HEALTH RISKS FROM SEAFOOD CONSUMPTION IN PACIFIC ISLANDS

S O S ON GUAM’S REEFS:
REVIEW OF A SEAFOOD CONSUMPTION ADVISORY DUE TO CONTAMINANTS IN GUAM
NATURALLY OCCURRING SEAFOOD HEALTH RISKS IN THE PACIFIC ISLANDS

- HISTAMINES
- BACTERIA AND VIRUSES
- PUFFERFISH (FUGU) TETRAODOTOXIN
- SHARK LIVER
- CLUPEOTOXISM
- PARALYTIC SHELLFISH POISONING
- HALLUCINOGENIC FISH POISONING
- CIGUATERA
CIGUATERA

• SYMPTOMS
• DISTRIBUTION
• SOURCE
• SPECIES AFFECTED
• PREVENTION
SEAFOOD POISONING FROM ENVIRONMENTAL CONTAMINATION

• CIGUATERA?
• SEWAGE CONTAMINATION
• HARMFUL ALGAL BLOOMS
• HEAVY METALS
• PESTICIDES
• PCBs
• DIOXINS/FURANS
OROTE LANDFILL, GUAM

• HISTORY
• CONTAMINANTS
• INSTALLATION RESTORATION ACTIONS
  – CLEANUP SHORE AND SHALLOWS
  – BUILD SEAWALL
  – CONSOLIDATE WASTE
  – CAP
  – MONITOR
OROTE PENINSULA
Orote Beach Before Construction of the Seawall
Cleanup Activities

• Removal of landfill material from beach and nearshore areas
• Construction of Seawall to protect landfill material from eroding further
• Capping of the landfill with low permeability cover
Orote Beach After Construction of the Seawall
Seawater and Fish Tissue Sampling Locations - June 2001
Field Sampling Program - June 2001

- **Sample Media**
  - Water
    - Salinity
    - Chemistry
    - Toxicity
  - Whole Fish Tissue
    - Chemistry

  - **Herbivorous Fish:** Sergeant major

  - **Carnivorous Fish:** Hexagon grouper
OROTE SEAFOOD TOXICITY

• HIGH PCBs
• ADVISORY
• TARGETED SAMPLING
• REVISED ADVISORY
• CONSUMPTION SURVEY
• HEALTH RISK
• SOURCE IDENTIFICATION AND REMOVAL
The Seafood Advisory

- June 2001 sampling conducted to see if marine life was affected by the landfill
- PCBs and other chemicals were found in seafood at levels that are not safe to eat
- Navy and Guam EPA recommended a seafood advisory to Guam Public Health on September 22, 2001
Targeted Sampling and Consumption Survey

- Sampled territorial reef fish within the advisory areas
- Asked local fishermen to help sample popular fish and seafood
- Conducted a seafood consumption survey of local residents
Revised Orote Seafood Advisory

• Advisory extends from Orote Point to the COMNAVMARIANAS Fence Line at Rizal Beach
• The Advisory extends to the 600 foot depth offshore
• Gabgab Beach Advisory located in Apra Harbor
Overview of Nearshore Environment and Seawall
(January 18-19, 2001)