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Notes to Contributors

The Hong Kong Geographer is published on a tri-annual basis by the Hong Kong Geographical Association. The Journal welcomes full-length articles, research notes, and comments and opinions on current development of Geography both in Hong Kong and abroad and the teaching of Geography at the secondary level. It also welcomes book reviews and field trip guides and publishes news of schools, colleges, universities and research institutes which may be of interest to Hong Kong's geographers. Articles may be written in English or Chinese. In the latter case, the editorial board reserves the right to ask the author to submit a typewritten copy of the paper to bear the typesetting cost. Very tight financial restraints render this necessary.

All articles are to be submitted to:

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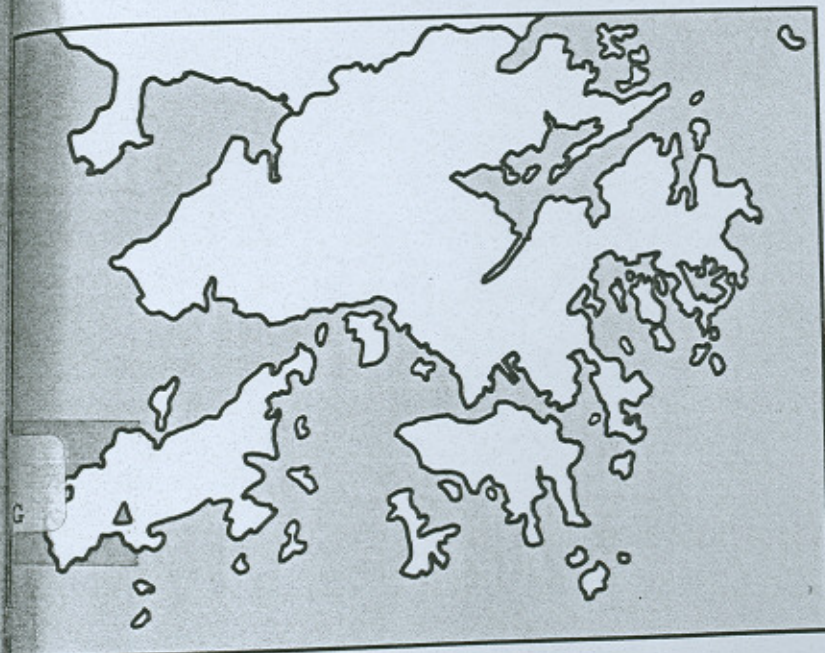
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Words from the Editor

This issue of the *Hong Kong Geographer* features three articles. As was promised, Professor C. J. Grant's speech on the development of the Geography and Geology Department of Hong Kong University on last year's Hong Kong Geography Day is published in the current issue. Also included are Dr. M. R. Peart's paper on field studies of weathering and Dr. Chow Chun Shing's article on the changing resource utilization and landscape of Sai Kung. Both secondary school geography teachers and professional geographers alike will find these papers highly useful.

The Association has been suffering from very tight budgetary constraints. A fund raising drive was carried out earlier this year. Also efforts have been made to seek outside support for the publication of the Association's two periodicals. A number of life-members have responded to the fund-raising drive, and the Manhattan Press has agreed to sponsor the printing of the *Hong Kong Geographer*. On behalf of the editorial board, I would like to express our sincere gratitude for their support.

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History of Geography at the University of Hong Kong

by

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The growth in importance of Geography at the University of Hong Kong has not been rapid but rather slow and irregular. The first mention of it as a subject was as a requirement in the Entrance Examination to the University in 1912. A little later in the *University of Hong Kong Calender 1913-14*, Geography was mentioned as a subject in the Matriculation Examination and as a part of an intermediate course in Economics.

It was not until 1933 however that Geography was recorded as a separate and distinct subject and not as a sub-heading elsewhere.

The first recorded staff member teaching Geography was Mr. F.M.H. Holman who also taught courses in English and History. He was appointed in 1915 as tutor in English and History and Reader in Economic Geography. In 1916 he was listed in the University's *Calender* as lecturer in Logic and in 1917 as lecturer in Psychology, and in 1918 as lecturer in Education. From the range of his titles and skills, it is apparent that Geography played only a small part of his job and in the University syllabus at that time.

Mr. Holman left the University in 1919 and it was not until 1931 with the appointment of Reverend Father D. J. Finn S. J. that Geography began to come into its own as an academic subject at the University of Hong Kong.

In the University's *Annual Report* in 1933 Father Finn wrote:

"In the last two years important changes have affected the Geography Course. The re-grouping of subjects within the Arts Faculty and addition of a second year course in Geography have led to considerable increase in the number of students reading the subject. The institution of the second

year course has called for a revision of the syllabus which ought to work more satisfactorily in content, distribution and treatment, textbooks and syllabus have been determined with a bias to the economic aspects of Geography."

The *Report* also mentioned that a lecture room had been set aside for the sole purpose of teaching Geography, and that a collection of visual aids, maps, films and prints had been established. In addition, the University Library began to fill up a gap in relation to Geography.

Father Finn died quite young and rather tragically in 1936. His scholarship extended beyond Geography to include fluency in European languages in Latin and Greek, as well as in Chinese and Japanese. He was specially remembered for his contributions to Hong Kong Archaeology and it was partly through his connection that the GGAS (Geography, Geology and Archaeology Society of Hong Kong University) has the Archaeology topic in its makeup.

From 1936-38 Miss K. K. Archer taught Geography and the progress initiated by Father Finn continued so that by 1939 in the *Sloss Report* it was recommended that Geography be enlarged from a two-year subject to a four-year course and that Geology teaching should form a part of Geography to be offered by engineers.

From 1938 until the beginning of World War II, the Department was run on a part-time basis by Rev. Father G. Casey, but it was at this time that Dr. S. G. Davis as a teacher in Hong Kong began working at the University as a part-time lecturer. Following the War, Dr. Davis resumed his position with the University and with the Education Department. In 1952, Dr. Davis took up a readership in Geography at the University.

In 1939, the Geography Department provided courses for the first time in two faculties, namely, Science and Arts. Geography continued to be an integral part of the Science Faculty until 1950 when for no clear reason it was excluded. This has been a most unfortunate lapse since a close-link with the Science Faculty would be beneficial both to students of the Faculty and the Geography and Geology Department.

In 1946 the Department of Geography reopened at the University with fifteen students using a lecture room on the ground floor of the School of Surgery which was sited on the area now occupied by the Haking Wong Building. Later it moved to the Tang Chi Nyong School where it remained until 1950.

In September, 1954, following proposals laid down in the *Sloss Report* of 1939 the Department was re-formed as the Department of Geography and Geology. Dr. Davis was elected to be the chair of Geography and Geology in 1955. Under Professor Davis the Department grew rapidly and by 1961 there were seven senior staff including Mr. C. L. So as assistant lecturer and with Mr. T. N. Chiu and David C. Y. Lai as demonstrators.

