



SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE



The Task Force & Invasive Species: WRDA 2020

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Task Force Overview

Strategic Action Framework

WRDA 2020 Requirements

Implementing Part 1

Implementing Part 2

Next Steps

Discussion

Topics





South Florida Ecosystem Restoration Task Force



- Established by the Water Resources Development Act (WRDA) of 1996
- Provides strategic coordination and a system-wide perspective to guide the separate restoration efforts being planned and implemented in the Everglades ecosystem
- Membership includes senior leadership of:
 - Seven federal agencies (Chaired by the Secretary of the Interior)
 - Miccosukee Tribe of Indians of Florida
 - Seminole Tribe of Florida
 - Five state and local government agencies



Everglades Cooperative Invasive Species Management Area

Task Force

Working
Group

Science
Coordination
Group

Subgroups and Teams

Stakeholder Engagement



South Florida Ecosystem

- South Florida Water Management District boundary plus offshore waters
- 18,000 square miles
- 16 counties
- More than 9 million residents*
- Numerous ports of entry
- Subtropical climate welcoming to many invasive species

* Quick Facts and Figures | South Florida Water Management District (sfwmd.gov)



South Florida Ecosystem Restoration Task Force

- Established three strategic goals for Everglades restoration:
 - Get the Water Right
 - Restore, Preserve, and Protect Natural Habitats and Species
 - Foster Compatibility of the Built and Natural Systems
- Invasive species part of the Task Force conversation for decades.
- New subgoals and objectives added in 2016 to support the Invasive Species Strategic Action Framework



Invasive Exotic Species Strategic Action Framework

- Initial Framework completed in 2015
- Updated in 2020
- 4 Goals organized along the Invasion Curve
- Includes a set of complementary resources:

<https://www.evergladesrestoration.gov/invasive-exotic-species-strategic-action-framework>

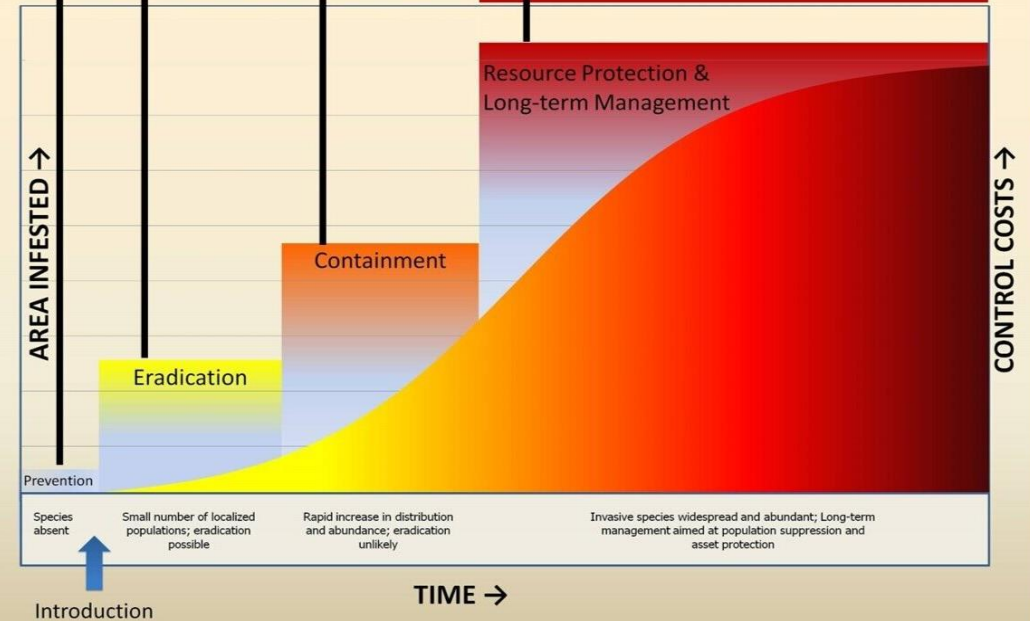
THE INVASION CURVE AND STRATEGIC GOALS

Goal 1: Prevent the introduction of invasive exotic species.

