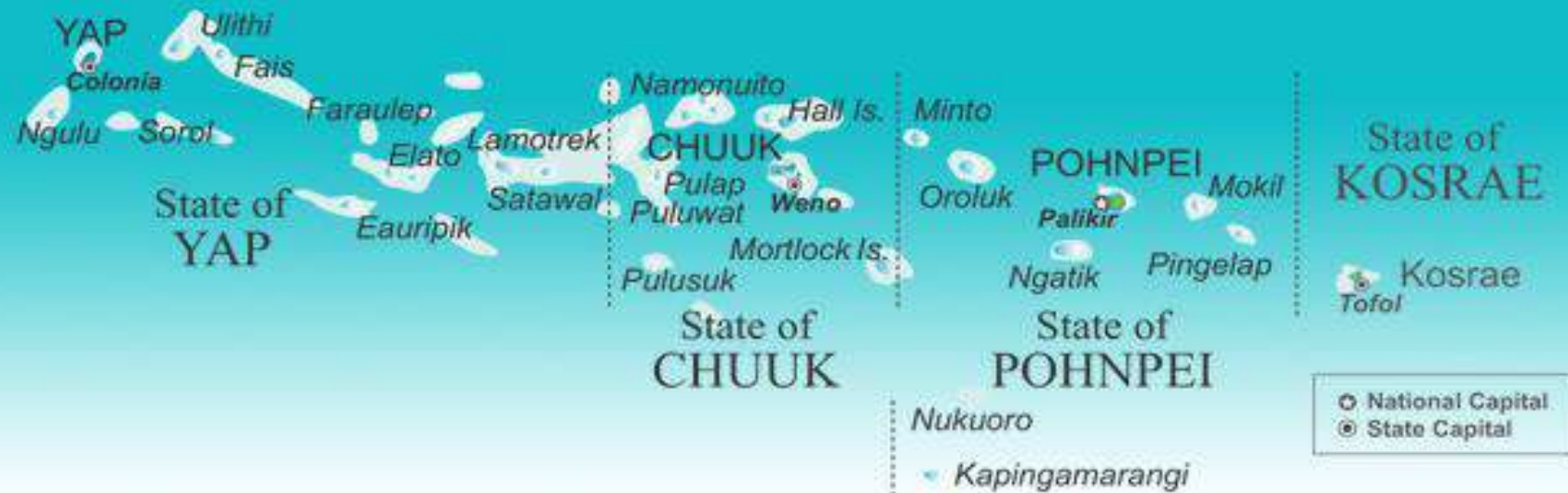




Federated States of Micronesia



FSM Invasive Alien Species Project

Ms. Beverlyn Danis Fred

Project Communications and Knowledge Management Officer

GEF6 FSM IAS Project

48th ATOSSCOM Annual Conference

SAFEGUARDING BIODIVERSITY FROM INVASIVE ALIEN SPECIES IN THE FSM



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Vacant:

**Kosrae State Technical Coordinator
Pohnpei State Technical Coordinator**

Barriers

- Inadequate governance and supporting regulations, coordination mechanisms, and communication to prevent the introduction of new IAS and control the spread of established IAS
- Lack of understanding about IAS, their identification, modes of introduction and spread, and socio-economic impacts and their management in terms of reporting, monitoring and eradication/control measures
- Limited operational capacity at State entry/exit ports, in terms of IAS-certified officials, inspection and quarantine facilities, fumigation equipment and on-line access to IAS information, to inspect freight, crews and passengers; and limited outreach to address the spread of IAS in terrestrial and marine ecosystems.



Outcome 1 & Expected Outputs

National biosecurity governance framework strengthened, institutionalized, sustainably financed and aligned with relevant Pacific initiatives

1.1 Biosecurity governance framework strengthened, institutionalized and aligned with relevant Pacific initiatives

1.2 IAS legislative and policy framework reviewed and revised, taking account of new Biosecurity Act of 2017

1.3 FSM Quarantine Services expanded into Biosecurity Authority with enhanced quarantine services and enforcement capacities, cost recovery system in place for port inspections, new Biosecurity Extension Service role and effective national-state coordination mechanism

1.4 Cost-benefit analyses of economic impacts of priority IAS on biodiversity, food security, livelihoods, health, and production systems versus preventative measures to eradicate and control such species