Physical Geography and Geology were strongly represented under Professor Davis with Mr. J. Llewellyn and Mr. George Riley lecturing in Geology. With the great urban expansion of Hong Kong in the Sixties the Department of Geography and Geology at Hong Kong University expanded and in particular the various branches of Human Geography became more adequately represented.

The Department of Geography and Geology formerly offered courses in Geology to both Architecture and to Civil Engineering but rather unfortunately in view of the important role of Geology in foundation works, the Faculty of Architecture no longer requires their students to study Geology. The Department of Geography and Geology still offers a two-year course in Geology and Soil Mechanics to Civil Engineering students and several of the Engineering graduates have benefited from Hui Oi Chow Scholarships to continue their study in the United States.

In recent years there has been recognition of the need to develop a programme in Earth Sciences within the Science Faculty but for various reasons, not all of them based on sound academic principles, there has been a reluctance to allow Earth Sciences to become established in Science.

Human and Urban Geography on the other hand are well accepted in both the Arts Faculty and Social Science Faculty.

As in many departments of Geography around the world there has been a tendency of emphasising the dichotomy between the Human and Physical aspects of Geography but the example of American Geography departments which have made this split has not been encouraging and in Hong Kong we have resisted splitting off Earth Sciences.

A major factor in support of a broad based department with both Physical and Human Geography equally balanced is the need to provide geography teachers with a sufficiently broad base to resist undue specialization in one or other aspects of Geography.

The majority of the University's Geography graduates become teachers and a close link is maintained between the Department of Geography and Geology and the Examinations Authority to ensure that desirable standards are maintained.

In 1974 a major review of the A-Level and GCE examinations was undertaken and the relationship between the curriculum and the final school examinations was examined in detail. Considerable modifications in the A-Level syllabus were gradually introduced and these are under regular review.

The Hong Kong University Department of Geography and Geology has responded to the rapid developments in Geography throughout the world and has maintained a leading position both in teaching and research.

The Study of Weathering Processes in the Field

by

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Introduction

Clark and Small (1982) provide a simple definition of weathering as "the disintegration or decay of rocks *in situ* ..." and go on to cite Ollier's (1969) more complex definition of weathering:

"the breakdown and alteration of materials near the earth's surface to products that are more in equilibrium with newly imposed physico-chemical conditions."

There are two major types of weathering which are physical and chemical. A third category of weathering, namely biological, may be distinguished. However, because it often involves either physical or chemical processes it may not necessarily be distinct from these types of weathering. Moreover, it is worth remembering that physical and chemical weathering often proceed together and may act to reinforce each other.

Types of Weathering and their Products

Table 1 presents the processes associated with physical, chemical and biological weathering. The products of weathering can be itemized. These are residual deposits which consist of the weathered and unaltered materials left by weathering. Among the most common unaltered residues will be the most resistant minerals such as quartz. Many of the less resistant minerals decompose to give clay minerals. At some risk of oversimplification it can be stated that mechanical weathering produces residues showing little chemical decomposition but which are much altered in terms of size and shape. In contrast, chemical weathering alters the composition of materials. Weathering may also generate distinctive landforms, although erosion may also be necessary. The following landforms owe

much to weathering for their development: tors; exfoliation domes and limestone features such as clints and grikes.

1) PHYSICAL WEATHERING

- Pressure release
- Frost weathering
- Salt weathering
- Insolation weathering
- Sheeting, unloading and spalling
- Moisture swelling
- Wetting and drying

2) CHEMICAL WEATHERING

- Solution
- Carbonation
- Hydration
- Hydrolysis
- Oxidation and Reduction
- Chelation

3) BIOLOGICAL WEATHERING

- physical effects: plant growth may be the means of the roots cause fracture
- simple chemical effects e.g. solution enhanced by respired carbon dioxide
- complex chemical effects including chelation
- respiration and absorption of plants affects soil pH

Table 1: The processes associated with physical, chemical and biological weathering.

Some Ideas for the Teaching of Weathering

A. Theory

i) *Weathering and climate*: Due to the fact that water and heat are important controls on weathering, these may govern weathering and landforms at the global scale. Peltier (1950) has related weathering to climate and this is shown in Figure 1. Using climate data for Hong Kong (e.g. Chin, 1983) students could be asked, using the diagrams of Figure 1, to ascertain the intensity of chemical and physical weathering in Hong Kong. They can also place Hong Kong in the appropriate weathering zone for the world and be asked to assess if there is any

evidence to justify this. They should report that Hong Kong is an area which might expect strong chemical weathering and that the deep weathering of the granites may support this. One should not forget, however, that it is difficult to establish a simple relationship between climate and weathering because many areas have experienced climatic change. Furthermore, Peltier's (1950) work suggests that only two climatic variables control weathering. It ignores other factors, such as, geology and micro-climate, while the use of annual temperature can be criticized because a more appropriate measure might be the number of freeze-thaw cycles.

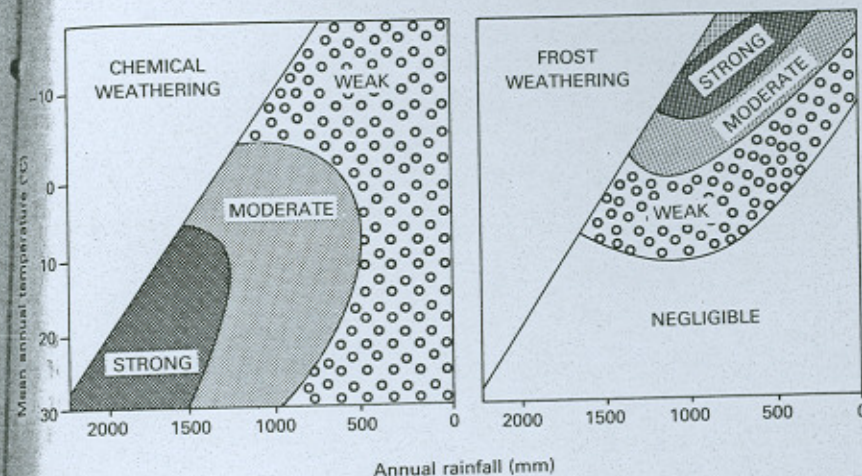


Figure 1: The relationship of weathering to climate.

ii) *Rocks and weathering*: Table 2 presents the resistance to weathering of a number of rock forming minerals. One can be made of this table along with thin sections of a number of rock types such as presented by Sparks (1972) to pose questions as to the relative resistance of minerals and the effect this may have on rock disintegration. An alternative is to present each pupil with a sample of heavily weathered granite in which the only identifiable mineral is quartz. They can be asked to explain why this mineral remains identifiable while the other material has been transformed to clays.

