

RESEARCH AND MODEL DEVELOPMENT ON COMMUNITY DISASTER RESILIENCE

Based on “Community-based Capacity Building in
Disaster Preparedness Programme (Sai Kung)”

RESEARCH
REPORT
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RESILIENCE



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Final Report

Research and Model Development on Community Disaster Resilience

Based on “Community-based Capacity Building in

Disaster Preparedness Programme (Sai Kung)”

Date: 19 October 2022

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Abbreviations and Acronyms

AED	Automated external defibrillator
AFCD	Agriculture, Fisheries and Conservation Department
ArchSD	Architectural Services Department
B/Ds	Bureaux/ Departments
Caritas	Caritas Hong Kong Sai Kung Community Development Service
CAS	Civil Aid Service
CCRAM	Conjoint Community Resiliency Assessment Measure
CEDD	Civil Engineering and Development Department
Community Profile Report	Community Profile of Sai Kung Community
CPDN	Contingency Plan for Natural Disasters
DEVB	Development Bureau
DH	Department of Health
DSD	Drainage Services Department
EDB	Education
EMSC	Emergency Monitoring and Support Centre
EMSD	Electrical and Mechanical Services Department
FEHD	Food and Environmental Hygiene Department
FSAs	Focused Study Areas
FSCC	Fire Services Communication Centre
FSD	Fire Services Department
GLD	Government Logistics Department
HA	Hospital Authority
HAD	Home Affairs Department
HKJCDPRI	Hong Kong Jockey Club Disaster Preparedness and Response Institute
HKO	Hong Kong Observatory
HKPF	Hong Kong Police Force
HKRC	Hong Kong Red Cross
HKSARG	Hong Kong Special Administrative Region Government
HYD	Highways Department
IFRC	International Federation of Red Cross and Red Crescent Societies

ISD	Information Services Department
LandSD	Lands Department
LCSD	Leisure and Cultural Services Department
MD	Marine Department
MOL	Making On Loft Limited
NGOs	Non-Governmental Organizations
OFCA	Office of Communications Authority
PHQCCC	Police Headquarters Command and Control Centre
Report 2a	Case studies on International Experiences in Building Community Disaster Resilience
Report 2b	SWOT Analysis to the Practices in Building Community Disaster Resilience
Report 3a	Assets Mapping of Sai Kung Community
Report F	Stakeholder Engagement Programme: Profile of Community Player
Report G	Stakeholder Engagement Programme: Focus Group Meeting Report
Report I	Stakeholder Engagement Programme: Quantitative Questionnaire
SB	Security Bureau
SKDCC	Sai Kung District Community Centre
SWD	Social Welfare Department
TD	Transport Department
The Research Project	Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung)
WSD	Water Services Department

1 Introduction

1.1 Introduction to the Research

1.1.1 Study Background

On late February 2022, the Hong Kong Jockey Club Disaster Preparedness and Response Institute (HKJCDPRI) appointed Making On Loft Limited (MOL) to provide research and evaluation services for “Research and Model Development on Community Disaster Resilience based on HKJCDPRI’s “Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung)”” (the Research Project). The goal of this Research Project is to establish a “blueprint” for future development of strategy, approach(es), measure(s) and tool(s) that bring about effective development of community disaster resilience. The Research Project will be designed and executed by the research team of MOL as agreed by the HKJCDPRI.

Sai Kung is located at the south-eastern of New Territories in Hong Kong, where a typically rural township setting with diverse communities, it is connected to major traffic routes of urban areas within half an hour. The well-established rural township in New Territories East is comparing the changes in terms of partnerships enhancement, empowerment of individuals as well as communities for self-awareness and self-initiations to risk of disaster, and capability of making uses of local networks as well as local resources. The players (local communities) will be the key of Team to understand the changes in the Project.

1.1.2 Background to the Programme

The International Federation of Red Cross and Red Crescent Societies (IFRC) defines community resilience as “The ability of communities exposed to disasters, crises and underlying vulnerabilities to anticipate, prepare for, reduce the impact of, cope with and recover from the effects of shock and stresses without compromising their long term prospects.” Capacity building initiatives can facilitate individuals and communities to develop abilities, resources, networks, and confidence, which empower them to

become changing agents to proactively identify, mitigate and cope with local disaster risks more efficiently. This community participatory approach has proven to be effective worldwide, compare with the traditional top-down “respond and rescue” structure.

Hong Kong is a dynamic city, with robust disaster response mechanism mainly developed and led by the government. Contingency plans and disaster drills have been carefully considered and rehearsed. However, a significant gap remains in awareness, knowledge and engagement in disaster risks management and response planning at the community level. Based on one of the findings of Scoping Study conducted by Harvard University under HKJCDPRI’s commission, there is a broad recognition among agency leaders and the community of the need to improve community engagement in all aspects of disaster management.

Sai Kung (excluding Tseung Kwan O area) is identified as the one of the vulnerable districts in terms of natural disaster risk in Hong Kong. Due to its geographical location, most of the residential areas are located at coastal or mountainous areas, which are frequently stricken by typhoon, extreme rain, and storm surge in recent years. With its geographical features and narrow roadway with slopes which are difficult to be reached by emergency vehicles such as fire appliances and ambulances), the risks of critical health issues and property damages are relatively high. The detailed characteristics of Sai Kung have been covered in the Report of Community Profiling Study as endorsed in May 2022.

A “Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung)” has therefore been developed by the HKJCDPRI, aiming to enhance awareness, knowledge and engagement in disaster risk management and response planning of Sai Kung (excluding Tseung Kwan O area) community members.

Community resilience model is essential for improving disaster resilience, as a process of continuous engagement that builds preparedness prior to a disaster and allows for a healthy recovery afterwards (Arbon, 2014¹). It has been adopted in different disaster

¹ Arbon. (2014). Developing a model and tool to measure community disaster resilience. Australian Journal of Emergency Management, 29(4), 12–16. <https://doi.org/10.3316/agispt.20150224>

mitigation and preparedness project, for example, the Los Angeles County Community Disaster Resilience Project², in which communities with population ranging from 10,000 to 150,000 are covered.

Currently, there is no community resilience model in local context being developed in Hong Kong. Therefore, it is considered valuable to conduct a programme-based, in order to develop a community resilience framework or model based on the evidence and lessons derived from the design, delivery and outputs of HKJCDPRI's "Community-based Capacity Building in Disaster Preparedness (Sai Kung)." All research deliverables could hopefully be able to serve as a "blueprint" for future effective development of strategy, approach(es), measure(s) and tool(s) of community disaster resilience.

While the Research Project will derive data and findings from, and recommendation for selected programme area in Sai Kung, we envisage that the recommendation(s) and model(s) developed can also benefit communities in other areas and/or districts with similar setting. Research findings and recommendations will also be published and disseminated to relevant parties, to facilitate understanding and dialogues among relevant stakeholders for continuous enhancement of the disaster resilience in Hong Kong.

1.1.3 Study Area

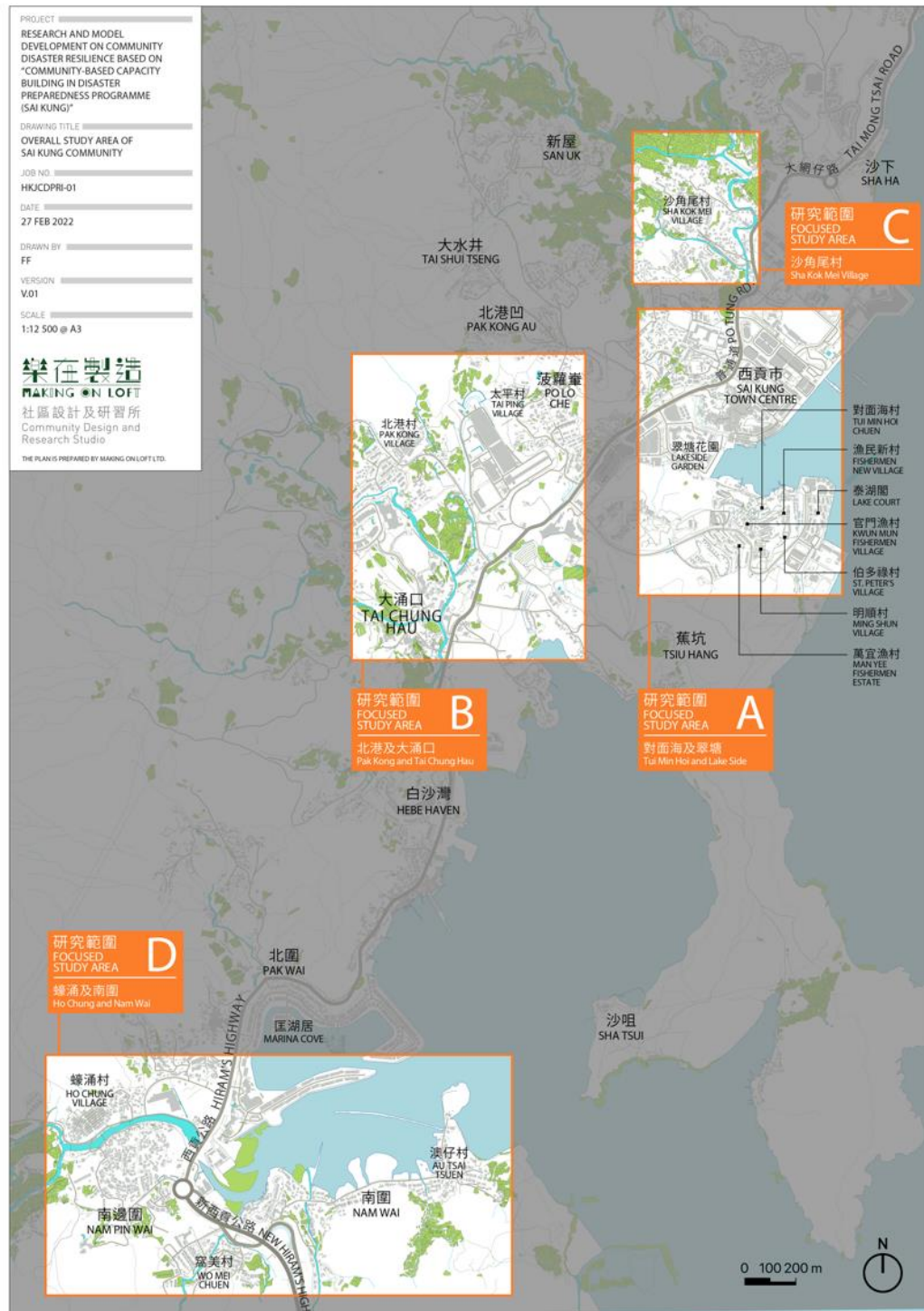
The Study Area of the Research Project covers the Sai Kung Town Centre with its surrounding villages, as shown in the following Plan. Geographically, the Study Area covers an area of approximately 2690 hectares (ha), which is bounded by Hebe Knoll to the south, Long Mei to the north, Tsiu Hang to the east, and Pyramid Hill and Fu Yung Pit to the west.

