

## Development and Application of Potentially Important Jute Geo-textiles

### Request for Proposals

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The Common Fund for Commodities is inviting bids from suitably qualified consultants/consulting firms to conduct a mid-term evaluation *cum* technical assessment of the above-mentioned project.

The aim of the project is to strengthen the technical and commercial acceptability of jute-based geo-textile materials for use in two identified applications. These relate to **soil erosion control** for riverbank protection and hill slope stabilization and to their use in **rural road construction**. The project operates in Bangladesh and India. Analysis of the jute supply chain and the international market perspectives for the use of jute geo-textiles in the project countries and in alternative, more developed, market economies like the USA and the EU are foreseen in the project. In addition, corroborative performance tests under controlled conditions are to provide scientifically acceptable results, contributing to the acceptability of the outcomes of the field trials.

The project is funded by the Common Fund for Commodities (in part with funds made available through the OPEC Fund for International Development) with substantive counterpart contributions from the Indian government and the government of Bangladesh. Total project budget is around USD 4 mln of which the Common Fund is covering about 50% through a grant. The project is being implemented by the National Jute Board (India) which is the Project Executing Agency (PEA). The PEA is responsible for the overall technical and administrative management of the project. The International Jute Study Group (IJSG) acts as the project's technical Supervisory Body (SB). Extensive project information is available on the website [www.jutegeotech.com](http://www.jutegeotech.com). The five-year project has started in end 2009 and is now due for an external, independent "mid-term" evaluation.

**Proposals:** Interested consultants or consulting companies are invited to submit their proposals outlining proposed methodology, work programme, time frame and budget. An account of relevant past experience/corporate profile should be included, duly reflecting the qualifications sought from the consultants as mentioned under "Profile of the Consultants" (below). Interested individual consultants are advised to team-up with experts having complementary capabilities, in order to be able to submit a joint proposal. One consultant shall thereby be identified as the "lead consultant", being the formal contract partner for the Fund.

The costs of the proposals are not expected to exceed US\$ 40,000 (including travel), based on a two-person evaluation team. Although the contract will be awarded on a lump-sum basis, the financial proposals should include a transparent breakdown of the total number of days worked, applicable daily fee, travel costs, DSA/local expenses, etc. The Fund reserves the right not to award a contract if no suitable proposals have been received.

Proposals (marked: "Evaluation CFC/IJSG/21") should reach the Common Fund by 21 September 2012 cob, addressed to:

The Managing Director  
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The Netherlands  
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## Terms of Reference for Consultants

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### Background

1. Objective and Scope of the Project: ***The overall objective of the project is to determine and demonstrate the effectiveness of jute geo-textiles (JGT) in the two pre-identified promising applications (soil erosion control and rural road construction) and to demonstrate their competitiveness vis-à-vis synthetic materials currently in use for both applications.*** An important consideration is that no sufficiently documented and accepted test and field trial results appear to be available which are satisfactory to decision makers in the relevant certification agencies. These certifications on performance of the different materials are seen as an overriding requirement for a larger uptake of jute as geo-textile material. The project aims initially at reasonably accessible “local” markets in Bangladesh and India, while including a study component looking to more distant and more competitive geo-textile markets in Europe and the USA.
2. Jute geo-textiles have been identified as an opportunity for the development and introduction of a technically and financially competitive product, which eventually could claim a substantive market share in a growing market, thus far dominated by synthetic materials. Experience has shown that expansion of the relatively limited uptake in current applications requires a concerted effort towards establishing, *inter alia*, technical performance criteria of different materials used under different conditions and for specific uses. Soil conservation and rural road construction have been identified as most promising. Key in this regard is the development of accepted standards and performance indicators which are based on clearly described, scientifically acceptable, controlled trials and experiments, both in laboratories as well as in the field. In particular, the certification of the trials and the trial outcomes by relevant regulatory bodies are considered key to ensure the acceptability of the outcome by the various market parties.
3. Various studies have concluded that jute-diversified products (like Jute Geo-textiles) have the potential to secure a larger share of the global geo-textiles market, especially in the sectors of soil erosion control and strengthening of rural roads. Studies and applications so far undertaken have not been comprehensive enough for large scale acceptability and adoption. What is needed is to dispel the apprehensions of the end-users and to initiate steps to work on the untried technical issues. The earlier studies and field applications carried out so far on soil erosion control and rural road construction have substantiated the efficacy of the appropriate variety of jute material. The applications, however, did not focus on design and manufacture of application-specific and function-orientated varieties of jute geo-textiles. Added to this short-coming is absence of appropriate standards on applications of jute in the sectors of soil erosion control and rural road construction.
4. The project has the following three main components: (1) Market needs assessment and supply chain analysis; (2) Identification of potentially important jute geo-textiles based on performance evaluation; (3) Manufacturing of identified/selected JGT and its standardization. The project has been described in detail in the Project Document (dated 14 August 2009).