Outcome 2 & Expected Outputs

Enhanced biosecurity awareness and capacity to safeguard terrestrial and marine ecosystems and agricultural and fishery production systems from IAS impacts

2.1 Biosecurity Communications Strategy and Action Plan developed and implemented, including events, outreach materials and knowledge products to target relevant sector

2.2 Modular Biosecurity Training Program on IAS management and compliance designed, delivered across relevant sectors and institutionalized



Outcome 3 & Expected Outputs

Biosecurity protocols operational and enhanced to prevent IAS introductions via ports of entry/exit and to safeguard natural and production terrestrial and marine systems from IAS

3.1 All international ports adequately staffed and equipped, including quarantine facilities and access to BIS, for inspection of air and sea freight, crews, passengers and their baggage on entry and exit

3.2 Extension services including helpline operationalized in each State supporting landowners, farmers and fishing communities to identify IAS measures to eradicate or contain

3.3 Safeguards and monitoring demonstrated in landscapes/seascapes in each State, with guidelines developed for mainstreaming across sectors and replication at other sites



Outcome 4 & Expected Outputs

Effectiveness of IAS interventions improved by enhanced digital access to and management of information

4.1 Web-based Biosecurity Information System (BIS) developed to support identification, screening, monitoring and reporting of IAS and biosecurity data

4.2 Project implementation and decision-making informed by having a monitoring and evaluation system in place

4.3 Project results and lessons learned shared with project stakeholders and disseminated more widely across Pacific via BIS and engagement in regional IAS networks



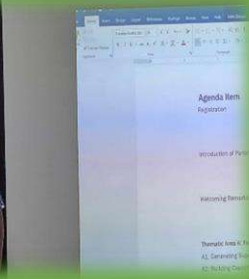
Challenges

- Lack of sustained financing of IAS work
- Limited technical capacity and number of staff
- Political will to support control, management and eradication
- Availability of equipment and supplies for effective enforcement at the Ports
- Resistance from landowners towards eradication efforts
- Eradication of newly introduced IAS and management of established IAS at the States



Ongoing and upcoming projects and activities

- Review and update of National Invasive Species Strategy and Action Plan and State IAS Taskforce Strategic Action Plans.



Ongoing and upcoming projects and activities

- Procurement of Biosecurity equipment for FSM Air/Sea Ports
- Renovation/refurbishment of biosecurity facilities



Ongoing and upcoming projects and activities

- Biosecurity Modular Training Program with the College of Micronesia-FSM
- Development of a Biosecurity Information System with UNCTAD
- Drafting of Rules and Regulations to operationalize Biosecurity Act of 2017

Ongoing and upcoming projects and activities

- IAS awareness and outreach at demonstration sites



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• <https://www.facebook.com/GEF6IASProject>

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CROWN OF THORNS

Crown-of-thorns starfish are large marine invertebrates which feed on coral as adults. The starfish can grow up to 80 cm in diameter. Despite their large adult size, they are often difficult to find on a reef, preferring to hide under ledges or in reef nooks and crannies.

Did you know?
A large female crown-of-thorns starfish can produce over one million eggs a year!

Crown-of-thorns starfish are a major cause of hard coral loss on the Great Barrier Reef (Australia). The coral-eating starfish is native to the Indo-Pacific region; however, they can occur in plague proportions, consuming vast swathes of hard coral during outbreaks. Crown-of-thorns starfish are one of several pressures facing the Reef. Pressures from climate change are increasing, and the time between reef disturbances is becoming shorter, leaving less time for coral communities to recover.

Source: <https://www.reef.gov.au/reef-ecosystems/reef-ecosystems/crown-of-thorns>

Tilapia (tuh-laa-pee-uh)

Tilapia is a hardy fish that adapts to both freshwater and saltwater environments. According to researchers from the University of California Davis, tilapia has a salt-tolerant gene that makes it immune to salinity stress. Salinity can be considered a stressor for most freshwater fish, but tilapia having developed physiological adaptations can resist and adapt to salinity. Changes in the water's salinity will cause stress for fish depending on the species. However, tilapia is one of the fishes that could grow in either freshwater or saltwater.

