

RESEARCH AND MODEL DEVELOPMENT ON COMMUNITY DISASTER RESILIENCE

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

社群韌性



Organiser



Sponsor



The Hong Kong Jockey Club Charities Trust

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Executive Summary of the Research Project

October 2022

SAI KUNG

Executive Summary: Abstract (1 of 4)

The Hong Kong Jockey Club Disaster Preparedness and Response Institute (HKJCDPRI) appointed Study Consultant - 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 goal of this research project (the Final Report) 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 Final Report involves four main chapters:

- **Section 1 (Introduction)** addresses the background of the study and the “Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung)”, and reiterating the study area, process and objectives of the whole study.
- **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.

Executive Summary: Abstract (2 of 4)

Summary of Research Findings

Section 2: In section 2 of the research (the Final Report), drawing from the results of Community Profile Report, Report 3a, Report F and Report G, the report has summarised the mechanism of the Contingency Plan for Natural Disaster (CPND), in terms of its structure, alerting system, and strategies adopted in disaster preparedness and disaster response. We also evaluate CPND in terms of disaster risk management circle:

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.

Section 2 also discusses the characteristics of Sai Kung in disaster preparedness in community level, and unfold the potential capacity in community resilience, which brings about the enabling and disabling factors of Sai Kung in developing disaster resilience in the future. Characteristics are pinpointed: with AED and First Aid Trainings provided by HKRC, Infrastructure Enhancement by relevant B/Ds (i.e. DSD and CEDD), regular visits and connection with the disadvantaged elderlies, self-help groups in community, strong social attachment, experience in coping with natural disaster. An analysis is conducted on the weaknesses and strengths of various community organisations such as local NGOs and old and young villagers, with which we can envision how collaboration can be further conducted within the local communities.

Executive Summary: Abstract (3 of 4)

Summary of Research Findings

Section 3: Study Consultant reviews the perceptions on community resilience viewed from local organisations both as actor and advocate, as well as from the local academic research circle. MOL summarised their works, actions and research output, from which we assess on which scope of community resilience they are focusing on. 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 providing available resources in cases of emergency.

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 organisation 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. MOL then suggest with the examples from Report 2 a on that the scopes of community resilience can be reframed in the context of Hong Kong by facilitating autonomy and sustainability in the community locally.

Executive Summary: Abstract (4 of 4)

Summary of Research Findings

Section 4: Section 4 draws a blueprint from the above findings to envision the plan for building community resilience in Sai Kung in the future. MOL evaluates the Sai Kung Programme conducted by HKJCDPRI with local NGOs and found that the service provider in local workshops lacked knowledge in disaster preparedness, resulting in the weak linkage between their deliverables and the concept of disaster resilience. Improvement should be made in networking within Sai Kung communities to identify and connect strong stakeholders for building community resilience.

MOL firstly propose with whom to act in future strategies to build community resilience in Sai Kung. Apart from consolidating the role of the government and CPND, local institutions, NGOs and organisations are also involved. Moreover, a new role as a bridging actor to line up these actors and the local community in the process is proposed.

MOL has also recommended a roadmap to envision directions for actions in short, mid and long term. Short term actions will involve establishing the bridging actor, consolidation of existing community resources and capabilities, and trial and prototyping of new approaches brought up by the bridging actor. Mid-term actions should concern the establishment of community platforms, expecting more active community participation. The long term goals are to build the autonomy and sustainability of the community. MOL thus formulate four guiding principles with such visions: social sustainability, community-centred approaches, consolidation of resources and capabilities, and accumulation of knowledge and experiences.

The final recommendation includes a three phased programme, with phase 1 establishing taskforces for building community resilience and learning about the community in a 2-year pilot programme, and phase 2 to facilitate collaboration between taskforces and to build stronger social network, releasing community assets, and finally phase 3 to establish sustainable community-based capacity building programmes is highly recommended.

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Section 1

Introduction to the Research

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1.1 Study Background

The Programme

by HKJCDPRI

- Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung)
- Objectives: enhance awareness, knowledge, and engagement in disaster risk management and response planning of Sai Kung (excluding Tseung Kwan O) community members

