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The Impact of Climate Change on Healthcare

Building Resilience of Vulnerable Populations with Mobile Health Facilities

Asia Development Bank

Anders Dahl – VP Head Saab Philippines

Amany Wahba – BD Director Medical Solutions



Agenda

Time	Session
11:00 – 11:05 AM	Welcome Remarks and overview of the webinar.
	Mr. Anders Dahl
	Vice President, Head of Saab Philippines
11:05 – 11:35 AM	Building Resilience of Vulnerable Populations with Mobile Health Facilities
	Ms. Amany Wahba Business Development Director- Medical Solutions, Saab Australia
11:35 – 11:55 AM	Q&A Moderator: Mr. Rikard Elfving
	Principal Social Sector Specialist, ADB
11:55 - 12:00 PM	Closing remarks
	Dr. Eduardo Banzon
	Principal Health Specialist, ADB

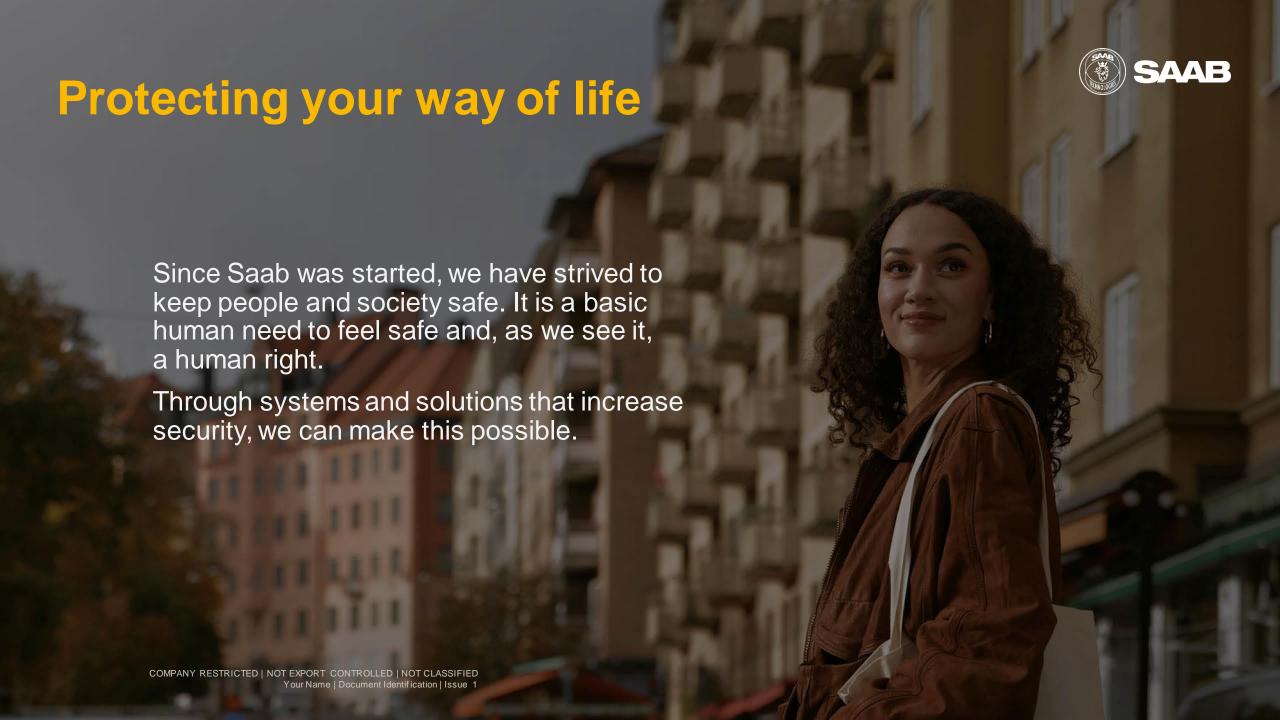


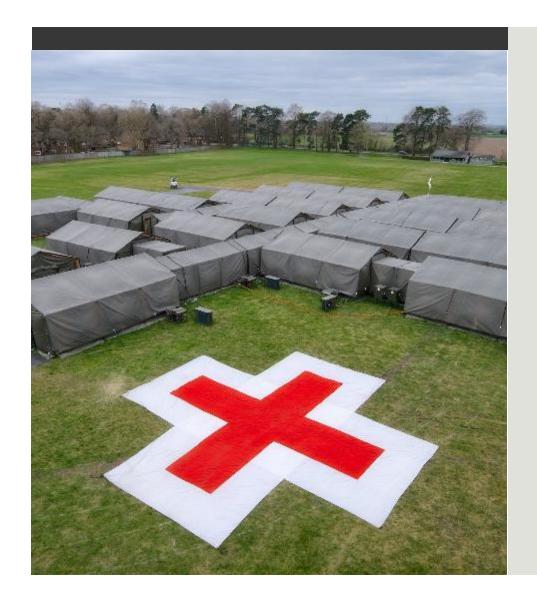
Saab's global organisation











Deployable Health



Saab Deployable Health Capability

Saab has over 30 years deployable health experience

- Medical Treatment Facilities
- NATO Role 1, 2F, 2B, 2E, 3
- Medevac Solutions
- Medical Infrastructure Design
- Medical Systems Integration
- Integrated Logistics Support Services

