GLOBAL ENVIRONMENT FUND FINANCED COMPONENT DESCRIPTION

1. The Global Environmental Facility (GEF) provides grants for projects with the potential to reduce greenhouse gas (GHG) emissions. The Asian Sustainable Transport and Urban Development (ASTUD) program was submitted to GEF by ADB and approved by the GEF Council in November 2011. ASTUD includes GEF funding for environmental improvements in Jiangxi Ji'an of US$2.75 million, to be implemented as co-financing for the ADB Jiangxi Ji'an Sustainable Urban Transport Project.

2. This note describes the scope of the GEF funded activities. It is based on discussions between ADB and leaders of Jiangxi Ji'an Municipal Government (JMG) and relevant agencies; Ji'an City Investment and Development Company; Ji'an Bus Company; Ji'an Traffic Police; and Jiangxi Planning and Design Institute. The discussions identified two key objectives for use of the available GEF funds: (i) improving the energy efficiency of existing and planned bus operations in Ji'an, and (ii) improving the integration of transport and land use planning and development in Ji'an. This will deliver savings in GHG emissions by reducing emissions from bus operations; reducing the need for travel in private cars; and encouraging walking and cycling through improved facilities and better land use planning and transport integration. It will also contribute to improved urban amenities and local air quality, and savings in bus operating costs. The components to be funded by GEF co-financing are described in the following table:

Component	**Description/Outcome**	**Budget** (USD)
1. Fuel Efficient Bus Operations – Hybrid Buses	Ji'an and similar smaller cities have been slow to adopt low-carbon technologies and concepts in urban public transport, including alternative energy sources, eco-driving/maintenance, and optimization of bus operation. This component will build awareness and capacity in energy efficient bus operations through a demonstration project that introduces diesel hybrid-electric buses into Ji'an public transport services; an associated eco-driving/ maintenance program; and fuel efficiency monitoring program (see Component 2). The Ji'an bus fleet is currently 100% diesel of mixed age and condition and there is little awareness of concepts such as eco-driving/maintenance and fuel efficient bus operations. The introduction of advanced hybrid buses into the Ji'an bus fleet will deliver direct GHG savings, and be a catalyst for further upgrading of the bus fleet to advanced clean bus technology. It will also enable scrapping of an equal or greater number of the Ji'an Bus Company's (JBC) oldest diesel buses; and in conjunction with other new buses to be introduced for BRT operations, will help to raise the image of bus services in Ji'an as a viable alternative to travel by private car. This component also includes training and supporting materials in eco-driving and maintenance techniques aimed at maximizing fuel efficiency on an ongoing basis. This is expected to add significantly to the overall direct GHG savings. International experience points to around 5-15% fuel savings from eco-driving; an additional 5% or more from low cost measures to improve ongoing maintenance and monitoring of vehicles; and larger initial gains from targeting the 10-15% of vehicles and drivers with the worst fuel economy record. The eco-driving/maintenance program will initially focus on the GEF-funded new hybrid buses, and the 80+ BRT buses expected to be	$1,900,000

	purchased under the baseline project. However building on the success in terms of reduced GHG emissions and operating costs, the same approach would then be replicated across the entire bus fleet.	
2. Fuel Efficient Bus Operations – Evaluation and Monitoring of Hybrid Bus Performance	Ji'an has a wide range of bus operating conditions, from wide boulevards to narrow back streets; from congested major corridors to free-flowing streets; and with the baseline BRT project in operation, a mix of BRT, feeder and urban non-BRT services. Ji'an also has an existing fleet of diesel buses and new BRT buses to be procured under the baseline project to use for comparison. This provides an opportunity to use the hybrid buses to be procured under Component 1 to conduct a set of carefully-designed and controlled trials that compare the performance of hybrid buses and other technologies under a range of operating conditions. This component will support (i) the design and supervision of carefully-designed and monitored trials of hybrid buses under a range of operating conditions in Ji'an; (ii) the analysis of the results to extract general conclusions regarding the GHG performance of hybrid buses versus other technologies; (iii) documentation of the findings in English and Chinese suitable for professional and industry audiences; and (iv) preparation of the information resources and base data for sharing broadly through online knowledge sharing portals. The results would be of broad interest and substantial value to other cities in China and elsewhere that are evaluating the likely GHG performance of hybrid buses under their local conditions.	$86,300
3. Integrated Transport/land use System Planning	The Jiangxi Ji'an Sustainable Urban Transport Project will link existing city centers to new development areas and will be a catalyst for urban development and renewal. This creates opportunities for avoiding unnecessary motorized travel through integrated transport, land use and access planning and other measures. This component will build local capacity in low carbon transport and urban planning and prepare associated demonstration projects for implementation by JMG. It will involve three key activities: (a) Identifying specific transit-supportive development (TOD) opportunities and work with the JMG to identify and establish mechanisms for mobilizing investment in TOD through public and private sector financing channels. (b) Reviewing the existing and planned greenways and non-motorized transport (NMT) facilities in Ji'an; identifying opportunities for better planning and integration with each other and with transit facilities; developing planning principles for NMT integration; and identifying specific opportunities for small scale investments by the JMG to implement these principles. Based on this analysis, a roadmap will be prepared for integration of transport, land use and access planning in Ji'an. (c) Knowledge sharing through institutional capacity building and workshops on key topics in low carbon planning principles. In addition, information resources created by this component will feed into the ASTUD/ADB-STI Knowledge Sharing network for broad access and sharing.	$560,000
	Fees and Project Management Costs	$203,700
	Total	**$2,750,000**