style-type: none"> <li>Loading / unloading daily workers</li> <li>Forklift</li> </ul>	Yes

<sup>4</sup> These facilities were selected on the basis of readiness to allocate resources to support government-led disaster response effort.

Surabaya, East Java	11,000 sqm	Up to 5 Celsius degree	<ul style="list-style-type: none"> <li>Refrigerated container</li> <li>Temperature-controlled room with racking</li> </ul>	<ul style="list-style-type: none"> <li>Loading / unloading daily workers</li> <li>Forklift</li> </ul>	Yes
Bali	1,800 sqm	Up to 5 Celsius degree	<ul style="list-style-type: none"> <li>Refrigerated container</li> <li>Temperature-controlled room with racking</li> </ul>	<ul style="list-style-type: none"> <li>Loading / unloading daily workers</li> <li>Forklift</li> </ul>	

## Transportation

### Shipping types & distribution mode

Province	Types of shipping	Distribution mode
All identified above: Greater Jakarta, East Java*, Bali	Both port to port and door to door	Multi-mode: air, road, sea

\*Specifically, from Narogog (Bekasi) for Greater Jakarta and Surabaya for East Java; and its surrounding areas.

### Trucks, container, and trailer – with temperature control

ARPI identifies more than 400 refrigerated transportation vehicles available in the five facilities, with the capacity of up to 6,500 tons.

## 5 types of refrigerated vehicles available

100-140  
units

small trucks  
(3-6 ton)  
CDD



150-190  
units

mid-sized trucks  
(7-15 ton)  
Jumbo



50-70  
units

units of large trucks  
(16-25 ton)  
Built-up



10-20  
units

units of container 20' +  
trailer (22-24 ton)  
WB



10-20  
units

units of container 40' +  
trailer (27-30 ton)  
Trailer



+6,500  
tons

cumulative truck tonnage estimated capacity – as above

### Additional resources: rental reefer container

Anticipating demand surge of cold chains storage and transportation in the coming months or so, ARPI prepares reefer containers available for rental in 28 provinces and 45 cities/regencies in Indonesia.

Mostly available in areas outside Java, this also serves as an additional cold chain infrastructure for areas with limited or no existing capacity.

On its specifications:

- Size: 20" and 40";
- Temperature: 2-5 Celsius degree;
- Electricity: 13,000W required in start-up, and 9,000W for running;
- Management and monitoring system available;
- Preparation takes max. 30 days.

It has a considerably moderate level of mobility; as it is able to be transported to other cities or connected to other refrigerated transportation vehicles owned by the government or partners.

Overview of its availability as follows:

#### Locations of ARPI's reefer containers



#### Specifications and locations of the additional reefer containers

No	Propinsi	Kotamadya/Kabupaten	Vessel To	Forklift	Genset	Facility Plug on Port
1	Aceh	Banda Aceh	Banda Aceh	Yes	No	TBA
2	Sumatera Utara	Medan	Belawan	Yes	Yes	Yes
3	Sumatera Barat	Padang	Padang	Yes	Yes	Yes
		Bukti Tinggi		Yes	Yes	Yes
4	Riau	Pekan baru	Pekan Baru	Yes	Yes	No
5	Kepulauan Riau	Batam	Batam	Yes	Yes	Yes
		Tj Pinang	Tj Pinang	Yes	No	No
6	Jambi	Jambi	Jambi	Yes	No	No
7	Sumatera Selatan	Palembang	Palembang	Yes	Yes	Yes
8	Lampung	Bandar Lampung	Bandar Lampung	Yes	Yes	Yes
9	Kepulauan Babel	Bangka	Bangka	Yes	No	No
		Belitung	Belitung	Yes	No	No
10	Jateng	Semarang	Semarang	Yes	Yes	Yes
11	Bali	Denpasar	Denpasar	Yes	Yes	Yes
12	NTB	Mataram	Mataram	Yes	Yes	Yes
		Bima	Bima	TBA	TBA	TBA
13	NTT	Kupang	Kupang	Yes	No	Yes
		Maumere	Maumere	TBA	TBA	TBA
14	Kalimantan Barat	Pontianak	Pontianak	Yes	Yes	Yes
		Singkawang		Yes	Yes	Yes
15	Kalimantan Selatan	Banjarmasin	Banjarmasin	Yes	Yes	Yes
		Palangkaraya	Banjarmasin	Yes	No	No
16	Kalimantan Tengah	Sampit	Sampit	Yes	No	No
		Pangkalan Bun	Pangkalan Bun	Yes	No	No
17	Kalimantan Timur	Balikpapan	Balikpapan	Yes	Yes	Yes
		Samarinda	Samarinda	Yes	Yes	Yes
		Bontang		Yes	No	No
		Berau	Berau	TBA	No	No
18	Kalimantan Utara	Tarakan	Tarakan	TBA	No	TBA
19	Sulawesi Utara	Manado	Bitung	Yes	Yes	Yes
		Kotamobagu		Yes	Yes	No
20	Gorontalo	Gorontalo	Gorontalo	Yes	No	Yes
21	Sulawesi Tengah	Palu	Palu	Yes	No	Yes
		Luwuk	Luwuk	TBA	TBA	TBA
22	Sulawesi Selatan	Makassar	Makassar	Yes	Yes	Yes
		Pare Pare		Yes	Yes	No
23	Sulawesi Barat	Mamuju		TBA	Yes	No
24	Sulawesi Tenggara	Kendari	Kendari	Yes	No	Yes
25	Maluku	Ambon	Ambon	Yes	No	Yes
26	Maluku Utara	Ternate	Ternate	Yes	No	Yes
27	Papua Barat	Sorong	Sorong	Yes	No	Yes
		Manokwari	Manokwari	TBA	No	Yes
28	Papua	Jayapura	Jayapura	Yes	No	Yes
		Merauke	Merauke	TBA	No	Yes
		Timika	Timika	TBA	No	Yes

### Technical expertise on cold chain infrastructure

In addition to having access to physical cold chain infrastructure such as refrigerated storage and vehicles to support temperature-controlled last-mile distribution; as business associations joined by cold chain providers onboard, ARPI also has broad technical expertise in operating and maintaining the quality of cold chain. This may come as a key contribution in supporting the government-led response to COVID-19.

A possible way to utilise this expertise is by supporting the government in elevating the standard of existing cold chains system, through personnel training for better quality control and handling, as well as long-term storage maintenance.

At the moment ARPI identified more than 30 personnel and experts ready to support the government:

- 29 est. cold chain operations and maintenance experts/trained technicians in Greater Jakarta, Bali, and East Java
- 9 est. certified trainer for cold chain operations – all located in Greater Jakarta.

### **Contact details**

For any queries on the National Logistics Cluster in Indonesia, please contact Ikhsanuddin [ikhsanuddin@wfp.org](mailto:ikhsanuddin@wfp.org) and Nadya S Pryana [nadya.pryana@wfp.org](mailto:nadya.pryana@wfp.org).

*In supporting the Indonesian Government-led efforts in responding to COVID-19 outbreak, WFP, as the lead agency of the IASC Logistics Cluster, supports the National Disaster Management Agency (BNPB) in the activation of the National Logistics Cluster and facilitates the engagement of private sector partners to ensure necessary logistics services are available and accessible by Government and the humanitarian community.*