Most susceptible

Maffic minerals

olivine
augite
hornblende
biotite

Felsic minerals

lime plagioclase
lime-soda plagioclase
soda-lime plagioclase
soda plagioclase
orthoclase
muscovite

Least susceptible

quartz

Table 2: Relative resistance to weathering of some rock forming minerals.

B. Fieldwork

- i) The most simple fieldwork exercise involves constructing a planned walk on which students are shown a number of weathering features. The route could be drawn on a handout and a number of questions posed at each site.
- ii) The deep weathering profiles which can be found on many areas of the granite in Hong Kong provide excellent sites for fieldwork. The zones of weathering identified by Ruxton and Berry (1957) and the degree of decomposition of weathered igneous rocks classification developed by Moye (1955), and which are shown in Figure 2 and Table 3 respectively, represent important teaching aids. Students can be asked to identify the weathering zones in a profile using these as guides.

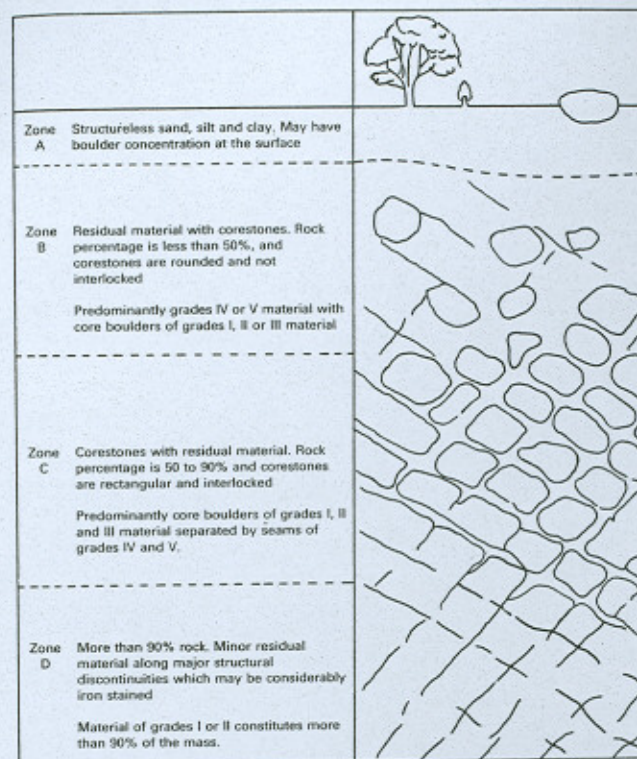


Figure 2: Zones of weathering after Ruxton and Berry (1957).

Grade	Degree of Decomposition	Diagnostic features in Samples and Cores
VI	Soil	No recognisable rock texture; surface layer contains humus and plant roots.
V	Completely decomposed	Rock completely decomposed by weathering in place, but texture still recognisable.
IV	Highly decomposed	Rock weakened so that fairly large pieces can be broken and crumbled in the hands.
III	Moderately decomposed	Large pieces (e.g. NX drill core) cannot be broken by hand.
II	Slightly decomposed	Strength approaching that of fresh rock - slight staining.
I	Fresh rock	

Table 3: Classification of the Degree of Decomposition from Weathered Rock of Igneous Origin (after Moye, 1955).

C. Laboratory Investigation

We often tend to forget that weathering can be studied using simple laboratory experiments. Trudgill (1983) provides a number of interesting possibilities for laboratory work within respect to both mechanical and chemical weathering. The most easily utilized of these are summarized in Table 4. Some of these experiments may be adapted for field use.

1 PHYSICAL WEATHERING

- a) Water uptake:
- b) Wetting and drying:
- c) Heating and cooling:
- d) Salt weathering:
- e) Freeze-thaw.

2 BIOTIC AND CHEMICAL WEATHERING

- a) The use of pH as a measure of weathering potential:
- b) pH change consequent upon hydrolysis:
- c) Organic acids which can be used to indicate that vegetation can cause acidity of water which may erode carbonate rocks.

Table 4: Experiments that are suitable for the illustration of weathering processes. See Trudgill (1983) for details.

References

- Chin, P.C. (1983) *Climate and weather*. Chpt. 3, pp. 45-56. In: T.N. Chiu and C.L. So (eds.), *A geography of Hong Kong*. Oxford Univ. Press.
- Clark, M. and Small, J. (1982) *Slopes and weathering*. Cambridge University Press, 112 pp.
- Moye, D.G. (1955) Engineering geology for the snowy mountains. *Jnl. Inst. of Engrs.*, Australia. Vol. 27, pp. 287-298.
- Ollier, C.D. (1969) *Weathering*. Oliver & Boyd.
- Peltier, L.C. (1950) The geographic cycle in periglacial regions as it is related to climatic geomorphology. *Annals. Ass. Amer. Geographers*. Vol. 40, pp. 214-36.
- Ruxton, B.P. and Berry, L. (1957) Weathering of granite and associated erosional features in Hong Kong. *Blltn. Geol. Soc. of America*. V. 68, pp. 1263-1292.
- Sparks, B.W. (1972) *Geomorphology*. 2nd ed., Longman.
- Trudgill, S.T. (1983) *Weathering and erosion*, 192 pp. Butterworths, London.

Resource Utilization and Landscape Changes: The Case of Sai Kung in Hong Kong

by

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This paper is concerned with developmental changes in the Sai Kung region in Hong Kong. Sai Kung is located in the easternmost part of the New Territories of Hong Kong (Figure 1). It has been considered a remote area and its level of development has lagged behind that of urban Hong Kong and Kowloon. In its early history, Sai Kung was a region with subsistence farming and fishing economy. Later, through people's adaptive action in response to changes that have occurred both within the region and in the overall context of Hong Kong society, the socio-economic and environmental characteristics of Sai Kung have been drastically transformed. By now, Sai Kung has developed into a region with a composite of different features, including specialized territories for recreational activities, declining and even abandoned villages at less accessible sites, thriving villages with truck farming along major highways, and an expanding residential and market area around Sai Kung Town.

The purpose of this paper is to explain the process of economic and environmental change in Sai Kung and to draw upon it implications for research and policies in relation to regional development. This will be of both academic and practical interest. It will provide insight into our understanding of how human action has helped modify the environmental and socio-economic characteristics of a region. On the basis of such an understanding, realistic policies can be formulated in the process of manipulating the environment to augment regional growth and development.

On Resources and Regional Development

To explain economic and environmental changes in Sai Kung, this paper places emphasis on the process of how people have

adapted to changing situations in both Sai Kung region and society at large in Hong Kong. This approach is based on the conviction that economic and environmental changes are ultimately the product of people's adaptive action in response to changing situations in the environment. This approach, however, is different from traditional studies of regional development.

