



**US INDO-PACIFIC COMMAND**  
**CLIMATE CHANGE IMPACT (CCI) PROGRAM**

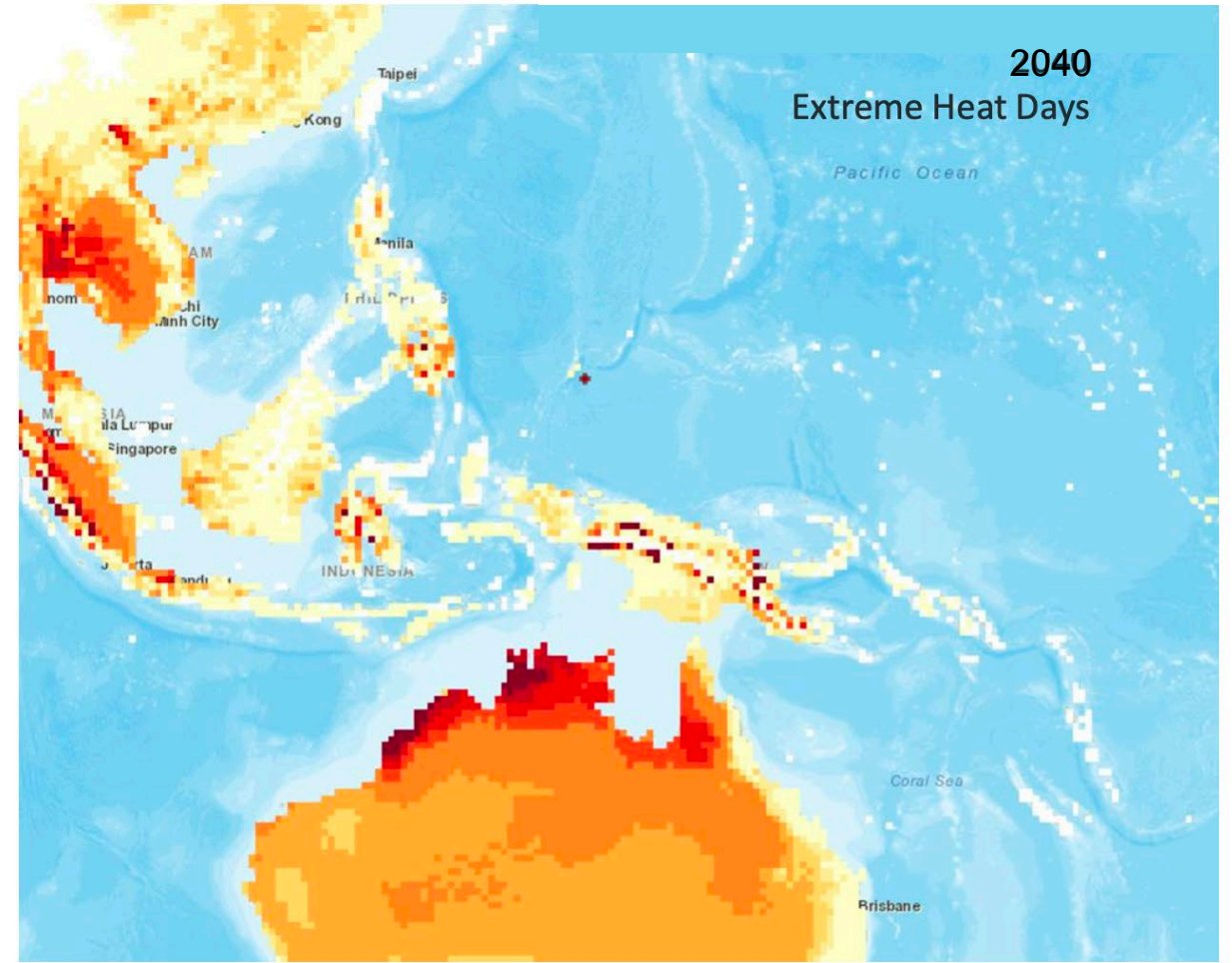
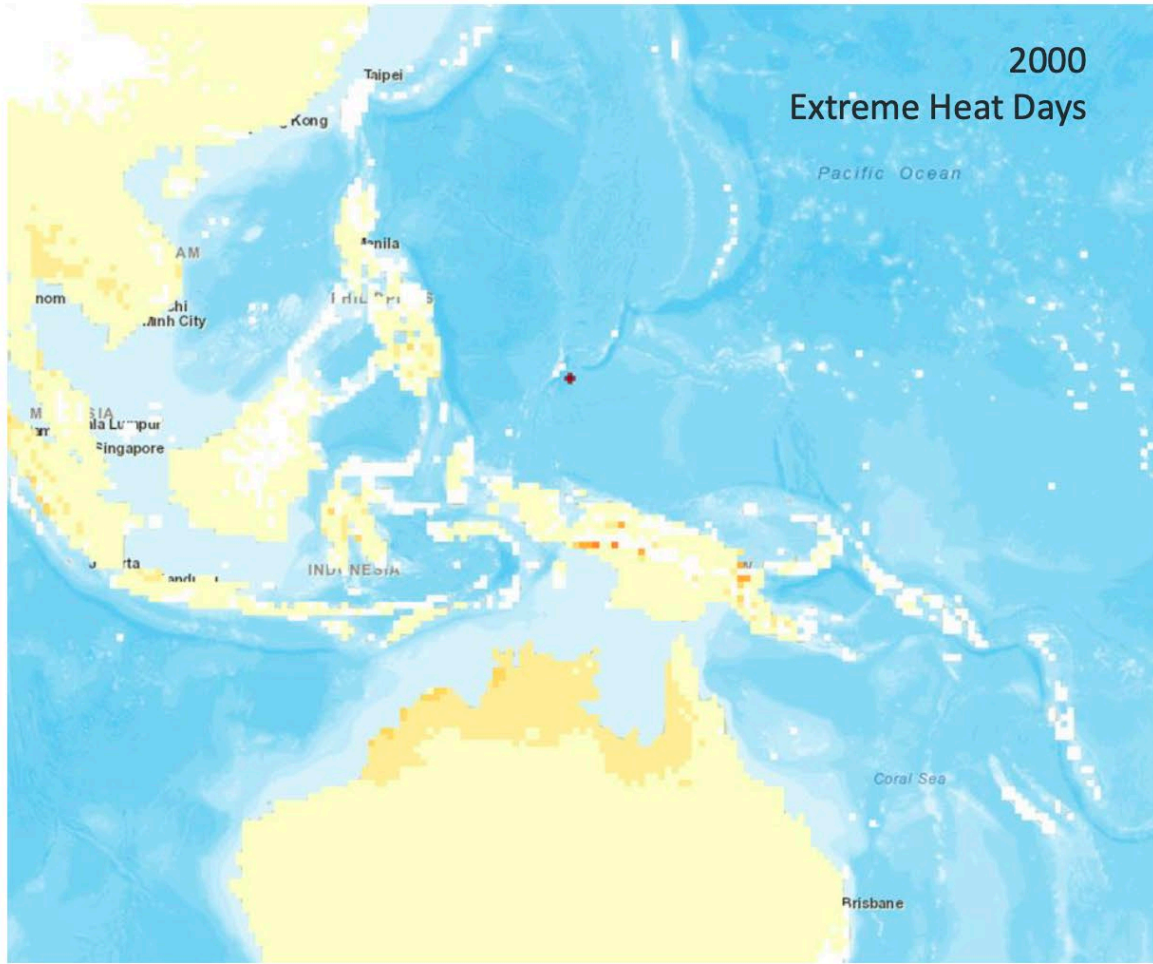
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**Beyond Disaster Response:  
Integrating the Military into Climate Adaptation Solutions**