The Research

by MOL

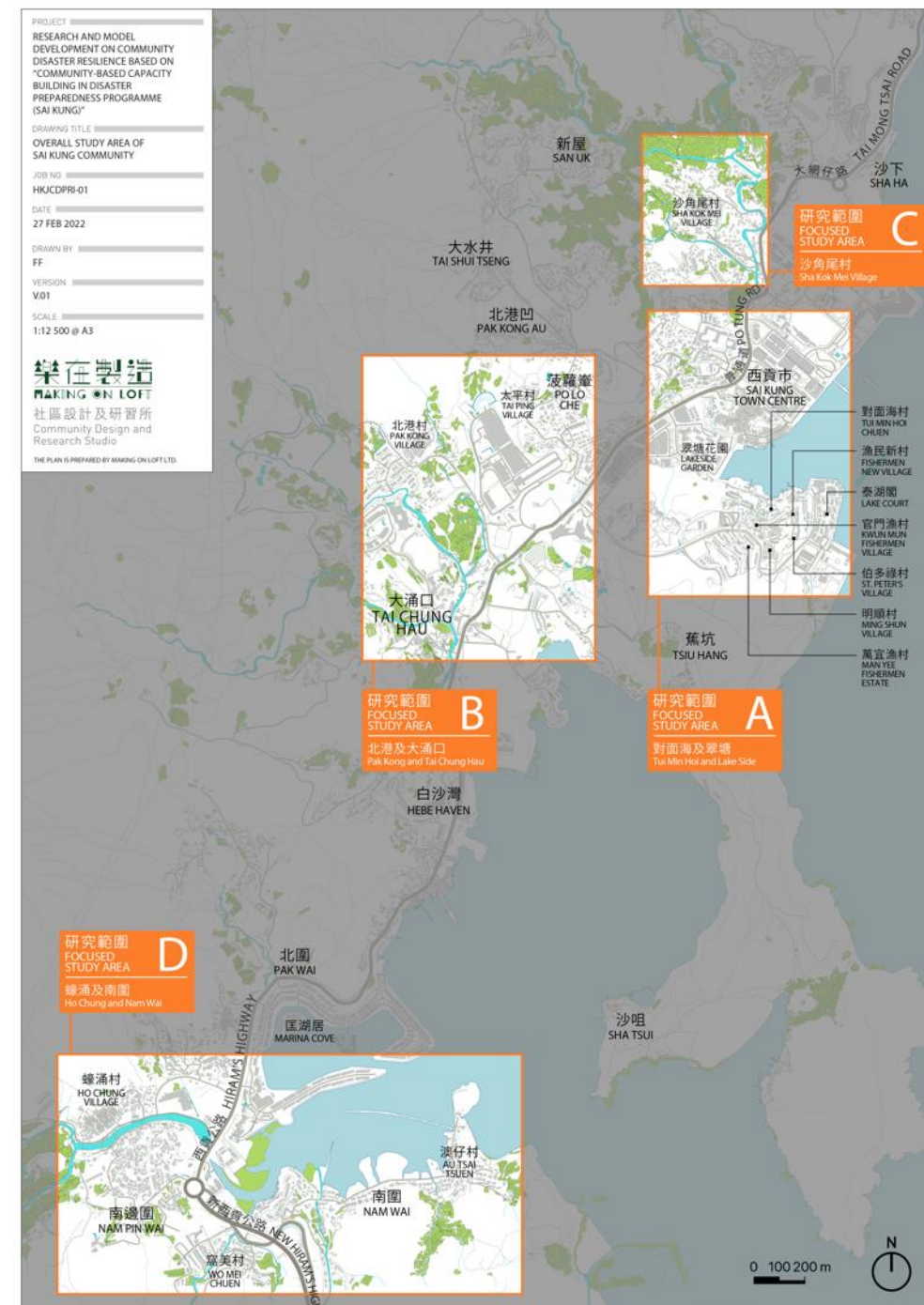
- To develop a community resilience model or model based on the evidence and lessons derived from the design, delivery and outputs of the Project
- Goal: establish a “blueprint” for further development of strategy, approach(es), measure(s) and tool(s) that bring about effective development of community disaster resilience
- Objectives:
 - (1) formulate **“blueprint” for building community 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 as well as academia, in the process of community building
 - (2) establish **guiding principles** on how to start building a resilient community and identify key collaborators potentially with **practical recommendations** to enhance works of disaster preparedness and community building

1.2 Study Area

- Sai Kung Town Centre with its surrounding villages covered in the map
- 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
- Zoomed into Focused Study Areas FSD A-D in **Community Profile Study** for observation and investigation at microscale

Sai Kung...

- A typically rural township setting with diverse communities
- Prone to natural disaster with its geographic context: comprising with coastal, riverside, and hillside areas
- Enhancement done on infrastructure over the past 20 years



1.3 Study Process and Deliverables

Delivery Month	Items
M3	Community Profile of Sai Kung Community
M3	Case Studies on International Experiences in Building Community Disaster Resilience
M4	SWOT Analysis to the Practices in Building Community Disaster Resilience
M4	Assets Mapping of Sai Kung Community
M4	Stakeholder Engagement Programme: Profile of Community Play
M6	Stakeholder Engagement Programme: Focus Group Meeting Report
M7	Stakeholder Engagement Programme: Quantitative Questionnaire

Please refer to Appendix of the Research Report for the contents of the deliverables

Section 2

Response to Current CPND System and the Previous Research

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Under Climate Change...