Traditionally, researchers and policy-makers have tended to explain regional development in relation to resource endowment and patterns of resource utilization in specific areas. The conventional approach focuses primarily upon two issues: (1) factual accounts of resources, capital, and amenities which are available within regions, and (2) normative prescriptions of where productive facilities and infrastructure should be located so as to optimally exploit the available resources (Manners, 1973, p. 243).

The traditional approach, however, has several shortcomings which make it difficult for people to adequately understand the actual process of regional development. First, the conventional approach assumes that resources exist in a closed system, i.e., within the boundaries of a region. Second, it assumes that regional development is static and is determined by the amount of resources which are available in a region at specific points in time. Third, it assumes that resource endowment, instead of human action, is the major determinant of regional development.

The static view of the traditional approach is primarily based on the fact that natural resources are immobile and are accountable within regions. Zelinsky (1966, p. 103), for example, defined a resource as "any substance or physical property of a place that can in some way be used to satisfy a human need. Resources include the physical and biological potentialities of the minerals, soils, biota, water, and atmosphere of the locality — as they can be realized by its occupants — and whatever transportation, military, or recreational value may accrue through the interests and activities of local or distant peoples."

Given the immobility of natural resources, it is not surprising that researchers have tended to take resource

endowment as the major determinant of regional development. According to Friedmann and Alonso (1964, pp. 209–11), for instance,

the start of development in a locality will frequently result from a unique resource advantage which attracts capital and the other factors of production. . . . As the local economy grows, it will cross one threshold after another, making possible larger and more diversified business operations. Eventually, a general threshold may be reached, which, if broken through, will lead to sustained and cumulative growth of the regional economy."

Such reasoning projects a perspective that regions with rich resource endowment will enjoy cumulative growth whereas regions with poor endowment will remain undeveloped.

This perspective, nevertheless, ignores the fact that although resources are immobile, the user of resources, i.e., people, are migratory. In reality, people are not bounded to engage in productive activities within their home regions only. They can extend their activity fields far beyond the boundaries of their home regions by, for instance, commuting or moving to other places to make use of the resources there. Such people can as well play a significant role in supporting the local economy of their home regions by sending back wages or remittance to their places of origin (Cheng & Liu, 1982; Connell, *et al.*, 1976, pp. 90–120; Hugo, 1981; Yu, 1983). The relationship between a region's resource endowment and its economic growth is thus not as direct as the traditional approach has tended to assume.

The traditional attempt to directly relate resource endowment to regional development has by-passed the impact of human adaptation on the modification of the environment and the utilization of natural resources. Moreover, factual accounts of a region's resource endowment can only provide cross-sectional profiles of the amount and kinds of resources of that region at specific points in time. Such attempts fail to depict regional development as a dynamic and an ever evolving process. As pointed out by Manners (1973, p. 248), although

there has accumulated a rich literature on regional studies, "many of the more fundamental questions raised by even a cursory examination of the changing patterns of regional development as yet remain unanswered."

For a better understanding of regional development, an alternative approach that considers development as a dynamic process and that places stronger emphasis on human adaptation than the quantitative aspect of resource endowment is necessary (c.f. Hagerstrand, 1970). As called for by Manners (1973, p. 248), there is "an urgent need for an improvement in our understanding of both the processes of spatial economic development and the appropriate responses of the community to their associated problems." To provide a case example of such an approach, this paper traces the development of Sai Kung in relation to the process of how people there have adapted to changes which have evolved both within the region and in the larger society of Hong Kong.

The Setting

Sai Kung is a peninsula located in the eastern end of the New Territories. It is surrounded by the Tolo Channel to the north, Mirs Bay (Tai Pang Wan) to the east, and Port Shelter (Ngau Mei Hoi) to the south. A narrow strip of land to its west provides the only direct right of way to connect Sai Kung to mainland Kowloon.

Topographically, Sai Kung is characterized by a rugged relief, an indented coastline, and scattered small islands. A series of hills and plateaux, which runs northeast-southwestward from Ma On Shan (Horse-saddle Hill), through Buffalo Hill, Tate's Cairn, to Kowloon Peak, shelves Sai Kung off from the urban part of Kowloon (Figure 2).

Owing to its rugged topography and its location in the easternmost periphery of the New Territories, Sai Kung has traditionally been considered a remote and relatively inaccessible area. Despite these locational and topographical disadvantages of Sai Kung, people there have exploited various opportunities that have evolved both within and outside the region for their benefit. Through this adaptive process,

development in Sai Kung has proceeded along three major lines: (1) farming and fishing, (2) out-migration for extra-regional opportunities and the support of Sai Kung's village economy with remittance, and (3) a market economy centering at Sai Kung Town. Such activities are inter-related and will be discussed below.

Early Development in Sai Kung: 1600s to Second World War

The earliest settlements in Sai Kung evolved in the 1600s in stream valleys which were more suitable than other localities for sedentary agriculture, such as at Ho Chung, Pak Kong, and Sha Kok Mei (Blake 1981, pp. 22-23). During the 18th-19th century, some Hakka people (literary meaning "guest people") moved into Sai Kung from southern China, particularly from nearby areas in Guangdong (Blake, 1981, p. 24). The majority of the new Hakka arrivals settled in hamlets around the established villages, along the coast, and near streams in uphill areas.

The numerous inlets along the coast of Sai Kung also attracted the in-migration of Tanka (meaning "boat people") into the region from other harbours in Hong Kong and southern China (Blake, 1981, p. 26). By 1911, the year when the first official census was taken in Hong Kong, Sai Kung had developed into a district of about 9,000 people, accounting for 13.4 per cent of the total population of the New Territories (Faure, 1982, p. 173).

During the early history of Sai Kung, fishing and paddy farming were the major forms of production. Life was harsh, however. As the population grew, people in Sai Kung found it difficult to produce enough food to maintain the subsistence level. Interviews with villagers in Sai Kung disclosed that their ancestors had to search for cultivable land by terracing the steep slopes along the hills and by reclaiming marginal land along the coast.

The impact of such efforts was piecemeal because large scale expansion of agricultural activities in Sai Kung was thwarted by the rugged topography, scarcity of flat land, and a

rapid runoff of surface water along steep slopes (Chiu, 1964). To improve their living conditions, people in Sai Kung were badly in need of additional sources of income.

The opening up of Hong Kong as an international port in the mid-19th century provided new employment opportunities for people in Hong Kong at large. The impact of this on Sai Kung was two-fold: (1) the onset of out-migration from the region, and (2) the emergence of the market economy and small scale industry in Sai Kung.

Employment opportunities in urban Hong Kong and Kowloon induced some villagers to leave Sai Kung for non-agricultural jobs. Some of them were recruited as seamen by foreign shipping companies. As most Chinese sailors did during this period of time, the early seamen from Sai Kung ended up as emigrants in overseas ports and initiated subsequent processes of emigration from the region (Blake, 1981, p. 29; Faure, 1982, p. 164; Watson, 1975, pp. 60-62).

