Dear Mrs Carrie Lam Cheng Yuet-ngor,

Policy Recommendations for the HKSAR Chief Executive’s
2020 Policy Address

The continued commitment from the Government to decarbonize Hong Kong’s economy, amid the complex challenges of managing the COVID-19 pandemic, is important. This is critical to the economic prospects and liveability of the city. We note, however, that progress in reducing the average energy use in commercial buildings (measured in kWhr/sqm/year) is very slow. Also, the number of private cars in Hong Kong increased by 64% between 2005 and 2017. Community and special interest groups continue to oppose key decarbonization initiatives. Acknowledging the counter-currents that are offsetting the effects of the decarbonization measures that have been introduced is essential for the development of strategy to put Hong Kong on the path to sustainable prosperity.

Our view is that the present crisis is an opportunity to restate the importance of decarbonization to Hong Kong’s recovery and future development. It is not simply a matter that delayed action now will lead to larger measures, having to be taken later, at much greater cost. Action on decarbonization today will provide fresh employment and business activities that can offset damage to the economy from COVID-19 and reassert Hong Kong’s place as a city committed to building better prospects for its own people and for the world.

Specifically, we recommend the Chief Executive for the 2020/21 Policy Address to provide the following. Further details are given in the remainder of this letter:

1. Grow low-carbon jobs and businesses across Hong Kong’s economy
2. Identify climate risks and invest in climate resilience
3. Grow Hong Kong’s clean energy sector and source more low carbon electricity from the Greater Bay Area
4. Ramp up Hong Kong’s building energy efficiency
5. Devise and implement a plan for Hong Kong’s adoption of low carbon mobility
6. Make Hong Kong’s material use more circular
7. Further improve Hong Kong’s air quality
8. Make Hong Kong a more walkable city
9. Improve urban spaces and metropolitan growth
10. A clear 2050 vision supported by a comprehensive road map for short- and long-term action

NB: We mention the “clear 2050 vision” last as many of the other actions are more immediately relevant. This 2050 vision should, however, become the guiding light for future policy development in all areas.
1. Grow low-carbon jobs and businesses across Hong Kong’s economy

How Hong Kong will earn its living in a future low-carbon world should be a major theme of Government policy. There are many aspects to this. Here are three examples:

1. Making our economy more efficient in its energy use, as noted in sections 4 (Buildings) and 5 (Mobility), will provide low carbon jobs and reduce the energy and material Hong Kong needs to purchase.
2. Similarly, making our economy more “circular” as recommended in section 6 will provide jobs in recycling and reduce our purchase of material.
3. A further example, which we do not provide details in this letter, is looking at the carbon intensity of different types of in-bound tourism and focusing on developing the lower carbon-intensity types. Thus in-bound tourism which is focusing on enjoying our country parks and coastline is more beneficial than hosting cruise ships.

One driver for low-carbon development is “green finance”. Hong Kong’s green bond market remains small, though the city is one of the largest bond markets in Asia. Nevertheless, we are aware of the Government’s efforts to make the sector more relevant. We note the initiation of a Green and Sustainable Finance Cross-Agency Steering Group by the Hong Kong Monetary Authority (HKMA) and the Securities and Futures Commission (SFC) to coordinate the management of the climate and environmental financial sector. These actions demonstrate that the Government is concerned about the potential impacts of business activity on the environment. We also acknowledge the launch of the Government Green Bond Programme to finance public work projects with environmental benefits. This is an important first step in fostering innovation in the insurance of climate-related risks.

Altogether, we hope that the Government will continue to work to enhance Hong Kong’s general corporate social responsibility, and continue to financially support local environmental projects. To expand Hong Kong’s green bond market, the Government should look into ways to further enhance Hong Kong’s international profile in green finance.

