Document of
The World Bank

Report No. T7470-UR

TECHNICAL ANNEX

FOR A

PROPOSED LOAN

IN THE AMOUNT OF USD 18.5 MILLION

TO

THE ORIENTAL REPUBLIC OF URUGUAY

FOR A

FOOT AND MOUTH DISEASE
EMERGENCY RECOVERY PROJECT
(FMD-ERP)

July 9, 2001

Argentina, Chile, Paraguay and Uruguay Country Management Unit
Environmentally and Socially Sustainable Sector Management Unit
Latin America and the Caribbean Region
CURRENCY EQUIVALENTS
(as of July 9, 2001)

Currency Unit = Uruguayan Peso (Ur$)
1 Ur$ = US$0.073
US$1.00 = Ur$13.75

WEIGHTS AND MEASURES
Metric System

ABBREVIATIONS AND ACRONYMS

- CODESA - Departmental Animal Health Commission
- CONAHSA - National Honorary Commission for Animal Health
- DGSG - General Directorate of Livestock Services
- DICOSE - Livestock Comptroller Division
- DSA - Animal Health Division
- FAO - Food and Agriculture Organization
- FMD - Foot and Mouth Disease
- GDP - Gross Domestic Product
- GOU - Government of Uruguay
- IBRD - International Bank for Reconstruction and Development
- ICB - International Competitive Bidding
- IE - Implementing Entities
- IS - International Shopping
- LCS - Least-Cost Selection
- MGAP - Ministry of Livestock, Agriculture, and Fisheries
- MEF - Ministry of Economy and Finance
- NCB - National Competitive Bidding
- NS - National Shopping
- OIE - Office International des Epizooties – World Organization for Animal Health
- PANAPFTOSA - Pan American Foot and Mouth Disease Center
- PMR - Project Management Report
- QBS - Quality Based Selection
- SOE - Statement of Expenditures
- UEP - Project Executing Unit

FISCAL YEAR
January 1 to December 31

<table>
<thead>
<tr>
<th>Regional Vice President</th>
<th>David De Ferranti</th>
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<tbody>
<tr>
<td>Country Director</td>
<td>Myrna L. Alexander</td>
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<tr>
<td>Sector Director</td>
<td>John Redwood</td>
</tr>
<tr>
<td>Task Team Leader/Task Manager</td>
<td>Michael Carroll</td>
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THE REPUBLIC OF URUGUAY
TECHNICAL ANNEX FOR A PROPOSED
FOOT AND MOUTH DISEASE
EMERGENCY RECOVERY PROJECT

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1. COUNTRY BACKGROUND

General background

1. After a rather disappointing economic growth in the late 1980s, which averaged less than one percent between 1988 and 1990, most of the 1990s was a period of improved macroeconomic performance in Uruguay. Real GDP growth averaged 4.4 percent per annum between 1990 and 1994, but there was a subsequent downturn in economic activity as a result of the 1995 economic recession, which led to a 1.4 percent decline in GDP that year.

2. The economy recovered after this crisis, showing a healthy average 5.1 percent growth per annum during 1996-1998, only to decline again due to the economic recession that hit the country in 1999 as result of the devaluation in Brazil and weak commodity prices. The economic situation was further aggravated by the onset of a severe draught during the second semester of that year, which hampered agricultural and livestock production as well as the associated agroindustrial sub-sectors. The economy declined by about 2.8 percent, in 1999, and by a further 1.1 percent in 2000.

3. The relative importance of the agricultural sector (including livestock and forestry) in the economy has fluctuated between 10 and 12 percent of GDP in the last 15 years. By 2000, the agricultural sector's contribution to GDP has been estimated at about 10 percent. During the early 1990s, the agricultural sector experienced fast growth based on productivity gains and grew slightly faster than overall GDP. Growth peaked in 1994, but the sector continued to grow at about 5 percent in 1995, despite the overall economic crisis that was affecting the country that year. During the second half of the 1990s, however, adverse weather conditions and other external shocks made the sector very volatile, ending the decade with a decline in GDP of 7 percent in 1999 and a further 3 percent in 2000.

4. These sectors, which are strongly export-oriented, doubled during a relatively short period of time during the 1990s through productivity gains, improved quality and the opening of new, more selective markets. Agricultural exports represent about 66 percent

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1 Following the Mexico crisis that affected the economies of important trading partners in the region.
2 Measured in 1983 constant prices.
of total exports, of which nearly two-thirds represent livestock products and the remaining are crops. If agricultural sector-related agro industries are included, then the sector is responsible for nearly 75 percent of total exports, thus providing an important contribution to the national economy.

5. Given that sector development could not be based on an expansion of the "agricultural frontier", sector growth during the first half of last decade was fuelled by increased investment and a more intensive application of capital to the existing natural resource base. Producers financed those investment through commercial credit and, as a result of a worsening income/debt ratio due to falling product prices, indebtedness of the sector increased to about 67 percent of sectoral GDP in 1998 and is estimated to have reached 85 percent in 1999 and 100 percent in 2000 jeopardizing not only future investment but, in times of crisis, also the normal operation of farms.

6. With respect to the livestock sector, according to DICOSE\(^3\), in the year 2000 the national herd was estimated at about 10.4 million cattle and 13.0 million sheep. Live-weight production of meats during the 1997/1998 agricultural year was 860,000 tons of beef and 126,000 tons of lamb, while 78,300 tons of unwashed wool were produced in that same year. Milk production has increased from 700 million liters in mid-1970s to more than 1.54 million liters in 2000.

7. At present, the livestock sector represents 6 percent of the total GDP\(^4\), and employs about 141,000 workers, in approximately 50,000 farms that cover 94 percent of the total agricultural land. About 69 percent of these farms are devoted to livestock production and occupy about 71 percent of agricultural land, some 20 percent of them are engaged both in livestock and crop production and occupy 22 percent of the land and the remaining 9 percent are dairy farms and occupy only 6 percent of agricultural land.

8. The livestock sector is crucial for the country's exports. Beef exports alone account for 15 percent of total exports, averaging 250,000 tons and about US$360 million in revenues during the last five years. By 2000, these exports had increased to over US$400 million mainly to Brazil, European Union, Israel, Chile, United States, Canada, Mexico, Japan, Korea, Canary Islands, Hong Kong, Singapore and Saudi Arabia. The major markets of destination for dairy products are Brazil, Argentina, Mexico, Peru, Venezuela, Colombia and the United States.

