



University of Sea Grant Listing/Listening Session Agenda

Hyatt Guam | 9:30am - 2:30pm | August 30, 2016

- Welcome – we appreciate you being here!
- Introduce yourself and one (1) thing you are working on in one (1) minutes (max) (30 mins)
- About UOG Sea Grant (Marie and Austin, 10 mins)
- The future Strategic Plan and Sea Grant’s feature (Jim, 5 mins)
- Facilitating this meeting – meeting rules, process, and recording (Jim, 2 mins)

Q1) What are some good things that are happening on Guam from ridge-to-reef that is supporting a healthy, sustainable environment?

Q2) What are some corresponding not-so-good things (bad things) that are happening?

Q3) What issues, from Q1 or elsewhere, need some Research to be done to identify possible solutions? (S-V)

Q4) What Extension & Outreach classes/activities should be taught/done to support a healthy, sustainable environment and what audience are we trying to reach? (S-V)

Q5) What information products (factsheets, booklets, books, videos, websites) could be made that would have a SIGNIFICANT value to the people who we want to treat the environment even better? (S-V)

Q6) What volunteer efforts that support a healthy, sustainable environment could use some support of some form?

Q7) What technology can we use to deliver science-based information and communicate with clients?

Q8) What non-CNAS/UOGSG type of service or support do advocates need that would propel a healthy, sustainable environmental agenda forward?



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Meeting purpose

To identify possible research, extension & outreach, and education projects that would benefit the people and environment of Guam.

Meeting attendees

- Guam Bureau of Statistics and Plans
- Guam Department of Agriculture - Forestry and Soil Resources Division
- Guam Department of Parks and Recreation
- Guam Department of Public Works
- Guam Community College
- Guam Environmental Protection Agency
- Guam Nature Alliance
- Haggan Canoe Club
- NOAA
- Northern Soil & Water Conservation District
- Office of the Governor of Guam
- Port Authority of Guam
- Southern Soil & Water Conservation District
- The Nature Conservancy, Pacific Program
- Traditions About Seafaring Islands (TASI)
- University of Guam Center for Island Sustainability
- Valley of the Latte
- Western Pacific Regional Fisheries Management Council Advisory Panel
- Guam Coastal Clean Up (International Coastal Clean Up)
- Habitat Blueprint Site – Manell Geus
- Guam SWCD Teachers Symposium
- Partnership for DOE, AYUDA, and Island Girl Power for service learning website
- Guardians of the Reef
- Restoration (Southern) urban agroforestry
- Coral reef monitoring in the Pacific region
- Active institutions and a consistent message of Ridge to Reef
- Guam Community Coral Reef Monitoring Program (1300 trained) and Eyes of the Reef
- Government of Guam climate change taskforce
- Political leaders recognizing importance of passing Southern Guam Development Master Plan and Southern Soil Erosion Council
- Community based management plan with Merizo and Yigo
- Youth for Youth summer swimming program
- Puppet shows and outreach to schools
- Wildland fire outreach and education
- Fire Wise community in Southern High School
- \$300K set aside for Western Pacific Islands in Forestry funding
- Marine conservation plan
- Marine Mania and Fish Bowl

Q1) What are some good things that are happening on Guam from ridge-to-reef that are supporting a healthy, sustainable environment?

- Guam Natural Alliance, R2R (Ridge to Reef) events

- Low impact development as part of zoning changes
- Seashore protection and flooding issue in Tumon Land – culvert did not come to fruition
- Ugum Watershed Partnership
- Federally funded climate change project vulnerability analysis at coastal base, stormwater plan updates
- Bamboo pilot removal in Merizo and UOG MBA program doing feasibility study on bamboo use
- Tåsi Beach Guides at CIS
- Guam Tropical Energy Code
- Proposed Masters program at UOG in sustainable agriculture, food, and natural resources
- Marine Preserves are generally still supported
- Fest Pac highlighted seafaring and protection of land and culture
- Guam Pig Derby now USDA Pilot for Swine Control