The Research Project targets the whole picture of Sai Kung (excluding Tseung Kwan O) for the overall analysis and recommendation on the development of community

² Eisenman, Chandra, A., Fogleman, S., Magana, A., Hendricks, A., Wells, K., Williams, M., Tang, J., & Plough, A. (2014). The Los Angeles County Community Disaster Resilience Project - a community-level, public health initiative to build community disaster resilience. *International Journal of Environmental Research and Public Health*, 11(8), 8475–8490. <https://doi.org/10.3390/ijerph110808475>

resilience of Sai Kung community. At the early stage, observation and investigation at microscale are needed for formulating the community profile as baseline research regarding the community for understanding its past, present and future, its strength, potential and needs. Therefore, the Study Area of the **Community Profiling Study** is further delineated with reference to the boundaries of Street Block, the smallest geographic unit of Hong Kong adopted in the Population Census administered by the Census and Statistic Department. For the detail coverage, please refer to the endorsed report, **Community Profile of Sai Kung Community** (see **Community Profile Report** Section 1.3).

For in-depth analysis of the characters of diverse villages and activity nodes in Sai Kung, four Focused Study Areas (FSAs) are identified and categorized based on their geographical locations and characteristics. FSA A includes areas around Sai Kung Town Centre and Tui Min Hoi. FSA B includes areas around Pak Kong and Po Lo Che. FSA C includes area around Sha Kok Mei. FSA D includes areas around Ho Chung, Nam Pin Wai, and Nam Wai.



Plan 1 Overall Study Area of the Research Project

1.1.4 Study Process and Methodologies

Several research and a stakeholders engagement programme, including focus group meetings, in-depth interviews, casual dialogues and public questionnaire, have been done in the study process, resulting in the following deliverables.

- ***Community Profile of Sai Kung Community (Community Profile Report)***

Community Profile Report provides a comprehensive background understanding on the compositions and potential dynamics of the existing community in Sai Kung. It establishes a strong research foundation for the subsequent engagement and collaboration processes committed in the Research Project. Some highlights include but not limited to the strong social attachment of villagers, varied geographical characteristics, and diversified social characteristics among villages and lives of villagers.

- ***Case studies on International Experiences in Building Community Disaster Resilience (Report 2a)***

Report 2a studies experiences in establishing frameworks and actions for building community disaster resilience through international case studies. It attempts to lay the foundation for understanding the current global trend in building community-based capacity for disaster preparedness, and to facilitate the further study to compare these cases with those in Sai Kung, followed by identifying potential and/or limitations in applying overseas frameworks and actions. Six international cases are covered.

- ***SWOT Analysis to the Practices in Building Community Disaster Resilience (Report 2b)***

Report 2b summarises the strategies in response to the disasters in cases in Report 2a, particularly on building community resilience in two aspects: top-down and bottom-up approaches. It further generates a SWOT analysis on applying the strategies on Sai Kung, including the strength, weakness, opportunity and threat analysis, in order to facilitate the formulation of strategies in Hong Kong-specific community disaster resilience in this final reporting with recommendations.

- ***Assets Mapping of Sai Kung Community (Report 3a)***

Report 3a identifies the social assets and unfolds the potential interconnection between individuals and parties, and the potential correlation between skills and resources for building a disaster-resilient community. It starts to explore on the potential of the discovered assets and deficiencies for the reveal of the key enabling and disabling factors of the future intervention. Three types of key stakeholder are identified locally as potential drivers in building community disaster resilience in Sai Kung.

- **Stakeholder Engagement Programme: Profile of Community Player (Report F)**

Report F shapes a comprehensive picture of villages' life and experience in Sai Kung rural township by conducting 8 in-depth interviews with 8 distinctive personas living or working in Sai Kung. Complementing on Community Profile Report, it deeply investigates the relationship between the spatial environment and the residents by shaping round and real characters in building resilience, further supporting the development of **Report 3a**.

- **Stakeholder Engagement Programme: Focus Group Meeting Report (Report G)**

Report G goes beyond Sai Kung locals, discussing community disaster resilience with the representatives of experts from various related disciplines to identify and prioritize opportunities and concerns from professional perspectives. Four groups of invited guests are engaged in the meetings or interviews, including Sai Kung locals, representatives of NGOs and church, scholars in local tertiary institutions, and representatives from various departments of HKSARG. The findings imply the key enabling and disabling factors of developing community disaster resilience model in Sai Kung and Hong Kong.

- **Stakeholder Engagement Programme: Quantitative Questionnaire (Report I)**

Report I obtains views and feedbacks from the community and identifies and validates key enabling and disabling factors on the disaster resilience community development from various tiers of key stakeholders with HKJCDPRI.

For the detail contents, please refer to the endorsed reports respectively.

The following table lists the timeline of the Research Project.

Table 1 *Timeline of the Research Project*

Deliverable	Anticipated Delivery Month	Date of Delivery
0 – Inception Stage	M0	
• Inception Report	M0	March 2022
1 – Community Profiling Stage	M3-M4	
• Community Profile of Sai Kung Community	M3	June 2022
• Assets Mapping of Sai Kung Community	M4	July 2022
2 – Research Stage	M3-M4	
• 2a	M3	June 2022
• 2b	M4	July 2022
3 – Stakeholder Engagement Stage	M4-M7	
• Profile of Community Player	M4	July 2022
• Focus Group Meetings	M6	September 2022
• Quantitative Questionnaire	M7	October 2022
4 – Final Report	M7	October 2022
5 – Project PowerPoint and Pamphlet	M7	October 2022

1.1.5 Study Objectives

The goal of this Research Project is to establish a “blueprint” for future development of strategy, approach(es), measure(s) and tool(s) that bring about effective development of community disaster resilience. In order to achieve the stated goal, there are four objectives of the Research Project:

- (a) To acquire a full understanding on any changes resulted from interventions of HKJCDPRI’s “Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung).” In aspects including but not limited to: (1) awareness and initiations in response to anticipate, mitigate and respond to disaster risks, (2) empowerment of individuals, (3) partnerships enhancement and (4) capability of making uses of local networks and resources.
- (b) To acquire a full understanding on what and how the parties engaged in the programme mentioned in (a) contributed to the knowledge, skills, well-being practices, micro-collaboration and network connection to the Sai Kung

community covered. The “parties” include but not limited to on-ground NGOs, relevant professionals, social innovators and/or designers engaged, who had applied means in professions, practical transfer and/or creativity during the programme implementation.

- (c) Based on (a) and (b), to identify key enabling and disabling factors for building community disaster resilience in similar setting (in terms of vulnerabilities and capacities) in Hong Kong, and recommend the way forward of such at individual community and policy levels.
- (d) Based on (a) and (b), to propose a service development framework/model (with a set of customized social indicators), to be adapted by related players/stakeholders as the basis and/or impact assessment tool for developing effective community-based capacity building programme towards disaster resilience in the future.

Throughout the qualitative and quantitative research, and evaluation on HKJCDPRI’s programme, we identified strong and potential stakeholders capable of taking up important roles in building community resilience. Therefore, MOL aims at formulating a “blueprint” for building community disaster resilience model, involving both top-down and bottom-up approaches, to engage not only local NGOs and the official parties, but also agencies, say local small groups, non-governmental groups as well as academia, in the process of community building. We hope to establish guiding principles on how to start building a resilient community and identify key collaborators potentially. Practical recommendations are given to enhance works of disaster preparedness and community building as a “blueprint” to community resilience.

1.1.6 Structure of the Final Report

The report involves three main chapters in addition to this introductory chapter:

- **Section 2** responds to current Contingency Plan for Natural Disaster (CPND) system and the previous research by demonstrating the official mechanism of disaster management in Hong Kong and the capacity and potential of Sai Kung in terms of disaster preparedness.

- **Section 3** reframes community resilience in the perspective of local organizations, policy makers and academia.
- **Section 4** formulates Blueprint from findings and gives recommendation on the development of disaster preparedness in local context.

2 Responds to Current CPND System and the Previous Research

2.1 Hong Kong Context: Configure Existing CPND

Climate change is the significant environmental challenge of the twenty-first century, a global threat to the social, economic and environmental sustainability. Despite the emergency, slow progress has been observed in performing international climate change agreements and introducing effective mitigation programs (Shammin, Haque & Faisal, 2022³). Whilst in community level, people have suffered from natural disasters occurring with increasing severity and frequency. Their immediate response determines their lives, attributing to the capacity building of the communities in disaster preparedness. Community resilience is a way out by understanding disaster resilience within a community as a societal phenomenon, in a prospect that higher resilience of the community can enhance sustainability and well-being (referring to **Report 2b** Section 1.1). It is a process of continuous engagement that allows for a healthy recovery afterwards (Arbon, 2014⁴).

Surrounded by the sea with a subtropical monsoonal climate, Hong Kong has suffered mainly from water-related disasters. Flooding from tropical cyclone, landslides from heavy rain and storms are constantly observed and associated with each other in every typhoon season. Some rare weather phenomena are experienced in the past decades, for example, the frozen precipitation event constituting frost and icy road at Tai Mo Shan in 2016 winter and hail hitting Hong Kong in 2016 and 2021 summer. From **Report G**, corresponding to disasters, Hong Kong government have done a lot in disaster mitigation through infrastructure enhancement and public education regarding first aid knowledge and emergency response. Climate Change Working Group in Infrastructure (CCWGI) of

³ Shammin, M.R., Haque, A.K.E., Faisal, I.M. (2022). A Framework for Climate Resilient Community-Based Adaptation. In: Haque, A.K.E., Mukhopadhyay, P., Nepal, M., Shammin, M.R. (eds) Climate Change and Community Resilience. Springer, Singapore. https://doi.org/10.1007/978-981-16-0680-9_2

⁴ Arbon. (2014). Developing a model and tool to measure community disaster resilience. Australian Journal of Emergency Management, 29(4), 12–16. <https://doi.org/10.3316/agispt.20150224>

CEDD has been established to combat the adverse effects brought by climate change and extreme weather on government infrastructure. Emphasizing adaptation and resilience in infrastructure, they have updated and reviewed design manuals and guidelines for enhancing the performance of infrastructure for several departments, while installing structures to reduce the impact of disasters. Education has been provided to different groups of people, including the minorities, vulnerable groups and general public via diverse media.

Sai Kung comprising coastal, riverside and hillside areas is prone to natural disaster with severe adverse impact. Therefore, several enhancements in infrastructure have been done over the past 20 years, including but not limited to drainage improvements and the reinforcement of coastal structures. The existing mitigation works, the social characteristics, and the geographical context of Sai Kung differentiates the disaster vulnerability of Sai Kung to that of Tai O and Lei Yue Mun, which takes Sai Kung out of the list of communities demanding a specific emergency response plan for disasters.

In policy level, the Hong Kong Special Administrative Region Government (HKSARG) has established an existing emergency and disaster response system for natural disaster, specifically the Contingency Plan for Natural Disaster (CPND). By the means of the super typhoon, Hato in 2017 and Mangkhut in 2018, Hong Kong demonstrated the response system as a comprehensive mechanism involving multiple bureaux and departments (B/Ds). From the findings of the Interviews with official departments (see **Report G**), the Contingency Plan for Natural Disaster⁵ and some desktop research, we draw a timeline of disaster management carried out by diverse B/Ds, as the following figure. The system is further elaborated in the following paragraphs.

