LINKING DISASTER REHABILITATION WITH SUSTAINABLE HUMAN DEVELOPMENT

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Your Excellencies, Respected Guests, Colleagues, Ladies and Gentlemen,

Introduction

On behalf of the United Nations System and the UN Development Programme in China, it is my pleasure to welcome you to the 1999 Beijing International Conference on Natural Disaster Management.

Natural disasters, such as the catastrophic 1998 floods in China, are exceptional and uncertain events. The principal cause of last summer's floods - the prolonged and massive rains that occurred in the upland basin of the Yangtze and at the same time in the lower reaches of the river basin, and in the Northern Provinces - was an extraordinary occurrence. So, too, was the unprecedentedly heavy snowmelt from Tibet and the Himalayas, which exacerbated the situation. Yet, disaster management is not just a relentless struggle with the uncertain natural events. We are far from powerless to predict, prepare for, and reduce the risk of natural disasters.

Though governments tend to plan and prepare based on the last disaster event rather than for the one to come, our efforts to learn from previous disasters must not be disparaged, as we can and do build on experience, as the Chinese situation shows

Disaster Rescue and Relief

In terms of water levels, the 1998 flooding compares to the dramatic floods of 1931, 1935 and 1954 that occurred in the Yangtze River basin. Although these three earlier floods took place in the context of lower population density and lower environmental degradation, the casualties suffered were dramatically higher:

In 1931, floods affected close to 28 million people, with a death toll of 145,000,
In 1935, floods affected 10 million people and 142,000 people lost their lives;
In 1954, close to 18.9 million people were affected and 31,000 perished in the disaster.

In comparison, the 1998 floods affected over 180 million people, but timely flood warning and massive flood fighting efforts limited the death toll to 4,100 people.

Clearly, China built on its previous experience of flooding to combat the 1998 disaster. Of particular note in this regard was the effectiveness with which local communities and the People's Liberation Army were mobilized to combat the floods. This kind of effective response is a product of long-term preparation, discipline, and training. Later this morning, we will hear a presentation from the Ministry of Civil Affairs on the unprecedented mobilization of national resources that took place to assist flood victims in 1998.

To complement these efforts, the United Nations system in China launched an International Appeal for Flood Emergency Relief and Immediate Rehabilitation on 23 September 1998. The US$ 139 million appeal was designed to last four months and to provide emergency relief to the most vulnerable flood victims in the form of food, shelter, water supply and sanitation facilities, disease control services, seeds and fertilizer, and construction materials for rehabilitation of schools. The international community has provided more than US$ 110 million in response to the appeal. The bulk of this assistance was delivered by the end of January 1999. The UN Disaster Management Team will tell us more this afternoon about the lessons to be drawn from this UN Inter-Agency Appeal.

Disaster Forecasting and Preparedness

Although disaster response measures for the flooding last summer were very well co-ordinated, the positive impact of earlier measures taken to prevent and prepare for the disaster should not be underestimated.

Successful disaster mitigation involves a chain of inter-linking activities that include awareness-raising, monitoring, forecasting, preparation, response, relief, rehabilitation, and long-term risk reduction. A preponderance of attention and funding is typically concentrated on "relief and rehabilitation," while many other links of the chain have historically and consistently received little support. For successful natural disaster mitigation, it is essential that all links in this chain be strengthened. Relief and rehabilitation are the most obvious targets, for when a disaster occurs, there are often many casualties and displaced persons. Yet the other links of the chain, though less visible, are even more important to the mitigation of disasters Preparedness and mitigation measures taken prior to a disaster are by far the most effective in diminishing the event's impact.

The experience of China's floods last year is a case in point. All sectors of Chinese society have a good general awareness of flood disasters While China is affected by floods every year, early in 1998 disaster scientists of China recognized the looming threat of exceptional, "once-in-a-hundred-year" floods. A half-year before the flooding began, Chinese scientists predicted heavy rains for Southern China. The concern was that tens of thousands or even hundreds of thousands of lives were at stake, and that there might be tremendous economic damage to major metropolises. In February, this prediction caught the attention of the Chinese National Committee for the International Decade for Natural Disaster Reduction, which sits within the Ministry of Civil Affairs. Soon after, the Government issued a warning to concerned provinces to prepare for possible floods in the summer months.