Hong Kong's Situation

Hong Kong has suffered mainly from water-related disasters

Common:

- flooding, landslide, and storm in every typhoon season

Rare:

- frozen precipitation event constituting frost and icy road at Tai Mo Shan in 2016 winter;
- hail hitting Hong Kong in 2016 and 2021 summer

Selected Responding Policy

Establishment of Climate Change Working Group in Infrastructure (CCWGI) of CEDD

- **Adaptation** and **resilience** as the principles

Duties:

- Update and review design manuals and guidelines for infrastructure design and performance;
- Structure installation for reducing impact of disasters, and
- Public education

Under Climate Change...

Sai Kung's Situation

Prone to Natural Disaster
because of its geographic context
(coastal, riverside, hillside areas)

+

Several Enhancement on
Infrastructure over the past 20 years
(e.g. drainage improvements and the
reinforcement of coastal structures)

Social Characteristics
of Sai Kung Community

**Differentiate the disaster vulnerability of Sai Kung from that of Tai O
and Lei Yue Mun with specific emergency response plan for disasters**

2.1 Contingency Plan for Disaster Management

- To prepare Hong Kong to be ready to respond effectively in the event of an emergency for natural disasters
- Narrates the strategies, organization and alarm system
- Explains the roles, responsibilities and functions for relevant departments, bureau, public utility sector and NGOs before, during and after the occurrence of natural disaster
- Emergency Support Unit under SB is the coordinator and keeper