**Indo-Pacific Environmental Security Forum**  
**04 August 2022**



# Climate Change Impacts Analysis



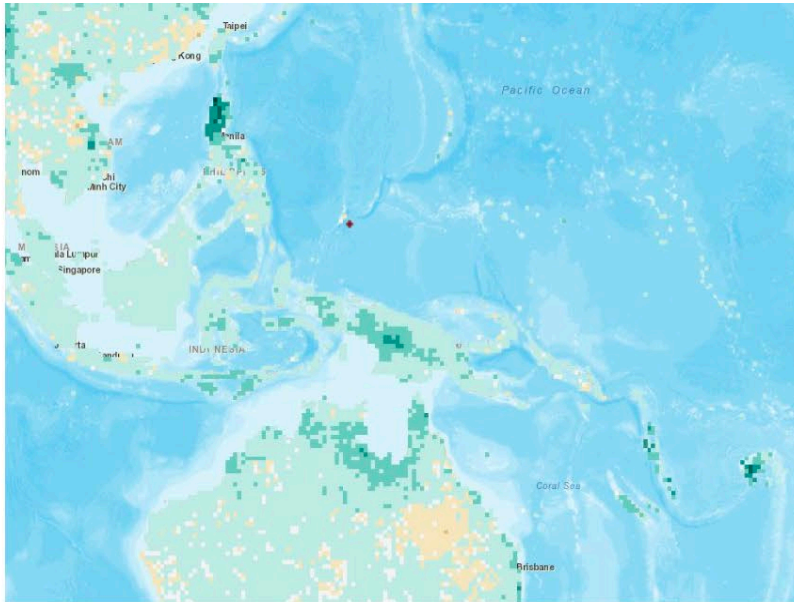
Extreme Temperature: Projected change in the number of days with maximum temperatures above 95F/35C