These provinces proceeded to strengthen and extend their dyke systems along the Yangtze and other rivers, to empty reservoirs, and to prepare personnel and materials to aid flood victims. Devastating floods inundated the Southern provinces, but the reinforced dyke systems remained strong enough to protect the cities, thereby reducing social and economic losses. Later this morning, we will hear a presentation from the Ministry of Civil Affairs on how Chinese scientists alerted decision-makers and, once alerted, how the decision-makers initiated flood preparedness.

Through the United Nations Global Programme for the Integration of Public Administration and the Science of Disasters, the UN system closely followed the increasingly worrisome flood forecasts. From May onwards, United Nations agencies and the Government of China worked together effectively to mitigate the flood disaster. In June in Southern China, just before the serious floods hit, a UNDP-funded workshop was held to train disaster-relief managers from 13 flood-prone southern provinces.

Although scientific forecasting played a significant role in these floods, the greatest lesson that we can learn from last year's mitigation success is the importance of communication in disaster reduction. What took place in February 1998 was an effective sharing and exchange of information by scientists and public administrators. Scientists can see ahead, but their results are of little use unless they are understood and acted upon by public administrators It is the linking up of these two professional communities that makes the greatest difference in disaster mitigation. Advances in scientific capacity are meaningless if we remain behind in disaster management decision-making and communication procedures.

However, the 1998 forecasting and preparedness success should not encourage complacency among forecasters and decision-makers. Too often, such successes lead to an unwillingness to credit new findings, concerns, or changing realities. So let us also remember that there were some delays last year in the dissemination of flood predictions to all concerned parties; moreover, the effectiveness of responses varied greatly from one location to another Our scientific ability to anticipate and predict disasters still far exceeds our capacity to communicate disaster-related information to public administrators, scientists, and society at large. Not one of these questions is unique to the Chinese experience in 1998, of course. Rather, such concerns apply to every country and every political system.

In addition to forecasting, technological development has the potential to strengthen each link of the disaster mitigation chain. Additional mitigation measures that are not economically feasible in the current state-of-the-art could prove critical to reduce floods should the technology further evolve. An illustration is the artificial seeding of rain. It stands to reason, had China succeeded in artificially inducing the rain to fall over the sea, instead of hitting the lower reaches of the Yangtze Valley, there would have been a quicker flow of the flood waters from the upper reaches of the river. I urge you to be forward looking and sincerely consider emerging mitigation measures to reduce floods.

Although this conference will focus mainly on weather disasters, the concepts to be discussed here apply to all natural disasters For example, a recent UNDP project for relief to earthquake victims in western China established a seismic monitoring network now being operated by local administrators. In March of this year, these administrators observed signals, which their team agreed, related to a possible magnitude five earthquake in their immediate region, to occur before March 20 On March 17, as they had anticipated, there was an earthquake of magnitude 4.7. While this UNDP project is just in its pilot stage, it holds great promise as an example of how local capacity for mitigating large and sudden disasters can be strengthened.

To conclude on disaster forecasting: Improvements in the information gathering and transmission of disaster predictions to the responsible authorities and the general public is essential to save lives and protect the possessions of people. UNDP is focusing its current attention primarily on these aspects.

Disaster Rehabilitation and Risk Reduction

As we discuss the Chinese floods, and other disasters, it is important not to attribute all disaster events to exceptional natural phenomena. This is part of the problem, but not the whole story. For, of course, in the case of the Yangtze flooding, many underlying ecological problems and improper patterns of development contributed to the disaster, none of which occurred overnight. Indeed, in the case of the Yangtze River Basin, the ecological and development problems amount almost to a recipe for flood vulnerability:

- Deforestation in the upper basin of the Yangtze, which reduces the capacity of forest cover to absorb continuous torrential rains and prevent soil erosion. Plant cover in the entire river basin has declined from 22 per cent in 1957 to 10 percent in the 90s[1];
- Massive growth in upland populations and agriculture;
- Soil erosion and heavy siltation along the midstream and lower stream of the river, which blocks waterflows;
- Encroachment of agriculture and other development into the flood plain of the Yangtze and potential flood diversion areas. Between 1959 and 1980, the area of freshwater lakes decreased by 35 % in the mid to lower Yangtze Valley[2];
- Lack of effective, and enforced, river basin management.