\section{The Foot and Mouth Disease Outbreak}

\subsection{The outbreak}

9. Up to the early 1990s, Foot and Mouth Disease (FMD) -a highly contagious viral disease that affects bovines, sheep and swine- was a persistent constraint to further development of the livestock industry in the region. After a successful campaign to eradicate FMD in the nineties, Uruguay remained FMD-free for several years (last outbreak in 1990) and

\[^{3}\text{Livestock Comptroller Division (Divisi}ó\text{n de Contralor de Semovientes, DICOSE).}\]

\[^{4}\text{Measured in constant 1983 values.}\]
was declared “FMD-free without vaccination” by the OIE (Office International des Epizooties - World Organization for Animal Health) in May 1996. As a consequence, Uruguayan meat exporter had been able to gradually open up selective export markets in Europe, Asia, and North America, reaching a total of US$412 million in 2000. This allowed the development of a more diversified demand from countries all over the world that permitted the maximization of the value of the animals slaughtered. The most valuable beef cuts from the back quarters were sold to the European Union while the front quarters were shipped to Israel. Manufacturing grade beef for hamburgers was sold to the USA, Mexico, and Canada. Some special cuts were being sold to South Korea and Japan. Apart from making the best possible use of the carcasses, this mix of demand also made it possible to increase the rate of slaughter of the Uruguayan stock, which climbed to near 20 percent in the year 2000 compared to less than 15 percent in the 1992-94 period. Leaner animals were slaughtered thanks to the possibility of shipping that kind of beef to the North American market.

10. In late October 2000, the first outbreak of FMD in ten years was reported in the north of the country. The incident was successfully contained to only one department - Artigas, - and eradicated with the use of the stamping-out or “sanitary rifle” method (slaughter of all infected and healthy animals within a five kilometer radius from the focus). Following OIE’s sanitary prophylaxis guidelines for the prevention and control of the spread of the disease, 425 animals of the outbreak herds were destroyed and several thousand more in the surrounding areas. An estimated US$2.0 million from an existing contingency fund was used to pay compensation to 1,000 affected farmers for the loss of animals and income due to the prohibition to restock for a period of three months, and the disruption of marketing of products from the area. As a result of the Government’s fast and effective response, the country regained its sanitary status in February 2001, thus enabling it to fully resume exports to selective markets within the FMD-free commercial circuit and to continue to seek new markets.

11. Unfortunately, against the background of worsening animal health conditions in Argentina, Paraguay and Brazil, a new outbreak of the disease was detected in late April 2001. This time, a herd in the southwestern department of Soriano was initially reported as presenting mild symptoms of the disease in very few animals, and the immediate response was the application of the sanitary rifle measures. However, by the third day, the outbreak had quickly turned into a multi-foci occurrence not only within the department but also in other adjacent departments, indicating a common source in the presentation of the epidemic, probably because of the uncharacteristically weak symptoms and low virulence with which the agent (virus “A 24”) presented itself.

12. Moreover, the speed at which the disease began to spread indicated that the initial response, based on the use of sanitary rifle, was technically insufficient to stop the disease from spreading, and economically not feasible, given the number of animals that would have to be destroyed. By the fifth day, 56 foci had been reported in eight departments and the Government of Uruguay (GOU) stopped the use of the sanitary rifle. By the ninth day the disease was present in 13 out of the 19 departments and GOU

5 The October 2000 outbreak was caused by the Type 01 virus.
extended mandatory vaccination of bovines to the rest of the country under a regionalized vaccination program, which gave priority to the most affected areas and critical herds, such as dairy.

13. As of May 31, 2001, the outbreak had spread to 18 of the country’s 19 departments through 1204 foci, affecting herds with a total of 940,000 head of cattle—almost 10 percent of the national herd, 19,000 clinical cases and 175 dead animals. By mid June the total number of foci had climbed to over 1,600 and, although at a sharply declining rate, it is expected that appearance of new cases will continue for 30 to 60 more days. So far, the outbreak has mainly affected bovine cattle.

**Preliminary damage and economic impact estimates**

14. The April 2001 outbreak brought to a standstill the beef and dairy sectors and left an already financially embattled sector of producers facing the prospect of increased costs and lower returns. The need to engage in a massive vaccination of the herd, in addition to other direct and indirect costs incurred, has added another burden to an already weakened economy.

15. Preliminary estimates indicate that damages are vast. The direct costs involved in the implementation of the initial sanitary containment measures during the April 2001 outbreak, which include the disposal of 5,424 head of cattle, 1,511 sheep and 333 pigs, amounted to over US$2 million. The costs involved in the secondary round of containment measures, which include the costs of vaccinating cattle in the immediate vicinity of the affected areas and the costs of the nationwide vaccination campaign covering the entire cattle herd that will follow, are estimated at US$18.2 million.

16. There are other indirect costs, which are more difficult to quantify but nevertheless are important for the sector. Some of these costs, for example, are related to the loss of premium external markets and the disruption of other markets that were absorbing many of the main livestock export products. Other costs are those which will result from the shut-down of the meat-packing industry immediately after the outbreak as well as the scaling down of production in the medium-term until new marketing channels are opened and sales stabilize. The meat packing industry confronted financial obligations derived from processing of US$60 million worth of products that faced marketing problems, which will have serious financial and fiscal implications for the State as well as affected producers, industrialists, and workers. Fiscal implications of this outbreak include the decline in fiscal revenues, due to the reduced production of the meat packing industry and marketing of livestock, as well as increased fiscal expenditure, due to unexpected compensation for laid-off labor workers and expenses incurred in the containment of the epidemic.
2. IBRD RESPONSE AND STRATEGY

Government Response

17. Government response to the 2001 outbreak was swift. The sanitary rifle was applied without delay and immediate attempts were made to isolate the affected area. However, it soon became clear that this was a much worse outbreak than the one in late 2000, more virulent and spreading more rapidly into the main livestock and dairy producing areas. Moreover, the effectiveness of the first method of containment used (sanitary rifle) was significantly reduced because of difficulties in determining the primary index case among the simultaneous focal points in the new outbreak. This fact, combined with the strong producers’ resistance that the sanitary rifle met, led government authorities to revise the containment strategy in favor of vaccination.

18. A massive vaccination campaign started in early May 2001, giving priority to the herds located near the border with Argentina. This was followed by vaccination in the departments along the border with Brazil and, finally, a vaccination campaign covering the rest of the national cattle herd. For vaccination to be effective, the campaign has to be repeated one month later; hence, the government will start a national vaccination campaign again in July 2001, to be repeated twelve month later.

19. In addition to epidemiological containment measures, the GOU has recently sent a set of economic measures to Parliament to assist livestock producers. These measures include the reduction of the social security contributions by the farming and the industrial sectors, the elimination of the capital tax paid by farmers and a reduction in diesel-oil price.

20. International solidarity also evident immediately. Argentina and Brazil donated 760,000 and 100,000 vaccine doses respectively, with a combined estimated commercial value of about US$260,000.

Response Gap and IBRD Response

21. Despite GOU’s quick response and the assistance received from Argentina and Brazil, a large gap remains until achieving full containment of the epidemic and recovery from its negative impact. The response by IBRD to meet emergency recovery assistance needs is through the proposed FMD-ERP, financed by a new IBRD loan of US$18.5 million to help GOU implement its epidemiological containment strategy and plan while preserving stock and restoring production levels and markets for the livestock sector.

Lessons Learned

22. Relevant lessons for the design of FMD-ERP are drawn from two sources: (i) previous IDA/IBRD-supported emergency projects outside Uruguay, and (ii) other IBRD-supported projects in Uruguay. Important lessons drawn from past IBRD/IDA-financed emergency projects that are reflected in the design of the FMD-ERP include: (i) the speed of appraisal and implementation is crucial to project success;
(ii) procurement needs to be flexible and procurement management should start early;
(iii) mitigation measures should always be included against a repeat disaster; and (iv) a
need for simple and flexible design and rapid execution.  