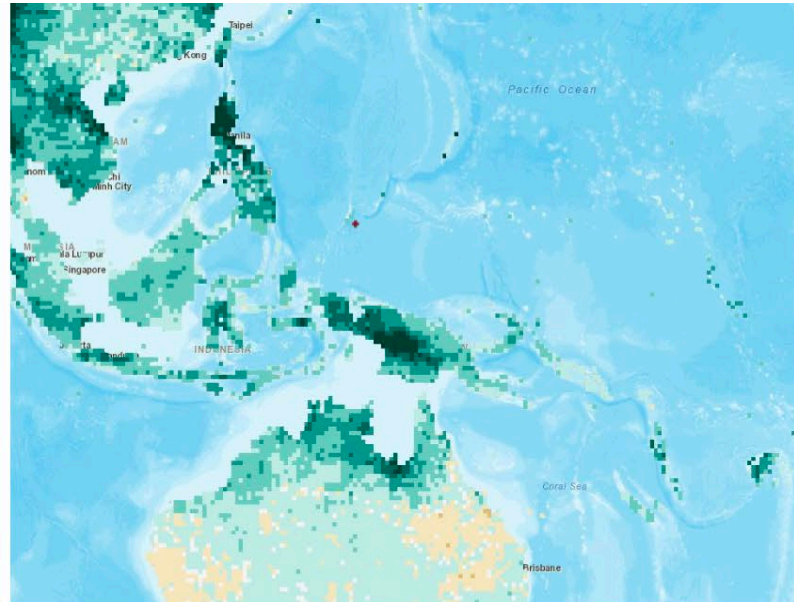


# Climate Change Impacts Analysis

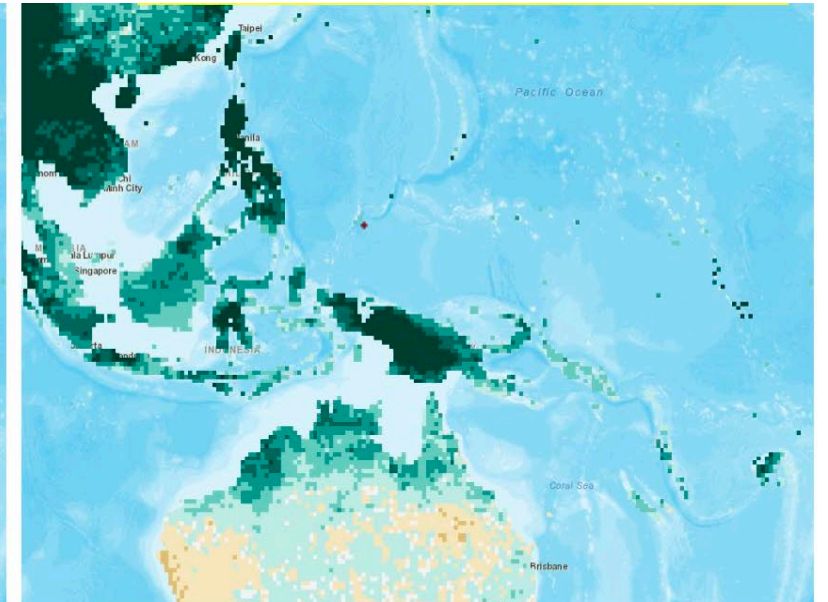
Extreme Precipitation: Projected change in the amount of precipitation that falls on the 1% of rainiest days each year



2000  
Extreme Precipitation



2020  
Extreme Precipitation



2040  
Extreme Precipitation



# Security Impacts: US Marine Corps, Kaneohe Bay







# Security Impacts: US Marine Corps, Kaneohe Bay







# Security Impacts: Oahu Infrastructure



Waiau Power Plant

Honolulu Reef Runway

Kahe Power Plant





# Security Impacts: Oahu Infrastructure







# Military Concerns on Climate Security

## Potential Impacts on Military Readiness



Damage from rising sea levels and extreme weather events on port facilities, bases, coastal cities, forward operating locations