At the same time, the overall development in Hong Kong created demands for agricultural products and building material. People in Sai Kung, especially those along the coast who enjoyed easier access to other areas outside the region, quickly responded to such demands. Lime and brick kilns sprang up along Sai Kung coast to produce building material for urban and village use. Pig raising for urban markets became a major source of income for some villagers (Faure, 1982, p. 164).

In those days, the terrain made arduous the communication between Sai Kung and Kowloon. Villagers had to climb up the steep hills and plateaux by way of footpaths before reaching down to Kowloon. In response to the increasingly frequent interaction between Sai Kung and urban areas, a market port gradually emerged at Sai Kung Town from which fishing boats and ferries departed for Hang Hau and then to Shaueiwan on Hong Kong Island (Faure, 1982, p. 167).

By 1900, Sai Kung Town had become a thriving market center for the entire region. Non-agricultural activities, such as small industries like brick and lime kilns, blacksmiths, boat-

repairing, and distillers, and commercial shops like bamboo wares, jewelries, bakeries, teahouses, herbalists, furniture, and coffin makers were clustered at the market town (Blake, 1981, p. 28; Faure, 1982, p. 170). From shops at the market area, villagers acquired daily necessities and supplies, such as oil and kerosene, which had to be imported from outside. Some of the commercial shops were also engaged in lending out money for interests and in helping villagers collect remittances from their emigrated relatives in overseas countries (Faure, 1982, p. 170).

The emergence of the market economy and small scale industries was, however, primarily confined to coastal areas. Vast areas farther away than walking distance from Sai Kung Town and the coast were virtually unaffected by this trend. Villagers who were located in remote areas had few options but to grow paddy for subsistence. The lack of transportation in such areas made it prohibitively laborious to carry farm products to market areas and to benefit from the emerging cash economy along the coast. More widespread and rapid development in Sai Kung had to await improvement in intra- and inter-regional transportation. This, however, did not occur until the Second World War.

During the Second World War, the entire territory of Hong Kong was controlled by Japanese army. The war brought much hardship to the people of Sai Kung. One after the other, Japanese soldiers and bandits intruded the villages in Sai Kung. They took away villagers' harvests and livestock, and burnt their furniture and farm implements as firewood. For the first time in the history of Sai Kung, people suffered starvation in 1942 and had to live on weeds (Faure, 1982, p. 187).

To survive the hardship, people in Sai Kung adjusted by drastically reducing their food consumption and by supplementing their diets with sweet-potato. Some villagers were engaged in the dangerous trade of smuggling, transporting clothing and other consumer goods to southern China and bringing back rice and other food stuffs (Faure, 1982, pp. 197-8).

During the years of Japanese occupation (1941-45),

however, a highway was constructed to connect Sai Kung and Kowloon, in order to serve the batteries and gun-posts on hills in the region. The highway was constructed for military purposes but improved considerably the transportational linkage between Sai Kung and the rest of Hong Kong.

After the Second World War, Hong Kong reverted to the British jurisdiction. The Hong Kong Government further extended and widened the Japanese-built Kowloon-Sai Kung highway. People in Sai Kung were thus able to enjoy more efficient and direct transportation to urban markets. Improved transportation brought about widespread changes which drastically transformed the rural landscape of Sai Kung in subsequent years.

Truck Farming, Emigration, and Polarized Development: Post-war Years to the 1970s

During the post-war years, Hong Kong experienced the most rapid growth in population due to the in-migration of hundreds of thousands of Chinese who took refuge from the civil war in Mainland China. A good number of these newcomers moved into Sai Kung. Between 1931 and 1961, the population of Sai Kung more than doubled from 7,585 to 15,389 (Hong Kong Government, 1976).

The majority of the newcomers to Sai Kung used to be peasants in China. They lacked capital and employable skills for industrial and commercial ventures in urban Hong Kong. At low and affordable costs, they rented marginal land from villagers in Sai Kung and picked up the farming occupation that they used to perform in China. The kind of land that the newcomers could afford to rent was small in size and of inferior quality. Such land was not fertile enough for paddy farming. Refugee farmers adjusted to the infertility of the land by putting in more labour and by growing vegetables instead of rice.

Meanwhile, rapid population growth in urban Hong Kong and Kowloon heightened the demand for vegetables, meat, and poultry products. Improved transportation to Kowloon enabled the peasants in Sai Kung to rapidly transfer their vegetable and other farm products to urban markets. Truck

farming thus formed a major source of income for most of the refugee farmers in the region. Gradually, the profit from truck farming was sufficient to induce indigenous farmers to convert paddy fields into vegetable beds. The adoption of truck farming over paddy in Sai Kung and other parts of the New Territories was so pronounced that the transformation was generally known as the "vegetable revolution" in the agricultural scene of Hong Kong (Watson, 1975, pp. 42-44).

Farming, however, was laborious and could at best produce enough for subsistence. It was not at all attractive to young and aspiring villagers. When better alternatives became available elsewhere, villagers left their farms for such opportunities. Non-agricultural jobs in urban Hong Kong and Kowloon provided some alternatives, but emigration was more appealing to the villagers of Sai Kung.

By the post-war years, some early seamen from Sai Kung had already established footholds in overseas countries, such as U.S.A., the Netherlands, and U.K. Most of them were engaged in the blooming business of Chinese restaurants in their host countries (McGee & Drakakis-Smith, 1973). When these emigrants returned to their home villages for visits, they held feasts to entertain fellow villagers and relatives; rebuilt and enlarged their farm houses with earned savings. Some villages, such as Sha Kok Mei, were able to pool enough donations from emigrants to help improve the village environment by erecting school buildings and village halls. The success of the earlier emigrants induced more villagers to leave Sai Kung and to seek entrance to overseas countries.

Prior to 1962, The United Kingdom had a liberal policy for the admission of Commonwealth citizens to the country. People who were born or naturalized in Hong Kong were British subjects and could immigrate to the United Kingdom without restriction. Consequently, most of the intended emigrants from Sai Kung preferred to move to the U.K..

In 1962, the U.K. Government enacted the first Commonwealth Immigrants Act, which imposed restrictions on the numbers of immigrant workers from Commonwealth areas and required each new immigrant to have a job awaiting him

upon arrival. Prior to the effective date of the Act on July 1 of that year, thousands of villagers rushed into the U.K. from the New Territories to beat the deadline (Watson, 1975, p. 77). Emigration from Sai Kung reached its climax in the early 1960s.

Remote areas in Sai Kung were most adversely affected by the rapid pace of out-migration. Young villagers abandoned their fields and left for urban Hong Kong, Kowloon, or overseas countries. The remoteness of such areas made them unattractive to the new refugee farmers from China. By the late 1960s, field abandonment had become prevalent in most of the less accessible territories in Sai Kung (Chiu, 1964; McGee & Drakakis-Smith, 1973).