Goal 2: Eradicate invasive exotic species by implementing Early Detection and Rapid Response (EDRR).

Goal 3: Contain the spread of invasive exotic species.

Goal 4: Reduce the populations of widely established invasive exotic species and maintain at lowest feasible levels.



WRDA 2020 Direction

Part 1: Develop a priority list of invasive species.



Part 2: Focus on cooperative and collaborative ways to develop innovative strategies and tools to facilitate improved management, control, or eradication of listed invasive species and to prevent future introductions of nonnative species.

Photo Credits from left to right: Midas cichlid illustrated by Diane Peebles, African clawfoot frog provided by FWC, Northern African rock python by <https://animalstime.com/african-rock-python-facts/>, Lygodium by Jennifer Possley, and Conehead Termite <http://www.pestworld.org/pest-guide/termites/conehead-termites/>.

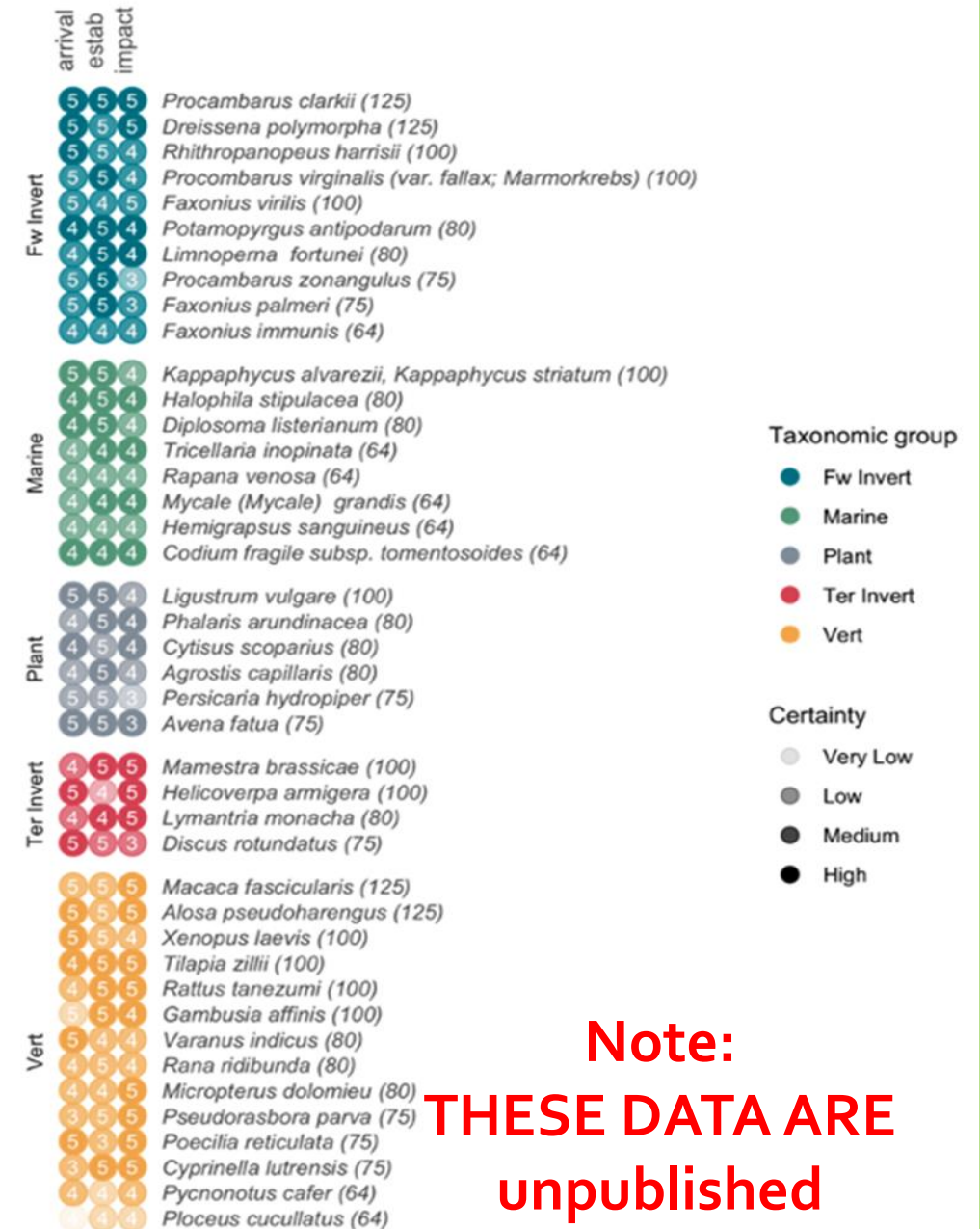