Increase in number & complexity of HADR missions



Extreme weather impacts on land, sea, air operations

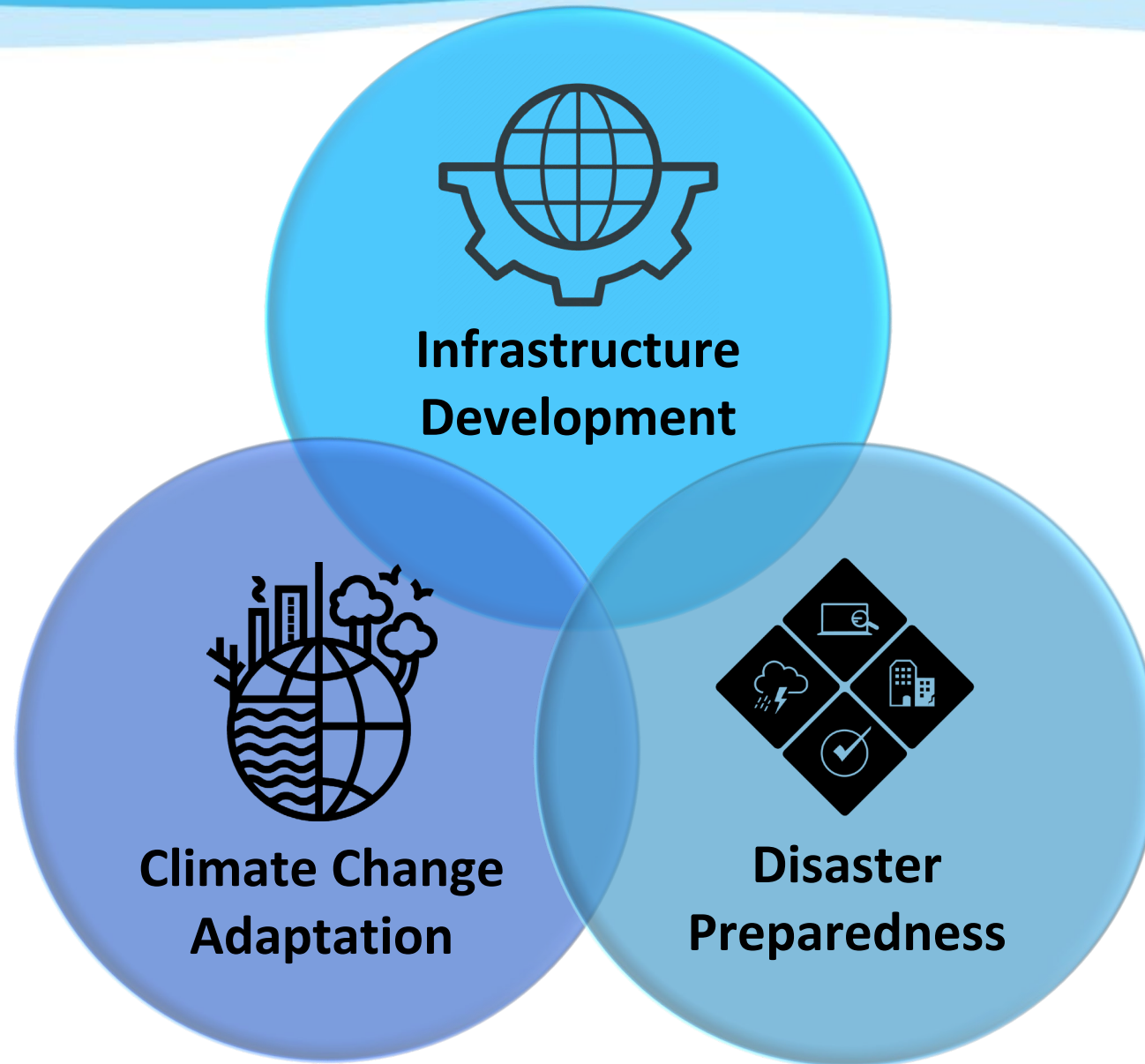


Damage to training ranges and reduced training time





# Civ-Mil Connection for Climate Security Solutions







# Palau Disaster Preparedness Workshop



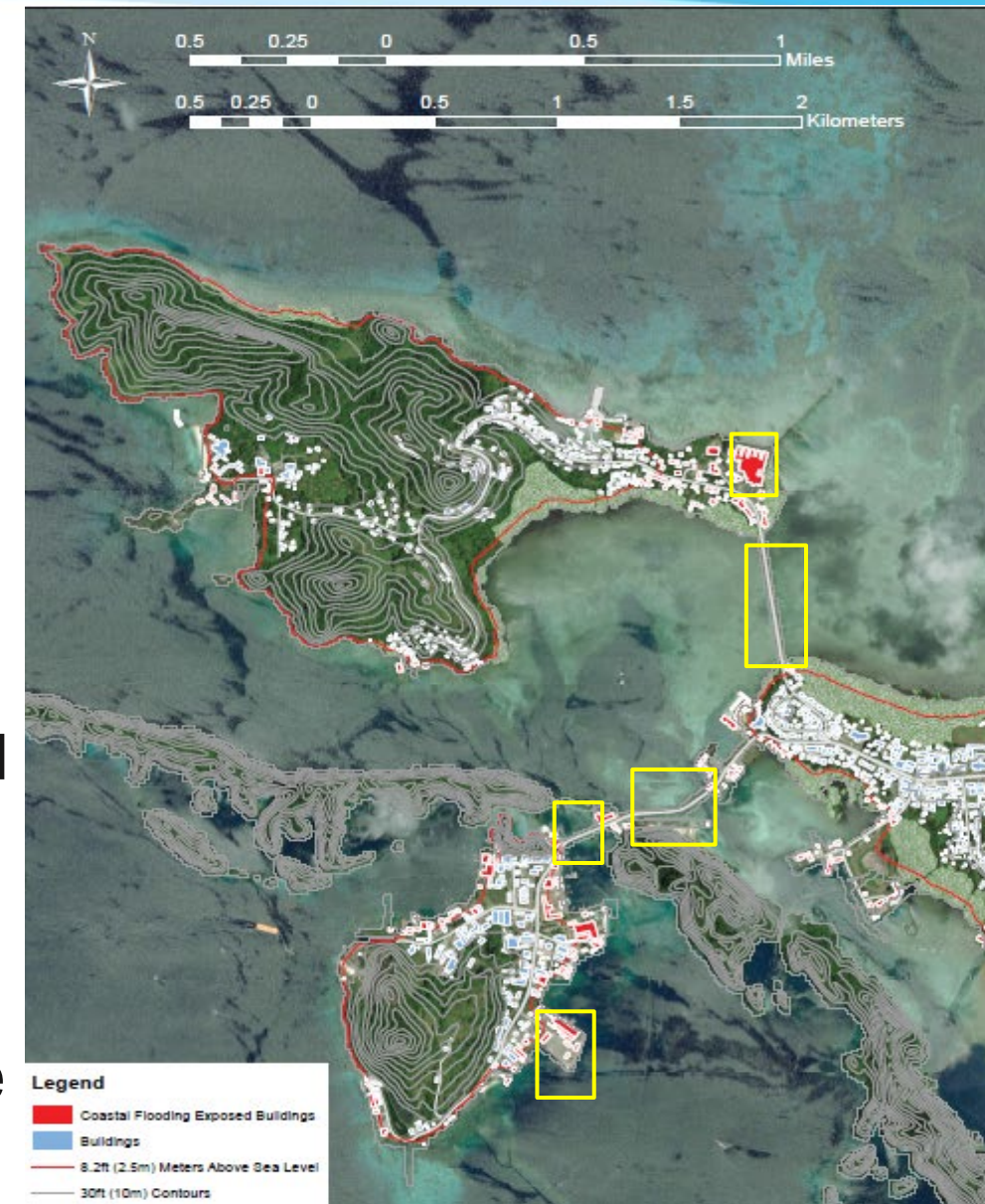
*Pacific Partnership 2022 HADR Workshop participants with Republic of Palau Vice President, Uduch Sengebau Senior (center), US Ambassador to Palau John Hennesy-Niland, Taiwan Ambassador to Palau, Jessica Chienyi Lee, Republic of Palau Minister of Infrastructure, Industries, and Commerce, Charles Obichang,*





