

## Wildlife in peril

### Some suggestions

LECTED government bodies in the past have always rested the responsibility of the wildlife management and conservation in the country on the shoulders of the Forest Department and thought they had done their duties. But the net result has been that we do not have a single piece of forest that is in the Sundarbans or elsewhere in the country, in the Shal forest belt or Mixed-Evergreen Forest belt in the erstwhile Chittagong Hill Tracts region that can be considered virgin.

The reason is simple. Government wants revenue from the forest department. This department cuts the trees and provides revenue to the exchequer. Often

it does it in such a clever manner that in addition to the national coffers some of its officials also stashed money in their pillow cases as was revealed during the past caretaker government.

So, what do we see today? As FD has failed to save the forest there is virtually no wildlife in the Madhupur National Park excepting a few troops of Leaf Monkey and Rhesus Macaque that numbered over a 1000 each during the 1970s, even after our independence in 1971.

All large cats completely disappeared from the Shal and Mixed evergreen forests. Same is the fate of the Spotted Chital or Deer. Even the Hoolock Gibbon and

Let a separate Wildlife Department run the sustainable management of the wildlife of the country and not only that in the government forests but also that spread all over the country, from Teknaf to Tetulia and Kaptai lake to the swatch of no ground in the Bay of Bengal, along with exotic animal and plant collections kept in various institutions following standards maintained by the US Fish and Wildlife Service, Sri Lankan and Malaysian Wildlife Departments.

Stump-tailed Macaque that used to be present in the Garo Hill areas of the old Jamalpur district are gone completely.

Bengal Tiger -- our national pride -- has been wiped out from the whole country barring the Sundarbans -- which is a natural imprisonment for such a lovely beast. People are afraid of its survival because this tiger population is genetically isolated from all the other tigers of the world.

Sundarbans was never a natural abode of tigers. Beyond our and Indian Sundarbans the tiger is not known to live in mangrove or coastal forest. Lack of freshwater is forcing this creature to drink saltwater and also prey on species like the fishes. Any tiger stepping out of the forest is being killed by the villagers, even sometimes right in the presence of the FD officials.

So, FD cannot say what are the impacts of all these on our national animal because it has initiated no research on its own during the past 37 years or so.

The whole of mixed evergreen forest ranging from the greater Sylhet district through Khagrachhari, Bandarban,

Chittagong, Cox's Bazar and Rangamati has become virtual a wildlife desert. Even in many areas we see more countryside animals (birds) like the crow and common or pied mynas than the naturally occurring Hill Myna, Hornbills, etc.

Round the world zoos have been and are being established for exhibiting, breeding, propagating and knowledge dissemination on wild animals and some plants. But just opposite is happening in our Dhaka Zoo. Here it seems it has no apparent aim or target, no public relations nor educational activities and no releasing back of national wild animals. It has also banned visitors from carrying cameras with them. This is possibly the only zoo in the world that does not allow photography inside the zoo. The zoo authorities seem ready to spend crores of taka to buy African animals that die within a few months of import but not ready to spend a farthing to procure and exhibit endangered local animals that are still present in our wilderness. Perhaps none of the zoos in the country has exhibits that can be considered as up to international standard.

The central or national zoo at Dhaka cannot provide you with even a brochure telling how many or what animals they have.

In the name of Safari Park wild animals have been virtually imprisoned in Dulahazra, Madhupur and other places. Even the so-called eco-parks are nothing more than picnic sites that have been walled or fenced up.

In many countries tourism is based on wildlife or biodiversity hotspots. However, in our country tourism means constructing buildings, compounds, clubs and golf courses, etc., spending crores of taka and generating little or no revenue.

MOEF spent nearly 16 crore taka to build some red buildings at the most fragile and the narrowest segment -- the Golacpahipa -- area of the St Martin Island during the early 2000s. Of these, the three windmill built at a cost of about 3 crore taka, have already disappeared. This monstrous site has never been opened officially and during 2007-2008 it was said to have been rented out to tourists by a private individual.