### Objective of the Evaluation

5. In accordance with the requirements of the Fund, a mid-term evaluation has been scheduled to take place in the third year of project operations. This mid-term evaluation which has to be undertaken by independent, external consultants shall comprise of, but shall not be limited to, an assessment of the progress made with respect to implementation of the project, the prospects for reaching the targets set therefor and proposals for any corrective measures required. In addition, the evaluation should assess the completeness of overall project design which should include, but not be limited to, *inter alia*, identification/formulation of activities, selection of appropriate project partners (at personnel as well as at institutional level) as well as involvement of pertinent direct/indirect ultimate decision makers.

6. The mid-term evaluation will also include an overall assessment of the effectiveness and efficiency with which the project is being implemented and, in particular, to provide a detailed technical assessment of the component-wise and of the overall results obtained so far. The evaluation shall specifically focus on the likelihood of achieving the expected results through implementation of the foreseen project activities. The evaluation shall include a thorough assessment of the (envisaged) complementarity of current-project activities with earlier implemented programmes utilizing JGT in the project countries and the evaluation of the results thereof. This assessment should confirm the absence of undue duplication of application trials.

7. While the emphasis will be on the project as it has been designed and implemented thus far, the consultants should also assess the considerations that have led to the design of the project itself, given the stated objective of the project, and comment on the perceived usefulness/appropriateness of the various components (as well as the explicit and/or implicit assumptions underlying the current design) given the overall objectives of the project.

8. Where necessary and feasible, recommendations for additional or revised activities for the remaining operational period for the project should be given, taking into account the remaining funds and time.

### **Profile of the Consultants**

9. The mission will preferably consist of two experts with extensive knowledge and experience in the field of erosion control and rural road construction and the relevant utilization of (preferably jute) geo-textiles in those applications. In particular for soil erosion control this should include knowledge of the current applications in markets like the EU and the USA. The consultants should be capable of analyzing project achievements *vis à vis* the existing formal requirements/impediments governing the potential application of JGT in these markets. They should have an adequate insight in the financial/economic determinants which impact on the chances for successful commercial introduction and utilization of jute geo-textiles in the identified applications in the identified markets.

10. The consultants shall be capable to act as independent evaluators of the project, having not been involved in any of the activities to be evaluated nor being formally linked to an organization which is an important operational partner in the project.

11. The consultants will be contracted by the Fund for the duration of the mission. The PEA, responsible for the overall implementation and management of the project, will organise the travel programme of the mission in consultation with the Collaborating Institutions, the Fund and IJSG as appropriate.

12. If deemed required or useful, the PEA and Project Managers in India and Bangladesh will be available for the mission as resource persons and accompany the mission during the visits to the project sites in India and Bangladesh.

### **Programme of Work**

13. The basis of the assessment will be the project design, budgeting and implementation arrangements as described in the Project Document (dated 14 August 2009), the subsequently produced Annual Work Programmes and Budgets and in the Progress and Technical Reports prepared during implementation.