《天災應變計劃》

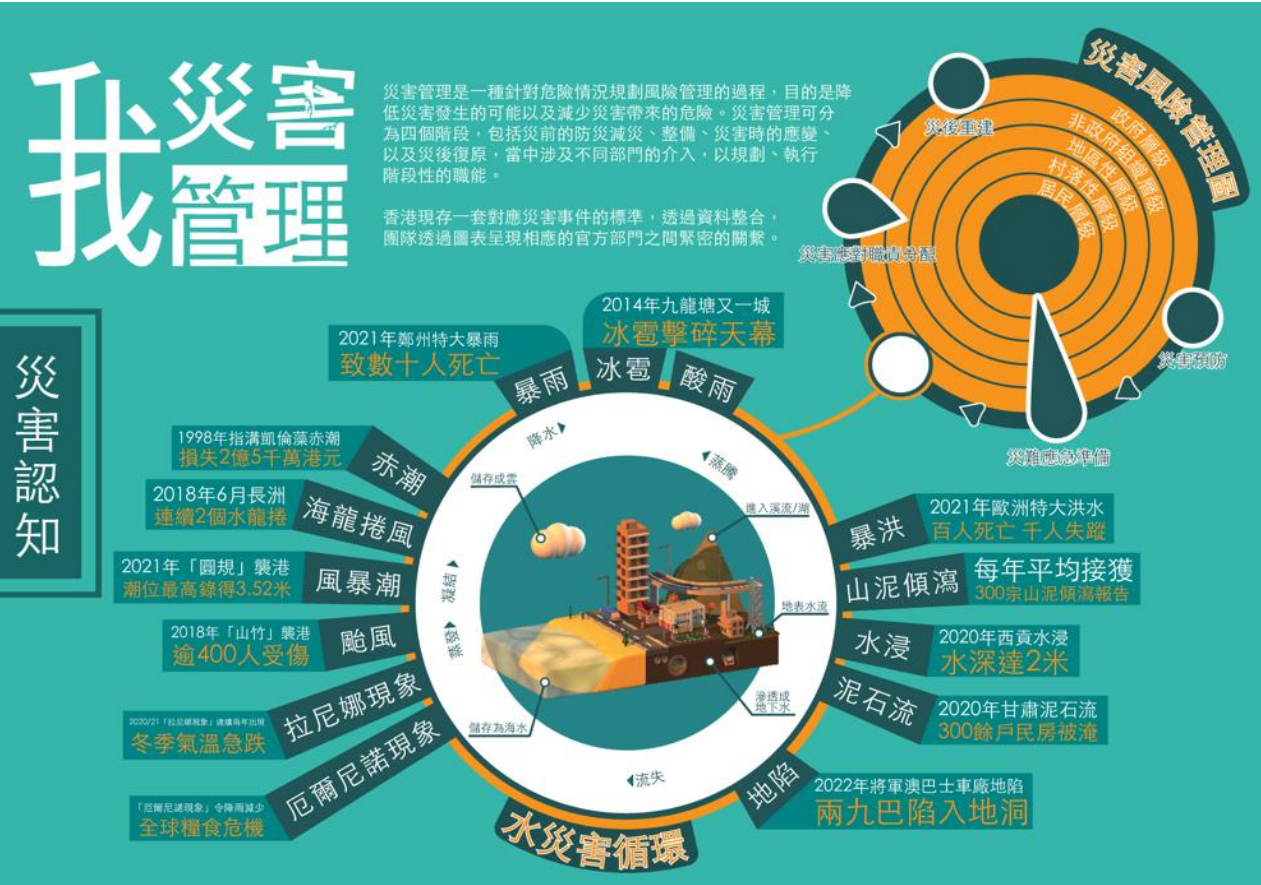
包括惡劣天氣引起的天災

政府總部
保安局
緊急事故支援組
年 月

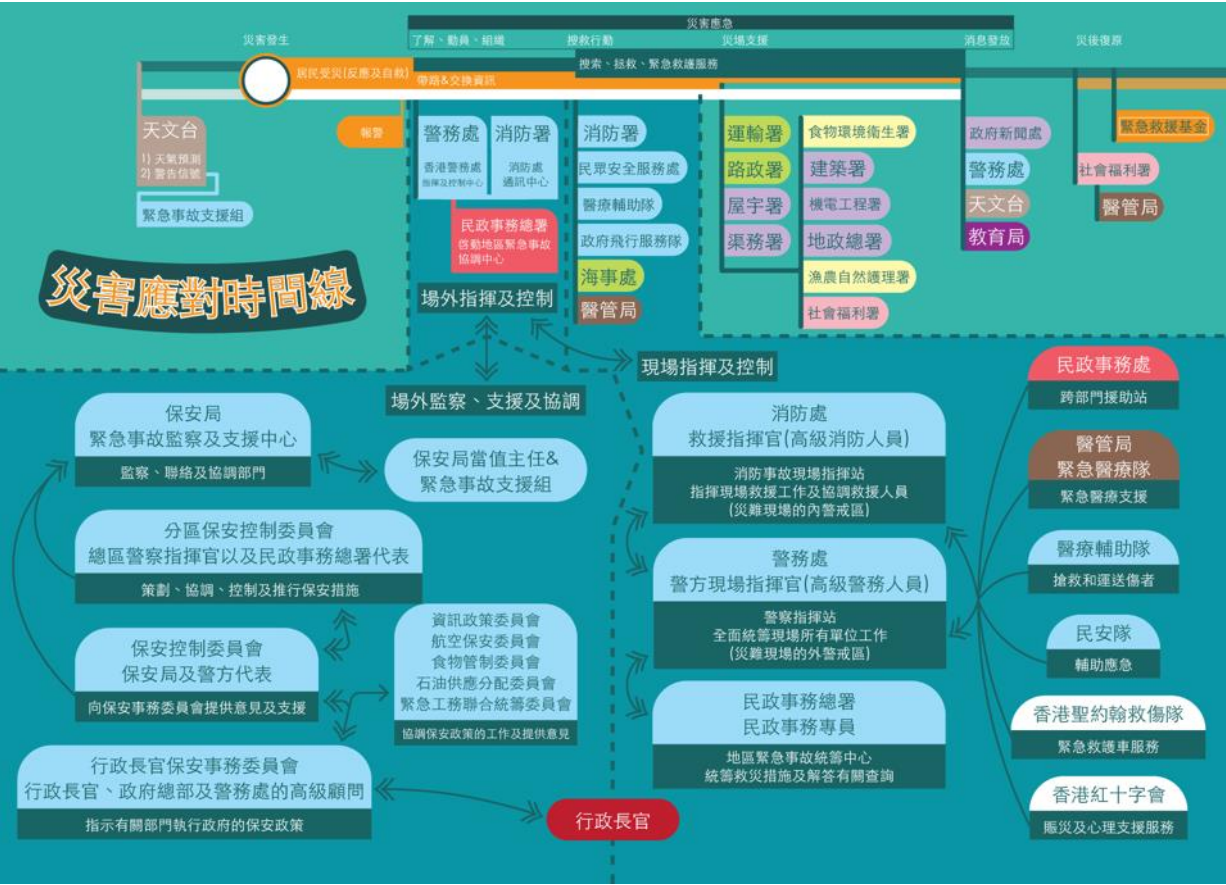
檔號：

Overall Disaster Management in Hong Kong

Overview of Disaster Management (i.e. materials to be used in engagement process in Sai Kung)



