Viet Nam is one of the countries most affected by climate change, affecting many sectors and regions, and presenting a challenge to human development. Effects such as sea level rise and associated flooding and saline water intrusion are critical for Viet Nam. Natural disasters including typhoons, droughts and river floods are expected to become more prevalent and severe. Agro-ecological zones are expected to shift because of changes in temperature and rainfall patterns. Heat waves will occur more frequently and vectors for diseases such as malaria and dengue fever are expected to increase. Most of the climate change effects impact dis-proportionally on the most vulnerable population groups, especially the poor, elderly, women and children.

The urban population of Vietnam is growing fast with an average increase of 3% per year and is expected to reach 40% of total population of Vietnam by 2020. Rapid urbanization is accompanied by increasing poverty density, especially in lowland urban areas. Floods and other climate change effects will have major impacts on urban areas, especially in coastal cities and neighbourhoods with poorer people and comparatively low quality water supply, sanitation and drainage systems. Industries, including the work places of many of the lower income groups in urban and peri-urban areas are also affected strongly by climate change effects.

Climate change is expected to be an additional cause of migration from rural to urban areas. Water resources are particularly under increasing pressure, for household supply, agriculture and industry. Climate change limits livelihood strategies and reduces access to resources, which impacts on men and women, boys and girls in different ways.

Climate change is caused by historic built up of atmospheric green house gasses from industrialization, transport and e.g. deforestation. The historic responsibility for this lies mainly with affluent, industrialized nations, not with poor countries, women and men. However, nearly 20 percent of current global emissions are from deforestation and forest degradation, mostly in developing countries, and the emissions from agriculture and especially from growth in the use of fossil fuel is rapidly increasing. Viet Nam is also developing rapidly, with increasing energy demand in industry and households, and it needs major investments in energy generation. Its emissions from agriculture are also projected to increase, at current trends well beyond 2020.
However, Viet Nam can reduce emissions in economically, socially and environmentally beneficial ways that are “nationally appropriate”¹. By making appropriate investments there are possibilities for rapid technological progress so that developing countries will leap-frog into a “low carbon” developed economy over the coming decades. This includes various forms of technological innovation in energy and industrial production; improving energy efficiency of buildings; reducing deforestation; improving (energy efficient, low emissions) mass transport systems; and changing behaviours of the wider population. The most important short and long term green house gas mitigation options for Viet Nam are in energy production and consumption, and especially in the urban and industrialised areas – as the city can be seen as a primary opportunity for low carbon development. Improving energy efficiency and achieving “co-benefits” of e.g. reduced local pollution are typically important in urban production and consumption patterns, including transporting, heating, cooling, and lighting. Key opportunities for a low carbon future economy also lie in afforestation and forest protection, and in innovations in intensive, peri-urban agriculture and livestock keeping that have immediate economic benefits.

The severity of the climate change challenges has been recognized by the Government of Viet Nam, and a National Target Program on Responding to Climate Change (NTP-RCC) was approved in December 2008. The NTP-RCC identifies the need to conduct vulnerability assessments at sectoral, regional and community levels, and identifies the poor, women and children as among the groups most vulnerable to impacts of climate change. The NTP-RCC includes research and assessment of vulnerabilities piloting of adaptation measures, and on low carbon development, and proposes that all key sectors and localities (provinces in particular, including city municipalities) mainstream response to climate change in strategies and action plans.

Various assessments of climate change vulnerabilities in human settlements have been undertaken or initiated in Viet Nam, with studies completed or underway in HCM City, Ha Noi, Hai Phong, Da Nang, Can Tho, Thanh Hoa and elsewhere. This is in several cases happening with international financial and/or technical support, for example from the Worldbank, ADB, and Rockefeller Foundation. The results of the first studies confirm that the scale of Viet Nam’s urban climate change challenge is indeed very big, especially because of the expected impacts. The completed assessments have not been based on officially agreed climate change scenarios and planning parameters (regarding tackling climate change effects) for the country. For example, the NTP assumes that sea level rise by 2100 will be 1 meter, for planning purposes. This is higher than predictions of the IPCC² and the draft predictions for sea levels near Viet Nam from downscaling of “general circulation models” to the local level for different (global) social economic development scenarios, which are associated with different levels of future atmospheric greenhouse gasses. But new scientific evidence is becoming available that is predicting more severe sea level rise.