Priority recommendations

- Extend the Green Bond Grant Scheme to include more qualified service providers and extensive green social sustainable bond.
- Include external (non-government) members from the environmental sector in Government Green Bond Programme steering committee and invite public submission of potential eligible projects to the Government Green Bond Programme for consideration.
- Become an active participant in the taskforce between China and Europe on harmonising sustainable finance. Provide support and contribute in the Taxonomy harmonisation process.
Other recommendations

- Leverage Green Finance\(^1\) to scale up energy efficiency improvement projects that can achieve a 20%+ target (aiming for 30% in line with EU Taxonomy\(^2\)):
  a. **Green SME loan guarantee**: extend the current Government SME loan guarantee to explicitly include green projects, that can be implemented immediately once they achieve the 20%+ target. Provide incentive like grant or guarantees to the applicant to promote the various Sustainable Construction Certification scheme, in particular for construction and supply chain certification holders under this scheme, with the aim of driving down embodied carbon.
  b. **Promote retrofit and retro-commission** on both commercial and residential buildings and build up knowledge hub for capacity building.
  c. **Green mortgage**\(^3\): create a green mortgage market in Hong Kong to drive energy efficiency demand in residential buildings on both new and existing builds.
  d. **Green Asset Backed Securities (ABS)**: have Hong Kong Mortgage Corp (HKMC) as an investor in Green ABS, with underlying green assets and green loans that support the items (a to c) above.
  e. **Digital Green Bank**\(^4\): provide initial capital and create a Digital Green Bank structure to leverage blockchain technology to make green loan origination cheaper and faster.

- Identify future job requirements and provide training to grow employment in low-carbon sectors of Hong Kong’s economy.

- Develop green insurance and pension fund market in Hong Kong. This includes measures such as offering parametric natural catastrophe insurance for corporates (e.g. an Asia equivalent of the Caribbean Catastrophe Risk Insurance Facility (CCRIF)), local communities and infrastructure; and catastrophe bonds.

- Highlight the opportunities of climate change for businesses in terms of investment and collaboration, and introduce guidelines for use of the proceeds.

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\(^3\) Green Asset Backed Securities are a particular type of financial security which are collateralised by a pool of green assets such as green infrastructure and low carbon project loans.

\(^4\) Digital Green Bank is a combination of Digital Bank and Green Bank which leverage blockchain technology for green financing.
2. Identify climate risks and invest in climate resilience

Hong Kong has seen few extreme weather events this year but science advises the severity of events will increase with global warming. Further, global warming will cause chronic long-term problems including sea-level rise and changes in rainfall patterns.

The Hong Kong Observatory provides excellent climate projections but there is very limited published information on risks and risk mitigation. We therefore believe more explicit planning is needed to manage the risks from climate change. This includes scenario planning for clarifying risks from long-term sea-level rise. Such planning is pertinent to which areas of Hong Kong are developed.

**Priority recommendations**

- The Government should publish a comprehensive risk **identification and assessment** for critical infrastructure to help decision makers in the community understand and plan for these risks. This should include scenario planning for sea-level rise which might happen by 2050 and 2100. Risks covers should include:
  - Extreme weather such as Super Typhoons and Black Rainstorms.
  - Sea level rise on top of the impact of storm-surge.
  - Heatwaves.
  - The possibility of reduced water availability and hence higher water prices.

**Other recommendations**

- The plans should include:
  - Arrangements for each District Council to engage on the action needed in its district.
  - **Tangible support** to vulnerable population groups, for instance, by upgrading existing weather information warning systems to provide sufficient time of **notification and preparation** in response to extreme climate and weather events.
  - Healthcare workers and social workers receiving appropriate **training** to handle patients affected by weather and climate extremes. This may require implementing new or developing existing training schemes to accommodate future climate shocks.

- **Invest in nature-based solutions (NBS) which reduce Hong Kong’s carbon emissions and to enhance resilience**
  - Facilitate scientific research to develop methodologies and assess Hong Kong’s NBS potential, including country parks, urban forests, and coastal wetlands.
  - Valuate the carbon and co-benefits of these natural systems based on the NBS assessment, and incorporate such valuation into cross-departmental policy development.
  - Develop market incentives such as NBS credits and trading mechanisms to engage the private sector in restoration initiatives through both philanthropy and investment.
  - Improve community engagements through public awareness campaigns, as well as promote actions such as crowdsourcing climate related alerts (in-city flooding, heat island effect) for better resilience strategies.
3. Grow Hong Kong’s clean energy sector and source more low carbon electricity from the Greater Bay Area (GBA)

Hong Kong has agreed to strengthen its cooperation with Guangdong on socioeconomic developments within the GBA. We strongly believe that this is a valuable opportunity for the Government to tap into cleaner production technologies.