<https://aquaponicsolver.com/tilapia-a-freshwater-or-saltwater-fish/>

Impacts Tilapia have on native fish and habitats include:

- Competition with native species for food and space
- Predation upon the eggs and young of native species
- Aggressive behaviour of Tilapia can lead to poor condition and higher infection and mortality rates for native species
- nest building by male Tilapia may also damage aquatic habitats through damage to aquatic vegetation and increased turbidity.

<https://www.dlnr.hawaii.gov/misc/info/invasive-species-profiles/coconut-rhinoceros-beetle/>

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African Tulip Tree

African tulip tree is indeed an impressive specimen with gigantic, reddish-orange or golden yellow trumpet-shaped flowers and huge, glossy leaves. It can reach heights of 80 feet (24 m), but growth is usually limited to 60 feet (18 m.) or less with a width of about 40 feet (12m.). The flowers are pollinated by birds and bats and the seeds are scattered by water and wind.

African Tulip spreads rapidly in mesic to wet areas, invading pastures and mature forests. The prolific seeds germinate quickly, reaching reproductive age in a few years. The dense thickets can crowd native vegetation in forests and waterways. The tree grows up to 6 feet per year, is shade tolerant, and resprouts after cutting. The seeds are numerous, wind-dispersed, can contaminate other potted plants and they can float on water.



Impacts:

- Spreads rapidly in mesic to wet areas, invading pastures and mature forests
- Seeds germinate quickly and form understory thickets
- Crowds out native vegetation in forests and waterways
- Brittle branches are a safety hazard



Source: www.gardeningknowhow.com/ornamental/trees/african-tulip-tree/african-tulip-tree-101.htm
www.ias.org/online/epubs/ias-compendium/african-tulip-tree/

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COCONUT RHINOCEROS BEETLE

THE RHINOCEROS BEETLE IS CONSIDERED A MAJOR PEST OF COCONUT PALMS. IT CAN BE ALSO FOUND IN BETELNUT, PANDANUS SPECIES, BANANA, PINEAPPLE, AND SUGARCANE.

ADULTS DAMAGE LIVING PALMS, EITHER KILLING THE TREE DUE TO DIRECT DAMAGE, OR OPENING UP THE TREE TO FATAL DAMAGE FROM OTHER INSECTS OR PATHOGENS.

ON PACIFIC ISLANDS WITH NO NATURAL ENEMIES OF THIS BEETLE, THE DAMAGE CAN BE EXTREME. IN PALAU, WHERE THE BEETLE FIRST INVADIED IN 1942, THE COCONUT PALM WAS ERADICATED ENTIRELY ON SOME ISLANDS, WITH OVERALL MORTALITY ACROSS THE ARCHIPELAGO REACHING 50%.

SOURCE: [HTTPS://Dlnr.HAWAII.GOV/Misc/INFO/INVASIVE-SPECIES-PROFILES/COCONUT-RHINOCEROS-BEETLE/](https://dlnr.hawaii.gov/misc/info/invasive-species-profiles/coconut-rhinoceros-beetle/)

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"SAFEGUARDING BIODIVERSITY FROM INVASIVE ALIEN SPECIES IN THE FSM"

GEF6 FSM IAS PROJECT SECOND QUARTER JULY 2023

GEF6 FSM INVASIVE ALIEN SPECIES PROJECT NEWSLETTER

BIOSECURITY FACILITY BIDDING CONFERENCE IN YAP

One of the aims under Component 8 of the project is to improve the biosecurity facilities in all the four states of the FSM. Consultations with relevant stakeholders, including the State Departments of Transportation, Port Administration and Agriculture Divisions were conducted in the first quarter.

In May 2023, Project Manager Jorg Aron along with the new Communications and Knowledge Management Officers, accompanied the Assistant Secretary of Agriculture Division of FSM SARD, Ms. Manuella Jacob-Owens and the Civil Engineer from FSM YCM, Mr. Phillip Ganan, to Yap to conduct the final bidding process of the renovation of the Yap Biosecurity Facility. The final outcome of this process will be shared as a later date once evaluations are completed.

HIRING OF NEW PROJECT STAFF

On May 2023, the Project Management Unit welcomed Mr. Rowland Shel' Dania Pual as the new Communications and Knowledge Management Officer. Prior to joining the team, he was the Program Assistant for the Iliat Program/ Microfinance program under the Marine Division of FSM Resources & Development.