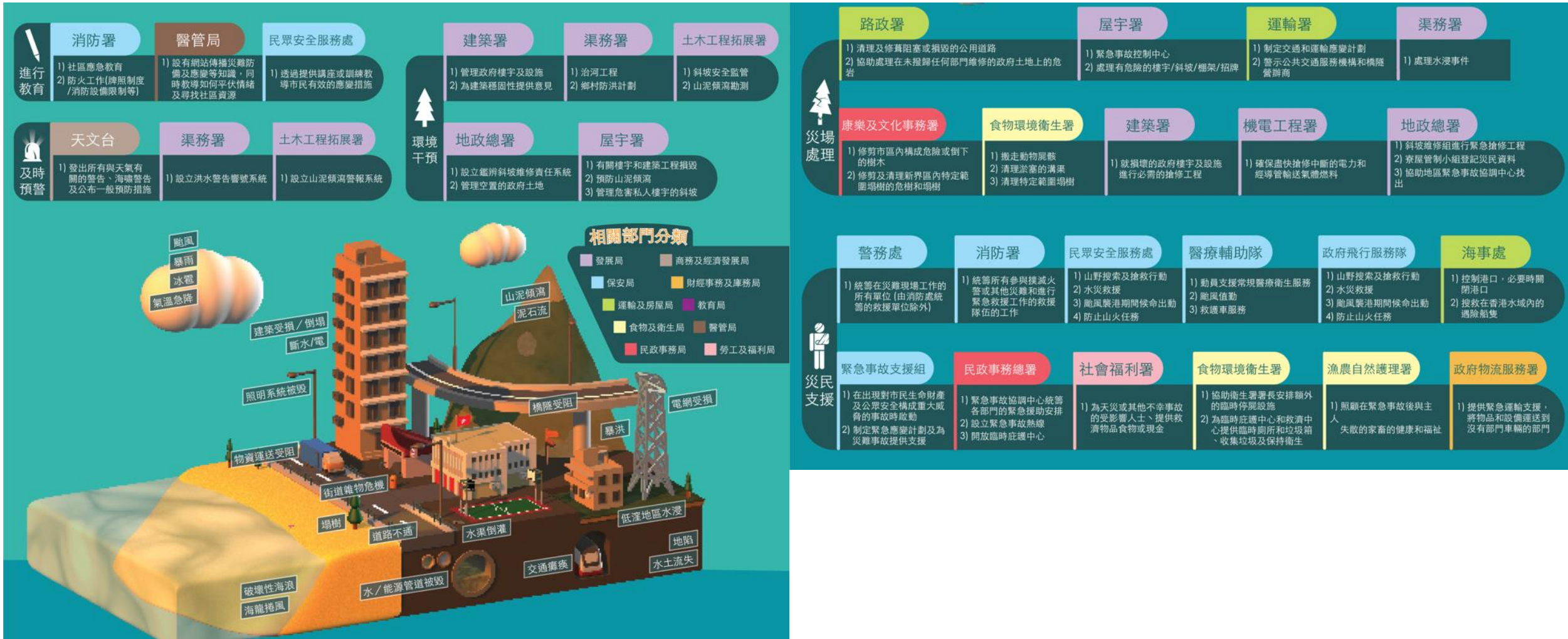
Overview of Disaster Action Timeline (i.e. materials to be used in engagement process in Sai Kung)



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Overall Disaster Management in Hong Kong



CPND with Disaster Risk Management Circle

- Top-down approach
- CPND as external intervener: from disaster preparedness to response
- Mitigation and recovery by the Emergency Relief Fund and the critical works of CPND

We doubt...

How community response and interact with the external forces?

How do the community members help themselves before the external support?

How to effectively connect to the external support? Any potential collaboration?

We believe in...

Capacity Building of Community in combatting disasters

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Disaster Risk Management Circle

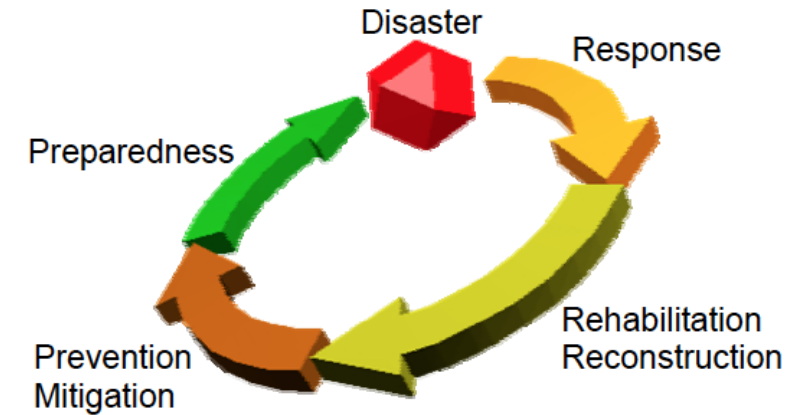


Figure: Asian Disaster Reduction Centre. (2005).
Total Disaster Risk Management – Good Practices.

Community Resilience

Incorporating the definitions of community development from governmental departments including the Home Affairs Department and the Social Welfare Development, we found the concept of community development, though similarly concerning the community and sharing a few common missions with community resilience, yet not encompassing goals and strategies conceptualised in community resilience.