The Government and local electricity companies should explore opportunities for energy collaboration in Mainland China, particularly by introducing renewable energy projects. Hong Kong could thus become a significant investor in utility projects in Southern China. Local electricity companies could participate in designing, building, operating and managing the facilities with other investors, ensuring reliability and quality of supply of renewable energy.

Further, with China’s development of Ultra High Voltage Direct Current (UHVDC) long-distance transmission there is potential for Hong Kong to participate in renewable projects which are further from Hong Kong but have high-quality wind and solar resources.

**Priority recommendations**

- Lack of clarity on Hong Kong’s own renewable energy potential obscures the debate on investing in renewables elsewhere. The Government should, therefore, task EMSD with publishing annual progress reports on renewable energy in Hong Kong. These reports should:
  (i) provide data on the extent of actual renewable energy generation and approved new capacity;
  (ii) note current and projected costs; and
  (iii) summarize published and ongoing research on Hong Kong’s renewable energy potential.
- Establish an enabling agreement under which Hong Kong companies can invest in renewable energy projects in Mainland China, with power transferred back to Hong Kong at fairly determined cost-plus rates. Public consultation and transparent governance will be important to ensure public confidence in this arrangement.

**Other recommendations**

- Commission a study to assess the case for increasing the share of nuclear energy imported from Mainland China.
- Establish centres of expertise for Hong Kong to become a “fast follower” in using the following technologies as they become viable and available:
  - Hydrogen for use in electricity grid balancing and use hydrogen fuel cells for propulsion for ferries, heavy duty vehicles and similar mobile purposes. Explore the possibility of Hong Kong and China Gas Co Ltd on shifting from Towngas to a hydrogen-plus-inert gas mix, instead of replacing it by electrification.
  - Carbon Capture and Storage: with the Mainland China’s agreement, use suitable saline aquifers under the seabed (located about 100 km offshore from Hong Kong).
  - Technologies for energy storage and demand management: enable grid-balancing when the percentage of electricity supply from non-flexible resources (nuclear and renewable energy) increases in the future.
  - Carbon pricing: to motivate cost-efficient reduction in carbon emissions.
4. Ramp up Hong Kong’s building energy efficiency

Buildings account for 90% of electricity used in Hong Kong and hence over 60% of Hong Kong’s carbon emissions, with commercial buildings accounting for three quarters of this figure.

Our analysis of EMSD’s end-use energy data coupled with the Rating & Valuations Department’s floor area data shows commercial buildings (i) account for about two thirds of total building consumption; and, (ii) on average, only reduced their energy consumption (in kWh/square meter) by 2.8% in the 12 years from 2005 to 2017 (an average of only 0.23% pa.). We believe that the reason for poor performance is not a lack of improvement in technology, but rather that technology improvements are frequently offset by changes in building design including from highly efficient thermal envelopes with relatively small, sun-shielded windows to glass curtain wall buildings.

**Priority recommendations**

- Develop mechanisms for the annual evaluation and disclosure of energy efficiency of large commercial buildings. As these mechanisms become established, progressively incentivize their adoption with rules on government leasing requirements, link to GFA concessions, and once well established, include differential property taxes.
- Establish mandatory life-cycle-assessments for new buildings to be filed with the Buildings Department before occupation permits are issued.

**Other recommendations**

- Promote and provide subsidies for retro-commissioning and building-based smart/Internet of Things (IOT) technologies.
- Update existing building codes to require the construction sector to adopt standards and materials appropriate for projected climate risks.
- Assess ways to improve demand management and user behaviour. These may include improving the Energy Charter, smart technology, greater variability in pricing electricity and publicity campaigns.
5. Devise and implement a plan for Hong Kong’s adoption of low carbon mobility

Private cars are the most carbon intense mode of transport yet the number of licensed cars increased by 57.6% between 2005 and 2017 while the number of kilometres travelled per licensed car per year changed little, causing the kilometres travelled by the private car fleet to increase by 55.4%. Further, this has caused the private car’s share of kilometres travelled on Hong Kong to increase from 32.3% to 42.5%. Electric vehicles (EVs), while currently a small share of the fleet, provide a route to reduce tail-pipe emissions. The extent of the reduction is, however, limited before Hong Kong sourcing sufficient low-carbon electricity. Secondly, EVs do nothing to relieve the traffic congestion which is causing all vehicles to have higher energy consumption.