23. Other relevant lessons for the design of the proposed project point to the following: (i)
emergency project objectives should be consistent and cohesive, with an adequate project
implementation period. FMD-ERP incorporates this lesson in its design by focusing on
the vaccination component and ensuring an adequate implementation period; (ii)
emergency loans should have no policy reforms or other similar conditions for
disbursement. This lesson is also reflected in FMD-ERP; (iii) emergency loans should be
simple in design and consistent with the borrowers' institutional capacity to prepare and
implement projects. This lesson is reflected in the design of FMD-ERP by using an
existing implementation unit, familiar with implementation of projects with external
financing, established in the line Ministry of Agriculture under an ongoing IBRD project,
to coordinate and manage the implementation of the project's various components.

Rationale of IBRD Involvement

24. The Bank has provided continued direct support to rural development, and the livestock
sector in particular, for several decades through various operations dating back to 1959.
More recently, through its assistance strategy, the Bank has also been instrumental in the
implementation of macroeconomic reforms and the introduction of sector specific
policies leading to a progressively distortion-free economic environment, the promotion
of investment and the adoption of technology at the root of the greatly improved sector
performance of the 1990s. Throughout this period, the Bank has established fluid and
efficient working arrangements with MGAP and other relevant sector agencies that
would be involved in project activities.

25. In addition, the Bank will provide managerial and technical input during project
implementation via project supervision - which has proven to be an important element of
project success in other emergency assistance projects.

3. PROJECT DESCRIPTION

Project Rationale

26. Having opted for massive vaccination of the herd, this would imply a second round (after
the May 2001 campaign) of vaccinations in June/July 2001 for adult cattle, which will
have to be repeated again in February, March and May 2002 respectively. Additionally,

6 Drawn from: Gilbert, Roy and Kreimer, Alcira, 1999. "Learning from World Bank's experience of natural disaster related
assistance", Urban Development Division; and Kreimer, Alcira, 1990. "Lessons learned from emergency lending",
calves would have to be vaccinated in October-December 2001 and again twelve months later. Following a two-year period with vaccination after the last recorded case, vaccination could be discontinued. After two years without vaccination and free of outbreaks, the country is expected to regain its without-vaccination FMD-free sanitary status.

27. Successful implementation of the strategy to regain FMD-free sanitary status, however, would require not only an effective vaccination campaign, but also an improvement in the monitoring and surveillance system and a strengthening of public awareness and education about the disease in order to ensure long-term sustainability of the measures taken. Provisions will be made to coordinate domestic surveillance efforts with those of neighboring countries in order to institute an effective Early Warning System, to incorporate lessons learned from the two recent incursions of the disease, including a re-examination of contingency plans and the risk analysis, and to allow for external monitoring of these efforts in order to maintain transparency and the credibility earned throughout the process followed to achieve FMD-free sanitary status. This would be combined with measures to regain access to export markets that normally buy beef from countries with FMD. In the short run, this would include an aggressive campaign to explain to actual and potential clients the effectiveness of Government actions to stop the disease as well as reestablish commercial contacts and marketing channels in those countries that had been abandoned when the country had access to more lucrative market as a result of its FMD-free status.

Project Objectives

28. The objectives of the FMD-ERP project is to provide technical and financial support to the GOU to help contain and mitigate the impact of the outbreak of the Foot and Mouth disease through: (i) vaccination of the national herd; (ii) strengthening of the monitoring and surveillance capacity of the country to prevent eventual future outbreaks from spreading beyond the directly affected area; and (iii) identification of alternative markets for Uruguayan beef in the short-run and restore the country’s presence in the premium beef market in the long-run. The project would contribute to minimize the short and medium term impact of the emergency by defraying the substantial and unexpected expenditures incurred in the implementation of the comprehensive containment and recovery plan.

Project Description

29. To achieve the above objectives, the project would be implemented over a period of two years and would provide, financial and technical support for the following components:

1. Epidemiological Containment Program (US$19.8 million; or 82 percent of total cost; see Appendix 1)

30. Within this component, the project would include:
(a) four vaccination campaigns for the 10.4 million head herd of adult cattle (two already undertaken) and two campaigns for calves (estimated at 2 million head).

(b) the sanitary rifle campaign: under this component, financed entirely through counterpart funding, the project would account for the compensation to farmers whose cattle were destroyed by the sanitary rifle at the beginning of the 2001 containment campaign plus the partial replenishment of the Contingency Fund implemented for that purpose and currently exhausted; and,

(c) purchase of portable livestock management equipment, to facilitate the vaccination and control of animals.

2.- **Strengthening of Monitoring, Surveillance and Control Systems (US$3.1 million; or 13 percent of total cost; see Appendix 2)**

31. Through this component the project would finance:

(a) strengthening of the DICOSE Information System to track animal movements and sales, which would include the purchase of improved hardware, electronic identification tags to be used on a pilot basis on calves born in 2001, updated software and technical assistance to design the improved system and train the operators; and

(b) strengthening of sanitary barriers in key points in the interior of the country and at the country’s 21 border passes.

3.- **Training, Education and Awareness (US$0.9 million; or 4 percent of total cost; see Appendix 3)**

32. The purpose of this component would be to improve the awareness of local producers of the importance of early detection of eventual future outbreaks, to increase the information of present and potential importers about the measures adopted by Uruguay to combat the disease and to try to recover some of the lost export markets. To that end the project would finance:

(a) an Internal Awareness Program which would involve the design and implementation of training and education programs for mainly small scale livestock producers in the various regions and the public in general; and

(b) an External Awareness Program which would include: i) visits by Government officials and local producers to key export markets to explain the current situation in the sector; ii) the invitation of delegations form the main export markets to visit the country for an on-the-ground assessment of the measures adopted and their impact in terms of the containment of the disease, and (iii) visits to, and workshops in the MERCOSUR countries, plus the preparation and publication of relevant printed material.
4.- Project Coordinating and Management (US$0.2 million; or 1 percent of total cost)

33. Project implementation would be conducted by an adequately staffed and equipped existing Unit within the Ministry of Livestock, Agriculture and Fisheries. The project would finance one additional staff, to work within the existing Project Executing Unit (Unidad Ejecutora del Proyecto, UEP) of the on-going Bank-financed Natural Resources Management and Irrigation Development Project\(^7\) (PRENADER, Ln. 3697-UR), and the incremental operating costs that this Unit will face as a result of the new responsibilities that it will assume in connection with the various project activities. GOU would assume the responsibility to keep the UEP functioning and to finance its operation after PRENADER’s closing.