- Bypass regulations
- Weak agriculture zoning
- Restricted fishing access for cultural practices
- Improper tree pruning
- Conversion of last stand of native forests
- Lack of vegetative ordinance
- Rapid loss of coral for the last 10 years
- Lack of maintenance of marine buoys
- Invasive/nuisance algae
- Lack of spatial understanding for access to near shore areas - surface part zoning/loss of public resources
- Lack of conservation officers
- Restricted access and monitoring in military restricted organizations
- Coral bleaching 2013, 2014, 2016, crown of thorns starfish
- Indiscriminate and overharvesting of marine resources
- Lack of enforcing the law
- Small percentage of locally grown produce
- Uneven enforcement of regulation
- Lack of option for solid waste, lack of recycling options
- Lack of tourist information re: marine conservation
- Lack of the styrofoam ban and trash burning
- Feral ungulates
- Lack of consideration on climate change
- Lack of invasive species action planning
- Lack of adaption plan for rising sea level
- People drowning
- Having sea walls
- Inability to reach different constituencies
- Federal regulation to conserve our natural marine services
- Lack of water education and safety in school
- Tremendous disconnect with the GovGuam in enforcing building regulations, enforcing environmental law and funding resources to execute these laws
- Trash on Guam
- Stormwater management
- Lack of green fee at the airports
- Lack of conservation and environmental

Q2) What are some corresponding not-so-good things (bad things) that are happening?

- Lack of enforcement of Guam laws (environmental, land use, conservation, marine)
- Lack of resources for environmental agencies
- Human-caused wildfires
- Lack of legislation to go after ship grounding
- Off-roading
- Too many roadblocks when you need to do upland restoration
- Indiscriminate land clearing - no consideration for medicinal plants
- Unenforced protection for threatened and endangered species
- Illegal dumping
- Invasive species
- A need for sustainable urban planning
- Lack of resources to deal with historical dumpsites and contaminants

- education for migratory residents
- Can't convert statutory regulations to on-the-ground action, diminishing marine resources
- Lack of joint jurisdiction on enforcing marine legislature
- Public apathy
- Soil erosion

Q3) What issues, from Q1 or elsewhere, need some research to be done to identify possible solutions? (S-V) (straw votes of potential impact/value in brackets)

- We need to do a study on green fees, tourists, contractors, and developers - feasibility study [17]
- Nuisance algae control measures [8]
- Socioeconomic study of recurring shut down of Ugum Water Treatment Plant [4]
- Expanded research on current silt socks project and its benefits [10]
- Stormwater management [10]
- Study of producing local aquaculture feed [7]
- Safe consumption level of contaminant fish stocks [1]
- Water retention of trees [6]
- Economic modeling on effective conservation management [2]
- Value of proper tree pruning for storms to prevent damages and interrupted power [8]
- Coral propagation and out planting; how to scale it up [1]
- Sustainable agriculture in watersheds [16]
- Baseline survey in conservation areas of existing invasive plants [2]
- Feasibility of fish restocking and expansion [9]
- Effective techniques to remove invasive species [10]
- Research on the value of local wood products [3]
- Characterization of user engagement with natural resources [3]
- Streambank and shoreline stabilization techniques [19]
- How many tourists can Guam support [9]

- Commercial and subsistence data for reef fisheries [9]
- Knowledge base of water safety of tourist [3]
- Good management practices for off-road activities [8]
- Feasibility of local ornamental plant industry [0]
- Downscale climate projection for specific niches [2]
- Listing in what causes flooding in the south [4]
- Study for effective energy storage [4]
- Study of the government law in conservation areas [16]

Q4) What Extension & Outreach classes/activities should be taught/done to support a healthy, sustainable environment; what audience(s) are we trying to reach? (S-V) (straw votes of potential impact/value in brackets)

- Storm water management on personal property [13]
- Water safety for school kids and boating safety for vendors [7]
- Conservation and management techniques for agriculture producers [13]
- Real hunters don't burn [5]
- Residential green waste management [9]
- Teaching children the value of medicinal plants [2]
- Value of ecosystem services [8]
- The value of a local diet [2]
- Sustainable practices for your Sunday BBQ [10]
- Value of our drinking water source [15]
- The problems of plastic / trash / styrofoam [8]
- Sustainable, good marine tourism reaching out to tour leaders on environmental practices [13]
- GIS course for watershed characterization [2]
- How to engage with community activism [4]

