

Salvage and Recovery Resources

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Salvage and Recovery Resources

- Singapore island city State
- Singapore carriers fly globally over waters
- Prepared for crash in water, deep or shallow

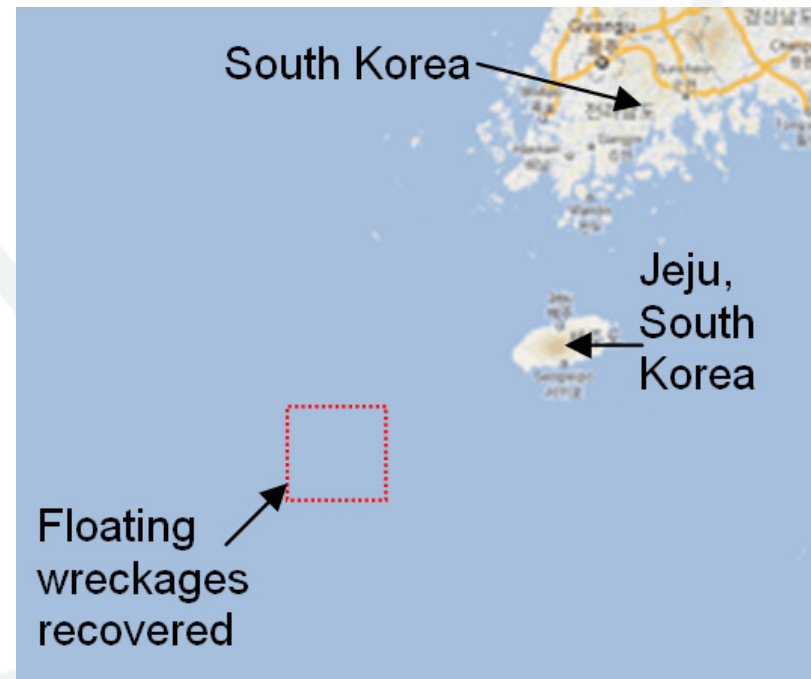
Salvage and Recovery Resources

- Upon receiving news of aircraft crash/lost contact over waters;
 - Form investigation team
 - Collect information about flight
 - Prepare for deployment
 - Operations equipment
 - Personnel belongings
 - First thing first; getting there



Salvage and Recovery Resources

- AAIIB Singapore's recent experience
 - Asiana Cargo Airline (Asiana) B747, Flight AAR991, crashed about 100km west of Jeju, South Korea on 28 July 2011
 - Supported by Korean Coast Guard vessels



Salvage and Recovery Resources

- Coast Guard vessels



Salvage and Recovery Resources

- Korean Coast Guard vessels
 - Meeting room
 - Bunks with attached bathrooms



Salvage and Recovery Resources

- Korean Coast Guard vessels
 - Meeting room
 - Bunks with attached bathrooms
 - Rigid inflatable boats



Salvage and Recovery Resources





Salvage and Recovery Resources

- AAIIB Singapore's recent experience
 - ATR 72 crashed into Mekong River, about 4KM from Pakse Airport
 - Supported by local businessman and villagers



Salvage and Recovery Resources

- Operated off a barge



Salvage and Recovery Resources

- Operated off a barge
 - Tentage for meetings and briefings



Salvage and Recovery Resources

- Operated off a barge
 - Make shift tentage for meetings and briefings
 - Speed boats



Salvage and Recovery Resources

- Operated off a barge
 - Make shift tentage for meetings and briefings
 - Speed boats
 - To and from river bank via river taxis
 - equipped with toilets



Salvage and Recovery Resources

- Questions
 - Can Coast Guard and Navy always support AIGs?
 - Will commercial resources always be available?
 - How can we increase probability of resources?

Salvage and Recovery Resources

- Military
 - Build ties during ‘peace’ time
 - Participate in exercises
 - RSN underwater exercises
 - AAIB search for flight recorders
 - Establish joint procedures
 - In progress

Salvage and Recovery Resources

- Commercial
 - Establish contacts
 - ICAO APAC Accident/Incident Investigation Bodies database with underwater resources
 - Establish contacts and relations during workshops and events
 - Retainer service contract
 - For search and recovery of flight recorders

Salvage and Recovery Resources

- Vessel retainer service
 - Conform IMO standards
 - **Set sail within 24 hours upon activation**
 - Sail for at least seven days
 - Worst case sea state 7 condition

Salvage and Recovery Resources

- Vessel retainer service
 - Stern operating deck space availability and conditions
 - Low freeboard
 - At least two RIBs
 - Freeboard less than 1 meter
 - 4 passengers each, excluding the crew

Salvage and Recovery Resources

- Vessel retainer service
 - Lodging and logistics
 - E.g. at least 20 people over 7 days
 - Meals, bunks, bathing and laundry facilities

Salvage and Recovery Resources

- Vessel retainer service
 - Estimated annual cost?
 - a. €50,000 - € 100,000
 - b. €150,000 - € 200,000
 - c. €350,000 - € 400,000
 - d. €500,000 - € 1,000,000
 - Is it worth it?

Salvage and Recovery Resources

Thank you