The Three Tier Emergency Response System

The HKSARG has an existing emergency and disaster response system. The Three Tiers emergency response system was developed in 1996 to initiate a response according to the level of severity of an emergency. Situations with higher level of severity and in larger

⁵ Emergency Support Unit. (2019, October). Contingency Plan for Natural Disaster. Retrieved June 16, 2022, from <https://www.sb.gov.hk/eng/emergency/cp.html>.

scale involves stakeholders with higher level of authority. Tier Three is for the most extreme situations and the smallest level is in Tier One. Relevant stakeholders have assigned roles and responding functions in each tier. The following figure shows the Hong Kong Emergency Response System and its associated stakeholders in the three tiers. Under the system, several contingency plans were made for the corresponding man-made or natural disaster, such as Contingency Plan for Dealing with an Aircraft Crash in Hong Kong, Daya Bay Contingency Plan and **Contingency Plan for Natural Disaster**.

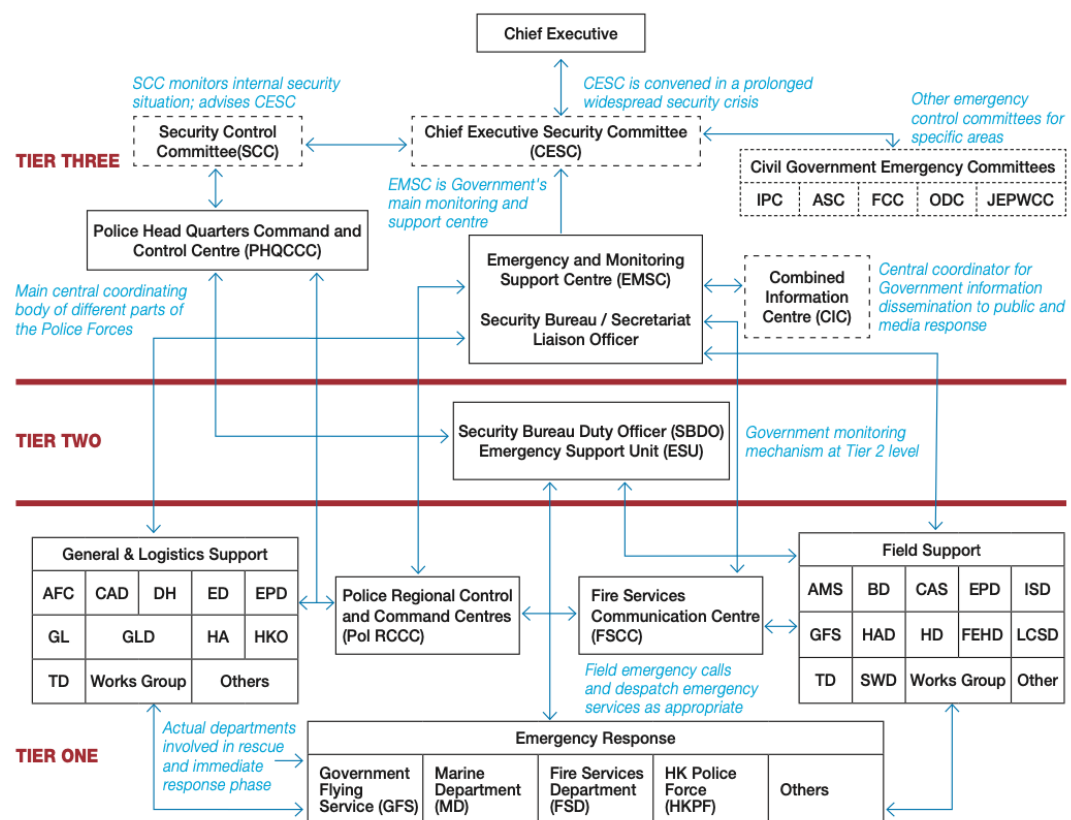


Figure 1 Hong Kong Emergency Response System for Disasters⁶

Contingency Plan for Natural Disaster (CPND)

CPND has been formulated for preparing Hong Kong to be ready to respond effectively in the event of an emergency for natural disaster. Located within the sub-tropical region, Hong Kong experiences extreme weather in different seasons. Heavy rain, storm surge,

⁶ Chan, Yeung & Lo. (October 2015). Hong Kong's Emergency and Disaster Response System.

thunderstorms and tropical cyclones are frequently observed, and they constitute natural disasters in Hong Kong, such as flooding and landslips. To effectively respond to the emergency, CPND narrates the strategies, organization and alarm system, as well as explaining the roles, responsibilities and functions for relevant departments, bureaux, public utility sector and non-government organizations before, during, and after the occurrence of natural disasters. Under the Security Bureau (SB), Emergency Support Unit is the coordinator and keeper of emergency response management.

Disaster risk assessment will be conducted by the Emergency Support Unit and related bureaux or departments for follow-up mitigation and prevention measures. Liaison offices will be set up involving the departments in the exchange of information and the coordination. Drills with specific weather conditions will be given to members in the strategies. The government will invite NGOs to participate in the drills and provide education to the public regarding emergency awareness and self-help knowledge.

Specific bureaux or departments (B/Ds) will be appointed by the government for coordination in disaster response. The government will steer on the overall performance of the relevant B/Ds. In special arrangement, a steering committee will be formulated and led by the Chief Secretary for Administration for steering on overall performance from disaster preparedness to disaster recovery.

After disaster, review will be carried out regarding workflow, division of labour, human resources distribution and constraints, improvement on equipment and infrastructure, and internal and external information exchange. A more effective and efficient workflow is expected in the upcoming disaster management circle for maximizing the functions of the government, related B/Ds in disaster management. CPND is then reviewed.

CPND: Alerting System

Hong Kong Observatory (HKO) is the trigger and the pivot. HKO monitors weather conditions closely and initiates the issue of all warnings of severe weather conditions. Messages will be delivered giving general advice on precautions to be taken to minimise loss of life and damage to property, followed by supplementary information and advice as the situation develops. Weather warnings summaries will be issued to the relevant

government departments, including the Emergency Monitoring and Support Centre (EMSC) under the Security Bureau (SB), the Police Headquarters Command and Control Centre (PHQCCC), the Fire Services Communication Centre (FSCC) and the Information Services Department (ISD), whenever any Tropical Cyclone Warning Signals, Rainstorm Warnings Signals, Localised Heavy Rain Advisory, Landslip Warnings, or Special Announcement on Flooding in the Northern New Territories are in force. All such warnings will then be disseminated to relevant department. Upon receipt of any such warnings or messages, each department shall immediately take all necessary action as required in its own contingency plan and in the CPND.

CPND's Keeper

The Emergency Monitoring and Support Centre (EMSC) in the Emergency Support Unit under the Security Bureau is on the top level of coordination and the keeper of CPND. Once Typhoon Warning Signal No. 8 or above, Black Rainstorm Warning Signal and/or Tsunami Warning is/are issued, or requested by Secretary for Security or Permanent Secretary for Security, EMSC will be activated. EMSC is responsible for monitoring the development of incidents, and collating information for carrying out a full picture of situations; monitoring and supporting the work of the emergency services and problem solving; liaising with ISD for news announcement and effective information transfer; in consultation with relevant parties the acquisition and mobilization of resources and services as required by the emergency services; liaising with the Home Affairs Department (HAD) to ensure that emergency relief and evacuation co-ordination matters are being fully addressed as necessary; briefing senior government officers on the development of, and prognosis for, emergency situations; and providing a permanent communication channel with the Secretary for Security through which advice on policy matters, difficult problems and emergency powers may be obtained by concerned parties. Liaison officers of the five departments (ISD, PHQCCC, FSCC, Lands Department (LandsD) and Transport Department (TD)) will sit in EMSC for immediate coordination.

Disaster Preparedness

Coordinated by EMSC, several departments are responsible for emergency response, rescue, and recovery according to CPND and their contingency plans. When HKO issues a weather warning signal, HAD, the Civil Engineering and Development Department (CEDD) and the Drainage Services Department (DSD) take the lead to execute disaster preparedness in identified vulnerable communities, such as Tai O. HAD is responsible for the opening of the temporary shelters and the liaison with local residents and stakeholders. CEDD and DSD do inspection around the areas for helping the residents with their preparedness works, say distributing sandbags, installing demountable flood gates, and clearing blocked drains. Several departments have standby operation teams in the headquarters or on site for quick response, for example, Civil Aid Service (CAS) supporting other government departments on disaster operations.

Disaster Response

Once a disaster occurs without precaution, officers of the Fire Services Department (FSD) and the Hong Kong Police Force (HKPF) will attend the scene. They set up onsite command for coordinating search and rescue tasks. CAS and the Government Flying Services (GFS) support the operation, while the Auxiliary Medical Service (AMS) provide onsite medical support. During the process, HAD's Emergency Co-ordination Centre works with other departments and agencies to ensure that their activities are properly coordinated in providing emergency relief, and to arrange temporary accommodation for members of public affected by natural disasters. Several departments are responsible to corresponding areas under their jurisdiction.

The functions of other relevant B/Ds are elaborated in the picture, including Agriculture, Fisheries and Conservation Department (AFCD), Architectural Services Department (ArchSD), Buildings Department (BD), Civil Aid Service (CAS), Civil Aviation Department (CAD), Civil Engineering and Development Department (CEDD), Development Bureau (DevB), Drainage Services Department (DSD), Education Bureau (EDB), Electrical and Mechanical Services Department (EMSD), Food and Environmental Hygiene Department (FEHD), Government Logistics Department (GLD), Department of Health (DH), Highways Department (HYD), Hospital Authority (HA), Housing Department, ISD, LandsD, Leisure and cultural Services Department (LCSD), Marine Department (MD), Office of the

Communications Authority (OFCA), SB, EMSC, Social Welfare Department (SWD), TD, and Water Services Department (WSD).

Respond to the Disaster Risk Management Circle

According to the Asian Disaster Reduction Centre, Disaster Risk Management Circle consists of four phases: mitigation and preparedness in the pre-disaster stage, and response and recovery in the post-disaster stage. CPND, the top-down approach in emergency response, covers mainly from disaster preparedness to response, complemented by the Emergency Relief Fund and the critical works for disaster mitigation and recovery. Despite the fact that the authority devotes resources for supporting the community as an external intervener, the response of the internal system, i.e., the community itself, is essential in combatting disasters. How the community reacts to disasters and interacts with the external forces are missing. Therefore, bottom-up disaster preparedness is worth discussing to enhance the capacity building of a community in disasters.

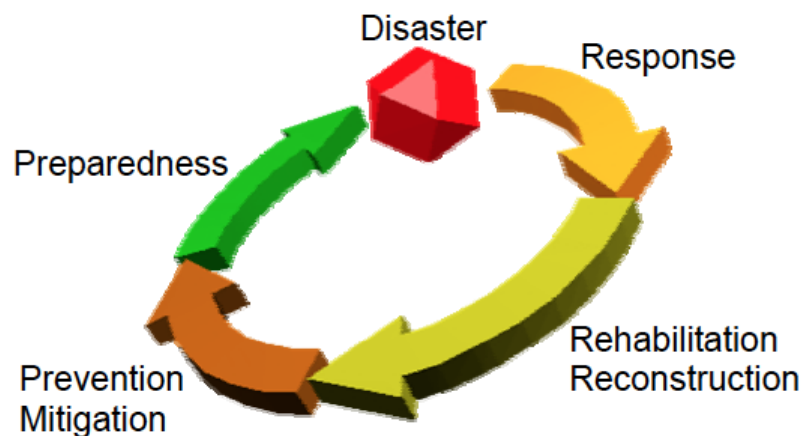


Figure 2 *Disaster Risk Management Circle⁷*

The following subsections will discuss on the characteristics of Sai Kung in disaster preparedness in community level, and then unfold the potential capacity in community

⁷ Asian Disaster Reduction Center. (2005). Total Disaster Risk Management – Good Practices.

resilience, which brings about the enabling and disabling factors of Sai Kung in developing disaster resilience in the future.