Everglades Cooperative Invasive Species Management Area

Implementing
WRDA 2020:
Prevention – Part 1

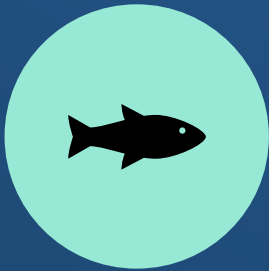
State-wide Prevention

- Horizon scan to identify invasive species threats to Florida
- Rated by likelihood of:
 - Arrival
 - Establishment
 - Impact
- Color saturation indicates certainty
- 40 Priority species for all of Florida



Note:
THESE DATA ARE unpublished

Developing the South Florida Ecosystem Restoration *Preliminary Prevention* Priority Species



40 SPECIES FROM
FL ALL TAXA
HORIZON SCAN
PROCESS

REFINED TO 16



MANGROVES
EVALUATED WITH
THE HORIZON
SCAN PROCESS



3 MANGROVES
ADDED TO THE
LIST



TOTAL OF 19
SPECIES SPLIT
BETWEEN 5 TAXA

*Note Florida All Taxa Horizon Scan Manuscript is in review (Deah Lieurance et al)

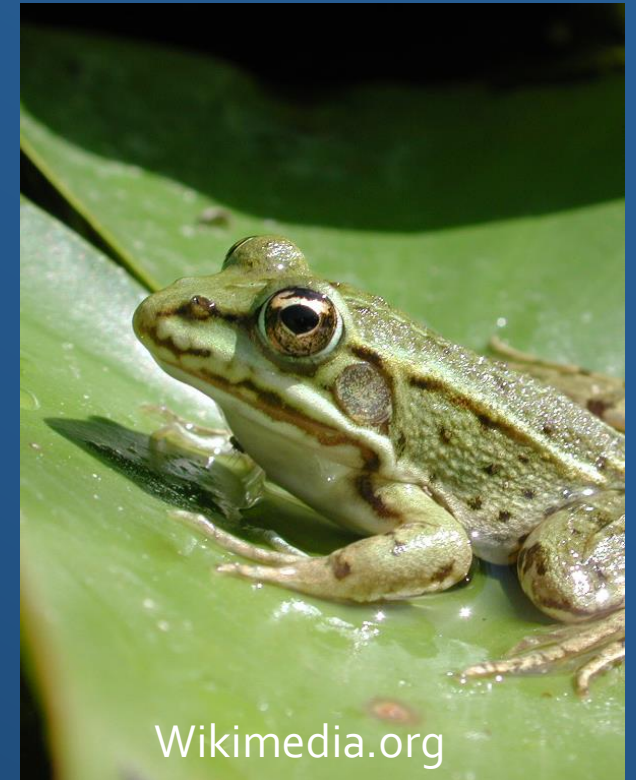
Fresh Water Invertebrates

- *Limnoperna fortunei* (Golden Mussel)
- • *Procambarus clarkia* (Red Swamp Crayfish)



