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Response to the Lantau Development Public Engagement Digest

Congratulations on the exciting plans which are being developed for Lantau. This is very important work. Decisions based on it are likely to reshape Hong Kong's urban area in a way which will last for many hundreds of years. Given this, please can the Lantau Development Advisory Committee cover three critical long-term issues which are not mentioned by either the Engagement Digest or the committee's First-term work report; namely:

1. **Sea Level Rise:** The HKSAR Government's Hong Kong Climate Change Report 2015¹ mentions sea level rise under the high carbon emissions scenario of 0.63 to 1.07 meters by 2100 compared to the 1986-2005 average (page 59). It also notes (page 60) that the UN's IPCC scientists warn that the increase could be much higher due to ice loss from the Antarctic and Greenland ice sheets. The latest IPCC report (AR5 in 2013) reported:
 - Collapse of the marine based sections of the Antarctic sheet could lead to a substantial increase in sea rise
 - Sea level was 5 to 10 meters higher than today and temperatures 2C+ higher between 129,000 and 116,000 years ago.
 - Projected 2500 sea level increase could be between 0.5 and 6.5 meters with the main variable being how successful global efforts to reduce carbon emissions are.

More recent reports from scientists advise sea level rise will be more rapid than the projections in the IPCC's R5.

I suggest the Lantau Development Plan includes a 'high sea level rise' scenario. Say an increase of 3 meters in average level plus an allowance of 3.5 meters for storm surge. Further, rather than speculate as to when such an increase might occur, the plan should work out the implications if it does. This may reveal ways of making the new developments less vulnerable to sea level rise. One option is to modify some of the links planned between islands so they could, when necessary, be further developed into barrages to protect parts of the city from flooding by the sea.

2. **The imperative for Hong Kong to be carbon neutral in the second half of this century and preferably by 2050.** The December 2015 Paris Agreement to which Hong Kong, as part of China, is committed includes achieving global carbon neutrality in the second half of this century.² Other parts of the agreement indicate that

¹ www.enb.gov.hk/sites/default/files/pdf/ClimateChangeEng.pdf

² Article 4 para 1 of the 12th December 2015 Paris Agreement: In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

advanced economies should move faster. The implication is Hong Kong should aim for carbon neutrality by 2050.

Given this the plan should estimate the carbon emissions for Lantau under different development options and look for ways to reduce them. In particular:

- Urban development should be planned on the basis personal mobility is almost entirely be met by walking, bicycling and the MTR.
- Buildings should be designed to minimize the need for air-conditioning.
- Allowance should be made for solar water heating and solar PV once these become truly cost/benefit justified.

3. **Climate change adaptation:** The HKSAR Government's Hong Kong Climate Change Report 2015 provides excellent coverage of current work on adaptation but does little on describing plans for the future. The Lantau Development plan should consider adaptation to potential changes in the climate over the next, say, 200 years.

Biodiversity: Another important long-term issue is the extent to which Lantau's biodiversity is protected. The Engagement Digest statement on 'Nature and Heritage Conservation' reads:

It is proposed to strengthen preservation of sites of conservation value, including sites with nature ecology, monuments and antiques. Major developments at these sites and their surrounding areas should be avoided wherever possible. However, under the principles of sustainable development and biodiversity, these valuable resources should be suitably utilised for releasing their potential for education, recreation and green tourism. The suitable sites should be connected to facilitate visits and enjoyment of the locals and tourists.

This statement does not mention of how the development of Lantau will fit with the Biodiversity Strategy and Action Plan which HKSAR Government is preparing to meet Hong Kong's Aichi commitments under the Convention on Biodiversity. The future work of the Advisory Committee should cover this.

Preserving Hong Kong's competitive advantage: Viewed from space Hong Kong is the 'green lung' of the PRD. Having our country parks makes Hong Kong 'livable.' We are already getting some Mainland tourists coming here to enjoy being able to walk our wonderful hills and see our natural environment. We should be careful that any development of Lantau does not diminish this competitive advantage.

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