

ENVIRONMENTAL ASSESSMENT SUMMARY AND ADDENDA

Project Name	RMIT International University Vietnam
Country	Vietnam
Sector	Education

1. This project involves the establishment of a new university campus on a 62 hectare site within the Saigon South Development. The site is approximately 5 km south of central Ho Chi Minh City on the area designated as the Eastern University Park on the master plan for the Development. It is anticipated that in the first year of operation the campus will have a population of approximately 2000 students and staff, growing to 9,000 by Year 10. The university will provide a broad range of education and training courses, consultancies, and research and development. The campus will also include student and staff housing; retail outlets; public and recreational facilities and a range of other ancillary services.

2. Resettlement issues:

Construction of the new campus on the proposed site will require physical resettlement of approximately 50 households who are currently living on the site, carrying out mostly farming activities to generate their incomes. In addition, approximately 84 households are estimated to have either legal ownership claims to parts of the land and/or depend on the parts of the land in the site for farming activities to generate income. Some households are reported to have legal ownership rights to land but do not live on the site and have other jobs, and therefore either not dependent or less dependent on the farming of the land on the proposed project site for their economic livelihoods. In all, there are approximately 560 project-affected people ("PAPs").

Resettlement of the PAPs for this Project will need to be carried out in accordance with the broad scope of various laws and regulations that apply to all resettlements in Vietnam, as well as the regulations and directives that have been issued by the HCMC Peoples' Committee and HCMC government agencies and which apply specifically to resettlements necessitated by investment projects in the South Saigon New Urban Areas. In addition, IFC requires preparation of a Resettlement Action Plan ("RAP"), by virtue of the Operational Directive 4.30 of the World Bank Group Policy. The ADB also requires preparation of a RAP under their resettlement policy guidelines. Therefore, this RAP has been prepared to ensure that measures necessary to satisfy the requirements of IFC and ADB, as well as various laws and regulations of Vietnam are established.

The objectives of this RAP are then (a) to describe measures necessary for mitigation of adverse effects of resettlement of PAPs, improve or at least

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maintain the living standards of PAPs, and (b) to ensure transparency throughout the resettlement and compensation process.

This RAP has been prepared based on the data provided by MASD, which in turn has been based on the results of the census carried out by MASD in April 1999. In addition, GHD carried out independent socio-economic surveys and research in September and November 2000. Detailed descriptions of the socio-economic profiles of the PAPs, the people in the Tan Phong Ward, and the resettlement impacts are provided in Sections 2 and 3 of the RAP.

Potential impacts expected to arise include relocation of PAPs, removal or destruction of assets, filling of the site, and a change in land use. The clearance of the site is expected to affect a small number of houses and other structures and minimal infrastructure, but it will cause a considerable change in land use from relatively low productive farming to urban, educational facility area. RIUV plans to maintain the existing waterways as is, as much as possible and feasible, and to develop it, if possible, into an environmentally protected sanctuary for plants, birds and other animals.

The various laws, regulations, and directives of Vietnam collectively provide a framework for resettlements broadly consisting of four components: (a) eligibility (mostly applicable to verification of legal ownership to land and other assets as well as residency requirements) of PAPs for monetary compensation; (b) compensation and resettlement assistance for PAPs; (c) grievance procedures; and (d) responsibilities of government organisations.

This RAP will be implemented by RIUV in conjunction with the relevant HCMC government authorities including the Compensation Committee. The key implementation process will include: (a) pre-resettlement consultation with PAPs; (b) payment of compensation (currently budgeted for a total of VND 38,261,750,633 (equivalent to US\$2.66 million at the exchange rate of VND14,400); (c) resettlement of PAPs and rehabilitation; (d) various training programs; and (e) monitoring and evaluation.