We note that Transport Department has been working with the bus companies to improve the efficiency of buses with “Bus to Bus interchanges” and rerouting. Progress has, however, been slow.

**Priority recommendations**

- Reintroduce and publicise the merits of Electronic Road Pricing (ERP) and pledge that the fees collected from congestion pricing will be used exclusively to enhance the transport system in Hong Kong and to develop a holistic vision for a pedestrian and public transport-first city.
- Target all government car purchases to be zero-emissions by 2023.

**Other recommendations**

- Provide, subject to reconfirmation of impacts on local air pollution, a biodiesel blend to reduce carbon emissions from buses and other diesel vehicles. Also offer financial incentives to the biodiesel manufacturing industry. Specifically:
  - Require all filling stations to provide biodiesel blends
  - Ban conventional diesel sales once a biodiesel blend sales mandate has been issued
- Establish a holistic plan for increasing the use of electric vehicles with a robust target, say 50% of new car sales by 2030, to guide investment and purchasing decisions of car suppliers and the public. As part of this plan the government should progressively ban vehicles with internal combustion engines.
- Continue developing existing smart technologies to increase the accessibility and user-friendliness of public transport.
- Enhance vehicle inspection, regulation and maintenance programmes to reduce unnecessary sources of roadside emissions.
- (repeat) Reform the Steering Committee on the Promotion of Electric Vehicles. We recommend the establishment of a new committee of experts on electric buses under the current steering committee. This committee should be tasked with driving e-bus trial programmes, and be responsible for all related technical matters.

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5 An example of the increase in emissions due to traffic congestion is the fuel consumption of air-conditioned double-decker buses moving very slowly in heavy traffic.
• Study the viability of all types of zero-emission buses and, based on its results, expand the trial of e-buses from the current number of 40 to a minimum of 200, and ensure viability in terms of the economic scale, employment and training of staff and technicians.

6. Make Hong Kong’s waste more circular
The latest government waste-reduction target was set out in the Blueprint for Sustainable Use of Resources 2013-2022 (EPD 2013). No replacement is planned for this policy, leaving Hong Kong without mid- to long-term waste-management targets. Enforcement of the 2022 targets has been unsatisfactory with delays in policy implementation being a major problem. Some of the progress that was made has since been reversed. For example, daily per capita municipal solid waste disposal to landfills rose from 1.27 kg in 2011 to 1.53 kg in 2018. This level is higher than in other major cities and puts a heavy burden on local landfills. Government regulation on waste generation needs to be ramped up significantly.

Priority recommendations

• **Reintroduce & achieve** the Municipal Solid Waste Charging legislation in the Extended LegCo term.
• Accelerate the introduction of Producer Responsibility Scheme for plastic containers.
• Commission a second **Integrated Waste Management Facility** on the **site identified** for this purpose next to the **WENT landfill**.
• Work with the Mainland authorities to make Hong Kong **part of Mainland China’s circular economy**. This would allow recyclables from Hong Kong such as clean, glass cutlets to be sold to glass bottle manufacturers in Mainland China.

Other recommendations

• Promote well-designed, hygienic and conveniently located mains **drinking-water dispensers** around the city.
• Take proactive steps to make the **waste recycling systems** more cohesive and robust.
• Specify waste reduction targets at a **sectoral level** and make arrangements for performance benchmarking. Sectoral targets would **clarify** roles and responsibilities within the overall waste reduction campaign.
• Proactively mandate the **recovery of products** for secondary use. Local legislation has focused mainly on reducing the amount of waste entering landfills. In order to increase waste reduction, the government should simultaneously implement recycling policies and education programmes that encourage a higher rate of recovery, such as through the building of more infrastructure and the **cultivation networks in civil society**.
• Review the effectiveness of the plastic shopping bag charging scheme and consider options for increasing its impact.
• Encourage beverage manufacturers to use recycled materials in the production of packaging.
• Promote bottle “deposit and return” schemes with positive benefits per life-cycle-analysis.
• Better educate the public about the harmful effects of plastic bottle waste.
7. Further improve Hong Kong’s air quality

The Government has made significant strides in its attempt to improve the city’s air quality. Notable initiatives include the establishment of Hong Kong’s Air Quality Objectives (AQOs) with updates every five years and the formulation of the Clean Air Plan in accordance with WHO-recommended targets. We also recognise the Government’s substantive efforts to improve air quality data collection and transparency, through the installation of smart evaluative systems such as roadside sensors.

