## Tourism and tropical cyclone in Tonga: assessment of damages and recovery of the accommodation sector

(トンガの観光と熱帯低気圧:宿泊施設の被害と復旧のアセスメント)

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On February 12th, 2018, Tongatapu and 'Eua were struck by a category-4 cyclone (TC Gita) which is considered as the worst TC in the Tonga's history. TC Gita greatly impacted the tourism industry, 88% of which was the accommodation sector. It has emphasized the needs for a better understanding of the accommodation sector's impacts, preparedness, and recovery strategies after TC Gita. Therefore, this research aimed to (i) assess the impacts of TC Gita on the accommodation sector, (ii) identify the preparation procedures and their effectiveness, and (iii) find out the recovery processes and strategies used during the recovery stage. The study gathered meteorological data and track map of TC Gita, including the selected accommodations' locations, elevation, and distance to the coastline to identify the severity and impacts of TC Gita on the sector. The study also conducted a questionnaire survey, interviews, and focus group discussion on the accommodation operators and officers from related ministries. The analysis of the meteorological data and track map, including accommodations' elevation, locations, and distance to the coastline showed that Tongatapu accommodations were affected the most by flooding and destructions of buildings. Most of the accommodations in the urban area are located at an elevation of around 4 m above sea level and a distance of around 5 m to the coastline. The respondents highlighted that the economic impacts by TC Gita led to the increased expenditures and profit losses, which resulted in (i) long shutdown period of the accommodations for renovation, (ii) a large number of booking cancellations, and (iii) a decrease of the visitor number to Tonga. The problems on the existing preparation procedures that the operators discussed were (i) guest protection, (ii) property protection, (iii) financial back-up, and (iv) disaster welfare. The above procedures were delivered to their guests through regular announcements, but none was in written forms. The focus group discussion identified that tourism has no proper national disaster management plan in place and lack of managerial skills. For the recovery strategies, the operators stated that business resources and savings were used and no governmental involvement and assistance were received. Furthermore, other recovery strategies identified were customer awareness and improvement of renovation (align TC building standard). Further group discussion included a lack of communication and collaboration between the government and business sectors. Therefore, to minimize future impacts of TCs on the accommodation sector, a national tourism disaster management plan needs to be formulated, implemented, and incorporated into the existing preparedness procedures and recovery strategies.