Swedish Armed Forces, Norwegian Navy, Australian Defence Force, Latvian Armed Forces







Saab Deployable Health





Primary Healthcare

- Treatment Modules
- Consulting Modules
- Dental Modules
- Environmental Modules





Rapid Frontline Care



Point of Injury

Collection Point

- Soldier First Aid Kits
- Medic Kits

- Medic Kits
- Emergency Resus Kits

Medical Evacuation

- Medical device integration
- Stretcher bridges
- Integrated vehicle solutions

Resuscitation

- Forward Resuscitation Module
- Triage Module
- Emergency Care Modules
- Shock Trauma Modules
- Integrated vehicle solutions

Initial Surgery

- Forward Surgical Module (FST)
- Essential Surgery Module
- Staging and Holding Module
- Integrated vehicle solutions

Hospital Care

- Advanced Resuscitation
- Advanced Surgery
- Critical Care Modules
- Ward Modules
- Advanced Diagnostics
- Allied Health
- Clinical Support Modules
- Facility support modules

NATO timeline of care

Enhanced First Aid	Damage Control Resuscitation	Damage Control Surgery	Deployed Hospital Care
0.00		2.0	

Australian Defence Force JP2060- Phase 3







Deployable Medical Modules

Mobile Modules

CSSD

CBRN (Fitted For)