Project Cost and Financing

34. Total project cost is US$24.0 million of which baseline project costs are estimated at US$23.1 million, with a foreign exchange component of US$18.1 million (79 percent) and taxes and duties estimated at about US$0.6 million, or 2.5 percent of total cost. About 82 percent of total project costs are accounted for by the epidemiological containment program, a further 13 percent would be absorbed by activities oriented towards the improvement of the monitoring, surveillance and control system; 4 percent of the costs is allocated to the training and education activities and, finally, the Project Coordinating Unit will account for the remaining 1 percent of the project costs. Physical and price contingencies have been applied to all items, except to those eligible for retroactive financing. Detailed estimated project costs are presented in Appendix 4, and are summarized by component in the table below.

<table>
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<th>Component</th>
<th>Project Costs (US$M)</th>
<th>Costs (%)</th>
<th>Bank Financing (US$M)</th>
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35. The proposed financing of US$18.5 million would cover 77 percent of total project cost, with the GOU financing the remaining 23 percent, or US$5.5 million, including US$0.6 million in taxes and duties.

\(^7\) Proyecto de Manejo de Recursos Naturales y Desarrollo del Riego, PRENADER.
36. Retroactive financing of up to US$7.03 million, or 38 percent of the loan, would be available to finance the cost of the two vaccination campaigns undertaken already (May and July 2001). The relatively high proportion of retroactive financing is justified by the critical need to have two vaccination campaigns within a period of one month and the time constraint that forced vaccination to take place prior to Board presentation (See Appendix 4) 8. About 92 percent of total project costs are accounted for by goods, a further 5 percent by services, and the remaining 3 percent by incremental operating services. No infrastructure expenditures are expected under the project. A breakdown of the financing plan and the estimated disbursement schedule is presented in Appendix 5 of this document.

4. INSTITUTIONAL ARRANGEMENTS FOR PROJECT IMPLEMENTATION

Project Organization and Management

37. The project would be executed by the Ministry of Livestock, Agriculture, and Fishery (MGAP). MGAP will be responsible for the overall supervision, coordination and monitoring of the implementation of the various project components, provide the necessary support for project implementation and approve annual operation plans.

38. Implementing agencies. The vaccination campaigns will be responsibility of the Division of Animal Health (Division de Sanidad Animal, DSA) within the Department of Livestock Services (Dirección General de Servicios Ganaderos, DGSG) of MGAP. DSA is currently responsible for the execution of any Sanitary Program and Campaign promoted by Government through its 43 Local and Area Offices distributed throughout the country. For the execution of the Foot and Mouth vaccination campaigns, DSA would use its existing staff and equipment both at the central and regional level. The improvement of the current information system would be implemented directly by DICOSE, the Division within MGAP-DGSG that manages and operates the system, with the assistance of UEP. Strengthening of sanitary barriers, both in the interior of the country and at the borders, as well the project’s internal awareness and training activities would be implemented also by DSA. Finally, the implementation of the External Awareness Program would be responsibility of DGSG, in coordination with the UEP, following the guidelines to be established by MGAP prior to loan effectiveness. All implementing agencies would be responsible for the preparation, and subsequent submission to the UEP for approval, of: (i) semi-annual action plans and work programs; (ii) procurement documents; and (iii) semi-annual progress reports.

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8 Once immunization has been chosen as the best way to control a FMD outbreak, the first vaccination has to be followed by a second one no more than 4 weeks later, in order for the strategy to be effective.
39. **Stakeholders’ participation.** There is long tradition of participation of farmers and private veterinarians in official health campaigns. This participation has been given institutional form through the National Honorary Commission for Animal Health (*Comisión Nacional Honoraria de Salud Animal, CONAHSA*) and the Departmental Animal Health Commissions (*Comisiones Departamentales de Salud Animal CODESA*), working in 18 departments of the country. CONAHSA is formed by the Director General of the Livestock Services, the Director of Animal Health, a delegate from the Uruguayan Veterinary Society and three delegates from the main farmers’ organizations (*Asociación Rural del Uruguay, Federación Rural and Cooperativas Agrarias Federadas*).

40. The eighteen CODESAs work in co-ordination with CONAHSA and are integrated by an official veterinarian, a veterinarian from the departmental veterinary center and three farmers from the departmental producer organizations.

41. CONAHSA meets normally twice a month to discuss animal health issues and any animal health campaign that is being either planned or executed by Government. In the particular case of the proposed project, CONAHSA would discuss, during its first meeting in August 2001, the project’s operating plan for the rest of the year. Subsequently, in January and July 2002 and January 2003, CONAHSA would analyze progress in project execution and review the UEP’s six monthly report on project implementation. An important input to these reports will be the information provided by the CODESAs on their assessment of project activities in their respective areas.

42. **Overall Coordination and Monitoring of Project Activities.** The MGAP would be assisted in the day-to-day management, monitoring and coordination of project activities by the UEP of the on-going World Bank-financed Natural Resources Management and Irrigation Development Project (*PRENADER, Ln. 3697-UR*), which is currently operating under MGAP. One accountant would be added to its staff to ensure that the additional responsibilities that the implementation of this project would involve could be discharged efficiently. The UEP will have the responsibility and mandate to: (i) approve the bidding documents prepared by the implementing agencies and purchases or contracts carried out within the framework of the project activities; (ii) monitor and coordinate project implementation by the implementing agencies, including procurement planning and scheduling; (iii) report to the Minister of Livestock, Agriculture and Fisheries on progress of project implementation; (iv) provide assistance to the implementing agencies on procurement; and (v) prepare the necessary periodic reports—including SOEs and PMRs—to the Bank on progress of project execution and loan disbursement.

43. The Closing Date of the Loan will be October 31, 2003, while project implementation is expected to be completed by the end of April, 2003.

**Financial Management and Disbursement Arrangements**

**Accounting and Reporting**

44. The existing UEP/PRENADER within MGAP would be expanded to assume responsibility for managing all aspects of project financial management. Its current staff
will be reinforced by hiring an additional specialist in financial management and accounting.

45. The implementing entities (IE), with support from the UEP, will be responsible for all aspects of procurement including maintaining procurement progress reports and contract monitoring. These reports will be produced on a monthly basis and forwarded to the Project Director at UEP who will be responsible for ensuring these reconcile with the financial records. The IE’s will also be responsible for producing annual work plans, with their respective costs, which will be forwarded to UEP after approval by DGSG, for incorporation into the project’s overall annual budget. A project operating account, holding government counterpart contributions, will be managed by the UEP. That unit will also be responsible for keeping the records relating to this account and project accounts and to prepare the overall project financial statements.

46. Applications for payments (invoices) will initially be received at the relevant IE. The Accounts Assistant within each IE will be responsible for ensuring that the necessary approvals are obtained before forwarding these to UEP for processing and payment.

47. The Project Financial Management Officer of the UEP will be responsible for maintaining the project’s books of accounts and producing quarterly Project Management Reports (PMR’s). A copy of each PMR will be forwarded to each IE and MGAP periodically within two weeks of each quarter end. UEP will be responsible for forwarding these quarterly PMR’s to the Bank within 45 days of the quarter end.

48. UEP will be responsible for preparing project Withdrawal Applications and Direct Payment Applications together with the relevant Statements of Expenditures on which disbursements from IBRD will be based. Withdrawal Applications will be jointly signed by a nominated senior official of MGAP and the Director of UEP before submission to IBRD.