The details of the implementation procedures will be developed in accordance with: (a) relevant regulations and directives, including Decision 6511 issued by HCMC Peoples' Committee and the Strategy issued by MASD on July 7, 2000 for resettlements necessitated by investment projects in Districts 7, 8 and Binh Chanh in the Saigon South New Urban Area; (b) various agreements and understandings undertaken by and between MASD, HCMC Peoples' Committee, the Tan Phong Ward, the District 7, and other Vietnamese government agencies, RMIT, as the sponsor, and RIUV; and (c) requirements and recommendations specified in this RAP.

In accordance with the HCMC PC Decision 6511 together with the MASD Strategy of July 7, 2000 and the Decree 22/1998/ND-CP, a Compensation Committee will be established after the Prime Minister has issued the Decision on the land lease for the Project site. The Compensation Committee will have the representative responsibilities for implementing the resettlement

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requirements of various laws, regulations and directives of Vietnam in connection with this Project. RIUV will make available the financial resources necessary to meet the compensation and resettlement costs, as well as additional actions necessary to satisfy the requirements of IFC and ADB. Details of the compensation and resettlement costs are provided in Section 4 of the RAP, and additional actions that RIUV will undertake are described in Section 6.

The implementation schedule for the RAP is proposed for a 10-month period. The implementation process will start after the approval by the Prime Minister of RMIT's application for the land lease. Following that decision, a Land Lease Agreement will be concluded between the HCMC Land Administration Department and RIUV. Almost at the same time, the Compensation Committee will be formed, RIUV's community liaison officer ("CLO") will be appointed, and the pre-implementation training of the officials and other staff and pre-implementation consultation with PAPs will occur almost at the same time. Rehabilitation assistance is anticipated to start early on and extend over two years. Monitoring will be undertaken over 5 years from the time the RAP has been approved to ensure that the RAP is implemented correctly and that IFC and ADB requirements are met. The post-Compensation Committee grievance procedures will be established to resolve grievances that arise after the Compensation Committee has ceased to exist.

In view of the inter-linking nature of the requirements of both the laws and regulations of Vietnam and IFC and ADB, it is recommended that the relevant government authorities in Vietnam and RIUV co-ordinate closely on the determination and payment of compensation, and the identification of and assistance to the PAPs in taking up effective rehabilitation opportunities.

3. Planning context:

The campus site was designated as the site of a university in the Saigon South Master Plan which has been approved by the Government of Vietnam. The master plan was developed to provide HCMC with the necessary amenities, services and infrastructure to accommodate a projected increase in population to 10 million. This Project is therefore consistent with regional and national planning objectives.

4. Impacts during construction:

Any negative impacts expected to occur during construction are no more severe than what would be expected from any construction project. The Contractor will be required to present for approval by RMIT and the Vietnamese authorities an Environmental Management Plan for implementation during the construction period. A major land filling operation will be required, which may have the potential to interfere with surface hydrology. The Contractor will be required to undertake the works to ensure minimal disruption during construction and to ensure that there will be no permanent impact on agricultural practices on the areas surrounding the site.

Additional traffic will be generated during construction. Contractors will make their own temporary access roads to the construction site. The South Saigon Parkway and the other feeder roads are adequate to handle this increased traffic without

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significant disruption to the normal traffic flow. Dust and vibration will be created by vehicles and equipment during the construction phase. Measures to reduce dust and vibration be the responsibility of the Contractor. These will include the use of dust control agents such as water and the paving of roads subject to heavy traffic. Construction activities will raise noise and vibration levels. Management of these levels will be part of the Environmental Management Plan, ensuring that noise is limited to daylight hours and barriers are constructed where necessary.

5. Impacts during operation:

An Environmental Management Plan based on ISO 14000 (Environmental Management Systems) will be developed and implemented in relation to activities associated with the operation of the University. This plan will include:

- details of monitoring of impacts on physical resources, human and economic development and quality of life values;
- details of measures to mitigate any anticipated negative impacts.