Dental

Imaging- X-ray, CT, US

Pathology

Pharmacy

Primary Health Care

Psychology

Trauma

Triage/ Resuscitation

Surgery

Wards

Evacuation Capabilities
Aeromedical and Surface





Deployable Infrastructure Capabilities

Infrastructure System

Shelters

Power Distribution

Environmental Control

Cold Chain Management

Water Management

Waste Management

02

Back up; spares and consumables

Staff

Laundry

Hygiene

Fitness

Training

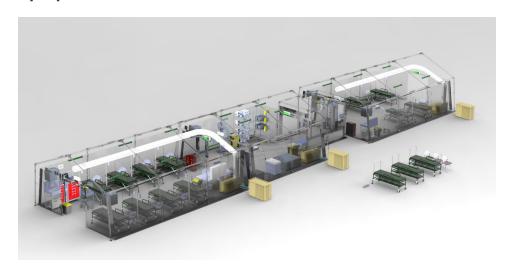
Shared Areas



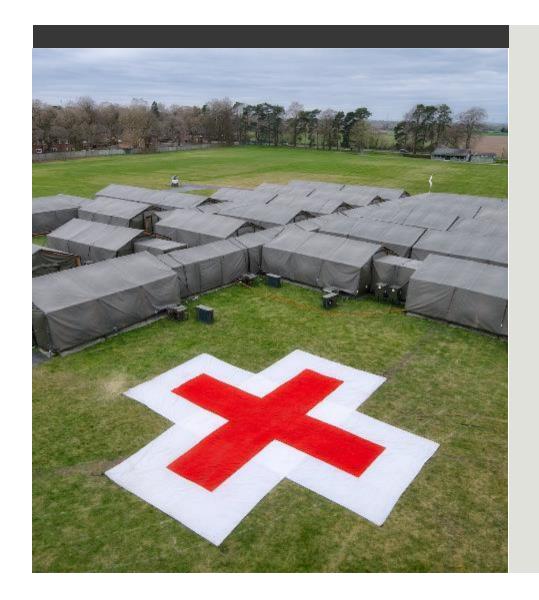


Prime System Integrator Approach

- Hospital Architecture;
 - Patient and Clinician Flow Optimisation
 - Environmental Controls
 - Services (water, waste, medical gasses, electrical, lighting, cold chain management, sterilisation)
- Design, verification and delivery of 550+ medical modules;
- Management of 200+ suppliers and 10,000+ unique equipment sets;
- Integrated Logistics Support
 - Documentation
 - Training
 - Maintenance and repair
 - Sterilisation
 - Spare Parts





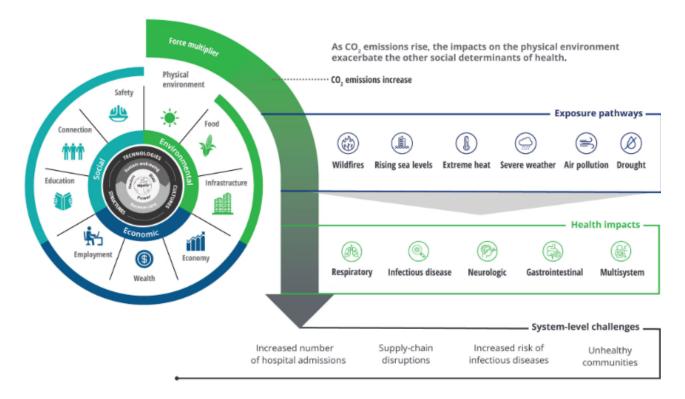


The Impact of Climate Change on Health



The impact of Climate Change on Health

Rising temperatures multiply the risks to human health



51% of global cities expect climate change to seriously compromise public health infrastructure

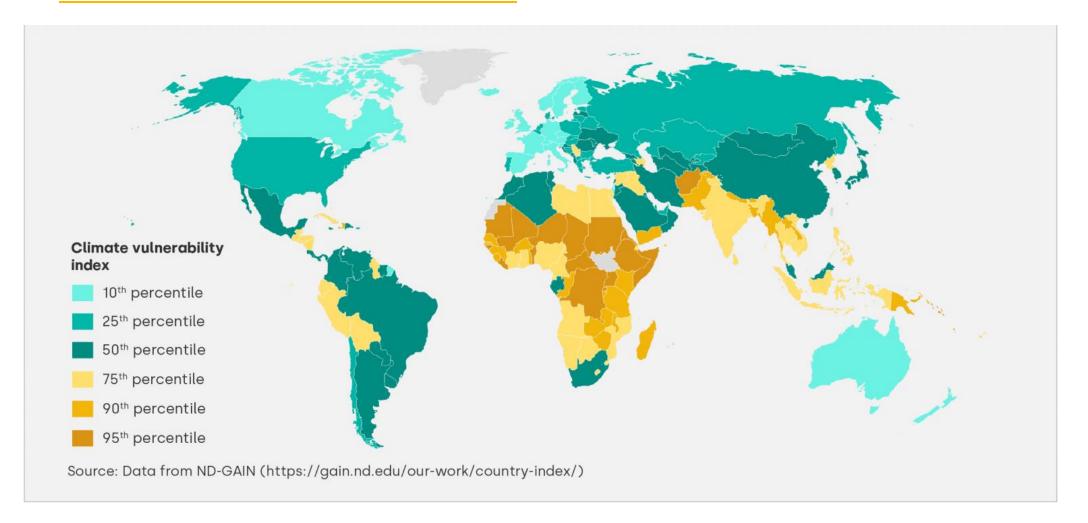
ANCET COUNTDOWNS DI HARZENING PROGRESS DI HARZENING PROGR