Major coastal and lowland cities and towns of Viet Nam, including Hanoi, Hai Phong, Da Nang, Ho Chi Minh City, Can Tho, and also others are heavily affected by a range of climate change stresses, including typhoons, sea level rise with associated saline water intrusion, and also floods from local heavy rainfall. At the same time there is likely to be increasing stress on water supply because of droughts. Da Nang and Hai Phong are examples of international seaports that must be protected from sea level rise and increasing likelihood of storm surges if trade continuity is to be maintained. The rate of urbanisation in Da Nang is amongst the most rapid in Viet Nam and the region. It is expanding rapidly but lacking thorough planning, which makes the city and its residents more vulnerable to climate change. Both Ha Noi and HCM City have experienced unusually severe rainfall-floods in 2008. The historic towns of Hue and Hoi An suffered extreme climatic phenomena in recent times, affecting tourism and trade. Whilst such problems are expected to intensify with climate change, many

¹ NAMAs, nationally appropriate mitigation actions, were agreed by developing nations in the “Bali Action Plan” under the UNFCCC (in 2007), as opposed to binding targets for green house gas emissions reductions by industrialized countries.
of these towns and cities, including industrial parks, are expanding into areas that originally function as flood plains for rivers, that are fertile agricultural areas, and that will be flooded increasingly with sea level rise and extreme rainfall.

Climate change adaptation and also green house gas mitigation challenges have not yet been integrated into urban development plans, and there is a lack of capacity to do so. The National Target Program on Energy Efficiency (NTP-EE) is supported by a number of donors. There are energy efficiency and energy generation projects in Viet Nam and new projects are underway to introduce international technology, for example with Global Environment Facility (GEF) funding. However, whilst energy demand is rising at a high rate (estimated as 8-12 percent annually), there remains a very large potential for improving the energy efficiency of buildings and transport. Furthermore, only some tax and subsidy options for influencing energy-related consumer and producer behaviour have been tried. Some biogas digesters are operating in peri-urban homesteads, but the large scale urban landfills in Viet Nam are still very basic and releasing methane into the air, as earning Certified Emissions Reduction (CERs) from CDM projects has not yet really taken off in Viet Nam.

There is some analytical work available; links (alliances) between some Vietnamese and foreign cities on issues of sustainable development are developing; and there is for example a history in which UN-Habitat has engaged with the authorities on policy questions. However, the implications of climate change for short term and long term national and city policy are not fully clear to the wider public and to policy makers. Particularly important is to get a clearer understanding of

a) the potential for ‘green Vietnamese towns and cities’ and the scale of the climate change challenges and opportunities (adaptation to climate change effects and opportunities for green house gas mitigation with co-benefits);

b) the long term investment needs under different strategies for city development and how such funds would be generated (in particular from the cities, the economic engines of the country);

c) the importance of institutional reform in urban management and city/spatial planning (making it cross sectoral, more consultative, transparent and strategic), as well as enforcement of agreed spatial / social economic development plans; and

d) migration patterns into cities and the two-way beneficial links between urban and rural areas, which is not yet fully recognised in policy;

The UN in Viet Nam, and specifically the Programme Coordination Groups (PCGs) on Sustainable Development, on Disasters and Emergencies, and on Gender, have prioritised climate change as a key issue for the present and the future. Some projects are undertaken with different ministries and local stakeholders, on climate change and closely related matters. Most important at this time is that analytical work is undertaken for understanding the main climate change issues in Viet Nam, especially the main policy questions. The UN is increasingly entering into policy dialogues at high levels and also stepping up its public communication on critical issues, including climate change and urban development. Over the coming months and years the UN hopes to develop its future support programme in this regard too. For those reasons various human resources from within the UN organizations in Viet Nam and their support offices are being mobilised for policy advisory, research, and methodology development in relation to climate change.