14. The consultants will visit technical and pertinent institutional partners as deemed relevant and will visit a number of trial sites in both countries. In India, a total number of 16 locations have been selected for the project covering the three applications for river bank erosion control, hill slope stabilization and rural road construction. In Bangladesh, activities are focusing on 10 trial sites. As the number of sites is substantial and as they are spread over both countries, a tentative programme to visit selected trial locations is given in Annex I. The consultants in their proposed approach of the assignment should feel free to add pertinent parties they may wish to consult or locations to be visited during the assignment.

15. Fielding of the mission is envisaged for November 2012. The final travel programme will be prepared by the PEA in consultation with the members of the evaluation team.

16. While the programme is tentative and subject to modifications if and as considered pertinent by the consultants, it is envisaged that the evaluation could be conducted within an overall time span of about two (maximum three) weeks. This might exclude travel from the home office – Kolkata vv.

17. The PEA/Project Managers will provide the consultants with the following documentation, after finalisation of the contractual arrangements:

- Project Document;
- Progress Reports for project years 2010 and 2011;
- Annual Work Programmes and Budgets for project year 2010, 2011 and 2012;
- Technical notes and reports prepared by the PEA and contracted project partners;
- Other documents as required and available.

### **Reporting**

18. The report will be the report of the independent evaluation mission and may not necessarily reflect the views of the Fund, IJSG, the PEA or the Collaborating Institutions. The main findings and preliminary conclusions of the mission, however, will (to the extent feasible) be discussed with the concerned parties prior to the departure from the various project locations and, where possible, consensus on conclusions will be achieved.

19. The report of the mission shall be prepared along the lines of the Fund's recommended/standard format for a project evaluation report (ref Annex II), be it that the

mission should feel free to add sections/information as deemed pertinent. The length of the report should normally be in the range of 30 - 50 pages (excluding annexes).

20. The report shall be prepared in draft and submitted to the Fund, in electronic form, within two weeks following the completion of the field travel. The Fund shall share the report with the International Jute Study Group and the Indian National Jute Board, inviting observations of a factual nature, which will then be shared with the consultants. The report will be finalized by the consultants after having considered the observations received. The final evaluation report will be submitted, in ten copies and on diskette/CD (in MS Word) to the Fund not later than two weeks after the evaluation team has received the comments from the three parties. The Fund will arrange for further distribution of the final report to the IJSG, the PEA and the Collaborating Institutions.

## Annex I

### Provisional (proposed) programme of meetings and location visits

Site(s) to be visited	Programme	Visiting route & approx. time taken for inspection of the site(s) including travel time	Present status of JGT application at the site(s)	Most expected status of JGT application by Nov'12	Remarks
NJB office at Park Street  Test Track at Rajarhat, Kolkata.  Visit to the facilitating agencies	<b>Day 1</b> Morning	-	-	-	Introductory meeting
	Afternoon	Kolkata to Rajarhat by road –2½ hours	Construction completed in March, 2012	Evaluation in progress.	Prototype study site for rural road constructed by application of JGT.
	Evening	Visit to IJT / IJIRA at Kolkata by road - 3 hours	-	-	Meeting and inspection of the testing facilities available for testing JGT.
Visit to JGT manufacturing mill  Visit to the facilitating agency	<b>Day -2</b> Morning	Visit to Gloster Ltd. By road – 5 hours	-	-	Inspection of the JGT manufacturing facilities
	Afternoon	Visit to BESUS by road on return from Gloster Ltd. – 3 hours	-	-	Perusal & review of data collection
Visit to a rural road/ river bank application site	<b>Day -3 &amp; 4</b>	Sites under consideration situated at South 24-Parganas (W.Bengal) / Malda (N.Bengal)/ Agartala (Tripura)	Depending on suitability on consideration of proximity /application status	-	Inspection of the application of JGT to address soil-related problem
Visit to Hill slope protection management sites at Ooty.  Night halt at Ooty.	<b>Day 5</b> Morning	Kolkata to Coimbatore by air. Coimbatore to Ooty by road – 4 hrs.		Application expected to be completed by Aug-Sep, 2012	Inspection of the application of JGT to address soil-related problem