Source: Climate change and health care | Deloitte Insights

Source: 5 ways climate change is bad for your health | Imperial News | Imperial College London



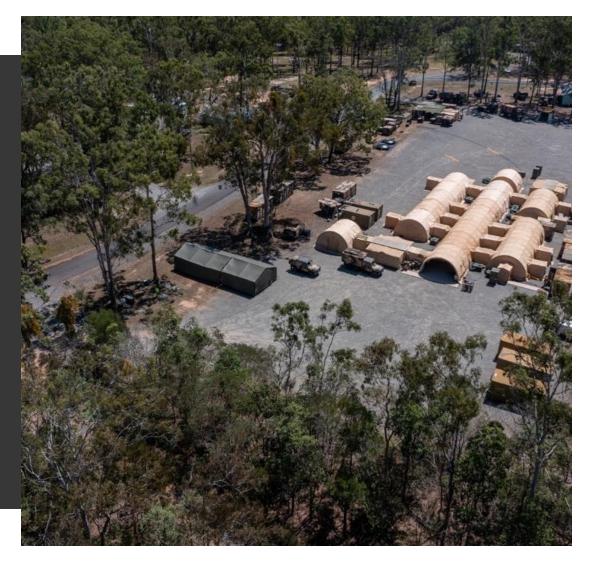
Impact of Climate Change in Vulnerable Populations





Building Resilience of Vulnerable Populations

Mobile Health Facilities





SAAB Medical & Rescue Shelter

SAAB Medical & Emergency Shelter

A lightweight, modular and connectable solution that provides a environmentally protected area to deliver operational effects, such as medical care, primary healthcare, military command and emergency accommodation.

Includes:

- 1 x lightweight shelter (flexible pole or air beam options)
- 1 x power generator
- 1 x power outlets within tent
- 1 x diesel powered heater
- 1 x LED lighting kit
 Total Weight: 80 kg (for flexible pole option)

Optional:

- Connection vestibule (to connect multiple tents together)
- Solar shade nets
- Camouflage nets (Barracuda)













SAAB Role 1

SAAB Role 1 Medical Treatment Facility

The primary role of the Role 1 facility is to provide Damage Control Surgery. The SAAB solution is based on TCCC (Tactical Combat Causality Care) guidelines to provide a rapid resuscitation response to trauma, close to the point of injury and within the NATO timelines of care (the Golden Hour).

The facility can also function to provide primary healthcare to support troop health (company / battalion aid station) and prolonged casualty care (PCC) in the event of an inability to evacuate.

Includes:

- Saab Medical and Emergency Shelter
- Medical kits, including
 - Trauma Set
 - Mascal Set
 - PCC Set
 - Oxygen
 - Blood
 - Stretchers

















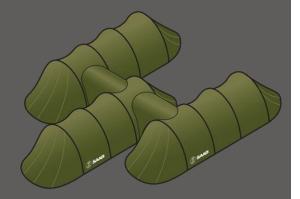
SAAB Role 2 Forward

SAAB Role 2 Forward Medical Treatment Facility

The Role 2 Forward facility is a multi-module field hospital used to provide surgical interventions in addition to the resuscitation capabilities of the Role 1 facility. A patient holding ward is also included to allow for the peri-operative care of surgical patients.