In response to the above, a desk study on urban development is proposed, with particular attention to current spatial planning practice and implementation of urbanisation and industrialisation plans in the context of sea level rise and increasingly heavy rains.

2) OBJECTIVES OF THE ASSIGNMENT

The study aims to draw out the main policy questions for Viet Nam in the short and long term future of urban development in Viet Nam, and recommend policy directions in responding to climate change with regards to urban development.
More specifically, the study will
(1) use urban climate change studies, and identify the main urban adaptation measures for the short term and long term in low land cities and towns, as well as GHG mitigation opportunities for low carbon urban development in Viet Nam;
(2) provide analysis of institutional challenges to integrate climate change into urban planning processes in Viet Nam;
(3) make policy recommendations for discussion on critical ‘climate change and urban development’ issues in Viet Nam at the highest levels and to provide a basis for communication with the Vietnamese public through the media; and
(4) make practical recommendations for future programming of the UN in Viet Nam on urban climate change adaptation and green house gas mitigation actions;

3) SCOPE OF WORK

The study will access ‘secondary data’ on the Vietnamese climate change impacts on human settlements and industrial zones and compare with international data and analysis. It will employ a cutting edge analytical framework on urban vulnerability and adaptation assessment and on (urban) low-carbon development opportunities.

The study will combine different types of data, including qualitative, participatory research; statistically representative quantitative social-economic research; administrative data; and hydro-meteorological and other environmental data, especially results of climate change scenarios (i.e. downscaling of global/general circulation models) and sea level rise projections. These data will be used in various combinations, in order to assess climate change effects over decades, prioritize adaptation measures, highlight ‘low carbon’ development opportunities, and make investment decisions.

The research will overall be led by the UNDP Policy Advisor on Climate Change (UNDP) and the UN-Habitat Coordinator (HAB), both based in Viet Nam. They will also
a) provide details of research methodology and analytical framework;
b) formulate research questions and the outline of the paper;
c) develop a detailed work plan for managing the inputs of all the hired experts and a plan for accessing inputs from national researchers / officials (notably: climate change scenario data from IHMEN/MONRE), and UN colleagues both in Viet Nam and outside;
d) provide and help analyze national data;
e) facilitate various meetings; and
f) take editorial end-responsibility for the final discussion paper / output.

Headquarters or regional staffs of UNDP and UN-Habitat are expected to supply expert advice at different stages of the research and writing process, in particular on formulation of research questions and analytical framework, and provide and help analyze international data.

Several external experts will be hired by UNDP for the purpose of this research. The table below summarizes the work plan, including the time allocated for each expert.

4) DURATION OF ASSIGNMENT, DUTY STATION AND EXPECTED PLACES OF TRAVEL

Up to 25 working days within the period from August to November 2009. The assignments are home-based, with expected travel to Hanoi and/or Da Nang, Vietnam.