Since people in Hong Kong spend much time indoors, especially at home, it is important that the Government does not put all attention on outdoor air quality – Indoor Air Quality (IAQ) is equally important for citizens’ health. This remains an overlooked aspect in current policy-making.

Priority recommendations

- Provide a roadmap for the tightening of Hong Kong’s Air Quality Objectives (AQOs), and require an alignment with the WHO Air Quality Guidelines level before 2030.
- Extend the Low Emission Zones to cover districts with poorer air quality, such as Sham Shui Po, Kwai Chung and Tuen Mun.
- Improve reporting on air pollution and begin publicising timely, district-based health information.
- Tighten the emission standards of Low Emission Zones – allowing only Euro VI, hybrid or electric buses to operate. At the same time, the Government should formulate a plan for regulating entry of all commercial vehicles into these zones.

Other recommendations

- Heighten civic education on the forms and risks of air pollution, including indoor air pollution, thereby empowering the public to change individual consumption habits and take responsibility for their own actions.
- Formulate comprehensive plans and pathway to reduce ozone formation in Hong Kong and, include Volatile Organic Compounds (VOCs), a precursor for ozone, in the emission inventory. This should be done in collaboration with the Greater Bay Area for greater coordination between Hong Kong and the Pearl River Delta.
- Under the Smart City Blueprint, upgrade air pollution monitoring infrastructure by setting up at least one roadside monitoring station in each of the 18 districts in Hong Kong. Some of them currently do not have one.
8. Make Hong Kong a more walkable city

Hong Kong’s urban morphology is predominantly car-friendly and discourages citizens from walking or cycling. The pedestrian experience has become increasingly uncomfortable due to overcrowding, construction and roadside pollution. Yet, about 90% of Hong Kong’s citizens use a combination of public transportation and walking in their daily commutes – far more than those (countries?) who own or drive cars.

We appreciate the pilot studies and public consultations that have been conducted, under the Walk in HK initiative, to make future pedestrianisation and road design more aligned with the objective, “Every journey begins and ends in walking.” Indeed, extensive developments in supporting more walking have been made by the Government, such as the incorporation of smart technology like the Walking Route Search function to facilitate travellers’ search of walking paths. The Government should continue to scale up these walkability enhancement initiatives by supporting pedestrianisation schemes in Hong Kong and ensuring that pedestrian routes and features are clearly and consistently indicated for public use. Complementary policy actions to help achieve the target of zero vehicular emissions need to be assessed as well.

Walking and cycling should not be thought of merely as first-mile and last-mile options from public transport stations to residential areas, workplaces, schools and open spaces. Rather, the Government should encourage citizens to walk to their workplaces, schools and open spaces, especially on the northern Hong Kong island and in new development areas, where distances are appropriately short.

**Priority recommendations**

- Make transit-oriented development a priority for new development areas and redevelopment areas to make public transport more attractive. This needs to be done in conjunction with plans to improve Hong Kong’s walkability.
- Conduct a new Travel Characteristics Survey immediately to collect and analyse data and explore measures to reduce the need for citizens to travel for work or education. Useful statistics could include the distances people travel to get to work or school and the transport mode used, the number of people who work from home and the frequency of travel.
- When analysing mobility in Hong Kong, endeavour to include walking and cycling as “trips”. Investigate the percentage of trips that could reasonably be replaced by walking and cycling and consider how to promote these mobility options.

**Other recommendations**

- Ensure that pedestrian routes and features are clearly and consistently marked, accessible to all, pleasant to use, and reflect the city’s diversity and vitality. Specifically, improve and expand pedestrian linkages to enhance connectivity, mobility and road infrastructure.
9. Improve Urban Spaces and Metropolitan Growth

Natural systems can provide protection against climate induced changes. Strategic design and location of green space enhances the protection of coastal assets and communities against flooding. Hong Kong has considerable potential for the augmentation of urban green space and the integration of natural landscapes into the city, with consequent benefits of improved air quality and positive effects on mental health, physical fitness, social cohesion and spiritual wellness. Urban green spaces can significantly contribute to reducing the urban heat island effects and provide natural cooling and comfort to nearby occupants.