Meanwhile, rapid population growth in urban Hong Kong and Kowloon had escalated the demand for water supplies. In the early 1970s, the Hong Kong Government decided to construct a reservoir (the High Island Water Scheme) in the eastern part of Sai Kung. This project resulted in profound changes in the region. The impact of the High Island Water Scheme on Sai Kung was at least five-fold: (1) relocation of affected villages and expansion of Sai Kung Town, (2) improvement in intra-regional transportation, (3) provision of temporary jobs in relation to construction activities, (4) the cut-off of irrigation water for fields far away from streams, and (5) polarized development within Sai Kung region.

Prior to the construction of the reservoir, two villages, Lan Nai Wan and Sha Tsui, which would have been directly affected by the project had to be relocated. To compensate the villagers, the Hong Kong Government granted them free housing, relocation allowance, and cash for their crops, livestock, and trees. To make room for the new houses, the government expanded Sai Kung Town by reclaiming land from the sea. Consequently, Sai Kung Town was considerably enlarged both in areal extent and in population. Reclamation, the provision of new buildings, and the relocation of additional people increased the potential of Sai Kung Town for rapid development in subsequent years.

To facilitate the construction work for the High Island Water Scheme, service roads were built to connect the reservoir site

to the existing highway in Sai Kung. This further improved the transportation facilities in the region. Moreover, while construction work was in progress, more than 3,000 workers were hired for various projects. Such people resided in work camps in Sai Kung and depended upon the shops in Sai Kung Town for retail and other services. Some villagers and fishermen in the vicinity responded to such opportunities by joining the work team or by engaging in small businesses to serve the new, albeit temporary, demand for services there.

With more land from reclamation, additional buildings, residents, and businesses, Sai Kung Town became a blooming center for the entire region. In 1973, as many as 150 non-agricultural establishments, such as restaurants, teahouses, retail stores, building supplies, ship repairing, and cottage industries, were located in Sai Kung Town (Blake, 1981, pp. 38-42).

The impact of the High Island Water Scheme on remote areas in Sai Kung, however, was unfavourable. Upon the completion of the reservoir in 1978, much of the surface water in its surroundings was directed into ditches and drained into the reservoir. This had the effect of cutting off the irrigating water for vast territories of agricultural land. Peasants in areas far away from major streams suffered the problem of not having enough water for irrigation. Many of them had to give up farming and looked for alternative jobs in urban areas.

The construction of High Island Reservoir and its related projects thus had the effect of polarizing the development between accessible areas and remote territories within Sai Kung. Coastal areas, particularly Sai Kung Town, which were well served by the improved highway, benefited from the government projects. Remote areas, however, were adversely affected, and people there were further induced to abandon their homes for alternative opportunities elsewhere. By the early 1970s, some remote villages at inaccessible sites had been abandoned and totally deserted (Chiu, 1964; McGee & Drakakis-Smith, 1973).

The persistence of population decline in the remote areas in Sai Kung, nevertheless, had preserved the ecology of such

areas from large scale man-made disturbances (Thrower, 1984, pp. 117-31). This part of Sai Kung became one of the few areas in Hong Kong where urbanites could enjoy a glimpse of the beauty of the natural scenery. Improved transportation and the scenic beauty of Sai Kung attracted thousands of weekenders to visit the area for recreation from urban Hong Kong and Kowloon. For such visitors, hiking, fishing, and swimming were the most favoured activities in Sai Kung, especially during the summer months. On Sundays and public holidays, visitors poured into Sai Kung Town to buy necessities, to dine, and to seek local transportation, such as sampans and fishing boats, to go to various parts of the region. Their patronage brought in additional income for the fishermen and shopkeepers in the town area, and reinforced the dominating position of Sai Kung Town within the region.

As Sai Kung proved to be a favourable area for recreation, when the Hong Kong Government was drafting its country park policy during the late 1960s and the 1970s, it decided to designate a vast portion of Sai Kung as country parks. The subsequent enactment of the Country Parks Ordinance in 1976 earmarked a new phase of development in Sai Kung.

Country Parks, Suburbanization, and the Market Economy: The 1970s to Present.

In view of the rising demand for recreational facilities from the ever growing population in Hong Kong and the need to preserve the environment of certain parts of the territory from urban encroachment and man-made disturbances, the Hong Kong Government began to consider the feasibility of designating several country parks in the mid-1960s. After years of exploration and planning, the Country Parks Ordinance was enacted in 1976 to authorize the establishment of the Country Park Authority. By 1979, the Country Park Authority had designated 21 country parks with a total area of over 40,000 hectares in Hong Kong and had formed the Country Park Board to develop and manage such areas.

Owing to the popularity of Sai Kung as a recreational area, over 75 per cent (7,500 hectares) of the region, including Sai Kung East, Sai Kung West, and Kiu Tsui Island, was designated

as country parks (Fig. 3). In conjunction with the development and management of the country parks in Sai Kung, the Hong Kong Government improved the transportation infrastructure in the region, provided additional means of public transport (such as public light buses) so as to serve the area with greater frequency, and specifically zoned certain localities, such as the resort area on Kiu Tsui Island, for private developers to invest in the provision of commercial and recreational facilities.

With improved facilities and transportation, Sai Kung soon became one of the most favoured country parks in Hong Kong. During the year 1985-86, over 1.6 million people visited Sai Kung Country Park (*Ming Pao*, 14 Apr. 86). Most of these visitors had to stop by Sai Kung Town to stock up their supplies, and to take transfer to various parts of the Country Park. The designation of a vast Country Park in Sai Kung thus benefited the commercial activities in Sai Kung Town.

Improved transportation brought in not only more visitors but also residents to Sai Kung. The scenic beauty of Sai Kung made it an ideal residential area for suburbanites. Improved transportation induced developers to exploit the areas close to major roads for villa-type low-rises. Upon completion, such housing projects were soon occupied by people who were attracted to stay there by the suburban environment of Sai Kung. Since the late 1970s, more residential blocks have been developed on the reclaimed land in the expanding Sai Kung Town. During the decade of 1971-1981, the population of Sai Kung was more than doubled from 19,551 to 44,682 (Hong Kong Government, 1981). Until today, the demand for housing in Sai Kung Town has remained exceedingly high.

Increased population and the large number of country park visitors have escalated the demand for commercial and other services at Sai Kung Town. In July, 1986, a survey conducted for this paper discovered that as many as 290 commercial and small scale industrial establishments were located in Sai Kung Town. Such establishments included restaurants, supermarkets, retail stores, dentists, furniture shops, banks, jewelry, hardware and textile factories. In view of the developmental trend in Sai Kung as a whole, the commercial sector in Sai Kung Town should continue to prosper in years to come.