- How to identify management species on our property [14]
- Utilizing drones for conservation law enforcement [2]
- Educating students on the Chamoru name for plants and animals and biology [14]
- Household level of sustainability practices [2]
- Traditional seasonal fishing practices [10]
- Educating elected leaders on the environment protection and management [13]
- Native plant propagation techniques [6]
- Environmental stewardship for all [7]
- Proper collection for storage and disposal of household hazardous waste [0]
- Informing general public on what environmental laws are [15]
- Educate incoming military and general public on fishing regs and proper fishing techniques [3]
- More environmentally responsible / sustainable consumer choices (choosing less package healthier foods) [1]
- Environmental stewardship for all [7]
- Responsible alternates for waste disposal [12]
- Story maps of different watersheds, apps for guided trails [1]
- Cell phone dead zones [1]
- Water safety TV PSA [7]
- Translation of weather service terms [2]
- Downscale scientific information and translate into nomenclature, culture infographics on environmental services [10]
- Its the law radio ads [6]
- A list of sustainable businesses [6]
- Facebook or Instagram shaming (i.e. flicking cigarette butts) / environmental heroes [4]
- High prestigious award for GovGuam or other environmental heroes bigger than MAG PRO award [8]
- How to compost at home, do it yourself [10]
- Providing scholarships to students going into natural sciences [3]
- Smoke signals [3]
- Update the *Life on Guam* (by Lynn Raulerson) curriculum series [15]
- Movie theater anti-off road commercials [2]
- Guam curriculum for elementary and middle school for environmental matters accessible to teacher on websites [12]
- Incentive payments for conservation easements [2]
- Quick references for household waste disposal [2]

Q5) What information products (factsheets, booklets, books, videos, websites) could be made that would have a SIGNIFICANT value to the people who we want to treat the environment even better? (S-V) (straw votes of potential impact/value in brackets)

- Pocket guide data on the kinds of fish to eat (based on Monterey Bay Aquarium pocket guide) [16]
- Videos and social media [14]
- Reef etiquette in multiple languages on video [11]
- Environmental score card for elected leaders and candidates [17]
- Native plant and animal guide apps for recognizing them [14]
- Pokemon Go for native plants [2]

Q6) What volunteer efforts that support a healthy, sustainable environment could use additional support in some form?

- Guardians of the Reef (needs more high school teachers to participate; could perhaps expand outside of public schools)
- Community coral reef monitoring program needs more site coordinators, "Adopt a Reef"
- Tapping into Department of Corrections inmates to do work
- A formal reporting of way invasive species sightings
- Adopt-a-marine preserve program
- Sponsor a conservation officer

- More regulatory support, more volunteers, and programs.
- SWCD annual teachers symposium - additional support for expansion. Lesson plans will be going on website.
- Mini grants to community groups
- CNAS Charter Day support for recognizing environmental projects
- Additional partnership with media to recognize community organizations
- More financial support for environmental groups, seafarer grant
- Supporting cultural groups and connecting them to environmental activities
- Environmental summer camp program more support and expansion
- Local businesses to volunteer and clean up illegal dump site
- Environmental youth group, like the Scouts, that meet weekly
- Island Girl Power
- Utilizing church youth groups to connect with environmental issues
- Support local festivals
- Orientation on commenting on the EIS and similar engagements
- Unified campaign on Clean Green Guam, focusing on natural resources and waste management

Q7) What technology can we use to deliver science-based information and communicate with clients?

- Environmentally related email list
- Movie theater ads
- App and Youtube videos
- Interactive ads on video games

- Internet ads on Facebook and steaming platforms
- Broadcast TV announcement
- Prime time radio slot on environmental issues
- Interactive smart boards
- Online magazine of environmental issues
- Sign advertisements
- Interactive displays and advertisements (i.e. Revenue and Taxation)
- Interactive kiosk at hotels
- Videos on incoming airplanes
- Canvas approach type PSA / Door hangers
- Tagging onto the people's messages (co-sponsorship)
- QR codes for smartphones in businesses and areas.

Q8) What non-CNAS/UOGSG type of service or support do advocates need that would propel a healthy, sustainable environmental agenda forward?

OR OTHERS

- Quarterly updates on environmental matters
- Information sharing by different stakeholders
- Monthly meetings of natural resource stakeholders (private, government, and federal)
- Creating an Inter-group marketing campaign
- Government doesn't hold private sector with the same requirements as the military
- Engage legislators on environmental issues
- Creating integrated interactive marketing on environmental issues
- Gateways to Marine Science certification in UOG