Future development plans must also take into consideration possible scenarios due to changes in immigration, climate, technology, the economy, the workforce and residents’ personal preferences. Moreover, they should be informed by the study of current urban deficiencies so past mistakes are not repeated.

Public open space (POS) issues in urban areas have not been widely addressed in Hong Kong. The Government’s current standard of 2 m² POS per person is too low and has not been updated for 15 years. Hong Kong citizens have far less urban POS – e.g. areas like city parks – than those of many other major cities. For example, Tokyo, Seoul, Shanghai and Singapore provide between 5.8 m² and 7.6 m² POS per person.

Some may argue that Hong Kong’s shortage of POS is offset by the country parks in and near the city. These parks do not, however, reduce the urban heat island effect or urban air pollution. They also do not benefit people with limited mobility or wanting a short break from congested streets.

Another controversial issue is the proposed East Lantau Metropolis. It appears to us that:

- The extra housing it provides will only be needed if either Hong Kong’s population increases substantially due to immigration from Mainland China or there is a policy to convert some of the existing built-up areas in Kowloon to parks thus increasing their POS per person.
- Any development needs to consider how Hong Kong would cope with substantial long-term sea level rise.

**Priority recommendations**

- Increase the planning standard for POS per person from the current 2 m² to at least 3 m².
- Enhance the quality of the pedestrian environment and public space through traffic calming, placemaking initiatives and urban design improvements to encourage walking.

**Other recommendations**

- Create large urban parks in the last three remaining areas where this could realistically happen given land constraints: The Central-Wan Chai reclamation, West Kowloon and Kai Tak.
- Re-engage with designers and community leaders to seek a better design for the Hong Kong waterfront that maximises the space available for public use.
- Lay out a clear overall strategy for identifying land for development and the relevant development needs across Hong Kong.
- Proceed with plans for the East Lantau Metropolis only after arguments for it have been fully made.
• Exclude the planning and responsibility for the East Lantau Metropolis from the remit of the Sustainable Lantau Office, so that this office can avoid the controversy of this initiative and focus on true sustainable planning for Lantau.

• Design new metropolitan areas and the revitalisation of old towns or districts with sufficient POS, bike-lanes and other amenities, coupled with measures to allow independent businesses to flourish.

10. A clear 2050 vision supported by a comprehensive road map for short- and long-term action

In 2017, the Climate Action Plan 2030+ set out plans to reduce Hong Kong’s carbon intensity by 65-70% by 2030 compared with the 2005 level. It did not cover what needs to happen after 2030.

Now, Hong Kong needs to provide its mid-century target for China to submit to the UNFCCC Secretariat in accordance with the Paris Agreement. The advice from the IPCC is that humanity needs to achieve net zero carbon emissions by 2050 to stand a reasonable chance of keeping global warming below 2C. We believe that Hong Kong, as an advanced territory with little exposure to hard-to-decarbonise sectors of industry, agriculture and long-distance travel, should explicitly plan to achieve net zero by 2050.

Further, to achieve the necessary progress on decarbonisation, Hong Kong needs more specific and comprehensive policies coupled with regular reviews of progress.

For example, the Government developed such a policy in its Blueprint for Sustainable Use of Resources 2013-2022. Yet despite this plan, per capital disposal rates of municipal solid waste (MSW), domestic waste and commercial waste have continued to rise. There are many reasons for this including the Mainland’s restriction on import of used material for reprocessing, opposition to charging for MSW collection and opposition to modern incinerators. A review resulting in stronger action is now needed.

**Priority recommendations**

• **Establish a roadmap to 2050** and a comprehensive governance framework for the deployment of policies, regulations and technologies to meet the decarbonisation objective. This involves establishing clear targets for business sectors and the public to guide innovation and implementation.

• **Regular reviews with involvement of experts** of progress against the roadmap to 2050 to both take prompt corrective action when the plan is not being met and also to modify it to take advantage of new opportunities which may appear.

• Focus not only on institutional mechanisms, but also individual behavioural change. The Government should form partnerships across sectors to help promote public consciousness for protecting the environment and support the transition to greener lifestyles and habits.

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We sincerely hope that the Government will take note of our recommendations.

Yours sincerely,

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