Fresh Water Vertebrates

- *Tilapia zillii* (Redbelly Tilapia)
- *Xenopus laevis* (African Clawed Frog)
- *Rana ridibunda* (Marsh Frog)
- *Pseudorasbora parva* (Stone Moroko)



Marine Species

- *Kappaphycus alvarezii*, *Kappaphycus striatum* (Agar-agar)
- • *Halophila stipulacea* (Halophila Seagrass)
- *Mycale (Mycale) grandis* (Orange Keyhole Sponge)



Plants

- *Phalaris arundinacea* (Reed Canary Grass)
- *Persicaria hydropiper*, *Polygonum hydropiper* (Marsh Pepper Knotweed)
- *Nypa fruticans* (Nipa Palm, Mangrove Palm)
- *Bruguiera* spp.* (Asian Mangrove in the family Rhizophoraceae)
- • *Lumnitzera* spp.* (Indo-West Pacific Mangrove)

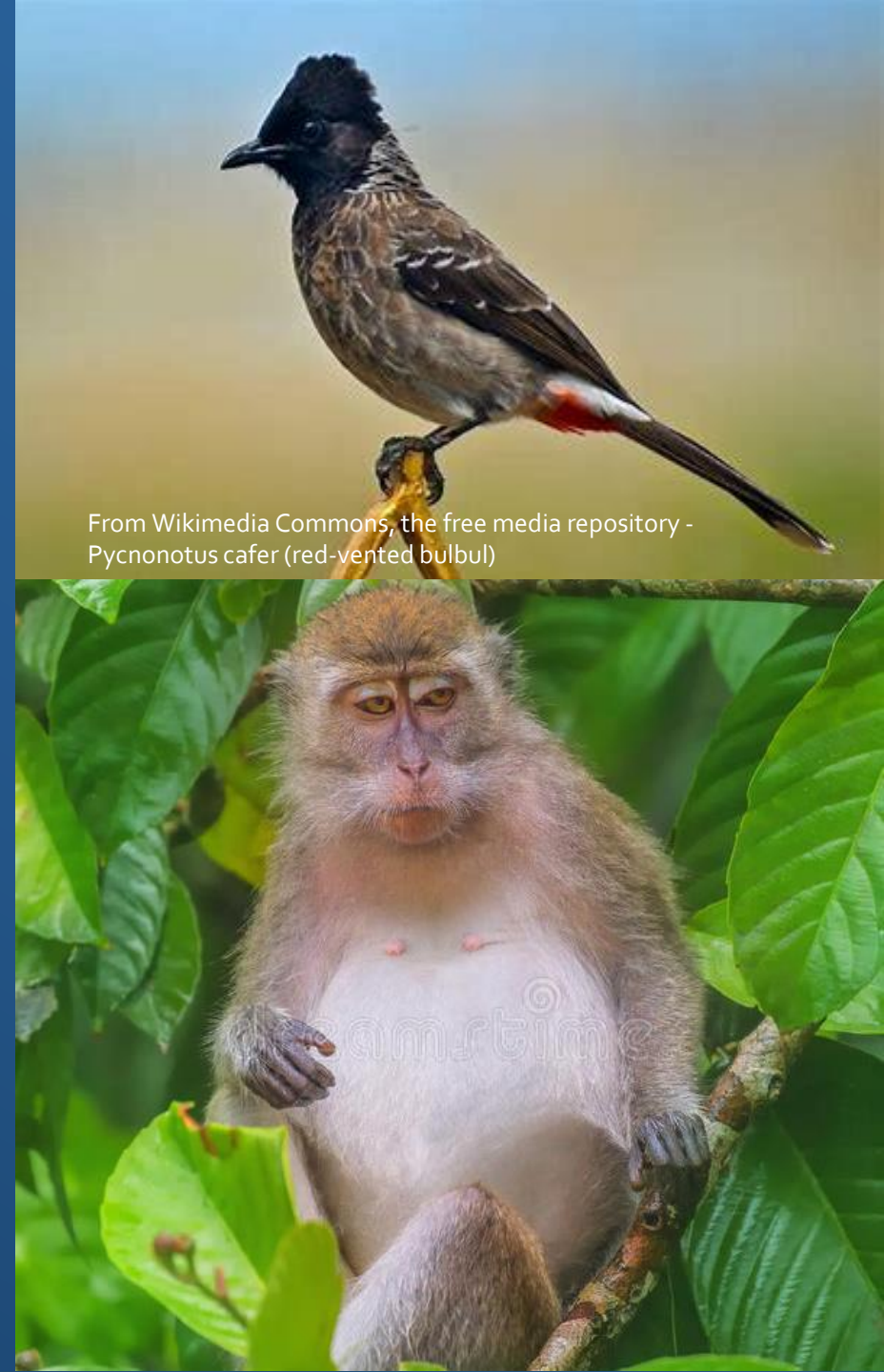
* includes all species of genus



Phalaris arundinacea (reed canary grass)-By Franz Xaver - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=7997933>

Terrestrial Vertebrates

- *Macaca fascicularis* (Crab-eating Macaque, Long-tailed Macaque)
- *Rattus tanezumi* (Tanezumi Rat, Asian House Rat, Asian Rat)
- • *Varanus indicus* (Mangrove Monitor, Western Pacific Monitor Lizard)
- *Ploceus cucullatus* (Village Weaver Bird)
- *Pycnonotus cafer* (Red-vented Bulbul)



From Wikimedia Commons, the free media repository -
Pycnonotus cafer (red-vented bulbul)

Implementing

WRDA 2020:

Prevention - Part 2

Recommended Actions for SFERTF:

Interrupting Pathways

Prevent them from getting here:

- Regulations
- Outreach and Education

Response Planning

Prepare for swift response:

- Research
- Monitoring
- Strategic planned responses

Interrupting Pathways: Regulation Recommendations

Restrict importation and possession of species through regulation using appropriate authorities

Add authorities to the USFWS Law Enforcement Wildlife Inspection Program to allow inspection of domestic containers that carry wildlife

Review and revise equipment decontamination protocols & procedures as appropriate

Interrupting Pathways: Outreach & Education