2.2 Sai Kung Character in terms of Disaster Preparedness

This chapter elaborates on the characteristics of Sai Kung in terms of disaster preparedness, referring to the previous studies of the Sai Kung Community, including the submitted and endorsed **Community Profile Report, Report 3a, Report F** and **Report G**.

AED and First Aid Trainings provided by HKRC

In collaborating local NGOs, HKJCDPRI invited Hong Kong Red Cross held AED certificate courses and First Aid training to villagers in Sai Kung, in 2022 which enriched villagers' knowledge regarding the immediate care given to the injured person and built confidence in facing relevant events. Those experience in handling patients empowered villagers to help their neighbours and self-help in any cases. They have higher awareness, confidence and more practical skills for getting prepared for the coming events.

Infrastructure Enhancement by DSD and CEDD

Several enhancements of infrastructures were done by DSD and CEDD, including but not limited to the improvement works over the past decade in Ho Chung, underground drainage system in Sai Kung Town, and the sea wall improvements in the south of Sai Kung Town Centre. The mitigation and prevention work reduced the risks and impact of disaster to the community, and hence increased the resilience.

Regular visits and connection with the disadvantaged elderlies

Local NGOs, including Sai Kung District Community Centre (SKDCC) and Hong Kong Sai Kung Community Development Service (Caritas), have served specific areas in Sai Kung over forty years. SKDCC provided mainly elderly, children and youth, and family service, covering Sai Kung District, while Caritas did community building in Tui Min Hoi and Po Lo Che. They have built strong and healthy relationship with the community over time. They conducted regular visits to villages for providing solicitude and resources. Caritas owned

the village data base of Tui Min Hoi and frequently updated their lists of vulnerable villagers, paying more attention to those who live along or live in the low-lying coastal area.

Self-help groups in community

Caritas organized local residents to form self-help groups and volunteer teams organically for building strong reciprocal relationships in the neighbourhood, formally and informally. Villagers gained experiences in producing handmade products and conducting home visits to hidden and singleton elders. The volunteer teams also conducted home assessment to evaluate the safety of the living environment, followed by the addition of safety enhancement furniture (such as handles). Throughout the process, residents obtained knowledge of maintaining a disaster resilient environment and built confidence of their relationships with the neighbourhoods.

Experiences during the COVID-19

The COVID-19 pandemic set an example for disaster preparedness and stimulated practical ideas in building a disaster resilient community. Church and local NGOs matched up the vulnerable villagers with active villagers for transferring information, distributing resources and providing immediate support during the pandemic. The practice is worth to be referred as the daily practice for disaster preparedness, and relationships built are worth to be sustained and further developed into a large safe net for the community.

Strong social attachment

Strong cultural and social attachment among villagers attributes to the long development history and the religious development. Referring to the ***Community Profile Report***, the three ancient villages have gone through a long history since the first appearing in the late seventeenth century (2.1). Some Hakka villages have been developed then, in which villagers practiced fishing and farming for living in the old days. Families lived together, developing as a village and passing through generations. Some strong social networks were formed. The service provided to villagers by the religious

groups has created close relationships among villagers since the old days. Both of which contributed to resilience development by enhancing mutual support at emergencies.

Experience in coping with natural disaster

Villagers gained valuable experience after coping with disasters from past events. For instance, Super Typhoon Mangkhut hit Sai Kung intensively in 2018, resulting in flooded houses and streets, as well as collapsed trees. Villagers responded quickly and escaped immediately from danger. They handled cleaning works actively and helped each other by providing shelters and daily necessities. The serious impacts alerted villagers to the danger of typhoon and helped discover talents and resources during disaster preparedness, which facilitated disaster preparedness for the future events.

Living with nature

Planting at home is a favourable practice for households living in Sai Kung Village since their village type housing with low density provide flexibility for gardening. In **Report F**, most of the interviewees practice farming at home in different scales. For instance, Wong manages her garden under glass shelter and Anna manages farmland with her family members for leisure farming. Planting enables villagers to be weather-sensitive. The increase of awareness and attention of weather and natural disaster enhance the capability of villagers in disaster preparedness.

Skills and tools

Living in rural area without sufficient mainstream support forces villagers to obtain self-help skill, such as home repair skills. From **Report F** and **Report G**, many villagers are experienced in home maintenance and repair. They even helped their neighbours with their household issues. Tools are easily found in the community, attributing to their needs of home repair and the maintenance of their workshops and garden. Beside households, construction companies and construction sites are easily found in Sai Kung, where gathered lots of knowledge and skills of handling collapsed trees and worn structure for disaster response.

Flexibility to living space

Without tight restriction from property management companies in urban areas, villagers have certain flexibility in changing the function of spaces and doing minor construction according to their needs. Some villagers made small-scale construction, say building a short wall, to avoid flooding (referring to **Report F**). Some added shading net on the roof to reduce heat in hot weather.

2.3 Asset Maps: Capability, Potentials, and Limitation of Sai Kung for Community Resilience

Asset mapping of Sai Kung Community is going to identify the existing and potential drivers for strengthening social networks and obtaining social capital for building community resilience. For better utilizing community assets, it is essential to understand the correlation among resources and the potential connection between people and assets. It is clearly recognized that several authorized parties and NGOs have served Sai Kung community for long time. They have supported the growth of community as well as the relationship built among villagers by various services and activities, contributing to the building of a disaster resilient community. However, this part aims at discovering the hidden but existing parties and groups that are capable of connecting people, utilizing resources and developing their networks. They are the new drivers in building resilience, in which they release their capacities of community assets during the process. The net of resource is then expanded to a larger coverage of Sai Kung community, even the remote areas.

From **Community Profile Report** and **Report G**, the existing drivers, including local NGOs (SKDCC and Caritas) and the rural representatives and committee, have strong relationships with some villagers, strong data base of field information, and connection with resources outside the community. They involve in the community with different perspectives and reasons, and in different scale and intensity. NGOs target different minority groups, say children and elderlies, and act as a platform for building reciprocal relationships. The rural representatives and rural committee provide services within their corresponding villages, regarding the welfare of indigenous inhabitant and

residents. Various parties serve the community in building resilience within their areas in their own channels and methods.

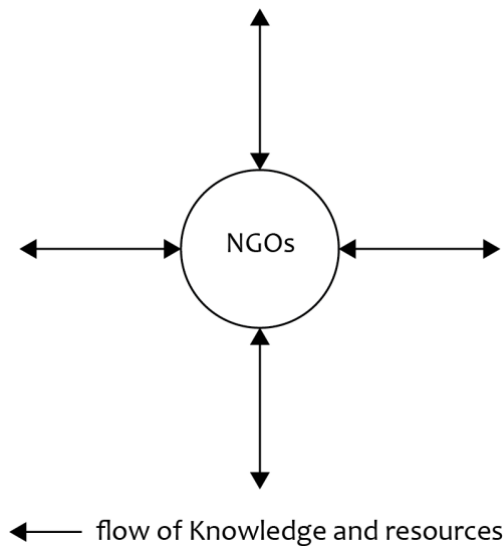


Figure 3 *The character of NGOs*

From **Report 3a**, three new drivers of enhancing community disaster resilience are identified, including local religious institutions, senior villagers and young generations.

Local religious institution runs a physical space to gather people and is one of the most important social networks of Sai Kung Community. In the old days, religious groups have intensively participated in villagers' lives by resettling fishermen and improving villagers' housing and providing education for generations of Sai Kung people, and hence serves as a trustworthy member of the community. Local religious institution contains wide range of assets, including personnel as part of the community. It is full of manpower, space and facilities as flexible physical assets, equipment supporting diverse activities, expertise from different specialties with professional skills, and economic power. It demonstrates as a fixed collecting spot of knowledge and resources, which leads it to be a potential influential media for information exchange and resource matching.

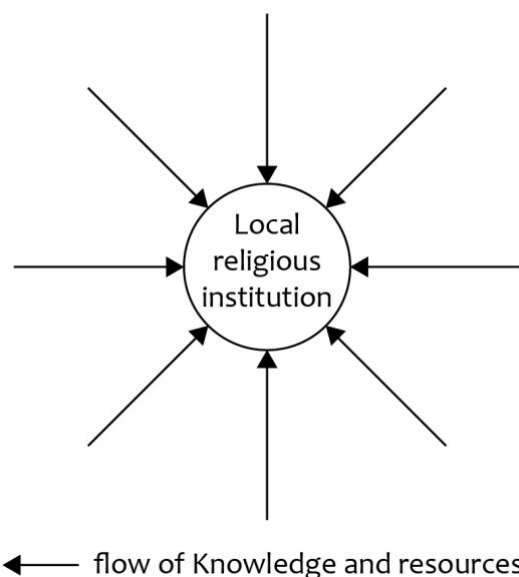


Figure 4 *The character of local religious institution*

Senior villagers are essential for discovering assets of Sai Kung Community as they are rooted for decades, going through diverse past events with Sai Kung. They have rich experience, skills, talents, local wisdoms, relationships and time. Time provides opportunities for them to live with their neighbours and discover their neighbourhoods. In this sense, they assemble as some small groups either in neighbourhood level or in village level. As a potential driver in building disaster resilience, they carry field knowledge and close peer relationships for the immediate response to disaster. They are potential teams rooted in their communities for tasks ranging from daily solicitude and discussions on village affairs to localized affairs for disaster preparedness.

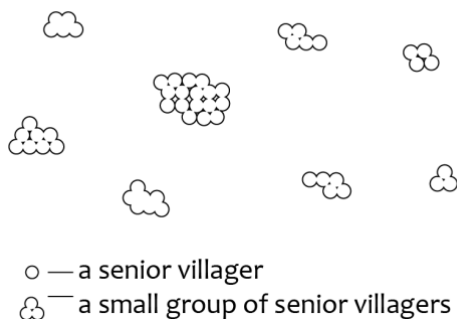


Figure 5 *The character of senior villagers*

Younger generations are one of large groups in the highly mobilized and mixed Sai Kung neighbourhoods. They are full of energy and insightful ideas to the community, which contains lots of potential to create various bonding with different assets and attachment to their living place. They contain connection to place attributing to the reasons of living in Sai Kung, skills and talents from their own experience, energy in their age, social network with parties outside Sai Kung according to their occupations or interests, friendship and networking in their childhood, and family relationships. Compared with the senior villagers, young generation is likely to be more independent as an individual popping up in the communities. As a potential driver in building disaster resilience, they are a huge manpower for the community in response to disaster with their energy and their network outside Sai Kung. They are potential influential media of disaster education in their family and gathered manpower in disaster response. In the form of some separated individual, they have high mobility moving around the communities for searching potentials and gathering when emergency.