On May 8 2023 the project successfully welcomed Ms. Stephanie Melio de Werra, Chile as the new GEF6 FSM IAS Chuuk State Technical Coordinator. She is currently based at the Chuuk's Environmental Protection Agency under the supervision of the State Head public Director Bradford Ilat.

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REACTIVATION OF THE CHUUK INVASIVE SPECIES TASK FORCE

With the help of the National Technical Coordinator, the new Chuuk State Technical Coordinator organized a meeting with the Chuuk Invasive Species Task Force (CISTF), consisting of representatives from various implementing agencies including Chuuk Cooperative Research Extension (CRE), Department of Agriculture and Department of Environmental Protection Agency. On May 18, 2023, the task force was reactivated on the project goals and outcomes and was able to provide feedback in finalizing a annual workplan for Mr. Melio in his role as technical coordinator.

UPDATING THE IAS MAP IN KOSRAE

On June 25 2023, the former State Technical Coordinator Mr. Suka Suka, along with partners from Kosrae Island Invasive Management Authority (IIMAA), traveled around the island of Kosrae to plot and assess invasive species infested sites. The team started off in the village of Wasing and was able to assess thirty eight (38) sites, ending in the village of Utes. Along with updating the IAS map through this exercise, the team was able to identify and select suitable sites to display awareness billboards for the project.

LITTLE FIRE ANT ASSESSMENT IN YAP

On May 20 2023, Yap State Technical Coordinator, Mr. Uliak Tawhatal, worked with an assessment team, consisting of staff from the Yap Division of Agriculture and Forestry and FSM Quarantine (Yap field office) in the outer islands of Uliak. The goal for the trip was to find if there was any evidence of the Little Fire Ant (LFA) in the chain islands of Fidiyap, Aon, Mogen and Raik. The mission team conducted their survey in two fields. One by collecting specimens from both the most planted in each household, and then interviewed head of households on their level of understanding on invasive species, especially the LFA. The team spent a week gathering information from community members and was able to determine the status of LFA in Uliak.

COMMUNITY OUTREACH HIGHLIGHTING PRIORITY SPECIES IN Pohnpei

On June 22, 2023, Palupal State Technical Coordinator Ms. Al Bal, conducted his project awareness activity in the community of Sepelak, Mekele in Palupal State. Teaming up with COMFSM CRE, Al Bal shared the project goals and highlighted the targeted invasive species to Palupal. A total of sixty-four community members - adults and children, both male and female, were in attendance.

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BROWN TREE SNAKE

THE BROWN TREE SNAKE IS A SNAKE WITH YELLOWISH TO DARK BROWN BACK, SOMETIMES WITH MOTTLED BANDS AND ABLE TO REPRODUCE AT THREE YEARS OF AGE. IT IS MOST COMMONLY LIVES MOSTLY IN TREES, ALTHOUGH FREQUENTLY SEEN ON THE GROUND. THE BROWN TREE SNAKE IS NATIVE TO THE SOUTH PACIFIC INCLUDING THE SOLOMON ISLANDS, NEW GUINEA, AND NORTHERN AUSTRALIA.

IT IS BELIEVED THAT BROWN TREE SNAKES HAVE BEEN INTRODUCED INADVERTENTLY BY THE U.S. MILITARY DURING WORLD WAR II AS THEY MOVED BETWEEN ISLANDS IN THE SOUTH PACIFIC.

ON GUAM, THE DIRECT DAMAGES FROM BROWN TREE SNAKES ARE CLEAR. ONLY TWO OF THE 12 NATIVE FOREST BIRD SPECIES ON THE ISLAND REMAIN.

\$2 MILLION IS LOST ANNUALLY IN PRODUCTIVITY FROM SNAKES EATING OCCULTING THEMSELVES ON POWER LINES, AND ONE OUT OF 1,000 EMERGENCY ROOM VISITS RESULTS FROM A SNAKE BITE.

SOURCE: [HTTPS://Dlnr.HAWAII.GOV/Misc/INFO/INVASIVE-SPECIES-PROFILES/BROWN-TREE-SNAKE/](https://dlnr.hawaii.gov/misc/info/invasive-species-profiles/brown-tree-snake-management/)

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For more information,
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Thank You!