Includes:

- Resuscitation Module
 - Shelter
 - Trauma and Resuscitation Kits (as per Role 1)
- Surgical Module
 - Shelter
 - Surgical bed and light
 - Anaesthetic equipment
 - Surgical equipment
 - Oxygen supply
- Ward Module
 - 4-6 ward beds
 - Ward medical equipment
 - Prolonged field care equipment











Medical Kits

- Trauma Set
- Mass casualty Set
- Prolonged Care Set
- Oxygen
- Blood
- Stretchers





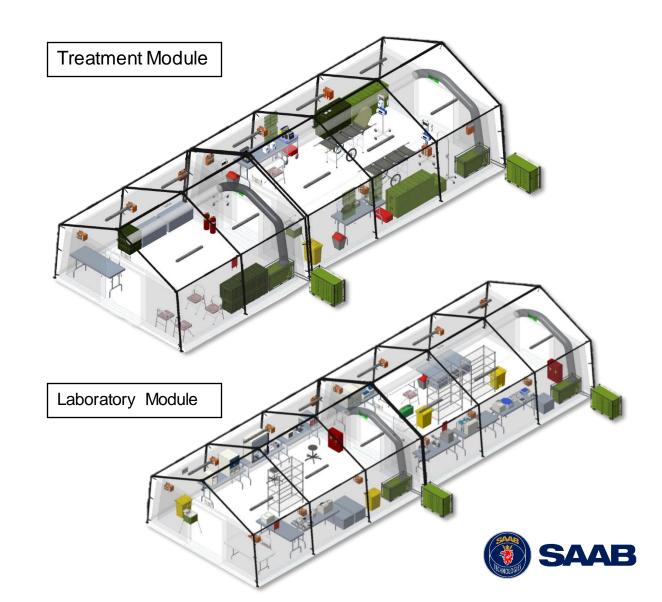






Mobile Health Infrastructure Options

- Mental health and emergency crisis care, diagnosis, therapy and pharmaceuticals
- Quarantine, general health facilities
- Treatment clinics, blood donation centres, and laboratory modules



Decentralise Health Responsibilities from Urban Centres

Support emergency evacuation during disaster management.

Physical delivery of mobile medical infrastructure:

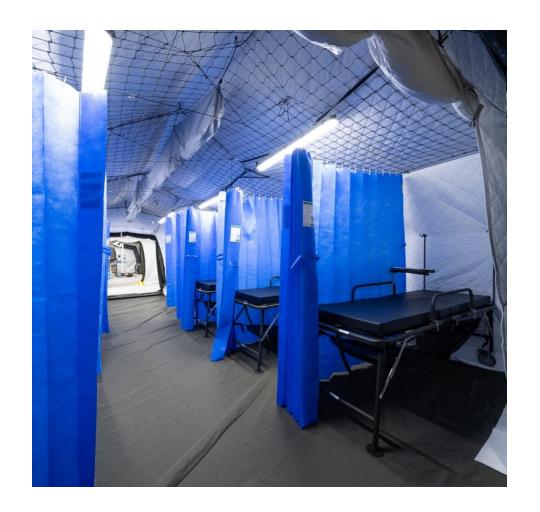
- Multi-functional health care clinics
- Mobile triage
- Surgery
- Blood donation centres
- Laboratories
- Dialysis facilities
- Vaccination clinics

Enhanced regional capabilities. Prioritising health areas Childcare Maternal health Family planning **Aged care Chronic and infectious disease** management



Enhancing pandemic preparedness and response

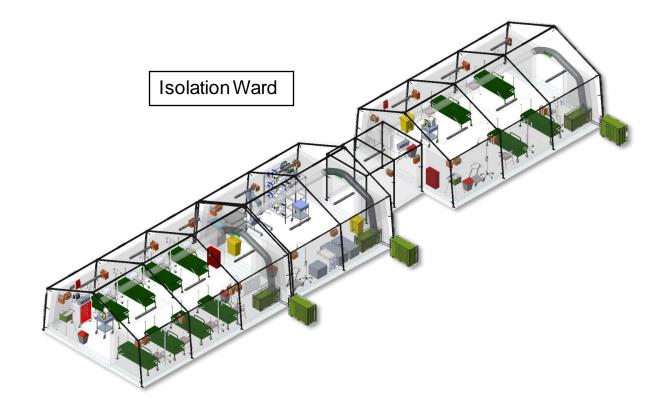
- Diagnostics and testing
- Clinical and therapeutic capacity
- Providing vaccines and preventative measures, masks, PPE
- Responding to signals of early disease outbreaks, and preventing major outbreaks