Meanwhile, villages along the major roads in Sai Kung have benefited from the prosperity of Sai Kung Town, through increased demand for housing, and improved transportation to the urban areas. Piece by piece, plots of agricultural land near to highways have been converted into building sites for village houses. Vegetable farmers in areas with irrigation water have continued to prosper. Orchards and flower-beds have as well begun to emerge at well irrigated and accessible sites. By now, paddy farming has virtually disappeared in Sai Kung.

Villages in remote areas, however, have continued to decline. Nowadays, over 20 villages in Sai Kung have less than 12 residents each. Most of these villagers are elderly persons who have no desire of living elsewhere (*Oriental Daily*, 14 April, 1986).

Emigrants have kept returning periodically to Sai Kung from overseas. Emigrants, especially those who originated from the major villages at accessible sites, have rarely deserted their connection with the home bases. They have contributed to the village economy by sending back remittance and by rebuilding and modernizing their village houses. Some of them intend to return to their villages upon retirement.

Judging from the developmental trend in the past, it is apparent that different parts of Sai Kung will develop along different routes in the near future. Villages in remote areas will continue to decline, whereas major villages at accessible sites and Sai Kung Town will remain prosperous. Market gardening of vegetables and flowers, remittance from emigrated villagers, and earned wages of commuting workers would be the major sources of support for the remaining villages. Sai Kung Town, however, should continue to be the major commercial and residential center of the entire region.

Conclusion

The development of Sai Kung has been due to many factors. Some of these factors, such as the amenity of Sai Kung, emerge within the region. Some others, such as opportunities for emigration and the demand for recreational facilities in urban Hong Kong, are generated elsewhere. A region, therefore,

cannot be considered as an isolated entity. Its development has to be understood within the context of the broader society of which it forms a part.

Moreover, the observed process of developmental change is a manifestation of how people in the region have adapted to the changing situation in the environment. For a better understanding of regional development, it is necessary to consider it as a process whereby people continually interact with the environment. The emphasis should be on human behaviour, and on people's perception and utilization of resources, rather than on the physical attributes of resources *per se*.

In this regard, the perspective that natural resources are immobile should be critically reconsidered. As described in the preceding paragraphs, people are migratory. They could exploit the resources in other areas and at the same time contribute to the economy of their home regions. To plan better for the utilization and allocation of resources, the migratory factor of people should as well be taken into consideration.

This, however, calls for a better understanding of why people migrate. On the basis of such an understanding, explicit policies on population distribution and redistribution should be formulated and be incorporated with strategies for the allocation of resources (Fuchs and Demko, 1980; Pryor, 1979). Unfortunately, until today, our knowledge of why people migrate is at best inconclusive (De Jong and Fawcett, 1981). Should we aim at more rational policies for regional development and resource allocation, there is obviously an urgent need for more integrated research on migration and resource utilization.

References

- Blake, C. F. (1981) *Ethnic Groups and Social Change in A Chinese Market Town*. Honolulu: University of Hawaii Press.
- Cheng, L. & Liu, Y. (1982) "Chinese emigration, the Sunning Railway and the development of Toishan." *Amerasia*, 1, pp. 59-74.
- Chiu, T. N. (1964) "Land use problems in the extreme east of the New Territories." in S. G. Davis (ed). *Land Use and Mineral Deposits in Hong*

- Kong, South China and South-east Asia, pp. 75-80. Hong Kong: Hong Kong University Press.
- Connell, J., Dasgupta, B., Laishley, R., and Lipton, M. (1976) *Migration From Rural Areas: The Evidence from Village Studies*. Delhi, India: Oxford University Press.
- De Jong, G. F. and Fawcett, J. T. (1981) "Motivation for migration: an assessment and a value-expectancy research model." In G. F. De Jong and R. W. Gardner (eds.) *Migration Decision Making*, pp. 13-58. Elmsford, N.Y.: Pergamon Press.
- Faure, D. (1982) "Saikung, the making of the district and its experience during World War II." *Journal of the Hong Kong Branch of the Royal Asiatic Society*, 22, pp. 161-216.
- Friedmann, J. and Alonso, W. (1964) "Introductory notes." In J. Friedmann and W. Alonso (eds.) *Regional Development and Planning*, pp. 209-212. Cambridge, Mass.: M.I.T. Press.
- Fuchs, R. J. and Demko, G. J. (1980) *Population Distribution Policies in Development Planning*. New York: United Nations Population Division.
- Hagerstrand, T. (1970) "What about people in regional science?" *Papers, Regional Science Association*, 24, pp. 7-21.
- Hong Kong Government (1976) *Annual Digest of Statistics*. Hong Kong: Government Printer.
- Hong Kong Government (1981) *Annual Digest of Statistics*. Hong Kong: Government Printer.
- Hugo, G. J. (1981) "Village-community ties, village norms, and ethnic and social networks: a review of evidence from the third world." In G. F. De Jong and R. W. Gardner (eds.) *Migration Decision Making*, pp. 186-224. Elmsford, N.Y.: Pergamon Press.
- McGee, T. G. and Drakakis-Smith, D. W. (1973) "Sweet and sour sources: home of the Chinese emigrant." *Geographical Magazine*, XLV, pp. 781-785.
- Manners, G. (1973) "Regional development, with particular reference to Britain." In M. Chisholm and B. Rogers (eds.) *Studies in Human Geography*, pp. 242-271. London: Heinemann.
- Ming Pao (14 April, 1986) "Country parks will have three more visitors' centres in the coming five years." Hong Kong: *Ming Pao* (Chinese newspaper).
- Oriental Daily (14 April, 1986) "Vanishing villages in Sai Kung." Hong Kong: *Oriental Daily* (Chinese newspaper).
- Pryor, R.J. (1979) "Population redistribution policies and Southeast Asian development plans." In R. J. Pryor (ed.) *Migration and Development in South-east Asia*, pp. 275-286. Singapore: Oxford University Press.
- Thrower, S. L. (1984) *Hong Kong Country Parks*. Hong Kong: Government Printer.
- Watson, S. L. (1984) *Emigration and the Chinese Lineage*. Berkeley: University of California Press.
- Yu, R. (1983) "Chinese American contributions to the educational development of Toishan 1910-1940." *Amerasia*, 10, pp. 47-72.
- Zelinsky, W. (1966) *A Prologue to Population Geography*. Englewood Cliffs, N.J.: Prentice-Hall.



Fig. 1: Location of Sai Kung Peninsula.