# Summary of Risk Analysis Discussion

- Quick focus brought us to the causeways as a critical component to their risk calculus
  - Only connection between populations
  - Only one connection to medical providers (hospital)
  - Fuel moves via truck from port to airport (over several causeways/bridges)
  - Water and sanitation lines included (if severed would cut off populations, possible environmental issues)
- Explored how military programs can support more preparedness and resilience building efforts.







# DOD Humanitarian Assistance

## **Overseas Humanitarian Disaster Assistance and Civic Aid (OHDACA)**

Capacity building to provide essential humanitarian services to the civilian population and support Partner Nation efforts *to reduce the risk of, prepare for, and respond to humanitarian disasters.*

### Types of projects:

- Construction
- Training
- Planning
- Disaster risk reduction (DRR), mitigation, and preparedness (DP)
- Health-related projects
- Education
- Basic infrastructure





# Oceania Engagement Team (U.S. Army Pacific)

- U.S. Army Civil Affairs active duty and reservists
- Overall mission it to improve interoperability between the United States and Pacific Island nations.
- In coordination with U.S. Embassy and host-nation governments to conduct engagements, facilitate exercises and conferences, and assist with humanitarian assistance and disaster response projects and planning.







# Koa Moana: U.S. Marines Forces Pacific

Designed to reinforce partnerships with partner nations to enhance interoperability with local security establishments

- Current Projects
  - Explosive Ordinance Clearance
  - Joint Range Complex
  - Joint Operations Center / Maritime Domain Awareness
  - Medical training and outreach
  - Food and Water Systems







# State Partnership Program

## 93 Partner Nations

- Disaster response / emergency response
- Leader development
- Aviation operations, maintenance & safety
- Cyber security
- Infantry tactics
- Engineer activities
- Counter-terrorism
- Military medical





# New Efforts Underway...

- New partnership for disaster response preparations  
**Concept: Conditions are Changing, the status quo is not the best alternative**
- Key Features:
  - Pre-identify most likely disaster response locations in future hazard environment
  - Analyze and execute physical infrastructure changes needed to execute HADR
  - Preposition assets to reduce response time and lift requirement
  - Rehearse regularly and respond when called (current FHA process)