So-called botanical garden in Mirpur appears to be a place full of miscreants. Even you are not safe to watch birds. So, you can forget about visiting it with your family. The botanical garden has not even collected representative plant species from three distinct types of forests we have in the country. No educational material available in the park either.

After a long time it seems our present Prime Minister has picked up an energetic team of dedicated people to run the present government. I urge upon her to create a --

Separate Wildlife Department -- following examples in Sri Lanka and

Malaysia -- and at par with the existing Environment and Forest Departments.

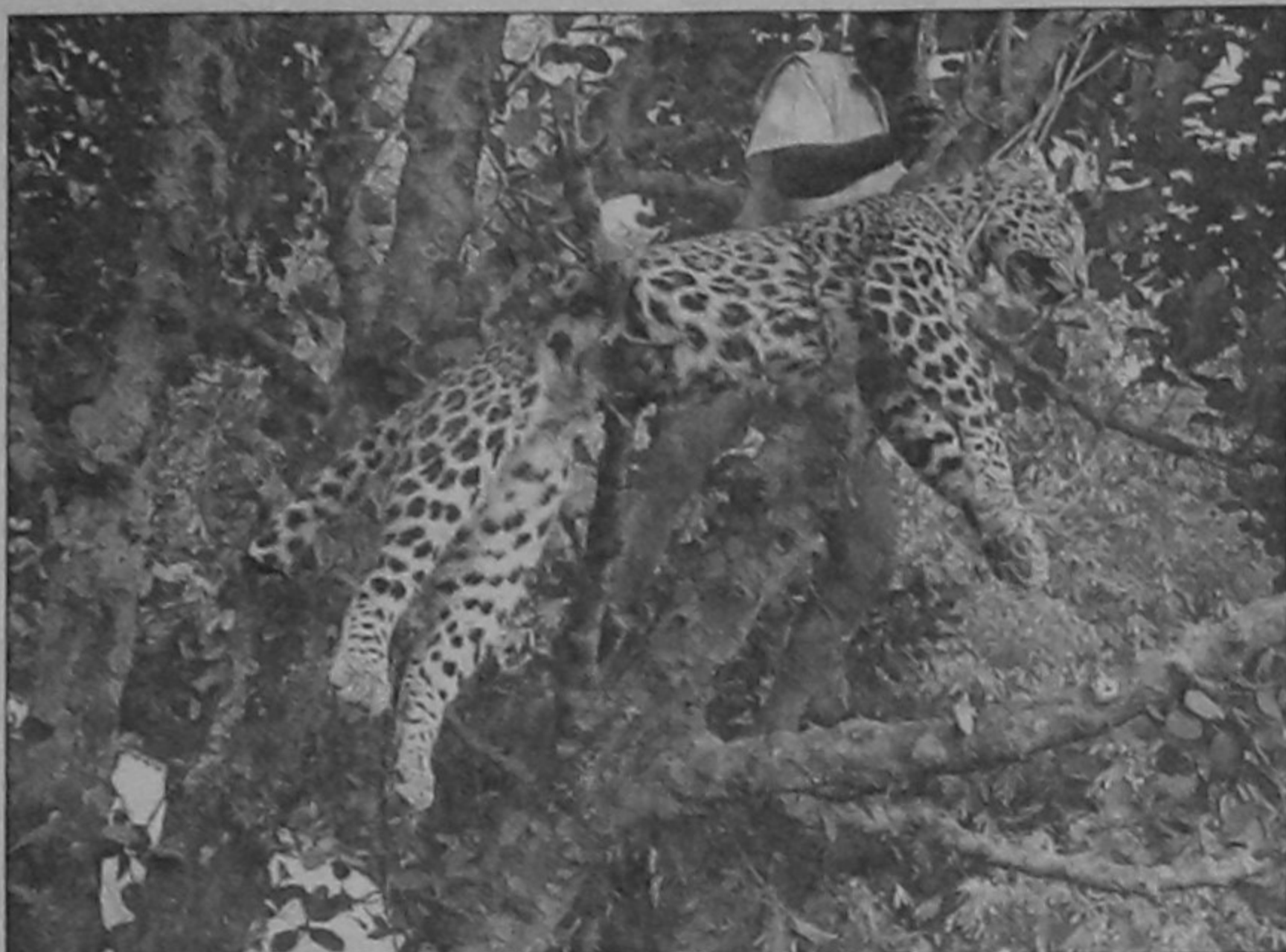
Let the government hand over all declared and proposed wildlife sanctuaries, bird sanctuaries, ecologically critical areas, national parks, game reserves, eco-parks, safaris, botanical and zoological gardens or zoos to this new department for management.