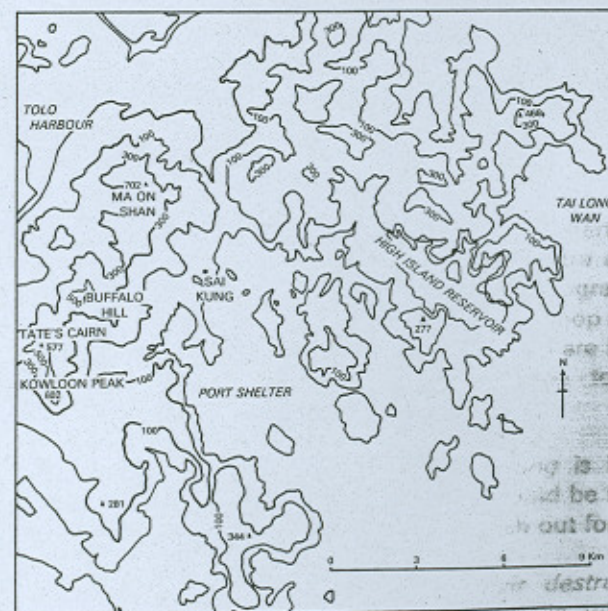


Fig. 2: Topography of Sai Kung.

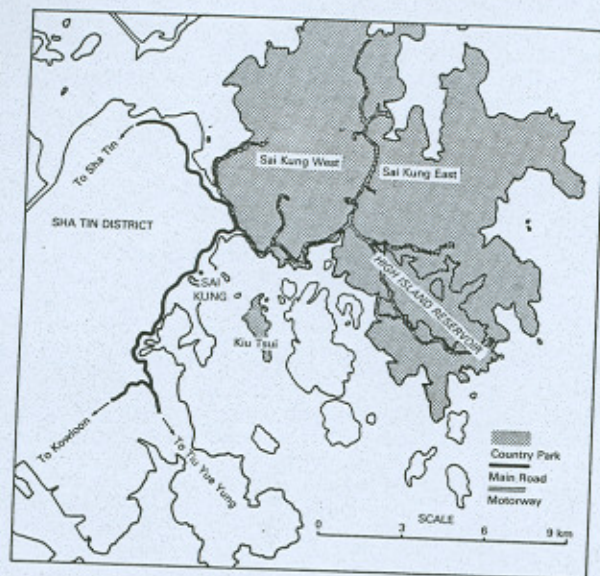


Fig. 3: Country Parks in Sai Kung.

News of The Hong Kong Geographical Association

Donations

The following life members have responded to the Association's fund raising drive and donated money to the Association.

Miss Hung Ling Cheung
Mrs. Ellen Mak
Miss Ng Suey Yee
Mr. So Yee To
Dr. Sit Fung Shuen

Secondary Education Committee

1. A *Teaching Aids and Strategies Sharing Session* was held on November 18, 1989 in the Teachers' Centre in which 37 members actively participated. There were altogether six preparations. The programme was carried out smoothly and everything went as scheduled. Some participants suggested that the session could be extended a little to accommodate one or two more presentations.
2. A *Field Camp* was jointly organized with the Agriculture and Fisheries Department and the Education Department on February 2-3, 1990 in the Field Studies Centre at Sai Kung which attracted 30 participants. The programme included a field excursion, a video show, a workshop and a visit. The worksheets produced in the workshop are being edited and should be ready for distribution to the participants in April.
3. A *pamphlet on field studies in Hong Kong* is being compiled. If everything goes smoothly, it should be ready for distribution before September 1990. Watch out for it!
4. A *talk of temperate cyclones and their destructive power* is being planned for mid-May. Details will be released in due course.

5. A *Seminar on Environmental Education* is being planned for June 2, 1990. In the seminar, there will be presentations of worksheets prepared by teachers who participated in the previous seminar on environmental education held in 1988. Don't miss it!

6. The newly established *Teachers' Centre* is organizing an Open Day from June 29–July 1, 1990. Your Association is taking an active part in it. If you are interested in helping, please contact Mr. Yeung Pui Ming at 8392476.

7. Two public lectures to be given by Dr. D. Biddle and Mr. M. Naish are being planned for August 1990. Further details will be announced at a later date. (It is most likely that they will be held in the Faculty of Education, University of Hong Kong, on August 7–8, 1990 at 6:00 pm.)

Extramural Course on Geography of China

Preparations have been made to offer a course on the Geography of China in conjunction with the Department of Extramural Studies of the Chinese University of Hong Kong. The course is entitled "Advancement in China Topics for Secondary School Geography Teachers" and will be offered in July this year. Lectures will be supplemented by a six-day field trip to northern and central Guangdong in mid-August. Please watch out for details in the Summer Programme to be released shortly by the CUHK Extramural Studies Department.

Tenth Hong Kong Geography Day

The tenth Hong Kong Geography Day was held at the Hong Kong University on March 16–17, 1990. The theme of this year's Geography Day was Geographic/Land Information System and Computers. The two-days conference was jointly sponsored by Hewlett-Packard Hong Kong Ltd and Buildings and Lands Department of Hong Kong Government by Dr. Anthony Yeh, Chairman of the Association and Acting Assistant Director of the Centre of Urban Studies and Urban Planning, University of Hong Kong, spoke on "Principles and Applications of Geographic/

Land Information System". Mr. Chan Hak, Chief Land Surveyor, Land Information Centre, Hong Kong Government, spoke on "Hong Kong Land Information System". Mr. Danny Cheung, President, GMR High Technology Ltd, lectured on "LIS Application: Utility, Local Government Planning, Transportation, and Land and Urban Management." Mr. To Ka Yan of Tung Wah Group of Hospitals Chang Ming Thien College and Mr. Yeung Ka Ming of the Agriculture and Fisheries Department, Hong Kong Government, spoke on the "Applications of Computers in Geography Teaching in Secondary Schools." More than 300 people participated in the event.

News of Colleges and Universities

Hong Kong University

Conference under Planning

The Department of Geography and Geology is going to organize an "Conference on Geographical Research and Development" to be held at the University on April 27–May 1, 1990. The objective of this conference is to bring together geographers from Hong Kong, mainland China, Taiwan and the rest of the world to share their ideas and research findings. Over 60 papers from all fields of Geography Topics will be presented. Chinese (both Cantonese and Mandarin) is adopted as the language medium. Interested persons are welcome to attend the conference. Please contact Mr. Yeung Chi-ling, Department of Geography and Geology, University of Hong Kong (Tel: 859-2828) for registration forms. The closing date is **April 7, 1990.**

Board of Editors

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Notes to Contributors

The Hong Kong Geographer is published on a tri-annual basis by the Hong Kong Geographical Association. The Journal welcomes full-length articles, research notes, and comments and opinions on current development of Geography both in Hong Kong and abroad and the teaching of Geography at the secondary level. It also welcomes book reviews and field trip guides and publishes news of schools, colleges, universities and research institutes which may be written in English or Chinese. In the latter case, the editorial board reserves the right to ask the author to submit a type-written copy of the paper or to bear the typesetting cost. Very tight financial restraints render this necessary.

All articles are to be submitted to:

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