Special Account

49. The Special Account will be opened at the Banco Central del Uruguay under terms and conditions satisfactory to IBRD. It will have an initial allocation of US$1.0 million. Applications to replenish the Special Account would be submitted regularly, preferably monthly.

Auditing

50. Annual project financial statements will be produced by UEP and audited by the Tribunal de Cuentas, appointed under terms of reference satisfactory to IBRD. The auditor will also be required to express opinions on: (i) whether the Special Account funds have been correctly accounted for and used in accordance with the Loan agreement; and (ii) the adequacy of documents and controls supporting the use of the Statements of Expenditures as a basis for disbursements.
51. The audited financial statements will be submitted first to UEP for review. MGAP will be responsible for ensuring these are forwarded to IBRD within four months of the year-end.

**Retroactive Financing**

52. Retroactive financing of up to US$7.03 million, or 38 percent of the loan, would be available to finance the cost of the two vaccination campaigns undertaken already (May and July 2001).

**Procurement Arrangements**

53. The procurement of goods and works will be carried out in accordance with the Bank’s *Guidelines on Procurement under IBRD Loans and IDA credits* (January 1995, Revised January and August 1996, September 1997, and January 1999). Procurement of services will be done in accordance with the Bank’s *Guidelines on Selection and Employment of Consultants by the World Bank Borrowers* (January 1997, Revised September 1997, and January 1999). The Bank’s standard forms of contract will be used under the Project. Any services not financed by the Bank will be procured in accordance with the public procurement regulations of the country or the co-financing institution’s procurement regulations.

54. A general procurement notice will be published in the United Nations *Development Business*, announcing all procurement of goods on the basis of International Competitive Bidding (ICB) to be procured under the project. The detailed procurement procedures (including assessments, methods and thresholds to be used, and prior review limits) are presented in Appendix 6.

**Procurement of Goods**

55. **International Competitive Bidding (ICB).** Procurement of the second batch of vaccines for the 2002 campaign and office equipment, with contracts above US$250,000 will follow ICB procedures (for a total amount of about US$10.6 million).

56. **National Competitive Bidding (NCB).** Procurement of vaccines with contracts less than US$250,000 will follow NCB procedures.

57. **International or National Shopping (NS).** Procurement of goods below US$50,000, up to an aggregate amount of US$1.5 million, will follow international or national shopping procedures. These include purchase of disinfectants, sprayers, portable livestock handling equipment, office furniture and equipment for the UEP and project implementation agencies.

58. **Direct Contracting.** All vaccines purchased for the initial campaign of May/June 2001, as well as the doses required to vaccinate newborn calves in September 2001 would be purchased through direct contracting (for a total amount of US$8.3 million).
Consulting services

59. **Quality and Cost Based Selection (QCBS).** Selection and contracting of consulting firms to assist in the design and supervision of the improvement of the DICOSE monitoring, surveillance and control component, estimated to cost US$0.4 million, will be through QCBS.

60. **Individual Consultants.** Selection of individual consultants will be carried out in accordance with the provisions 5.1 through 5.3 of the *Guidelines on Selection and Employment of Consultants by World Bank Borrowers* dated January 1997 and revised in September 1997 and January 1999.

Project sustainability

61. Sustainability of project outcome would be achieved as a result of the integrated approach being implemented. The program encompasses activities directed towards quick containment of the outbreak, improved conditions for producers compliance of mandatory sanitary measures, strengthening of the monitoring and surveillance activities and heightening of public and producer awareness. This would be of utmost importance to regain efficiency and self-control of the voluntary epidemiological warning system, as well as increased support by the public in general to the maintenance of the FMD-free sanitary status.

Environmental and Social Aspects

62. No major environmental or social issues are foreseen under the project except for: (i) the appropriate burial (to avoid groundwater contamination) or other disposal of slaughtered livestock carcasses (if and when slaughtering might be needed to control possible new disease outbreaks); and (ii) disposal of disinfecting chemicals (such as iodine and sodium hydroxide) at decontamination checkpoints. So far, strict guidelines set by the Pan American Foot and Mouth Disease Center (PANAFTOSA), and agreed upon by the Mercosur countries, for the destruction of animals and disposal of carcasses, have been followed. These guidelines will be incorporated in the project operational manual, and in the event that conditions during implementation would require the re-establishment of sanitary rifle campaigns, the Bank would monitor adherence to such guidelines. Because of the need for environmental follow-up regarding the adequacy of the disposal procedures, the project is classified as Category B, but with no separate Environmental Analysis required.
5. PROJECT BENEFITS AND RISKS

Project Benefits

63. The project would assist the Government in its efforts to eradicate the Foot and Mouth disease from the country and to regain the Foot and Mouth Free Status that Uruguay enjoyed in the recent past. The main long-term benefit would be to livestock producers who, once the FMD-free status is re-established, will be able to maximize the value of their slaughtered animals through the diversification of their exports according to the particular demands of the different beef importing countries. The combination of lower prices and a less diversified outlet for the different types of beef is expected to result in annual loss of more than US$150 million, with the consequent loss in income for livestock producers. In the short-run the project would assist them to divert their exports to countries that do not demand a FMD-free origin of their beef imports, thus enabling them to partially compensate for their lost income as a result of the decline in their current exports. An estimated 50,000 livestock farmers are expected to benefit from the project.

64. The livestock sector in general would benefit from project activities geared towards improving border sanitary barriers that would reduce the risk of future outbreaks originated in the introduction of contaminated materials from neighboring countries. The strengthening of DICOSE’s information system would further contribute to a better surveillance and early containment system of any future outbreaks.

Project Risks

65. The main risks are associated with the deteriorating sanitary situation in the region, and the effectiveness of similar efforts in neighboring countries, which will require extreme caution to avoid recurrence of the current problem, in order to avoid jeopardizing Uruguay’s efforts to regain FMD-free status. However, a regional task force has been created in order to coordinate efforts and to ensure maximum efficiency of the measures currently being taken in the region to restore FMD-free status, mainly through specific interventions financed through the Training, Education and Awareness component. Project activities will directly support these measures.

Agreed Actions

66. During negotiations, conducted in Buenos Aires on July 2-3, 2001, agreements were reached with the Uruguayan delegation on a series of activities to be performed prior to loan effectiveness. These were summarized in the preparation and adoption of a final Project Implementation Manual, which includes the procurement action plan and a financial management plan.
THE REPUBLIC OF URUGUAY
FOOT AND MOUTH DISEASE EMERGENCY RECOVERY PROJECT (FMD-ERP)

APPENDIX 1: EPIDEMIOLOGICAL CONTAINMENT PROGRAM

General Background, Damage and Impact

1. Livestock production in Uruguay is a very important contributor to GDP and exports. More than 6 percent of GDP and more than 65 percent of total exports in the last five years came from this sector of the economy. Uruguay has 16 million hectares of farming land where 10 million beef cattle, 0.4 million dairy cattle and 13 million sheep graze openly on natural and improved pastures all year long. Annual beef production averages 860,000 tons on a live-weight basis, equivalent to 448,000 tons carcass weight, 56 percent of which is exported. Sheep meat production is 120,000 tons on a live-weight basis, equivalent to 55,000 tons carcass weight, of which 21,000 tons are exported annually. Dairy production amounts to 1.54 million liters per year of which more than 80 percent is processed and exported. There are roughly 45,000 farms engaged in beef and sheep production and 5,000 dairy farms in Uruguay, employing more than 140,000 workers. Uruguay total meat exports in 2000 reached 313,000 shipped weight tons, amounting to US$478 million in revenue.