Solutions for pandemic preparedness and response

- Provide quarantine facilities, treatment modules
- Providing care and vaccine infrastructure,
 refrigeration, clinics, medication
- Strengthening laboratory systems





Deployable Health Support Centre

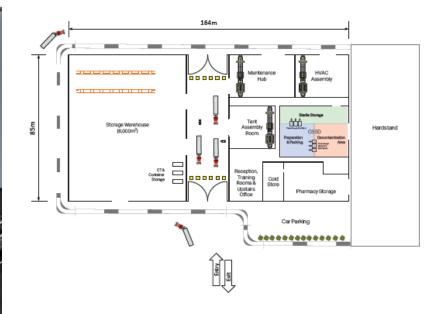
Total building area 12,346m²





Saab Service Concept







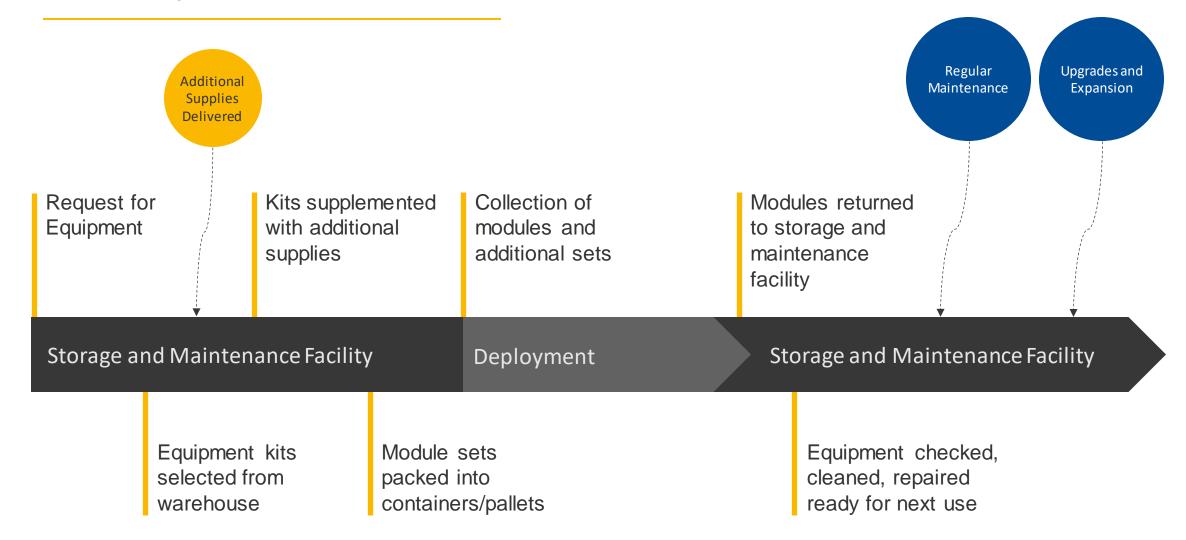








Supply Chain & Support





Deployable Health Support Centre

Warehousing, Engineering, Maintenance, Supply and Training.

- Surge capacity to allow for incoming/outgoing equipment;
- Areas to unpack modules on return from deployment/training;
- Area to Clean Dirty Equipment;
- Fully certified sterilisation capability;
- Maintenance Areas for HVAC and Shelters:
- Area to Pack and Consolidate Modules for Despatch;
- Storage of Hard Shelters both undercover and on Hard standing;
- Provision of Pharmacy and Cold Chain storage;
- Space to Store Spare Pallets; and
- Office Space including meetings rooms, training room and colocation of Commonwealth representatives.



Mobile Medical Infrastructure in Health and Facilities Management

Centrally located to Transport Hubs

- Storage of modules
- Maintenance
- Sterilisation
- Training Facility

Strengthening health care supply chains