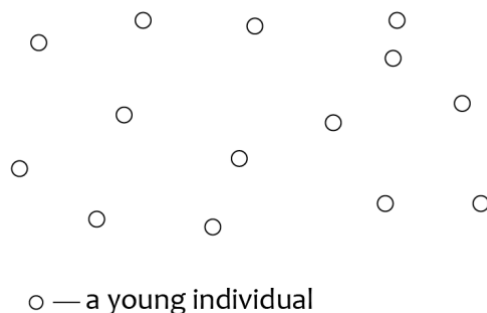


Figure 6 *The character of young generation*

Both the existing drivers and the potential drivers are segregated without collaboration unless the existence of an agency for coordination between the parties and groups. The lack of coordinator hinders the utilization of resources across parties and areas. The potential cannot be further developed, and the limitation cannot be broken without reviewing good international cases. By applying the characteristics of Sai Kung as a potential resilient community, the Research Project will try to re-frame community resilience in the favour of Hong Kong, pushing forward the development of disaster resilient communities.

3 Re-Framing Community Resilience

From the findings in **Report 2b**, the concept of community resilience is elaborated and there have been various aspects of community resilience adopted in different contexts and by different stakeholders. With the aim to recommend effective and suitable strategies to further promote disaster preparedness and community resilience in the context of rural Sai Kung, this section will draw a conclusive picture of how local organisations build community resilience and how the academia conceptualise community resilience – to be precise, what framework they have been adopting. In response, referencing international case studies in **Report 2a** and the local conditions of Sai Kung, this section discusses what aspects, or to what degree of respective aspects, should be adopted for the context of Sai Kung, as well as other rural areas in Hong Kong in an extensive vision.

3.1 Community Resilience viewed from Local Organisations

Local Organisation as Actor

From **Report 2b**, the prime example of local organisations, Hong Kong Red Cross, is the most forefront actor with its fundamental mission “to prevent and alleviate human suffering” as stated in the International Red Cross and Red Crescent Movement. In the case of Hong Kong Red Cross, the activities are designed and executed, encompassing several types of disaster to which Hong Kong citizens are commonly exposed to. They include learning processes of understanding disaster risks and ways to minimise loss during disasters. They also organised visits before and after typhoons in rural areas such as Tai O and Lei Yue Mun so as to promote disaster preparedness by knowledge sharing and volunteer training and helping residents clean up if damages are done. Tai O Flooding Crisis and Need Assessment was conducted by paying home visits to the residents in 2018. Hong Kong Red Cross (HKRC) also contacts other rural areas so as to acknowledge them of the provision of emergency resources by HKRC in case of disasters.

Their conceptualisation of building community resilience, as viewed from their previous works, is quite focused on the scope of disseminating and collecting knowledge on disaster preparedness in the community, including educational activities and need assessment, as well as providing ad-hoc tangible resources and physical actions. These approaches reveal that the building of community resilience is led by HKRC, as a central player with its volunteers (which include some local participants), with its active role to educate and equip the community.

Local Organisation as Advocate

The Hong Kong Jockey Club Disaster Preparedness and Response Institute (HKJCDPRI) was launched in November 2014 carrying out collaborative programme across medical and academic institutions, government departments, non-governmental organisations and communities in Hong Kong. Its mission is to provide training and skills development, to foster community education and preparedness, and to facilitate policy making and exchange, to development Hong Kong into a regional knowledge hub in the field. With its aim of building resilience, it carries out projects in three domains including: (1) capacity building of target groups in preparing for and responding to emergencies by raising disaster awareness, delivering the required knowledge and enhancing the required skills for coping with disasters, (2) building the knowledge platform to create learning opportunities for and disseminate relevant knowledge to disaster practitioners, corporate, people interested or with a role in emergency planning and the general public, and (3) furthering research and innovations to identify knowledge gaps and conduct research.

The conceptualisation of establishing community resilience by HKJCDPRI, similar to HKRC, concerns the accumulation and dissemination of knowledge. HKJCDPRI works not only with the general public but also with various stakeholders in disaster preparedness, and to achieve which community resilience is one of the approaches, and it advocates new approaches for the field by forms of collaboration, research and innovations.

3.2 Community Resilience viewed from Local Academic Research

There are not focused academic research on community resilience. However, from available studies on disaster preparedness, there are particular frameworks concerning community resilience.

In the policy brief, *Community Engagement in Disaster Planning and Response: Recommendations for Hong Kong* (Newnham et al 2015)⁸, prepared by Harvard University, evaluation on disaster preparedness encompasses financial planning and safety-nets against destruction of livelihood, community outreach for need assessment and education, and establishing communication systems to inform community members before and during disasters.

In the study of Chau et al (2014) on social vulnerability in Hong Kong⁹, a social vulnerability index for older population is adopted, assessing the characteristics of the population, including poverty, living alone, disability, communication obstacle, and access to primary care. In his study, Sai Kung has a relatively low index, which means the communities in Sai Kung are less vulnerable as seen from the statistical data. However, the report, though highlighting a few factors such as the accessibility of the people's accommodation and education level, has not offered an in-depth discussion on the reason behind such a phenomenon, specifically for the case of Sai Kung or other similar rural areas, as juxtaposed to other areas in Hong Kong. Nevertheless, from the selected data in the report, there is no particular correlation between vulnerability and rural/urban setting as there are both rural and urban cases with highest and lowest levels of vulnerability.

In the territory-wide survey conducted by Lam et al (2017)¹⁰, indicators of disaster preparedness are listed as: Disaster preparedness information, Information during

⁸ Newnham, E., Patrick, K., Balsari, S., Leaning, J. (2015) Policy Brief - Community Engagement in Disaster Planning and Response: Recommendations for Hong Kong. Cambridge: Harvard University.

⁹ Chau, P. H., Gusmano, M. K., Cheng, J. O., Cheung, S. H., & Woo, J. (2014). Social vulnerability index for the older people—Hong Kong and New York City as examples. *Journal of urban health*, 91(6), 1048-1064.

¹⁰ Lam, R. P. K., Leung, L. P., Balsari, S., Hsiao, K.-H., Newnham, E., Patrick, K., Pham, P., & Leaning, J. (2017). Urban disaster preparedness of Hong Kong residents: A territory-wide survey. *International Journal of Disaster Risk Reduction*, 23, 62–69. <https://doi.org/10.1016/j.ijdrr.2017.04.008>

disasters, Communication methods, Evacuation strategies, Financial resilience, First-aid knowledge and response to warning signal, Disaster preparedness behaviours.

Though not directly addressing community resilience in these researches, some of the aspects they cover are constituting community resilience in the context of disaster preparedness. They mainly include aspects such as knowledge of community members - to what degrees and in what ways they are informed about disasters and ways to minimise loss. Moreover, to what degrees and in what ways, community members can access resources for rescue and recovery. Furthermore, the importance of vulnerability mapping in community is recognised to ensure that the allocation of resources can reach particular members in the community.

Apart from the above studies, Guo et al (2020) has published an article on the “Impact of information seeking, disaster preparedness and typhoon emergency response on perceived community resilience in Hong Kong”¹¹, which directly addressed the concept of community resilience, adopting the framework of Conjoint Community Resiliency Assessment Measure (CCRAM-10). It focuses on the socio-psychological aspect as perceived community resilience, studying how positive the attitudes towards leadership, collective efficacy, preparedness, place attachment and social trust are in the community. Such an understanding widens and deepens the research as the perception from the community member themselves are considered. In the design of the questionnaire, it is revealed that there is particular reference to the regional council as the authority and decision makers. Moreover, though the process of information seeking is individual/household oriented, the source of information is basically dependent on governmental departments. Thus, the conceptualisation of community resilience in the study assumes an active role of the government or public institutions.

¹¹ Guo, C., Sim, T., & Ho, H. C. (2020). Impact of information seeking, disaster preparedness and typhoon emergency response on perceived community resilience in Hong Kong. *International Journal of Disaster Risk Reduction*, 50, 101744.

3.3 Overall Perception on Community Resilience in Hong Kong

Summarising the works and study accomplished by local actors including local organisations and the academia, community resilience has already been one of the main goals in promoting disaster preparedness. One crucial mission shared by all stakeholders is enhancing the knowledge on disaster preparedness and available resources in cases of emergency, such as first-aid and the basic understanding of warning systems, among community members, by ongoing educational activities on different levels such as schools and neighbourhoods. Understanding of the particular characteristics of communities is also an established practice and recognised aspect for building disaster preparedness in both organisations and academic research - need assessment of community is conducted so that resources and needs align, especially for particular vulnerable groups in the community who requires special care. Moreover, there are actions and support, in terms of finance and human resource, offered by local actors.

These findings show that community resilience, according to the framework presented in **Report 2b**, local actors have contributed to the three major domains including learning, resources and capability and actions, though not every element in each domain are the focus of their works.

Learning	
Aspects	Focus
Risk / loss perception	No
Problematizing risk / loss	No
Critical reflection	No
Experimentation & innovation	No
Dissemination	Yes
Monitoring & review	Yes

In terms of learning, more precisely, knowledge on disaster preparedness, local stakeholders are capable of establishing specific content of knowledge and ways in disseminating them to particular communities at risk by regular activities, as well as need assessment in certain periods. Governmental departments are also responsible for

monitoring data related to disaster risks. Knowledge dissemination and acquisition are mainly performed outside concerned communities and the research methods and findings are basically quantitative understanding. For example, from statistics we may know how many vulnerable populations are in the community, or whether they have access to emergency resources. However, there are gaps in critically conceptualizing risks and loss in the perspectives of communities – for example, what community members value most and what they want to safeguard most in case of emergency in particular contexts such as rural villages.

Resources and Capabilities	
Aspects	Focus
Natural/place-based	No
Socio-political	Yes
Financial	Yes
Physical	Yes
Human	Yes

In terms of **resources and capabilities**, local organizations such as HKRC are active in providing physical and human resources for communities while advocates such as HKJCDPRI provide financial support and policy recommendations for building up disaster preparedness. However, these resources are drawn from external backgrounds and may not suitably fulfil the need of community while place-based or natural resources are not utilised or coordinated to facilitate the need for building disaster preparedness.

Actions	
Aspects	Focus
Preparedness	Yes
Response	Yes
Recovery	Yes
Mitigation	Yes
Vulnerability reduction	Yes
Social safety nets	Yes

In terms of **actions**, current scope of work among local actors concern aspects of actions in community resilience quite comprehensively. For preparedness and recovery, local organisations deliver prompt actions in communities by offering aid and support, while for response and mitigation, local governmental workforces establish sets of reacting mechanisms in cases of emergency. Meanwhile, vulnerability reduction and social safety nets are of academic concern in their study and policy recommendations. However, these actions are mostly implemented by outsiders instead of local community members whereas the study on social protection is not thorough – implementation of such actions are not contextualised in particular communities such as rural villages in Hong Kong.

Generally speaking, community resilience is a recognized concept in the field of disaster preparedness among local stakeholders with active implementation of standardized actions and provision of tangible resources, mostly in top-down approaches, coordinated by local organization or governmental departments. However, these approaches may not fit local contexts in terms of practical use and values. Moreover, locally sustained mechanisms in learning, actions and resources and capabilities have not yet been built up.