Community Resilience	Community Development
Co-learning and accumulation of experience	n/a
Building community resources	Building community capacity
Building community capabilities	Empowering the vulnerable groups
Actions for social protection to enhance preparedness, mitigation, response and recovery for adversity	Solving community problems
Enhancing autonomy of community	Participation of individuals
Community-oriented planning for sustainable future	n/a
n/a	Social relationship and cohesion by mutual help

2.2 Sai Kung Character in terms of Disaster Preparedness

- Hardware
 - Infrastructure enhancement by DSD and CEDD
 - Flexibility to living space
 - Skills and tools
- Knowledge and Experience
 - AED and First Aid Trainings provided by HKRC
 - Living with nature
 - Experience in coping with natural disasters
 - Experiences during the COVID-19
- Community relationships
 - Strong social attachment
 - Regular visits and connection with the disadvantaged elderlies
 - Self-help groups in community

Build Confidence and
Capability in Disaster
Management

2.3 Community Assets: Capabilities, potentials and limitations

Identify the existing and potential drivers for strengthening social networks and obtaining social capital for building community resilience

Drivers are capable of ...

Connecting People,
Utilizing Resources and,
Developing their Networks

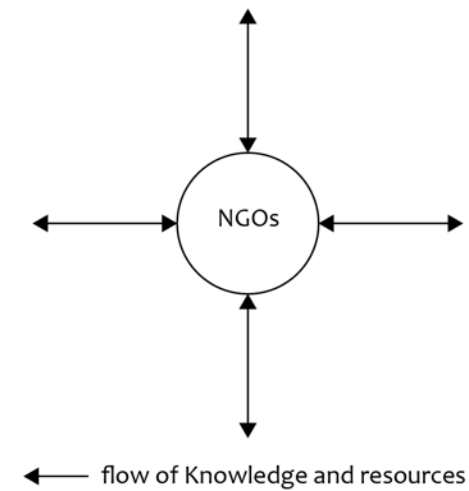
Local NGOs and the Rural Representative and the Rural Committee

Involve in the community with different perspectives and reasons in different scale and intensity

For example, SKDCC and Caritas

Have strong

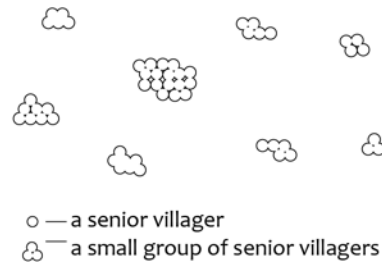
- relationships with villages
- data base of field information
- connection with resources outside the community



3 Potential Drivers

Senior Villagers

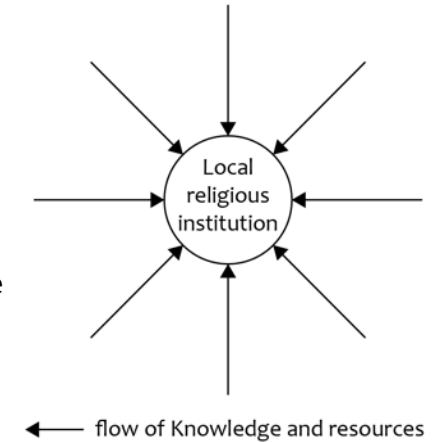
- Carry field knowledge and close peer relationships for the immediate response to disasters
- As a team rooted in the communities for tasks ranging from daily solicitude and discussions on village affairs to localized affairs for disaster preparedness



The lack of an **Advocate and Coordinating Agency** to release their potential and facilitate collaboration.

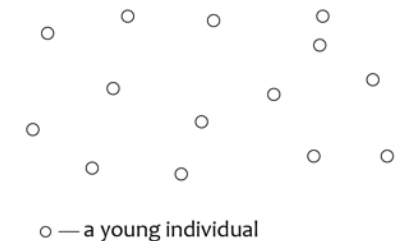
Local religious institution

- Contain wide range of assets (both manpower, tangible resources, and economic power)
- As a fixed collecting spot of knowledge and resources
- A potential influential media for information exchange and resource matching



Young Individuals

- Independent with high mobility
- As a huge manpower for the community in response to disasters with their energy and network outside Sai Kung



Section 3

Re-framing Community Resilience

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3.1 Community Resilience viewed from Local Organizations

Local Organization as Actor

Hong Kong Red Cross

- 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
- Organize activities regarding several types of disaster in Hong Kong: learning processes of understanding disaster risks and ways to minimize loss during disasters
- Organize visits before and after typhoons in rural areas (e.g. Tai O and Lei Yue Mun): promoting disaster preparedness by knowledge sharing and volunteer training and helping residents clean up
- A central player with its active role to educate and equip the community

Local Organization as Advocate

Hong Kong Jockey Club Disaster Preparedness and Response Institute

- Carry out collaborative programme across medical and academic institutions, government departments, non-governmental organizations and communities in Hong Kong
- 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
- Projects for capacity building, knowledge platform, and research and innovations
- Advocate new approaches of community resilience by forms of collaboration, research and innovations