2. The country’s livestock production had already been severely affected by the FMD outbreak that occurred on October 23, 2000 in the Department of Artigas, which was very rapidly and effectively controlled. The most recent outbreak on April 23, 2001 began in the Department of Soriano and very quickly spread to the rest of the country. Due to these outbreaks the country was excluded from the list of countries free from FMD without vaccination of the OIE, status that had been obtained on May 23 1996 after many years of hard work by Government officials, independent veterinarians and livestock farmers of the country.

3. The fight against FMD was established by law in November 1961, and became mandatory throughout the national territory. Since 1968, a systematic and mandatory vaccination program was carried out. At first only bovine cattle were included in the vaccination program, but from 1975 the ovine population was also included. The results obtained in the control of the disease led to the implementation of a domestic eradication strategy starting in 1987, and also within a regional framework since 1989.

4. The eradication strategy encompassed various stages and lasted from October 1987 to June 1994. In the first stage, systematic vaccination of sheep was discontinued on February 1988. Oil based vaccines were used beginning in 1989, using a strategy of routes of vaccination that gave priority to higher risk zones. Livestock farmers participated actively through national and local committees; official staff, private veterinarians and
farmers were trained on how to deal with eradication, and coordinated and integrated activities were held with neighboring countries.

5. By May 1994, the OIE recognized Uruguay as a country free from FMD with vaccination. On June 17, 1994, the country entered a second stage with the objective of being declared free from FMD without vaccination. Vaccine production was discontinued; vaccination of any animal was prohibited; a risk analysis committee was officially established; sanitary barriers were enforced at ports, airports, border crossings, and postal customs; feeding garbage to animals was prohibited; an intensive extension work on sanitary education was carried out; and, a model of sanitary surveillance was developed which included the training and the execution of sanitary drills by the various actors involved in FMD issues.

6. By May 1996, Uruguay was included in the list of countries free from FMD without vaccination. Since then, both officials and private entrepreneurs have made a big effort to obtain access to markets in FMD-free countries throughout the world. Significant import quotas were obtained from USA, Canada and Mexico for Uruguayan beef, and progress was also made to open up the beef markets of Japan and Korea. The widening scope of the access to beef markets all over the world had a tremendous impact on the increase of Uruguayan beef exports both in physical and monetary terms.

7. After the outbreak of April 2001, the disease spread very fast to every region of the country. On May 31, 2001, there were 1204 foci in 18 out of the 19 Departments of the country. Those foci represented many livestock farms carrying a current stock of 941 thousand head of cattle, 536 thousand head of sheep and 4,715 head of swine. The number of animals affected by FMD was 19,030 head of cattle -both beef and dairy-, 21 head of sheep and 40 head of swine. These figures make for a disease attack rate of 2.02 percent for cattle, 0.04 percent for sheep and 0.85 percent for swine. The number of animals that died because of the disease was 175 head of cattle and 20 head of swine whose replacement value would be approximately US$60,000.

8. The rate of daily declaration of foci increased dramatically after the fourth day of the outbreak and, since then, almost 40 new cases have been declared per day. During the first week, the programmed strategy involving the sanitary rifle was applied, and 5,424 head of cattle, 1,511 head of sheep, 333 head of swine were killed and various materials like hay bales were destroyed in the initial foci. Once the rate of new foci started to rise, there was a change of strategy and vaccination of cattle livestock was adopted with the endorsement of producers and GOU, through the relevant technical services.

Project Scope

9. The scope of this component of the Project consists in urgently achieving control of the FMD outbreak in Uruguay and the most rapid reinstatement of the country in the OIE list of FMD-free countries. The strategy to be applied is the vaccination of all livestock cattle in the country during May and June 2001, followed by a new vaccination period a month after the first one is completed. At the end of 2001, all the newborn calves will be vaccinated just once. In 2002, the scheme of vaccination will be repeated with an overall
livestock cattle vaccination twice in May/June and July/August followed by a single vaccination of the new born calves at the end of the year.

10. After this vaccination strategy is complete without the appearance of FMD outbreaks, Uruguay will request the OIE the FMD-free status with vaccination. From that point Uruguay will start the process of obtaining again the FMD-free without vaccination status that is expected to conclude favorably in the year 2005.

Description of the Epidemiological Containment Component

11. This component of the Project will cover the compensation to farmers for the livestock killed when the sanitary rifle was applied, during the April outbreak. The number of farmers affected were 19, most of them in the Department of Soriano. Their average herd size was 314 animals in Soriano, 198 in the Department of Colonia, 234 in the Department of Florida, and 73 animals in the Department of Rio Negro. The valuation of animals was made by a committee whose composition and procedures are determined by law. The committee was headed by an official veterinarian from DGSG, a representative of farmers, and a third participant nominated by the former two. They inspected the animals and once their value was agreed, they signed a form stating their approval. The affected farmer also signed the valuation form. There were 5,242 beef animals, 1,511 sheep and 333 pigs killed via the application of the sanitary rifle in April 2001.

12. Livestock killing under the sanitary rifle strategy entails the digging of a special deposit where the animals are shot and later covered by soil. There are certain conditions that have to be met regarding the depth, width and length of the trench according to the operational manual prepared by PANAFTOSA and agreed by the Mercosur countries. The excavation should be 3 mts. deep, and 3 mts. wide, and should provide for a length of 1.5 mts. for each animal. Bodies should be covered by soil and the surface should be thoroughly disinfected with an adequate disinfectant. Operators should stay in the foci for several days and should be provided with special equipment.

13. The component also includes the vaccination of all livestock cattle at four different times in both 2001 and 2002; the vaccination of all the new born calves in both 2001 and 2002; the acquisition of portable working facilities for performing livestock vaccination and control; and, the operating costs of handling the application of the sanitary rifle strategy and the vaccination strategy. Currently there are 10.5 million head of cattle in Uruguay, and the probable outcome for the next calving season will be around 2.5 million new-born calves. Both figures will probably be the same next year.

14. FMD vaccines have not been produced in Uruguay since June 1994. The necessary vaccine type to be used in the country according to the Official Veterinary Service has to be bivalent, and contain inactivated antigens of the type 01, the virus present in Brazil in last year's outbreak, and A 24, which is the virus present in Argentina and in Uruguay in the current emergency, plus oil adjuvant. The inactivation of the virus has to be carried out using a first order inactivant BEI (Binary Ethylene Imine). Providers of this kind of vaccine are located only in Argentina, Brazil, Paraguay and Colombia. Currently they are
running short of vaccines due to the sudden and unexpected outbreaks of FMD in all Mercosur countries during the last 5 months.