3.4 Reframing Community Resilience

To facilitate the sustainable building of community resilience fitting local contexts, a reframing of current practices and conceptualizations of community resilience should be offered.

In terms of learning, the understanding of risk and loss in current studies may have blind spots, as they are defined by the academic in mainly quantitative standards. More qualitative and people-oriented studies of their perceptions can shed light on, for example, how people weigh risk over loss, and the cost of carrying out recovery works, as well as how people perceive disaster with different religious beliefs or cultural traditions. For example, in the case of Tamil in **Report 2a**, though fisher folks are given a disaster kit and have experienced the tsunami, most of the villagers still chose not to use the kit because they tend to minimize risk by a more cautious prediction of weather upon deciding whether to go fishing in the ocean. Even knowledge is generated from

studies, or experiences are derived from previous disasters, people may understand them in various ways. Therefore, it is important to facilitate a community-oriented perspective and contextualized discussion in generating knowledge, so as to have a meaningful learning process and by understanding people's perception, more feasible and effective actions can be planned.

In terms of resources and capabilities, to facilitate greater sustainability, place-based and bottom-up works should be initiated. Though other forms of resources are aided and supported by local organizations, the most important and direct actors are the community members themselves who can carry out community works sustainably. When such works are initiated within the community and operate in a self-sustained way, there can be less dependence on outside resources which may vary due to institutional factors. For example, in the case of British Columbia in **Report 2a**, some communities are willing to clear the fuel (vegetations prone to fire) with their members herding their livestock, eating grass, or cutting the woods with schools' students bringing along local tools, who take this as an opportunity to learn about forestry. Such a place-based utilization of resources and capability facilitates both community development and disaster preparedness enhancement. Therefore, actions can be planned not only with the primary aim of promoting disaster preparedness. Instead, actions can be initiated for the benefit of the community, such as its economy or environment, meanwhile disaster preparedness can be one of its elements, but not necessarily the primary goal, when natural resources are especially abundant in rural context in Sai Kung.

In this way, more comprehensive actions can be designed for the context of particular communities and acted by local members who do not need to rely on outside help, and civil and social protections can be sustained more independently and durably.

What degree of Community Resilience should be taken for HK rural context?

Reviewing the international cases and local situation, a chart of community resilience by the degree of community orientation for learning as well as resources and capability is plotted as follows

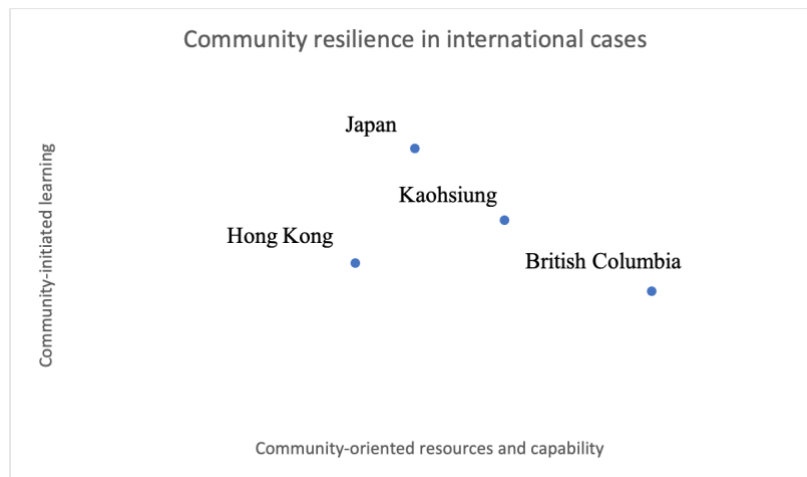


Figure 7 *Position of community resilience in international cases*

The cases of Japan and British Columbia represents respectively the high level of community-oriented learning process and resources and capability while Kaohsiung's case demonstrate the joint measures of top-down and bottom-up approaches. Hong Kong, in such a comparison, remains mainly in top-down direction in learning processes and information flow, as well as dependent on centralized sources in building up community resources and capability.

For the development of community resilience in the future, we suggest further consolidating and utilizing local resources and capability, especially for the context of rural Hong Kong, where land and natural resources are abundant and economic and social activities are diverse. While the residents in Sai Kung for example have got used to living along with the natural environment and are with a greater attachment to the community, there is potential to develop sustainable community resources and capability which promotes community resilience in disaster management context. It is in Hong Kong's case that most environmental information is collected and disseminated by the government. Still, further place/community-specific consolidation for learning process can be facilitated by having information ready and consolidated, in other words, user-friendly for people living in rural context. Within rural communities, there can be acting agents to facilitate the accumulation of experiences in specific contexts – these

recommendations will be further discussed in the following section.

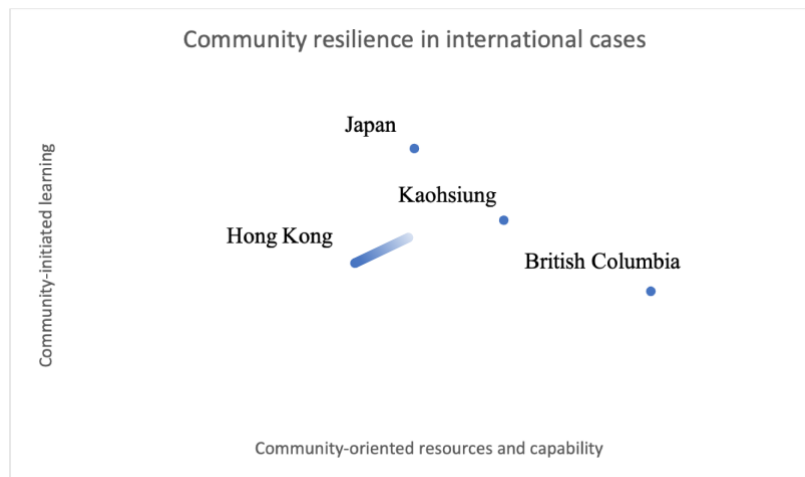


Figure 8 *The proposed direction of development in community resilience of Hong Kong*

Community resilience in Sai Kung is heading to the development of community-oriented resources and capability, attributing to its strong social attachment and their living environment. Strong social bonding enables the growth of potential connections among community members with trust, while living in natural environments enables members to obtain skills and resources. The evolvement of self-help groups and volunteer groups helps release the capability of community, as a result of pushing Sai Kung community towards the development of community-oriented resources and capability. On the other hand, knowledge obtained regarding disaster preparedness and response mainly came from agencies outside the community, say HKRC. The learning of the community relies on the input at a higher level, but less depends on peer learning and knowledge passing through generations. With rich experience in coping with natural disaster, the community has certain potential to develop community-initiated learning. Yet, more is needed to be done in building a net of knowledge for consolidation and the delivery of knowledge and information is another concern.

4 From Findings to Blueprint Formulation, and Recommendations

4.1 Understanding of HKJCDPRI

4.1.1 HKJCDPRI's Nature and Core Position

As an advocate, HKJCDPRI aims at establishing Hong Kong as a regional and international leader in disaster preparedness and response training, and to promote community resilience. Shifting from medically focused to multi-sectoral action, the HKJCDPRI Project consists of three domains, including capacity building, knowledge platform, and research and innovations. Under capacity building domain, the HKJCDPRI Project aims to build capacities of target groups on preparing for responding to emergencies by raising disaster awareness, delivering the required knowledge and enhancing the required skills for coping with disasters. Public engagement contributes to capacity building by engaging communities vulnerable in disaster preparedness efforts, targeting groups vulnerable to disasters. “Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung)” is as a result.

Coordinator and facilitator are the two key positions of HKJCDPRI in the Programme. As a coordinator, HKJCDPRI fosters collaborations between different stakeholders in disasters by matching vulnerable communities with diverse service providers. Resources and knowledge are redistributed in the process to facilitate the development of a disaster resilient community.

4.1.2 Evaluation on Sai Kung Programme

From March to October in 2022, HKJCDPRI, collaborating with local NGOs (SKDCC and Caritas), and several service providers (I.e., HKRC, FSD, Fair Trade Hong Kong, School of Everyday Life and Kadoorie Farm and Botanic Garden), completed a series of activities in Sai Kung. 452 attendances were recorded in total of 28 activities. The activities are classified into 4 categories, including Community Story on Disasters Prevention and Preparedness, Disaster Risk Reduction from Daily Life Workshops, Disasters Prevention

and Preparedness Knowledge Application Workshops, and Disaster Drill. They are listed below.

Table 2 *List of activities conducted by HKJCDPRI with SKDCC (available in Traditional Chinese only)*

編號 No.	活動名稱 Activities	日期 Date	開始 時間 Starting time	結束 時間 Ending time	舉行 地點 Venue	總參與 人數 Number of Participa nts
1	環保藝術之扎染工作坊 (第一期)	2022.03.22	1430	1630	線上	16
2	環保生活之肌膚料理工作 坊(第一期)	2022.03.25	1430	1630	線上	19
3	低碳飲食(一)之日式便 當常備菜暨未來飲食法工 作坊(第一期)	2022.03.29	1430	1630	線上	14
4	低碳飲食(二)之本地農 產食品體驗暨家居種菜工 作坊(第一期)	2022.04.01	1430	1630	線上	15
5	低碳飲食(三)之食物再 生暨天然酵素工作坊(第 一期)	2022.04.12	1430	1630	線上	18
6	低碳飲食(四)之素食料 理 泰式咖哩與小豆芽工 作坊(第一期)	2022.04.19	1430	1630	線上	15
7	認識社區防災資源之西貢 社區備災導賞(第一期)	2022.06.11	1400	1700	西貢市中心	9
8	自然生態保育防災親子團 之低碳本地親子遊(第一 期)	2022.06.12	0900	1700	嘉道理農場 暨植物園	37

9	環保藝術之扎染工作坊 (第二期)	2022.04.19	1500	1700	線上	8
10	低碳飲食(一)之本地農 產食品體驗暨家居種菜工 作坊(第二期)	2022.04.29	1500	1700	線上	12
11	低碳飲食(二)之日式便 當常備菜暨未來飲食法工 作坊(第二期)	2022.05.03	1500	1700	線上	18
12	環保生活之肌膚料理工作 坊(第二期)	2022.05.06	1500	1700	線上	12
13	低碳飲食(三)之食物再生 暨天然酵素工作坊 暨家居種菜工作坊(第二 期)	2022.05.10	1500	1700	線上	13
14	低碳飲食(三)之食物再生 暨天然酵素工作坊 暨家居種菜工作坊(第二 期)	2022.05.13	1500	1700	線上	15
15	認識社區防災資源之西貢 社區備災導賞(第二期)	2022.06.11	1400	1700	西貢區社區 中心	5
16	自然生態保育防災親子團 之低碳本地親子遊(第二 期)	2022.06.19	0900	1700	嘉道理農場 暨植物園	40
17	自動體外心臟去纖維性顫 動法課程	2022.06.04	1000	1700	西貢區社區 中心	6
18	自動體外心臟去纖維性顫 動法課程	2022.06.18	1000	1700	西貢區社區 中心	6
19	自動體外心臟去纖維性顫 動法課程	2022.10.08	1000	1700	西貢區社區 中心	6
20	西貢區社區防災能力建設 計劃——社區防災故事	2022.07.20 及 2022.08.01	0900	1300	西貢鄉郊及 沿海地域	6