3.2 Community Resilience viewed from Local Academic Research

- Lack academic research on community resilience
- 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; accessibility of resources for rescue and recovery; the importance of vulnerability mapping in community

Academic Research	Contents
Community Engagement in Disaster Planning and Response: Recommendations for Hong Kong by Harvard University (Newnham et al 2015)	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
Social vulnerability index for the older people—Hong Kong and New York City as examples by Chau et al (2014)	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
Urban disaster preparedness of Hong Kong residents: A territory-wide survey. <i>International Journal of Disaster Risk Reduction</i> by Lam et al (2017)	Indicators of disaster preparedness are listed as: Disaster preparedness information, Information during disasters, Communication methods, Evacuation strategies, Financial resilience, First-aid knowledge and response to warning signal, Disaster preparedness behaviours.
Impact of information seeking, disaster preparedness and typhoon emergency response on perceived community resilience in Hong Kong by Guo et al (2020)	Address the concept of community resilience, adopting the framework of Conjoint Community Resiliency Assessment Measure (CCRAM-10)

3.3 Overall Perception on Community Resilience in Hong Kong

- Local actors have contributed to the 3 major domains: (1) learning, (2) resources and capability and (3) actions, with the following elements
- 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
- In top-down approaches, which may not fit local contexts in terms of practical use and values
- Lack locally sustained mechanisms in the 3 major domains

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

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

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

3.4 Reframing Community Resilience

Learning:

- more qualitative and people-oriented studies on understanding of risk and loss in disasters
- Facilitate a community-oriented perspective and contextualized discussion in generating knowledge

Resources and capabilities:

- Facilitate greater sustainability, place-based and bottom-up works
- Actions for not only promoting disaster preparedness, but the benefit of the community in terms of economy and environment

Actions:

- Comprehensive actions for the context of particular communities and acted by local members, not relying on outside help
- Sustain civil and social protections more independently and durably

The degree of Community Resilience should be taken for Hong Kong rural context

- In terms of community-oriented resources and capacity, and community-initiated learning



Section 4

From Findings to Blueprint Formulation, and Recommendations

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4.1 Understanding HKJCDPRI

An advocate aiming at establishing Hong Kong as a regional and international leader in disaster preparedness and response training, to promote community resilience

3 domains: capacity building, knowledge platform, and research and innovations

Projects under capacity building aim 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
- Engage communities vulnerable in disaster preparedness efforts, targeting groups vulnerable to disasters
 - Result in "Community-based Capacity Building in Disaster Preparedness Programme (Sai Kung)"

A Coordinator and facilitator fostering collaborations between different stakeholders in disasters by matching vulnerable communities with diverse service providers

4 Categories of activities

- Community Story on Disaster Prevention and Preparedness
- Disaster Risk Reduction from Daily Life Workshops
- Disasters Prevention and Preparedness Knowledge Application Workshops
- Fire Drill

Evaluation on Activities

Community Story on Disaster Prevention and Preparedness

- ✓ Collect knowledge and local wisdom for accumulating knowledge and experiences
- ✗ Limited effectiveness of delivering knowledge and stories to audiences

Disaster Risk Reduction from Daily Life Workshops

- ✓ Introduce insightful entry point for a better sense of protecting the environment and living with nature
- ✗ Lack direct knowledge and information regarding disaster preparedness

Disasters Prevention and Preparedness Knowledge Application Workshops

- ✓ Transfer practical skills and knowledge to empower villagers to deal with injury with confidence
- ✗ Doubt the sustainability of the increased awareness and practical knowledge without the participation of the young generations

Fire Drill

- ✓ Provide useful resources and identify gathering points for villagers
- ✗ Lack review on the mobility of the villagers and the accessibility of the gathering point

Connections of Co-partners

NGOs	SKDCC	Caritas
Service Scope	<ul style="list-style-type: none"> • Serve over 50 years • Cover the whole Sai Kung District (excluding Tseung Kwan O) • Provide mainly elderly, children and youth, and family service 	<ul style="list-style-type: none"> • Serve over 40 years • Cover Tui Min Hoi and Po Lo Che • Do neighborhood development
Strength	Have developed trustworthy relationships with their target audiences over time	
Limitation	<p>Lack manpower and capital resources for expanding their service scope</p> <p style="text-align: center;">↓</p> <p>Discourage the development in their scope of service and audience</p> <p style="text-align: center;">↓</p> <p>Limit the potential of intergenerational and interdisciplinary collaboration</p>	

4.2 Formulation of Guiding Principle

With WHOM to act?