5) FINAL PRODUCTS***
<table>
<thead>
<tr>
<th>Outputs / activities</th>
<th>UNDP</th>
<th>HAB</th>
<th>IHMEN</th>
<th>HSE</th>
<th>IE</th>
<th>SPE</th>
<th>PRs</th>
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</thead>
<tbody>
<tr>
<td>1) Detailed design of the study, including work plan (gantchart), analytical framework, main research questions, detailed guidance for focus group discussions with experts, outline research report.</td>
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<tr>
<td>2) Collection and review of international and national literature with relevance to the research topic, including publicly available national statistics and survey outcomes; refining of the main policy questions</td>
<td>2</td>
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<td>7</td>
<td>7</td>
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<tr>
<td>3) Production and communication of selected climate change scenarios for Viet Nam’s major cities and immediate surroundings: Hanoi, Haiphong, Danang, HCM City, Can Tho.</td>
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<tr>
<td>4) Focus group discussions with national experts on literature reviews, climate scenarios, development scenarios, and the likely priority policies and actions until 2050 and 2100 in the major cities of Viet Nam; preparation of this FGD; note taking</td>
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<td>5) Preparation of a draft paper (‘think piece’) (Vietnamese and English)</td>
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<td>6) Detailed peer review of draft paper (Vietnamese and English)</td>
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<td>3</td>
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<tr>
<td>7) Discussion between peer reviewers and Experts on draft paper</td>
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<td>1</td>
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<td>2</td>
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<td>8) Preparation of the final draft (English; max 30 pages) incorporating recommendations of (national and local) researchers; and stand-alone 4 page executive summary</td>
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<td>9) Translating and editing Vietnamese final draft</td>
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<td>10) Presenting the final draft paper in a policy dialogue with selected city leaders; discussion</td>
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<td>2</td>
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<td>11) Preparation of the final paper incorporating viewpoints and recommendations of senior officials and leaders, and UN; publication by UN, with forewords by UN and Government</td>
<td>3</td>
<td>3</td>
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<td>TOTAL</td>
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<td>30</td>
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<td>25</td>
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Notes:
The underlined number of days in the table indicates that the expert(s) concerned have the / a primary responsibility for that output.

**UNDP/HAB** UNDP Policy Advisor on Climate Change and UN-Habitat Coordinator, both with support from their UN colleagues inside and outside Viet Nam (in-kind)

**IHMEN** Institute for Hydro-meteorology and Environment (MONRE) (in-kind)

**IE** International Human Settlements & Climate Change Expert (contracted)

**HSE** National Human Settlements Expert (contracted)

**CCE** National Climate Change Expert (contracted)

**SPE** International Spatial Planning Expert (contracted)

**PRs** Peer Reviewers (civil society supported)
An International Spatial Planning Expert (SPE) will

- a) consolidate the detailed work plan including gantt chart
- b) consolidate the analytical framework based on various inputs
- c) provide substantive comparative international secondary data to the HSE and CCE and support the review/analysis of those
- d) participate in consultation meetings including peer reviews of the draft discussion paper, and
- e) edit the final draft discussion paper
- f) present the final draft discussion paper in a meeting with leaders/senior officials

6) PROVISION OF MONITORING AND PROGRESS CONTROLS

The experts hired by the UNDP will formally report to the UNDP Climate Change Policy Advisor. Support to research design, literature review will be provided by the UNDP Climate Change Policy Advisor, the UN-Habitat Coordinator, and their UN colleagues.

The UN’s Program Coordination Groups (PCGs) will be engaged by the UNDP and UN-Habitat and be briefed and asked for written inputs at several steps of the process. The final draft output will be assessed and discussed by members of the three interested PCGs.

7) DEGREE OF EXPERTISE AND QUALIFICATIONS

**International Spatial Planning Expert (SPE)**
- Proven track record conducting research on spatial urban planning in Southeast Asia
- Publication track record on spatial planning
- Familiar with urban planning issues in Viet Nam
- Excellent written and spoken English

8) Admin support and reference documents

Administrative support will be given by UNDP’s Policy Team.
- Selection criteria: Evaluation criteria, attached

For pre-qualification screening, interested candidates are kindly requested to submit an updated CV with 3 references and to clearly state which position you are applying for. Only successful applicants will be invited to submit a proposal of 5-10 pages which clearly states why you are most suited for the post, your approach to achieve required outputs, and your financial offer (for the whole assignment, not based on daily rate).

Deadline for application submission: Wednesday, 5 p.m Ha Noi Time, 29 July 2009

9) REVIEW TIME REQUIRED AND PAYMENT TERM

Within two weeks of completion and submission of a final design and contribution to the literature review as specified in item 1 and 2 of the chart above, 50% advance will be made upon acceptance. The remaining 50% will be made within two weeks upon completion of the assignment and upon approval of the achieved outputs by Climate Change Policy Advisor.

10) CONSULTANT PRESENCE REQUIRED ON DUTY STATION/UNDP PREMISES
☐ NONE   x PARTIAL   ☐ INTERMITTENT   ☐ FULL-TIME