Table 3 *List of activities conducted by HJJCDPRI with Caritas (available in Traditional Chinese only)*

編號 No.	活動名稱 Activities	日期 Date	開始 時間 Starting time	結束 時間 Ending time	舉行 地點 Venue	總參與 人數 Number of Participa nts
1	防災應用知識工作坊：防火演習（伯多祿村明順村）	2022.06.17	1430	1530	明順村球場空地	59
2	防災應用知識工作坊：防火演習（對海村大湖角）	2022.06.24	1430	1530	對面海村（近大湖角）空地	35
3	家居安全急救班（FAWF）	2022.06.28	1900	2200	明愛西貢中心	18
4	公眾急救教育講座（PET）	2022.07.12	1930	2130	明愛西貢中心	20
5	AED 機全日課程（1）	2022.07.16	1000	1700	明愛西貢中心	7
6	AED 機全日課程（2）	2022.07.23	1000	1700	明愛西貢中心	8
7	社區防災故事	2022.07.29	1330	1800	明愛西貢中心	8
8	AED 機全日課程（3）	2022.09.24	1000	1700	明愛西貢中心	7

A. Community Story on Disasters Prevention and Preparedness

The making of community story on disasters prevention and preparedness shared the real experience of disaster response from the old villagers. It was a good start to collect knowledge and local wisdom for accumulating knowledge and experiences, and

developing localised disaster preparedness tasks. To effectively deliver the stories to other villagers, the medium of sharing information and promotion is essential in increasing the coverage and accuracy for knowledge transfer. The existing channels of information sharing mainly depends on SKDCC with limited service scope and target audience. More effective platforms for sharing those community stories were expected to enhance the positive impacts brought by the activity.

B. Disaster Risk Reduction from Daily Life Workshops

From our observations, participants actively participated in the online activities and followed closely to the demonstration by practicing the taught skills at home. Organizing daily life workshop was an insightful entry point in which participants gained a better sense of protecting the environment and living with nature. Nevertheless, it lacked direct knowledge and information regarding disaster preparedness. It was observed that the workshops did not cover any information regarding disaster preparedness and elaborate on the relationship between the activities and disaster before we suggested. The absence of explicit linkage between daily environmentally protective practice and disaster management shifted the focus out of disaster resilience. Participants found it difficult to associate the contents with disaster risk without scenario setting for natural disaster. It implied that the service provider lacked knowledge in disaster preparedness, resulting in the weak linkage between their deliverables and the concept of disaster resilience.

C. Disasters Prevention and Preparedness Knowledge Application Workshops

Practical skills and knowledge were transferred to villagers for better response during disasters. Through observation in the First Aid Workshop held by Caritas and Red Cross, participants actively participated in the activities and attempted to finish all the given practice. They were given empowerment to deal with injury when emergency and confidence was built in the process. Participants found the first aid kits distributed in the activities useful and promised to place them near the door. It implied the high

effectiveness of the delivery of disaster preparedness knowledge in individual level. Yet, the sustainability of the increased awareness and practical knowledge was in doubt. The young generation and their positioning in disaster resilience was missing in the learning process, which discouraged intergenerational collaboration.

D. Fire Drill

From our observations, participants gave positive feedbacks regarding the home fire prevention tips, the use of fire extinguishers, and the importance of survival kits. Specifically, the distribution of the survival kits was favourable among participants. They found it useful and importance as the daily precaution, implying the increase in the awareness of disaster preparedness in daily life. Since the given fire drills were the first attempts of the villages, participants found it effective in identifying gathering point. However, considering the effectiveness of the gathering points, participants lacked clear advice on the safe pathways from home to the gathering points during disasters. The lack of practice in the given natural disaster scenario might weaken the utility of setting up a gathering point, in which the mobility of the villagers and the accessibility of the gathering points during disasters should be reviewed and included in the fire drill.

Unfortunately, two main activities, Interdisciplinary Community Collaboration on Disasters Prevention and Preparedness and Exhibition of the Programme were cancelled due to the social distancing measures of COVID-19. The absence of interdisciplinary community collaboration missed the opportunity in assembling and bridging relationship between strong local stakeholders for building community assets and capacities in disaster preparedness. Disaster resilience in community level was expected to be cultivated and developed in the process. The absence of exhibition lost the opportunity to do public education and to share the achievements throughout the Programme. The coverage of local audience was limited.

4.1.3 Connections of Co-partners

Two local NGOs closely collaborated with HKJCDPRI in connecting targeted audiences and executing a series of activities for disaster resilient capacity building. They are

- Sai Kung District Community Centre (SKDCC), and
- Hong Kong Sai Kung Community Development Service (Caritas).

SKDCC, having served Sai Kung community for over fifty years, provided mainly elderly, children and youth, and family service. Their services cover the whole Sai Kung District excluding Tseung Kwan O. Caritas, having rooted in Tui Min Hoi for over forty years, did community building in Tui Min Hoi and Po Lo Che. They developed reciprocal relationships, released community capacities and promoted strong neighbourhood relations.

Both the local NGOs have developed trustworthy relationships with their target audiences over time. Nevertheless, their audience were fixed at the same groups of elderlies and women, causing the uneven distribution of service in the Study Area. Only specific audiences received the information and participated in the Programme. Resources were concentrated in Sai Kung Town Centre, but less was input for outreaching and expanding their audience coverage in Sai Kung. Building community resilience emphasises on the collaborative process in discovering and redistributing community assets and building potential connections. Yet, the service scopes of the two NGOs were defined and limited by the organization nature and the funding source, which stated the clear boundaries of their service areas and the target. With limited manpower and capital resources, the feasibility of the expansion of the service scope was confined. It discouraged the development in their scope of service and audience, and intergenerational and interdisciplinary collaboration. Improvement should be made in networking within Sai Kung communities to identify and connect strong stakeholders for building community resilience.

4.2 Formulation of Guiding Principle

4.2.1 With Whom to Act?

In this report, we have discussed the range of stakeholders and their respective roles in facilitating community resilience in the context of disaster management. Before formulating the guiding principles for actions and planning in the future, it is important

to list out the key collaborators working with the communities so that the following guiding principles are to be executed by relevant actors.

HKSAR Government and CPND

First and foremost, as mentioned in section 2, the CPND has been formulated to make clear the strategies, organization and alarm system, and to explain the roles, responsibilities and functions for relevant departments, bureaux, public utility sector and non-government organizations. The governmental and public bodies should carry on their roles in allocating emergency resources, providing aid and necessary and latest information for local communities in need.

Local institutions

Local institutions, such as HKRC and HKJCDPRI, as well as other universities departments or research centres, can also continue on their work in generating and accumulating knowledge on disaster management as well as the community in social, cultural and environmental perspectives, as they have already expertise knowledge and experiences in conducting these studies.

Local NGOs

The regional NGOs, as mentioned in Section 2, include not only community centres concerning social welfare or those providing care services, but also other established organisations such as religious institutions, as they may provide resources, such as land and manpower, as well as local connections and knowledge tied closely to the communities. When implementing new or reinforcing existing actions, regional NGOs can be resourceful partners.

Community organisations

There has been existing self-help groups or committees in rural village settings, or other self-organised groups in urban setting such as Sai Kung Town Centre. They are the major contact points and information hub for households and individuals especially the older residents.

A New Role?

In the context of Sai Kung, and the wider context of Hong Kong, there have already been quite a lot of functional organisations working on building different aspects of community resilience, including learning (knowledge production), building resources and capabilities, and action. However, a role in integrating these three aspects in a community-centred perspective seems lacking. Therefore, we envision that there is an agent to assume such a role in bridging the aforementioned aspects to facilitate community resilience in local settings in the future, working in two ways: to make knowledge, resources and capabilities provided by local actors more easily accessible and utilised by local communities, and on the other hand to act as a bridge to let different actors learn more about local communities so that they can produce knowledge and resources in a more effective way.

This agent need not be solely engaged in the discipline of disaster management but also place-making and social sustainability in local communities. The personnel in such a taskforce will be expected not necessarily outstanding expert in disaster management but experienced player in liaising with local actors such as the government, NGOs and local groups, and in identifying possibilities in collaboration and strengths and potentials of each stakeholder and in local communities, which can be a team with members from diverse backgrounds such as sociology and public/ social policy, history and culture, social design and innovation. In the future, this new role can serve not only Sai Kung but other rural areas in Hong Kong, with their skills and experiences accumulated.

4.2.2 When to Act?

In implementing the guiding principles, a roadmap can be pictured with short, middle and long-term visions and objectives in facilitating the building up community resilience in Sai Kung, as well as areas with similar rural contexts.

4.2.2.1 Short Term

In short term, presumably ranging from 3 to 5 years of implementing, the work on community resilience will be a trial state for new actions and organisations.

Establishment of Bridging Actor

As mentioned in the previous part, a new role is expected to be set up in bridging local communities and other actors as third party outside the communities. This new acting taskforce will be establishing its operational procedures while recruiting and training competent staff in executing their missions.

Consolidation

Earlier parts of the report plot the existing knowledge, resources and actions available in the context of Sai Kung, which the new taskforce can further consolidate by making plans on integrating, reducing redundant parts and exploring deeper understanding on the community and the scenario of disaster management in Hong Kong. By collaborating and discussing with local actors, the taskforce can further negotiate the direction of resource allocation and knowledge building. And with deepening connections with local communities, further engagement possibilities can be plotted. Collaborations among local actors and communities can be lined up and facilitated by a trial and prototyping process as follows.

Trial and Prototyping

When plans of consolidation as well as new programmes are drawn, the new taskforce may begin trials and prototyping actions in communities. In such an early stage, the scope can be limited to a particular village or neighbourhood, so as to devote more resources and time on designing and implementation with local participants, as well as to conduct a thorough process of getting feedback from local communities for further adjustments.

4.2.2.2 Mid-term

After the initiating process in 3 to 5 years, mid-term visions can be set for another 5 years to more solidly implement prototypes in local communities, and further collaborate with other communities or apply similar mechanisms in other areas.

Establishment of Community Platforms

When trials and prototyping works have been carried out, there can be a clearer picture of the future development in facilitating community resilience. The taskforce itself, or by encouraging community members or organisations, may take up the role as a communication and collaboration platforms where local actors and community members may share their thoughts, consolidate existing and co-create new initiatives in promoting community resilience, along with other place-making programmes. Also, community knowledge and experiences including disaster-related aspects can be archived and passed on for references in the future.

More Active Community Members

Familiarised with community actions for resilience and place-making, community members are to be encouraged to take more active roles in initiating programmes, planning for future development, or taking up roles in existing programmes formerly led by the new taskforce. The new taskforce can turn to be a more supportive and advisory role to align resources and knowledge from other local actors. Also, the taskforce may give guidance to the community members in operation and facilitate the capability in the community to critically review whether and how actions achieve the goals in community resilience (as well as other shared missions such as place-making).

4.2.2.3 Long Term

Having established community platforms and engaged community members in building community resilience, long term visions should be set, expecting a higher level of sustainability in learning, building resources and capabilities and actions.

