

Usage of N to S canal infrastructure to provide water for bushfire protection

Bushfires are on top of list of what most people in Australia fear from natural hazards. Once a fire gets to a certain size in windy conditions it is very difficult to extinguish it or stop its expansion. NASA in coordination with the USA Forest Services recognised the possibility of using multiple UAV's (or drones) fitted with infra- red cameras to monitor fire outbreaks 24 hrs /day during the fire season. Immediately a fire outbreak was located its coordinates were passed on to fast moving water bombers to put it out. Such a system while not fireproof when multiple lightning based fires start has been proven to be very effective in forested USA regions. Such a system can only be introduced in Australia when there is adequate close by water available to handle multiple fires in one region.

However with the introduction of a N to S canal flowing over a long distance 365 days /year we have the possibility of building multiple water based landing strips beside the canal to allow fast moving water bombers to land and pick up 8-10,000 litre of water in 12 seconds and move quickly to put out fire identified . A Phd researcher at Macquarie university (Brian Ashe) carried out an assessment of the cost of fires in Australia through a group contactable at riskfrontiers@mq.edu.au . His assessment indicated annual cost of fires across Australia (which include a high component of bushfire protection), cost the Australian economy \$18bn pa. With fast moving Bombardier water bombers costing \$35 million each, the introduction of a fleet of 4 planes and constructed water landing strips beside canal would seem to be an economic option to look at improving the productivity of fire protection over a long distance.

Bombardier have brought planes over here several times in past and it would seem possible to utilise this service to assess its future potential to reduce cost of extinguishing bushfires over a wide area. The Canberra fires in 2003 and the Vic Black Saturday fires in 2009 started from a single fire which spread over a distance to cost relevant territory and state governments about \$1.0 Billion dollar each.

Airlines have indicated concerns with usage of drones as regards collisions. Provided drone flight path is kept around 1000 ft this should not be a major concern if a coordinating authority is able to provide information to airports on high intensity fire days. Level of savings to the Australian economy from fire protection labour and equipment costs and reduced fire damage, could be in multi \$Billion range.

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