The campus operation will result in increased traffic. The South Saigon Parkway, National Highway 1 and Provincial Road 15 will provide adequate links with HCMC and surrounding areas. A transportation plan will be developed for the campus to link the internal road system with these major transit corridors. The proposed campus development will incorporate a sewage treatment plant, with treated effluent being recycled for irrigation or discharged into the canal system. Stormwater will be discharged to the naturally occurring wetlands and the canal system. Hydrological issues in relation to the waterways will be addressed during the detailed design. Culverts will be laid to ensure twice daily flushing of the canals.

6. Social Impact:

There are significant long term benefits of the Project in terms of human resource development, employment and economic growth in Vietnam. This will be achieved through an increase in skill levels, the creation of job opportunities during construction and operation of the campus, and the stimulus to economic activity. These benefits will be local, regional and national. They will result in increased personal/household income and therefore in increased expenditure on food, rent, transport, entertainment, clothing, education and health. Higher education and training in Vietnam will be strengthened. The University will provide a valuable model to assist Vietnamese institutions to develop appropriate flexibility in terms of curriculum, technology and methods of delivery.

Addenda

The following issues were identified by the IFC and ADB environmental specialists as requiring further clarification:

7. Site flooding:

The maximum recorded high tide level in the streams and river adjacent to the site is 1.5 metres. The proposed fill platform for the campus is 2.5 metres with building floor levels at least 2.7 metres. The South Saigon Parkway has been filled to a level of 2.35 metres and would therefore act as a floodway, offering additional protection from flooding to the site. The river levees, which will retain water permanently in internal canals, have a proposed top level of 2.5 metres. A spillway set at 2.1 metres will allow water from behind the levee to flow back to the river and prevent flooding of the site. The provision of levees will allow the canals to provide some detention of stormwater runoff from the site. This peak runoff will be released to the river through the culverts at a reduced rate and will lessen the likelihood of the project contributing to flooding of downstream sites during peak rainfall events.

8. *Liquid Effluent Treatment and Disposal*

The applicable standard adopted by the project for waste water discharge is the Vietnam Standard on "Industrial Waste Water Discharge Standards". This allows waste water to be discharged into water bodies used for sources of domestic water supply if the BOD is less than 20 mg/l and the suspended solids are less than 50 mg/l. The packaged sewage treatment plants to be installed on the campus plants produce effluent with BOD of 10 mg/l and suspended solids of 10-15 mg/l so that effluent would be of much better quality than required by the standard. With tertiary treatment, the effluent quality can be further improved to BOD of 5 mg/l and suspended solids of 2-3 mg/l.

The budget for this project assumes both tertiary treatment and also chlorination of effluent. It is proposed to spray irrigate the landscaped and conservation areas of the site with effluent during the dry season and this additional treatment will assist with odour control and will also limit nutrient build up in the canals within the site which could promote algal growth. During the wet season, effluent will be disposed of direct to the internal canals. The effluent produced will be of a quality well in excess of that required by the standard.

The standard will be achieved by setting requirements for production of effluent in the Contract Documents, and by requiring tenderers to provide evidence of having installed similar plants producing effluent of the required quality at other sites.

9. *Solid and Hazardous Waste Disposal:*

The campus will be serviced by the Urban Environment Company which will collect solid waste on a daily basis and transport it an appropriate landfill site. The nature and quantity of hazardous waste will be assessed. Procedures will be implemented to ensure that hazardous wastes will be stored separately from other solid wastes and will be collected by an appropriate contractor. Enclosed refuse collection vehicles will be used as necessary. In accordance with RMIT's Environmental Policy, the recycling and re-use of goods and materials used by and within the campus will be encouraged. Clean and readily identifiable receptacles for materials to be recycled will be provided. The material will be collected by recycling contractors on a regular basis.