Autonomy of Community

The communities should have already been capable of building their own knowledge system on community resilience, being able to have their own renewing and feedback system of disaster knowledge as well as to have a thorough understanding of their own situation and decide on actions in the future. The communities should be enabled to grow or seek for resources and training their members to be capable of sustaining their actions and plan for future development. Ideally, the learning process, resources and actions may reach most of the members in the community.

Role of Taskforce

The taskforce no longer plays a central or leading role in the communities but more as a consultant, by providing alignment or facilitating collaborations of local communities and expertise in further strengthening resilience, or acquiring latest information about academic opinions or government policies. Its operational scale can be reduced, or its resources can be reallocated to other areas in need of building community resilience.

4.2.3 Four Guiding Principles

There are four major guiding principles recommended for designing strategies and actions for building community resilience.

A. Social Sustainability

First and foremost, social sustainability is referring to the building of community resilience in the way that community members are facilitated to have an autonomous and independent mechanism in the process of learning and building resources and capabilities. Although there may be aid from time to time from local actors, they are fundamentally third parties who may not offer immediate and everlasting support to the local communities. Thus, it is important to facilitate the local community to be self-conscious of the importance of building resilience for disaster scenarios, and their knowledge and resources to be passed on to next generations.

B. Community-Centred Approaches

To design community-centred initiatives is also important in consolidating community resilience in local neighborhoods. It is not to say top-down resources and knowledge dissemination are unimportant. However, to make knowledge and resources delivered to local communities utilized effectively and sustainably, community members have to be motivated and united with community-centred approaches which are beneficial to the members themselves, not in the standards of disaster management but from the perspectives of the community itself. Thus, it may not be the most effective way to promote community resilience directly, especially when rural villages like Sai Kung have strong local traditions in their ways of living and their common beliefs such as

Christianity and ancestral worshipping. Instead, resilience can be one of the outcomes integrate into community activities, which may enhance the community as a whole including its economy, culture and environment.

C. Consolidation of Resources and Capabilities

As plotted in previous sections, there are indeed a lot of existing or potential resources and connections in the area of Sai Kung – there are a wide range of local groups working for various service targets. Even some resources may be redundant as different actors in the community are taking similar actions. The gap lies in how these resources and connections, among local communities themselves and with local actors in disaster preparedness, are put together and consolidated in collaborative forms. Thus, there will have to be a facilitating role in bridging the gaps.

D. Accumulation of Knowledge and Experiences

Plotted in previous as well, local actors have also disseminated disaster-related knowledge in local communities in Sai Kung – quite a number of educational activities are conducted. However, there has not been an established system in accumulating knowledge and experiences in local contexts. Such a system is not only for the dissemination of disaster-related knowledge but a platform to record community events that people may critically review how the process of building knowledge, resources, capabilities and actions, so that experiences can be accumulated, and adjustment can be made accordingly. Not only in Sai Kung, other rural areas with plans to build community resilience can make references to the experiences.

4.3 Recommendations and Blueprint

Assumed a scenario of Hong Kong community resilience advocate in short future with several key agents who are ready in giving interventions including relevant bodies as well as scholars, 3 phases are recommended in developing community resilience in Sai Kung or similar context of sub-rural characters in order to practice the four guiding principles as recommended and achieve disaster resilience with the enhancement on community-

oriented resources and capabilities and community-oriented learning through short-term, middle and long-term approaches.

4.3.1 Phase 1 – Establishment of Taskforces and Knowing the Community

Community resilience concerns not only connecting community members, but the needs and innovation for creating points of positive intervention, as a catalysis to motivate and accumulate capabilities and resources. Diverse parties are then needed to be involved in the process. From advocacy to execution, the formation of a resilient community requires different skill sets from multi specialties and connections among stakeholders at different levels. Therefore, a two-tier hierarchy is recommended to be set up for coordination.

Hierarchy of Building Community Resilience

A trustworthy agency with nature similar to HKJCDPRI/ HKRC, having sufficient resources and connections as the advocate is required to kick start of the community building. For instance, Hong Kong Red Cross (HKRC), one of the most forefront actors with its fundamental mission “to prevent and alleviate human suffering” (referred to Section 3.1), qualifies for the position as a coordinator. With its experience in promoting disaster preparedness from territorial wide to community based rural contexts, the coordinating agency is the central player to educate and equip the community potentially.

As an external party of Sai Kung community, the coordinating agency needs partners who are rooted in Sai Kung with certain authority and strong influence on community members. Local NGOs, such as Sai Kung District Community Centre (SKDCC) and Caritas Kong Sai Kung Community Development Project (Caritas), and the rural committee and representatives are the eligible players. More partner(s) can be identified through research, for example, the local religious institutions (referred to Section 2.3), namely the Sacred Heart Parish, who is also a gathering point consisting of strongly bonded community members. The diverse nature of partners determines the coverage of audiences, in which more community members are covered when more partners are included in the process of community building.

Form of committee is recommended as initiate by the coordinating agency and its partners to facilitate the discussion on building community resilience. The committee is responsible for determining the development direction as driving mutual consensus from local partners as mentioned and allocating resources for developing different approaches. Formation of 3 taskforces is proposed with endorsement under the proposed committee to execute community resilience research and projects according to their specialties and professions. The 3 taskforces as proposed are 1) Think Tank, 2) Lab for Social Innovation, and 3) Action for Community Participation. Different parties and individuals are involved respectively with distinctive objectives and responsibilities.

- Task Force 1 - Think Tank

This taskforce involves mainly researchers from academic as well as community-based research parties, advocates and concern groups for conducting research and generating aspirations in developing community resilience. Experts from multi disciplines are required, including but not limited to public health, sociology, anthropology, social works, medicine, nursing, social design and urban studies. Research varies in methodology, for which both empirical and theoretical research are expected to contribute new insights and understanding of the community.

- Task Force 2- Lab for Social Innovation

This taskforce involves mainly younger generations for stimulating innovative projects and encouraging collaboration within the community. From Section 2.3, they are full of energy and aspiration to the community, with lots of assets and connections outside the communities. Taking advantage of the characteristics of the young individuals, the taskforce is expected to line up creative individuals to re-innovate new programmes. Trial and prototyping actions may be taken with consolidated plans.

- Task Force 3 - Community Participation

This taskforce involves mainly senior villagers for bridging different community members and consolidating field knowledge. Given the characteristics of senior villagers (referred to Section 2.3), they are eligible to contribute local wisdoms and experience. With much

time living in the community, they have built strong connections with different community members and identified vulnerable groups demanding more cares and resources. The existing self-help groups (referred to Section 2.2) connect minorities within the community, which sets an example of the responsibilities of the taskforce.

The two-tier hierarchy of building community resilience consists of the two major levels: the committee and the three taskforces, including parties of similar nature and role, with the organizations being researched taken below as an example (see Figure 10). The committee should report to community members for further collaboration, while reporting to HKSARG to facilitate the handover in phase 3.

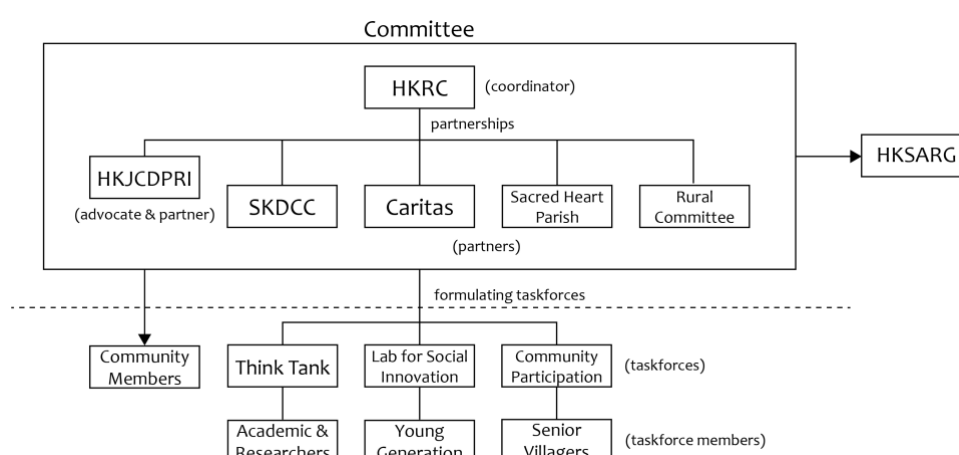


Figure 9 *Hierarchy of building community resilience with agencies for examples*

A 2-year Pilot Scheme

The first six months of the scheme aims at assembling several partners with the coordinating agency for discussing the formation of and constructing practical guidelines for the three taskforces. Distinctive development directions are established. The committees respond to finish the recruitment and deliver clear instructions to the endorsed taskforce members to facilitate the following tasks. Knowledge regarding community resilience should be given to the members for aligning the objectives and approaches in community building. In the seventh month of the scheme, the three taskforces begin their journeys in building community resilience through different aspects and strategies. Supported by the committee, the three taskforces respond to carry out research and projects according to their objectives and responsibilities. The

committee should give advice and provide resources (say social connections and financial resources) in advance of the endorsement of the coordinating agency to the taskforce members during the process. After twelve months, taskforces should review and consolidate their achievements and learning, followed by reporting to the committee in six months. The committee should review and evaluate the functions of the committee itself and the three taskforces for further allocating resources for the coming phase.

4.3.2 Phase 2 – Collaboration between Taskforces and Releasing Community Assets

Phase 2 is another 3-year scheme with the objectives to facilitate cross-disciplinary collaboration for drawing a wider and stronger social network.

The coordinating agency are suggested to review the functions of the committee and the diversity of the committee members. More members may be invited to the committee when more partners are identified in Phase 1. After reviewing the functions of the three taskforces, the committee may further input resources for developing more solid implementation. Across the three taskforces, collaborations are expected for stimulating new insights in community resilience. The committee is responsible to consolidate the achievements and results, followed by recommending potential crossover studies and design.

The three taskforces are asked to conduct interdisciplinary projects, in which knowledge and experience accumulated are then integrated among three independent forces. The scope of implementation is expected to be expanded across some independent villages. The exchange of knowledge and resources between villagers enhances community resilience. By initiating more collaborations, and exposing and creating community assets, social sustainability is improved for building a self-sustaining community.

4.3.3 Phase 3 – Sustainability

A 5-year scheme for Phase 3 is recommended, aiming at sustaining the effective community-based capacity building relate programme and advocating mechanism of building community resilience over Hong Kong at higher level. Throughout the continue interventions in developing strong and resilient community in having established

community platforms and engaged community members in building community resilience, long term visions can be achieved, expecting a higher level of sustainability in learning, building resources and capabilities and actions which are capable in aligning with the policy of HKSARG, the precise showcase of sensitive and closely connected community forms and echo the widespread discourse of community resilience internationally. The coordinating agency may step down from the role of coordination but turn into an advisory committee in monitoring the functions and the development directions of the committee and the three taskforces. The governmental departments (say HAD or any standing B/Ds) are expected to have established connections with local community through the coordinating agency. Thus, for further changes in the policy for building community resources, or update in knowledge, the B/Ds can directly work with community members. More efficient communication and actions can be conducted. But we should bear in mind that the coordinating agency might be consulted again if either side of the government or local community loses track of previous communication when they pass on their roles to their successors. After the short and middle term of implementation and advocacy, the B/Ds can also adjust their long term strategic plans and guidelines upon latest policies on both community building and emergency services.