Re-enact a modified version of the Bangladesh Wildlife Preservation Act of 1974 incorporating parts of Bangladesh Environment Conservation Act, and form Wildlife and Zoo Advisory Committees under it.

Let the new Department run the sustainable management of the wildlife of the country and not only that in the government forests but also that spread all over the country, from Teknaf to Tetulia and Kaptai lake to the swatch of no ground in the Bay of Bengal, along with exotic animal and plant collections kept in various institutions following standards maintained by the US Fish and Wildlife Service, Sri Lankan and Malaysian Wildlife Departments.

I am sure both zoos and wildlife management could be made profitable through efficient public awareness campaign, publicity, aggressive marketing of the by-products and wildlife tourism, allowing national and international teams to make films or documentaries and letting people and business houses to sponsor animals, plants or programmes. This in turn could ensure sustainable management of the wildlife in the country and encourage members of the public in defending their natural heritage.

Dr. Reza Khan, a nature lover, is Member, World Commission of Protected Areas, IUCN. E-mail: drezakhan@gmail.com.



Very recently a leopard stepped into a forest side locality to its peril

## DHAKA CITY FLOODING

# Inappropriate land development increases risk

JAHIR UDDIN CHOWDHURY

DHAKA city is located on the floodplains of the distributaries of the Brahmaputra, and the topography is almost flat because of deltaic formation. Change in the floodplain water regime due to land development inconsistent with the floodplain topography is the main cause of rising flood hazard in Dhaka city. Some factors that are responsible for flood hazard, and steps necessary to address the issue, are briefly discussed below.

### Factors responsible

During monsoon, the river water level remains high and results in fluvial flood in the floodplain due to spill from the rivers. Flood proofing is the appropriate flood management approach in floodplain landscape. This was the traditional practice in Dhaka, as evident from old buildings -- e.g. Ahsan Manzil. In this practice, road levels and plinth levels are set above flood level.

The practice of plinth level proofing has stopped because of the embankment constructed in the western part of the city to provide protection against fluvial flood. Lakes, khals (floodplain channel) and ponds act as detention reservoirs in the western part by storing runoff generated from local rainfall, which is drained by gravity when the river water level

decreases.

The storm water flood hazard in the protected western part of the city is on the rise because of increasing imperviousness and decreasing storm runoff detention capacity. Land development activities and associated land use changes that are not consistent with floodplain landscape functions are among the main factors responsible for rising flood hazard. Deposition of solid waste in, and lack of proper maintenance of, storm sewers and khals make the situation worse.

Increase in imperviousness due to decrease in green areas has resulted in an increase in storm runoff and decline in groundwater recharge. Decrease in groundwater recharge due to reduced infiltration during monsoon is a concern for the city's water supply. Uncoordinated road construction, ignoring the storm runoff passage, is also an important factor contributing to storm water hazard because road networks modify drainage catchments on the floodplain topography.

Because of the rise in storm water hazard, some drainage zones in Dhaka have been provided with pumped drainage systems. Reduction in retention areas at the pump intake because of encroachment is causing storm water flooding in areas with pumped drainage system. Pumped drainage is not appropriate in floodplain topography in delta setting

Water storage and drainage capacities of urban catchments are to be increased by recovering encroached wetlands and khals. Making provision for water transport within Dhaka will usher in great benefit for the city dwellers.

since it causes increase in flood level in the adjacent floodplain areas.