- HKSAR Government and CPND
- Local Institutions
- Local NGOs
- Community Organizations
- **A NEW ROLE** to integrate the 3 aspects of community resilience: learning (knowledge production), building resources and capabilities, and action
 - make local actors' knowledge, resources and capabilities more easily accessible and utilised
 - act as a bridge to let different actors learn more about local communities

WHEN to act?

- **Short Term** (3-5 years):
 - Establishment of Building Actor
 - Consolidation
 - Trial and Prototyping
- **Mid-term** (5 years):
 - Establishment of Community Platforms
 - More Active Community Members
- **Long Term:**
 - Autonomy of Community
 - Role of Taskforce

FOUR Guiding Principles

- **Social Sustainability**
- **Community-Centred Approaches**
- **Consolidation of Resources and Capabilities**
- **Accumulation of Knowledge and Experiences**

4.3 Blueprint of Community Resilience Building in Sai Kung

- For develop community resilience in Sai Kung or similar context of sub-rural characters
- Practice the four guiding principles
- Enhancement on community-oriented resources and capabilities and community-oriented learning
- **3 Phases** (short term, mid-term and, long term approaches)

Phase 1 –
Establishment of
Taskforces and
Knowing the
Community

2 Years

Phase 2 –
Collaboration
between Taskforces
and Releasing
Community Assets

3 Years

Phase 3 –
Sustainability

5 Years

Phase 1 –
Establishment of
Taskforces and
Knowing the
Community

2 Years

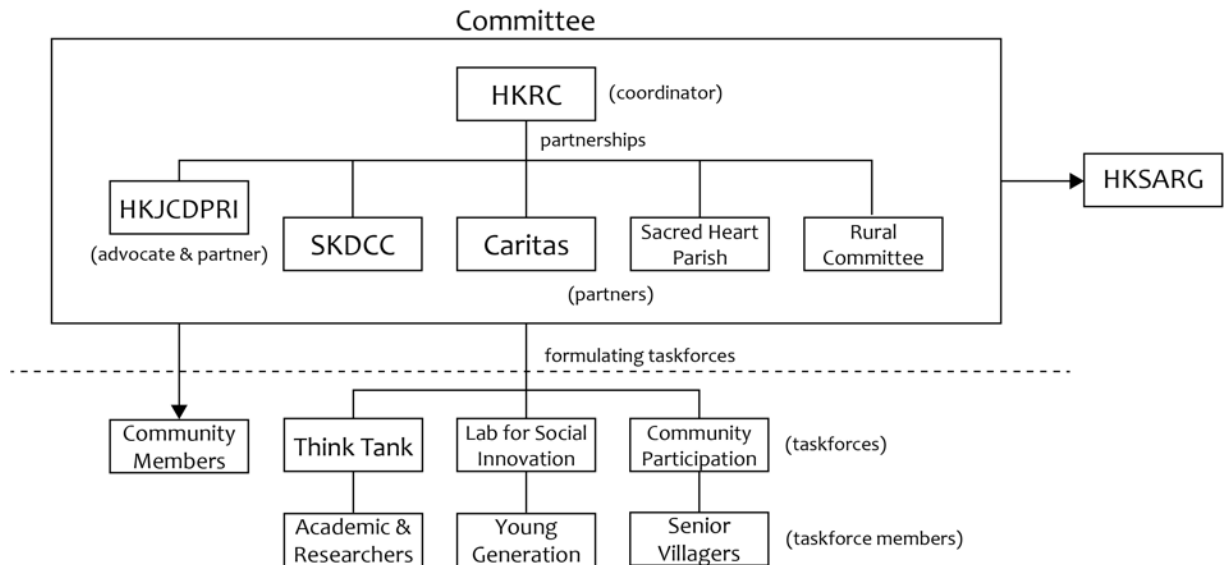
Objective:

- Kick start of the building of community resilience
- Identify and gather external forces and local forces to ensure the enough resources and connections for community resilience building
- Form acting forces for pilot community projects and research

Implementation:

- A two-tier hierarchy: the committee and the 3 taskforces
- Committee consists of an advocate and coordinating agency with several partners
 - Advocate/ coordinator: trustworthy with sufficient resources and connections
 - Partners: rooted in Sai Kung with certain authority and strong influence on community members
- Formation of 3 Taskforces with respective parties

Hierarchy of building community resilience with agencies for example



**Phase 2 –
Collaboration
between Taskforces
and Releasing
Community Assets**

3 Years

**Phase 3 –
Sustainability**

5 Years

Objectives:

- Encourage cross-disciplinary projects in order to accumulate knowledge and resources
- Further explore potential community assets
- Review the function and the formation of the committee and the 3 taskforces

Objectives:

- Sustain the effective community-based capacity building relate programme
- advocate mechanism of building community resilience over Hong Kong at higher level

Tentative timeline for the committee and the 3 taskforces through the 3 phases