15. Vaccine purchasing priorities have been identified and their cost assessed on the basis of a quick analysis of the emergency. These data will be refined, the scope of vaccination adjusted, the cost re-assessed, and the number of cattle to be vaccinated might be revised.

Strategic Selection Criteria

16. The FMD control strategy has been prepared using the following criteria:

(a) since June 1994 Official Veterinary Services (DGSG) of MGAP developed a Contingency Plan and the corresponding manuals, to respond to outbreaks of FMD, which includes the declaration of National Sanitary Emergency, interdiction of the farms where the disease appears, assessment of the animals and goods to be destroyed, the application of the sanitary rifle, establishment of control and disinfection checkpoints between areas, banning the movement of animals and livestock products, serological monitoring, investigation, and epidemiological follow-up;

(b) the number of focal points after one week of the primary outbreak and the spreading of the disease to most departments of the country made it economically unreasonable to continue implementation of the Contingency Plan as it was set in 1994;

(c) vaccination with oil based vaccines providing long term immunity has an average protection rate of 74 percent which makes it necessary to repeat the vaccination after one month, to be sure that the level of protection reaches 100 percent according to the MGAP-DGSG and PANAFTOSA;

(d) calving season in Uruguay is from August to November and it is necessary to provide new born animals with the necessary protection during the lactation period and immediately after they are weaned which normally takes place from March to June;

(e) vaccination must be completed by the end of the year 2002;

(f) the need to comply with the Bank's guidelines on environment, resettlement and social aspects; and

(g) the emergency would not be financed by other external donors or agency with the exception of 760,000 doses donated by the Argentine Government and 100,000 doses donated by the Government of Brazil.
Cost Estimate


18. The cost of vaccination is based on the vaccination of the whole cattle herd in two occasions which is already under implementation, the vaccination of new born calves in October-November 2001 and the repetition of the vaccination schedule for the whole herd and new born calves in the year 2002, using international competitive bidding (ICB) method and pre-qualification.

Implementation Arrangements

19. MGAP will be the executing agency of this component of the Project. Overall technical responsibility will be on MGAP-DGSG. The day-to-day implementation of the project will be undertaken by DSA within MGAP-DGSG, and the overall coordination and administrative procedures by the existing PEU currently responsible for the implementation of the WB-financed Natural Resource Management and Irrigation Development Project (PRENADER Ln. 3697-UR).

Implementation Schedule

20. Implementation of this component of the Project will be spread over a period of two years. All the activities are scheduled for completion by April 2003.
THE REPUBLIC OF URUGUAY
FOOT AND MOUTH DISEASE EMERGENCY RECOVERY PROJECT
(FMD-ERP)

APPENDIX 2: MONITORING, SURVEILLANCE AND CONTROL COMPONENT

Sectoral Background

1. The outbreak of FMD has affected the country's livestock production and, as a consequence, relative damage to the credibility of the monitoring, surveillance and control system currently being applied and an important impact on the funding of the various activities.

2. One important aspect of the monitoring system has been the international agreements within the regional framework. In 1987 an agreement for the control and eradication of FMD in the basin of the River Plate was signed by Argentina, Brazil and Uruguay, and PANAFTOSA. Paraguay signed the agreement in 1992 and Bolivia in 1998. The geographical area covered by this regional agreement was vast and included the whole of Uruguay and Paraguay, the Provinces of Salta, Jujuy, Formosa, Chaco, Santa Fe, Buenos Aires and the Mesopotamia in Argentina, the states of Rio Grande do Sul, Santa Catarina and Parana in Brazil, and the Department of Santa Cruz in Bolivia. Due to high compliance with the terms of the agreement, Uruguay was included in the OIE list of countries free from FMD without vaccination in 1996, Argentina and Paraguay were included in 1997, and the states of Rio Grande do Sul and Santa Catarina in Brazil in 1998. This regional status was particularly favorable for Uruguay as a very large area surrounding the country was free from FMD without vaccination.

3. Uruguay developed during the last twenty years an improved animal health legal and institutional framework to deal with prevention, control and eradication of various animal diseases including FMD. In October 1989, a law on the eradication of FMD was passed through Parliament. This law and its regulatory decrees of 1990 and 1994 established the current regulatory and institutional system. The DGSG of MGAP was given authority to carry out all the necessary actions regarding FMD. During the preparatory stage of the eradication strategy emphasis was given to the control and detection of infected or carrier animals and their mandatory slaughter. Following this stage, the emphasis moved to the achievement of clinical absence of FMD through massive vaccination and mandatory slaughter of animals detected with the virus. The final stage of the strategy aiming at the preservation of the country as being free from FMD without vaccination, included the creation of a system of sanitary barriers in order to control the crossing of people and vehicles at borders, ports and airports, and the introduction of animals, plants, products and by-products of animal and plant origin, through any means of transportation.
4. There are 21 major sanitary barriers in the country. Eight are located at borders with Argentina and seven at the borders with Brazil. The rest of the barriers are located at airports or ports mainly in the River Plate and the Atlantic coast. The DSA of MGAP-DGSG is responsible for the effective control at the sanitary barriers.

5. The DGSG is divided in four divisions, each with its own responsibilities, and has a total of 299 veterinarians and agronomists, 763 technicians and 67 clerical workers. They are spread all over the country in 44 locations. The DGSG has a total of 125 vehicles and 150 motorcycles. Those closely involved with FMD issues are DSA and DICOSE. The DSA is staffed with 99 veterinarians, 291 technicians and 5 clerical workers. They have 78 vehicles and 150 motorcycles. DICOSE is staffed with 4 agronomists and veterinarians, 25 technicians and 36 clerical workers and they have 10 vehicles.

6. The DSA staff has been carefully trained in all the important issues involved in dealing with FMD. During normal times they check and control any suspicion of disease in places where there are livestock concentration in the country. There are 218 livestock auction markets in Uruguay evenly distributed in every Department. In most of these places there is at least one auction every month. Livestock health control and food safety issues in the 56 slaughter plants of Uruguay are dealt with through the Livestock Industry Division within DGSG.

7. DICOSE is responsible for monitoring the current livestock numbers and movements in the country and farmers ownership rights on them. Since 1974 they organized a compulsory annual declaration that has to be submitted in June by every livestock owner in the country, stating detailed information on number and location of cattle, sheep, horses and other animals. Transportation of live animals from any farm to any other place has to be declared in a transport certificate and a copy of this document has to be delivered to DICOSE. Average transportation figures per year would be two million head of cattle and two million head of sheep from farms to slaughterhouses, and about three million animals transported between farms.