The government has decided to construct a road-cum-embankment in the eastern part of Dhaka to provide protection against fluvial flood. Meanwhile land development activities are going on in the eastern part without much consideration to the storm water management issues, increasing the intensity of flood hazard.

### Steps needed

Urban area planning should ensure that land development activities stick to the following principle regarding storm water management: Storm-runoff that would be generated after land development should not exceed the pre-development magnitude.

This can be achieved by making provision for inlet control within individual property to reduce storm runoff, by maintaining green area in sub-catchments to facilitate infiltration and by providing on-site detention storage to trap excess runoff. Floodplain wetlands perform

crucial detention function in storm drainage process. They are also storehouses of ecological resources and means of recreation.

Preservation and restoration of wetlands is a must for sustainable storm drainage system in floodplain landscape. It is essential to maintain green areas so that groundwater is recharged adequately through infiltration during monsoon. As per Dhaka Metropolitan Development Plan of Rajuk, storm water management boards will oversee the protection of the required retention pond area (12% within their management areas).

Land development activities are going on without fulfilling this requirement. This policy will be effective if at least 12% on-site storm water retention area is ensured in land development projects. Detention reservoir based gravity drainage system is the appropriate storm water drainage system in floodplain landscape.

An example of such a detention system

is the Hatir Jheel (wetland), that is regulated by a regulator at Rampura. This detention system is located in the western part of Dhaka City, and its performance is declining because of encroachment on the Hatir Jheel itself.

Water storage and drainage capacities of urban catchments are to be increased by recovering encroached wetlands and khals. Making provision for water transport within Dhaka will usher in great benefit for the city dwellers. It is to be ensured in the eastern part of Dhaka City

that road alignment and culvert locations are consistent with the storm water runoff process in the floodplain landscape.

Landscape consistent passage of storm runoff should be shown in the urban area plan. By taking into consideration the effects of proposed land developments on floodplain water regime, appropriate plinth level and road level for every zone also should be set in the urban area plan.

Jahir Uddin Chowdhury, Institute of Water and Flood Management, BUET.



# How America can turn China green

FRED GUTER

GAO Guangsheng has an odd sense of timing. In late October, 2008 as the global financial system was collapsing around him, he put the United States, Europe and Japan on notice that they would be getting a bill for a hundred years of pumping the climate full of carbon dioxide.

The idea wasn't entirely new -- the big industrial powers had been vilified before for despoiling the planet on their way to wealth and modernization, while asking China, India and other poor nations to do the right thing. But the demand took on an entirely new character coming from Gao, Beijing's climate czar. It didn't hurt that he was able to deliver a precise figure: 1% of GDP, which comes to more than \$350 billion a year.

Western leaders handled ignored Gao's statement. Over the next few months, however, that tactic will be difficult to sustain. As climate talks begin to build toward a climax in Copenhagen in December, when a follow-on to the Kyoto Protocol is due to be drawn up, Gao's challenge stands as a gap in the rift.

It's the same rift that kept China, India and other relatively poor nations out of Kyoto and gave President George W. Bush an excuse to withdraw, putting climate-change policy on hold for the past eight years. The issue looms large over Hillary Clinton's first trip to