None of these factors are recent developments nor are they unique to the Yangtze River Valley. They indicate a structural vulnerability of the Yangtze River Valley to catastrophic floods and other hydrological disasters. Unless the root causes of natural disasters are addressed, the cost in lives and in property from natural disasters is bound to increase steadily.

China is a natural hazard prone country. On average, annual economic loss from natural disasters ranges from three to four percent of Gross Domestic Product, equivalent to about one-third of annual Government fiscal revenue[3]. If we fail to incorporate the occurrence of natural disasters into development planning, the social and economic losses that disasters cause will continue to increase in proportion to the economic growth of the country. Furthermore, sustained economic growth would not be possible, if the impacts of

[1] State Environmental Protection Agency - cited in China Daily 4/6/1999
[2] State Forestry Administration - 1998
[3] Prof. Wang Angsheng, Chinese Academy of Sciences

recurring natural disasters are not minimized and mitigated.

Concluding that the flooding had been worsened by environmental degradation, the Government formulated a new policy framework to promote ecological watershed management in September 1999. As a result, a massive plan to redirect land-use management in river basins, especially in the Yangtze River Basin and the Yellow River Basin, was initiated.

Key aspects of this initiative include:

(i) Prohibiting logging in mountainous areas and transforming former logging brigades into reforestation brigades;
(ii) Reconverting farmlands to forest lands or plowing these back to wetlands,
(iii) Restoring wetlands and lakes in the flood planes of major rivers to the 1954 capacity to reestablish the natural absorption capacity of the river channels;
(iv) Relocating human settlements situated in hazardous flood areas.

The importance of incorporating disaster reduction into rehabilitation activities in the aftermath of a natural disaster, of taking on the challenge of turning a catastrophic event into an opportunity for sustainable development, is often overlooked. Let us, therefore, tackle this during the conference. Let us discuss how the strengthening of disaster reduction can act as a critical link in a successful disaster mitigation chain. I request you, in addressing this issue this week, not only to learn from the assembled experience gathered here, but also to extrapolate from that experience, and think imaginatively, to avoid the disasters to come.

UN Assistance for Disaster Management

Given the critical importance of disaster reduction, the Government requested the UN system to launch a second flood appeal on 10 February 1999. The aim of the February appeal was to spur efforts to: (i) Consolidate the results of flood relief work; (ii) Rehabilitate essential human settlements, education and production facilities; and (iii) Implement integrated flood management and information systems to mitigate flood risk in the future.

This appeal is not limited to a specific time period. Its objective is to identify a set of priority disaster rehabilitation and mitigation measures to be funded by the international community as part of its disaster relief or regular official development assistance with China.

Recognizing the cumulative destructive effects of recurring natural disasters on sustainable human development, the United Nations System in China has maintained the development of disaster management skills as a major focus of its regular assistance to China.

The United Nations Development Programme, which I directly represent in China, has supported 27 projects in the area of natural disasters for close to $ 24 million of grant assistance over its past 20 years in China. In addition to emergency relief, part of UNDP assistance aimed to support each link in a successful disaster mitigation chain; from flood forecasting for the Yellow and Yangtze Rivers using weather radar and improved telecommunication system in 1982, to the provision of technical assistance for the formulation of the National Disaster Reduction Plan in 1998. The UNDP remains committed to natural disaster reduction and sustainable human development. In accordance with the Second UN Inter-Agency Appeal, UNDP assistance will focus in the near future on:

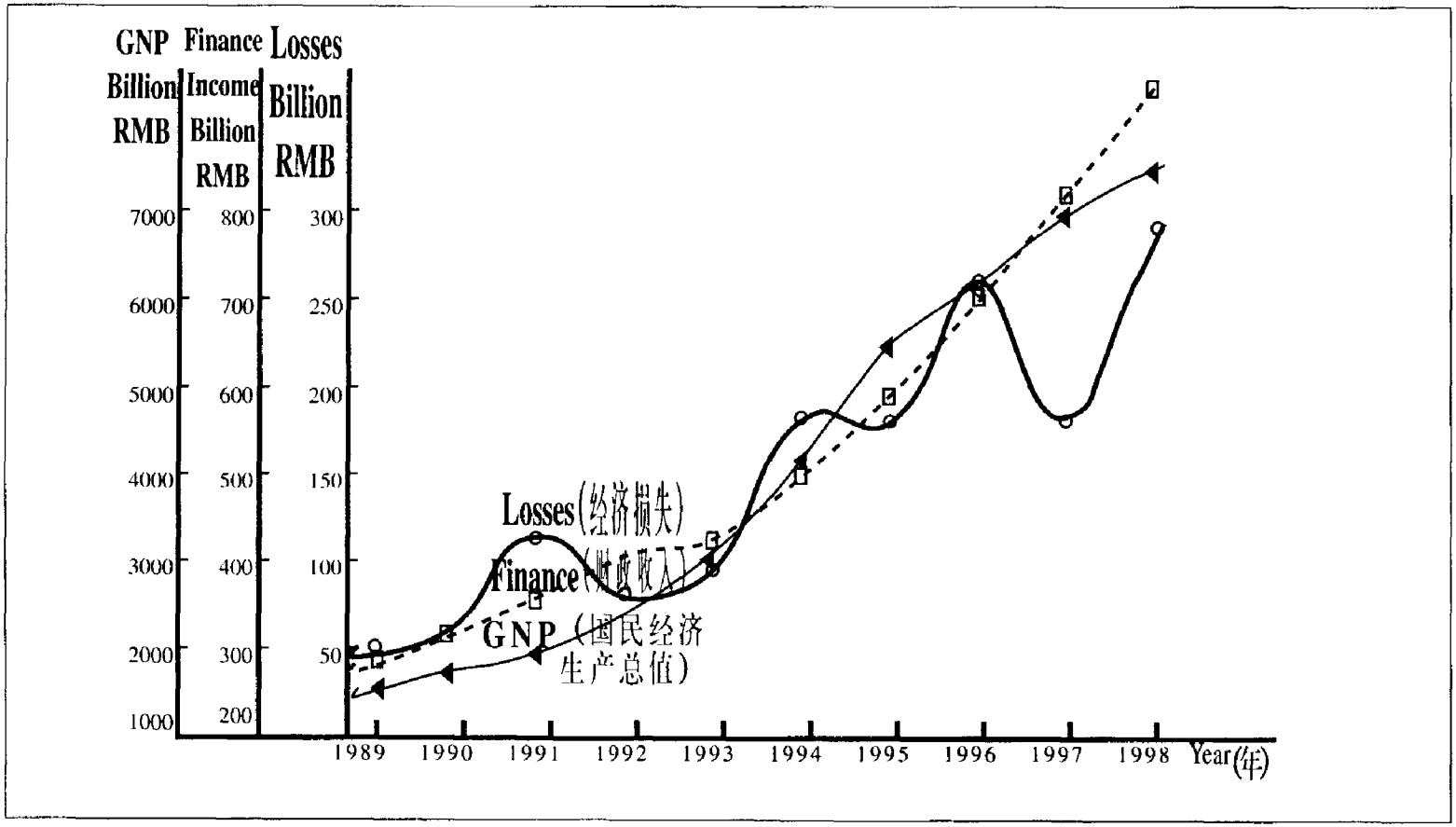
(i) Strengthening communication of disaster-related information between public administrators, scientists and society;
(ii) Assisting participatory approaches to render the reconstructed human settlement outside of flood areas viable;
(iii) Supporting efforts to redirect land-use management in river basins and to restore wetlands and damaged soils.

Dr. Nay Htun, UN Assistant Secretary-General, UNDP Assistant Administrator and Regional Director for Asia and the Pacific, will tell us more about UNDP efforts in the area of soil rehabilitation and sustainable land-use management in his closing address at the conclusion of the workshop.

I invite you to enjoy yourselves, and to make this a pleasant and instructive conference.

Annex

Economic Development Indicators vs. Annual Economic Losses Caused by Natural Disasters in China



Source: Professor Wang Angsheng, Chinese Academy of Sciences