Recommendation: Task Force, Working Group, Science Coordination Group, and OERI:

Distribute the list and recommended actions

Encourage member organizations and invasive species groups such as CISMAs to adopt the list as appropriate and

Create outreach initiatives and provide them to target audiences

Response Planning

Recommendation: Task Force, WG, & SCG agencies prepare in case of species arrival

Research: Promote, fund, and support research including synthesis for priority species to identify preferred habitat, likely points of entry, and possible control methods

Monitoring: Include species in existing monitoring programs and develop new as needed

Response Planning: Encourage development of response action plans and teams



Prevention Resources Needed Examples

REGULATIONS: USFWS Law Enforcement Wildlife Inspection Program: Additional inspection resources such as inspectors and dogs/handlers

OUTREACH AND EDUCATION: Cleaning stations at boat ramps, marinas, fishing tournaments, at the State line, and other freshwater public access points

OUTREACH AND EDUCATION: Additional resources, including support to South Florida ecosystem CISMAs

RESPONSE PLANNING: Resources and resource requests to support research, monitoring, and planned response actions for the prevention priority species as needed



Next Steps

WRDA 2020 Part 1: Priority Lists

- **Early Detection Rapid Response:** Develop, calibrate, and validate methods for prioritization including a workshop
- **Established Species:** Evaluate current species lists and prioritize using newly developed processes

WRDA 2020 Part 2: Cooperative and Collaborative Efforts

- **Prevention:** TF/WG/SCG and OERI begin work on recommended actions

WRDA 2020 Updates

- **Prevention:** Continue updating priority species list and processes as needed

Discussion



Think locally, Act neighborly
invasive species know no boundaries!