Site(s) to be visited	Programme	Visiting route & approx. time taken to reach the site(s) from Kolkata	Present status of JGT application at the site(s)	Most expected status of JGT application by Nov'12	Remarks
Visit to site no. 1, 2 & 3 at Ooty.       Night halt at Ooty.	<b>Day 6</b> Morning    Afternoon	Visit to site (Site No. 1) at CSWCRTI Research Farm- 1 hour  Visit to site 2 & 3 2 ½ hrs.	JGT Application completed on May, 2012. Site ready for application. JGT supplied	Evaluation in progress  Application expected to be completed by August, 2012	Inspection of prototype study site for hill slope protection by application of JGT.  Hill slope management by using JGT
Return from Ooty to Kolkata.  Night halt at Kolkata.	<b>Day 7</b>	Return from Ooty to Kolkata.			
Kolkata to Dhaka.       Night halt at Dhaka.	<b>Day 8</b> Morning   Afternoon	Kolkata to Dhaka by morning flight reaching Dhaka by 09.00 AM. Introductory meeting with JDPC at Dhaka Visit of Bangladesh University of Engineering & Technology (BUET) (2 hours).			Introductory meeting with Jute Diversification Promotion Center (JDPC) at IJSG conference room/JDPC office, Dhaka.
Visit to Rural Road Application site and visit to JGT manufacturing mill at Narsingdi    Night halt at Dhaka.	<b>Day 9</b>	130 km by road crossing River Meghna by Ferry – 8 – 10 hrs.	JGT laying in progress	Application expected to be completed	Visit of JGT field trial site for rural road at Banchharampur, Dist.- Brahmanbaria and Janata Jute Mills Ltd, Ghorasal, Narsingdi, back to Dhaka by 10.00 PM.

Site(s) to be visited	Programme	Visiting route & approx. time taken to reach the site(s) from Kolkata	Present status of JGT application at the site(s)	Most expected status of JGT application by Nov'12	Remarks
Meeting at Dhaka.	<b>Day 10</b>	Meeting with Facilitating Agencies (FAs)/Project Partners of Bangladesh. Meeting with Jute Geo-textiles Standardization Committee for Bangladesh.			
Return to Kolkata.	<b>Day 11</b>	Leave Dhaka arrival to Kolkata.			
Meeting with PEA, Facilitating Agencies and Standardization Committee of the India part of the project at Kolkata.	<b>Day 12</b> Morning  Afternoon	Meeting at NJB.  Meeting with PEA.			Queries and collection of project related information.  Winding up meeting



## **Annex II**

### **Standard structure of the evaluation report**

#### **I. Executive Summary**

- Main findings
- Major recommendations

#### **II. Introduction**

- Period and place(s) of evaluation
- Composition of the evaluation team

#### **III. Description of the Main Elements of the Project**

- Brief description of the commodity covered (1 to 2 pages maximum)
- Problem(s) to be addressed by the project
- The means applied to solve the problem(s)
- Stated beneficiaries
- Results to be achieved
- The main players involved
  - SB
  - PEA
  - Collaborating Institutions
  - Others
- Country coverage
- Relation to other projects financed by the CFC

#### **IV. Analysis of Project Objectives**

- Importance of the problem(s) addressed for the commodity and the beneficiaries
- Relevance to poverty alleviation
- Suitability of the means to address the problem(s)

#### **V. Implementation Analysis**

- Management of the project and its activities, including annual work plans
- Timeliness of implementation, achieving milestones
- Factors favourable and/or detrimental to project implementation
- Appropriateness of adjustments made during implementation
- Availability of co-financing and counterpart contributions
- Adherence to budgets

#### **VI. Impact Analysis**

- Project results against objectives and targets
- Economic (and social) importance of project results
- Impact on other factors (if any), such as environment
- Reaching the direct and indirect beneficiaries, including effectiveness of dissemination of project results
- Sustainability and replicability of project results

**VII. Lessons Learnt**

- Project design
- Project appraisal
- Implementation/operational aspects
- Sustainability

**VIII. Recommendations**

- For follow-up of the project

**IX. Annexes**

1. Methods applied for the evaluation
2. Work schedule
3. Places visited and persons contacted
4. Other sources of information