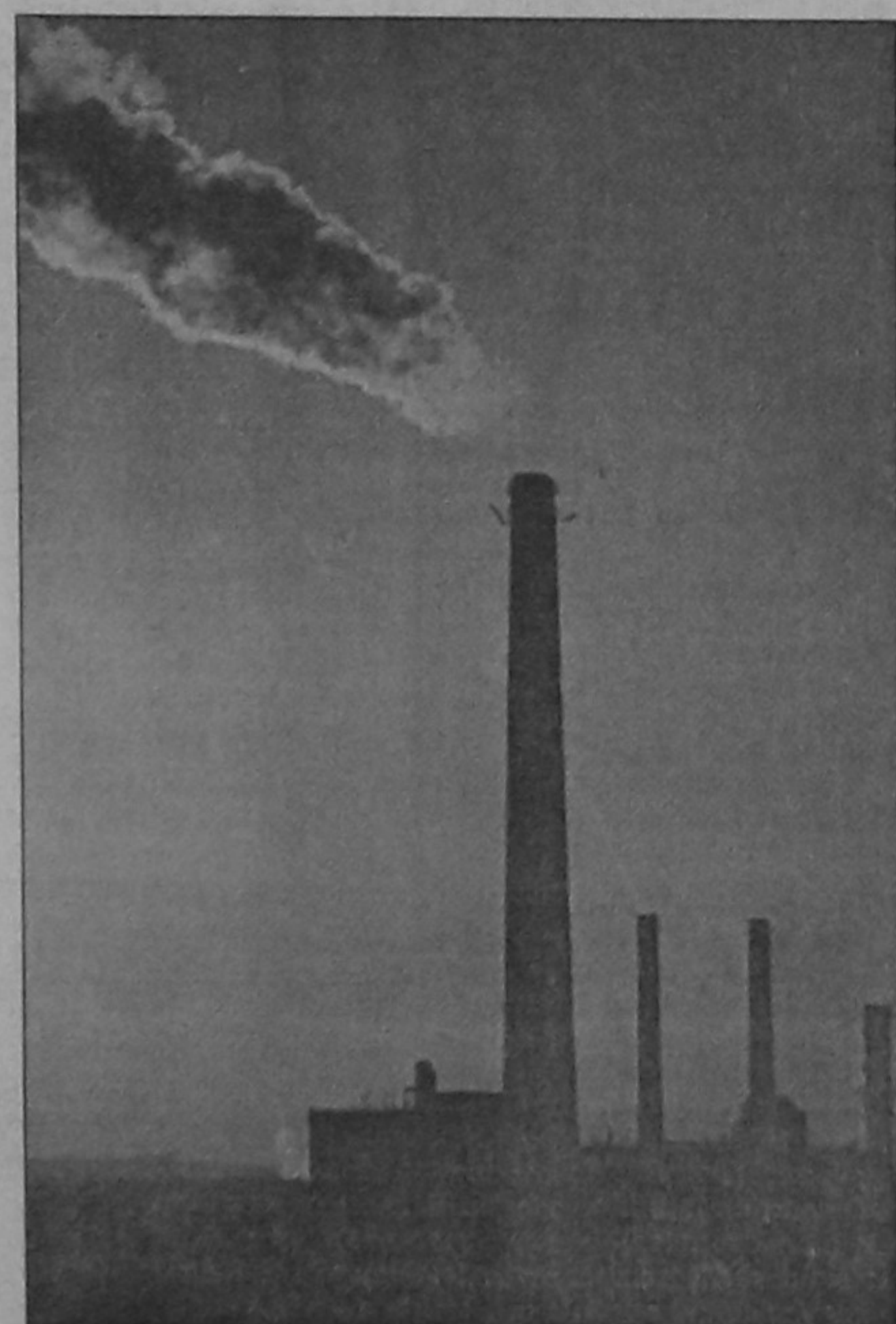
Beijing as newly minted secretary of state. The longer the issue remains unresolved, the greater the chance that Copenhagen will end in a similar stalemate -- and this time there'll be no George Bush to blame.

Given the gravity of the issue, the notion of paying China to solve its environment problems may not be as much of a nonstarter as it sounds. China is a key pressure point of the world's climate problem. Last year it surpassed the United States as the biggest emitter of greenhouse gases. Even so, China's breakneck growth means that most of its mistakes, from a climate standpoint, are yet to be made.

China, for instance, has whole cities on the drawing board, waiting to house hundreds of millions of people who are expected to move from the countryside in the next decade or so. But buildings -- constructing, heating and lighting them -- typically account for about 40% of a nation's energy demand.