10. *Construction Practices and Materials:*

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Companies shortlisted for construction of the project will be required to submit evidence that the following management systems are in operation in their day to day construction activities:

- Quality Management System
- Environmental Management System
- Health and Safety Management System

Contract documents will require a site specific Environmental Management Plan to be developed and submitted for approval prior to commencement of construction. Adherence to the plan will be monitored by regular inspections by the Client's Representative.

11. Dredge Material Supply:

It is anticipated that material for the landfill will be obtained from a range of sources including sand from the Saigon River. Dredging practices will be in accordance with government regulations and the material will be tested for suitability as landfill prior to transportation to the site.

12. Air Emissions:

The services infrastructure will not include boilers. The generators used will only operate in periods of electricity failure and will have emission controls fitted in accordance with world's best practice for good commercial quality engines. If necessary to further reduce emissions, catalytic converters can be fitted to the generators. The air conditioning systems to be installed will not include CFC refrigerants. R22 refrigerant gas will be phased out in 2001 and thus the refrigerant selected will be chosen for optimum ecological sustainability.

13. Air Quality Monitoring:

Monitoring of air quality will be undertaken during pre construction, construction and operational phases. Parameters for monitoring of ambient air quality will include temperature, humidity, wind velocity, dust sulphur dioxide, nitrogen dioxide, carbon monoxide and lead. Parameters for motor vehicle emissions will include carbon dioxide, nitrous oxide, hydrocarbons, lead, benzene, particulates and carbon monoxide.

14. Fire Protection and Life Safety:

The site infrastructure includes a reticulated external fire hydrant system with street hydrants located in accordance with the Water Reticulation Code of the Water Services Association of Australia. Within the campus buildings, hose reels, fire sprinklers, fire detectors, smoke detectors, emergency warning systems and emergency/exit lighting will be installed based on Australian codes and regulations.

15. Disposal of sulphate rich soils:

Acid sulphate soils as they occur on the site may cause problems. An acid sulfate soil management plan will be implemented including:

- A description of the soil characteristics and the location of potentially sensitive environmental receptors such as water bodies.

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- A description of the acid sulfate soil management strategies incorporating the proposed construction schedule and the volume and proposed disposal location of the acid sulfate soil.
- A monitoring program for soil, surface and groundwater quality.
- Discussion of contingency measures should the acid sulfate management procedures be inadequate.

The measures adopted for treating sulphate soils will include:

- Minimisation of disturbance of sulphate soils because potential acid sulfate soil will not react unless exposed to oxygen.
- Treatment or management of the acid sulphate soil by burial, neutralisation, and separation. Treatment techniques will be based on either reducing the oxygen flux to negligible levels through burial beneath low permeability sediments or increasing the neutralisation capacity of the sediments by the addition of lime.
- Allowing acid sulphate soil to oxidise but managing the leachate by neutralising the leachate as it runs off. This may be incorporated into landscaping with drains lined with crushed limestone or concrete to neutralise the acid being generated.

Any acid sulphate soil management, with the exception of non disturbance, requires a degree of monitoring. Depending on the scale of the problem, both the sediments and the leachate generated will require monitoring.

A monitoring program will be developed including:

- parameters to be monitored;
- medium to be monitored;
- monitoring locations on site and frequency;
- analyses to be conducted;
- laboratory conducting the analyses;
- procedures to be undertaken if monitoring indicates that thresholds are being exceeded;
- reporting procedures to relevant authorities.

16. Ecology

A number of species of *zooplankton*, *zoobenthos* and *phytoplankton* are found on the site, as well as 29 plant species. Species of inland fauna were not identified during the study undertaken by VESDEC (Vietnam Environment and Sustainable Development Centre) in February 2000.

17. Wetlands:

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Development of the campus will involve loss of some wetland area. However this Saigon South area has been designated as a development zone to be used for the construction of roads, buildings and parks. The design of the campus will enable retention of significant areas of the 62 hectare site as a wetland environment. Natural vegetation will be retained wherever possible. To reduce impact on the wetland areas a series of connected elevated walkways will be constructed within the campus.