DEFAUS 18 **MULTIPURPOSE AIR-DEPLOYABLE RESCUE KIT**

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On the 2nd of Feb, 2012, the overcrowded passenger ferry, MV Rubaul Queen sank in heavy seas off the northern coast of New Guinea, with great loss of life. Seven fixed wing aircraft, some fitted with high capacity air-dropped inflatable life rafts, participated in the ensuing rescue operation. Each of these life rafts (up to four could be carried in the larger aircraft) could cater for up to 10 survivors. Another life-saving aid used was the "helli-box", a cardboard container that could be dropped out of the main cabin door or rear ramp of the an aircraft, and could be filled with up to 3kg of life preserving equipment such as buoyancy vests, radios, food and water. All the droppable stores were delivered saving many lives. However, due to the water currents that had produced a string of survivors several kilometres long and there being few concentrated groups of survivors to drop the 10-person life-rafts, several rafts had only 1 or 2 people use them. Air-droppable supplies quickly ran out with many people still unassisted, and little more the aircraft crews could directly do for them. What would have been ideal in this, and many similar rescues, was a larger number of smaller rescue kits containing smaller life rafts and compact life support packages. This is where the STOREBUOY® MARK concept comes in as a capability multiplier – a complement to existing solutions, or a capability all of its own.

This proposal calls for manufacturing SAR kits in the form of 'A' Class stores (Sonobuoy) to be deployed in flight from aircraft fitted with sono-launch tubes and/or Sonobuoy free-fall chutes. Three separate package types would contain either a Mark 1 (1-2 single-man life rafts), a Mark 2 (Multi-purpose (sea and land) survival stores container) or a Mark 3 Utility container that can be packed with a required load on the aircraft to replace the heli-box.

PROPOSAL AND OUTCOMES

The use of the MARK 3 box also brings added safety to the aircraft crew, as the main aircraft door does not need to be opened in flight (if indeed it can be) for it be deployed.

I envision that every MPA (for example, the Boeing P-8A Poseidon, Lockheed P-3 Orion or Kawasaki P-1) aircraft could have a stowed load of STOREBUOY® rounds which would enable the aircraft to switch missions in an instant mid-operation if called upon, without the need to return to base to have a mission load change. Even if another aircraft is available for a dedicated SAR mission, the first aircraft could transit to the scene and provide some assistance before the dedicated load gets off the ground, and in the SAR business, time is life. In the event of a disaster such as the MV Rubaul Queen, high capacity equipment could be dropped to survivor concentrations, while STOREBUOY® loads could be dispensed to individuals or small groups that have been separated.

Sonobuoys, and therefore STOREBUOY® rounds are quick and easy to fit to aircraft. Where High Capacity units fitted in an aircraft's bomb bay require additional onaircraft maintenance in the form of Control Release Jettison Checks every 20 days (job takes 4 personnel 2 hours each time), the STOREBUOY® rounds need no such extra maintenance. The P-8 Poseidon can figuratively carry up to 124 rounds in the sonobuoy launchers and on-board storage, giving massive SAR coverage when Required especially when also fitted with one or more High Capacity units. Life of the STOREBUOY® rounds (MARK 1 & 2) would be in the vicinity of 5 years, which means a long shelf life and low maintenance overheads.