Retrofitting existing buildings in the United States to be more energy-efficient is a lot harder than building green ones in China from scratch. A similar potential holds for automobiles and power plants. China builds 100 or so coal plants every year, and each time it fails to use the most efficient technology it commits the atmosphere to absorbing that much more carbon for the next 30 or so years. From the standpoint of the planet -- a

A joint programme to develop electric cars, for instance, might not require much more from Washington than paying travel expenses for some Chinese scientists and engineers from Beijing to Cambridge. It would send a signal to Chinese citizens that they are finally getting something from Washington in return for committing to emissions cutbacks and other green measures.



ton of carbon dioxide does the same damage regardless of where it comes from -- it makes sense for the United States to help fix China.

A cash payment, of course, is out of the question. (Sorry, Gao.) Hillary Clinton not handing over a check for climate reparations. The American public is angry enough at the billions of dollars Washington is throwing at the banks and might not take kindly to spending another \$140 billion (1% of US GDP) every year to bail out someone else's environment. The American public might acquiesce to climate aid to China if it were sold as a kind of trade stimulus or partnership, however.

When it comes to environmental troubles, the United States and China have more in common than meets the eye. Both nations are climate sinners. Both have vast indigenous reserves of coal, the dirtiest form of electricity generation. And both are under considerable pressure to go green.

Common problems also lead to common solutions -- what works in one country might work in the other. For this reason, some experts think

that giving China a green stimulus wouldn't be all that much different from giving one to US firms doing business there, or vice versa.

"Even if we spend it at home, we're investing in companies that themselves have to be in China selling these technologies," says Ed Steinfeld, a political scientist and director of the China programme at the Massachusetts Institute of Technology in Cambridge. "If we end up investing in China, we have to frame it as something different."

Framing it as assistance to US companies might not be too hard because industry is becoming intertwined. Walmart's "sustainability initiative" would impose energy-efficiency targets on the factories in its supply chain -- a decision that could affect thousands of plants. You don't have to go very far from Walmart's headquarters in Bentonville, Arkansas, before you wind up in Shenzhen or Shanghai.

Elizabeth Economy, a China expert at the Council on Foreign Relations, argues that governments could promote more of this sort of thing by subsidizing some of the

upfront costs -- arranging loans through private banks that would ultimately be paid back from savings in energy costs, or paying for audits to make sure efficiencies get carried out down the supply chain.

Partnerships in key technologies could do much to jumpstart private investment. In a recent report, Brookings Institution fellows David Sandalow and Kenneth Lieberthal highlight electric cars and batteries as especially promising areas for US-Chinese collaboration. Both require breakthroughs in technology and would benefit from a sharing of resources and know-how.

The commitment of governments from two of the world's biggest markets would also go some way toward helping establish standards and address intellectual-property issues.

Sandalow and Lieberthal advocate high-profile projects that share technology and expertise. A joint programme to develop electric cars, for instance, might not require much more from Washington than paying travel expenses for some Chinese scientists and engineers from Beijing to Cambridge. "Signals that national leaders send on this issue will have an impact on the marketplace" in both China and the US, says Sandalow. "If leaders in both places jointly say that electric vehicles are a priority, private companies will respond."

Such initiatives might also smooth over the diplomatic problems ahead of the Copenhagen meeting. It would send a signal to Chinese citizens that they are finally getting something from Washington in return for committing to emissions cutbacks and other green measures. Leaders in Beijing could crow about the concessions they won from the West.

It may be time to try a new approach. The Clean Development Mechanism, the carbon-credit trading system born from Kyoto, has provided a market-based way of transferring wealth to developing nations. But it's too small to make a big impact on global emissions and has been criticized for financing clean-energy projects that would have happened anyway.

The UN Environmental Programme, in a report last week, says that Western aid that promotes green industries -- wind turbines, solar power and the like -- in Africa, Southeast Asia and other developing nations could act as both an economic stimulus and climate fix. Such a programme would probably run into the common problem of how to distribute funds where they'll do the most good. A simpler and more effective climate fix might be to go straight at the biggest emitters -- both of them.