8. DICOSE processes the annual declaration and produces a report with detailed figures for the entire country and for each Department. In the years 1997, 1999 and 2000 the information recorded was introduced into the GIS of PRENADER and maps with the geographic location of livestock were prepared which has been a very important support for DSA when dealing with the emergency. The information included in the transport certificate is normally processed by DICOSE. Limitations of various types such as lack of the necessary equipment and software, and shortage of trained personnel have proved to be a serious barrier to develop an efficient monitoring system based on the day to day movements of animals within the country using the information included in the transport certificate.
9. There is an active participation of livestock farmers and private veterinarians in the surveillance of the sanitary condition of the livestock population of the country. In 1989 Parliament created by law the National Honorary Commission for Animal Health (CONAHSA) which has to be consulted by MGAP before taking any decision related to animal health issues within the country. This commission is made up of the head of DGSG, the head of DSA, three representatives of the farmer unions and one representative of the private veterinarians. They meet regularly every 15 days. CONAHSA works in close coordination with 18 Departmental committees called CODESAs, which include one representative of DSA, one private practitioner representing the local chapter of the veterinarian union and three farmers representing local farmer unions. The CODESAs meet regularly every month and whenever requested by CONAHSA.

**Damage and Impact**

10. During the year 2000 when the FMD outbreaks in the Province of Chaco and Formosa in Argentina and in Joia in the State of Rio Grande do Sul in Brazil, the sanitary barriers of Uruguay were on special alert. Despite the strengthening of the system of control by providing barriers with more personnel and better equipment and disinfectants, in October 2000 there was an FMD outbreak in the Department of Artigas. An efficient application of the sanitary rifle strategy jointly with the complete isolation of the whole Department through the implementation of strict internal barriers, proved to be very successful and Uruguay shortly regained its status of country free from FMD without vaccination. The estimated direct cost of the emergency in Artigas has been US$2.5 million and the indirect costs for farmers in the Department and for the beef industry has been estimated in US$10 million.

11. In the second half of year 2000, and the beginning of 2001, FMD in Argentina spread first to the Provinces of Cordoba, Santa Fe and western Buenos Aires and finally to the Provinces of Corrientes and Entre Rios very close to the borders with Uruguay. Special attention was given again to the strengthening of the sanitary barriers at the border with Argentina. A great number of veterinarians and technicians of DSA were posted in the barriers and special equipment and inputs were provided for the inspection and disinfection of vehicles. FMD finally got through on April 23, 2001 and the first outbreak was recorded in the Department of Soriano. The sanitary rifle strategy was immediately applied in the same way as last October and strict internal barriers were set to avoid the spreading of the disease. Unfortunately the focal point was not the primary case and new focal points started to be recorded in Soriano. An enormous effort was made by official and private veterinarians and farmers to stop the spreading of FMD by establishing a large amount of internal barriers in every road and farm paths. Sprayers and disinfectant were used in the barriers and special protective clothing and boots were provided to people posted in them. As FMD continued to spread over more and more barriers were established in almost all Departments of the country. Finally the spread was so vast that after two weeks almost all barriers were lifted and there was a change in the sanitary strategy. The total cost of the
emergency operation in April and May in terms of disinfectants, equipment, special clothing and transportation costs, has been estimated in US$0.663 million. The damage to the country is very difficult to quantify. First cost estimates provided by the Ministry of Economy are US200 million taking into account the loss of premium external markets, the distortion of traditional beef, dairy and wool markets, and the decrease of beef and milk production of cattle affected by the disease.

Project Scope

12. This component of the Project consists in strengthening the capabilities of DSA and DICOSE in the public sector and private veterinarians and farmers, in order to develop an improved system of control of FMD, considering both the performance of internal and external regional barriers and monitoring of livestock movement within the country.

13. A well equipped, funded, trained and organized system of control of FMD in the country associated with solid and effective health policies in the regional framework, are the necessary conditions to regain Uruguayan status as a FMD free country which has been very important to diversify markets and expand beef production.

Description of the Component

14. This component of the Project will cover the payments of disinfectants, transport costs, and equipment effectively made by the Uruguayan Government during the emergency. There were two kinds of disinfectants used. The most abundant one was Virkon which is an environmentally friendly triple solution of potash monopersulfate made in Britain. Virkon price is US$26 per kilo and it was possible to buy only 6,500 kilos because world demand for this product has been very large in Britain as a result of their emergency with FMD. To complement Virkon, DSA bought 8,000 liters of acetic acid to be used at 2 percent concentration in water. The total amount spent on disinfectants in the internal barriers was US$182,000.

15. The disinfecting procedures in the internal barriers required transportation of official and private veterinarians, technicians and farmers. One hundred thousand kilometers were traveled at a cost of US0.31 per kilometer. It was necessary also to provide people working on the barriers with adequate protective garment. 115 portable sprayers, 1,000 Wellington boots and rubber outfits, and 5,000 breathing protectors were bought. The amount of money spent on these items was US$31,000 on transportation and US$50,000 on special equipment.

16. It is also important to cover the costs of maintaining the external barriers during the emergency. The DSA spent US$300,000 on disinfectants and US$100,000 on equipment during April and May 2001.
17. There is a need to help the Uruguayan Government in the strengthening of the external barriers in the near future. This component will cover the costs of buying disinfectants and equipment up until March of 2003. The total amount to be spent on disinfectants in various stages will be US$406,000 and on equipment another US$243,000.

18. This component will cover the cost of transforming the current DICOSE monitoring system into an effective, computerized system capable of monitoring all livestock movements in the country at any time. The requirements for this type of system is estimated to be US$ 531,000 of computer hardware, including network wiring and equipment and US$423,000 on specific software some of which will have to be specially tailored to Uruguayan needs. The identification of calves by using identification tags to be read electronically will amount to US$1.05 million assuming there will be a 75 percent weaning rate and 2.5 million calves in the next calving season. Government will continue the identification of livestock beginning next season once the new monitoring system is implemented.

19. Consulting services will be needed in order to design the new monitoring system, describe in detail hardware and software requirements and train DICOSE and DSA staff on how to run the system. The cost of the consulting services is estimated in US$422,000 and should start immediately after the Project starts.

Cost Estimate
20. The cost of monitoring, surveillance and control under this component of the project is US$4.08 million. The sanitary barriers component amounts US$0.65 million and the DICOSE component US$2.43 million.

Implementation Arrangements

21. The MGAP of Uruguay will be the executing agency of this component. The overall technical responsibility will be on DGSG/MGAP. The day-to-day implementation of the component will be undertaken by DSA and DICOSE. The overall responsibility for the coordination of administrative procedures will be the given to the existing PEU of the WB financed Natural Resource Management and Irrigation Development (PRENADER), WB Loan-URU 3697.

Implementation Schedule
22. Implementation of this component of the Project will take place from April 2001 to April 2003.
Background and Rationale

1. After being declared free of FMD without vaccination by the OIE, Uruguay managed not only to gradually open up selective export markets in Europe, Asia and North America, but also to access a much more diversified range of export markets, which enabled the country to place a different mix of beef products in the world market. As a result, during the second half of the 1990s, the sector witnessed an increase in the total volume of exports of beef products of various qualities which, despite declining world prices of beef, translated into an increase in the value of the livestock sector's total exports, reaching a total of US$412 million in 2000.

2. This mix permitted the maximization of the value of the animals slaughtered and, therefore, higher and more stable incomes for livestock producers. The most valuable beef cuts from the back quarters were sold to the EU. The front quarters were shipped to Israel. Meat for hamburgers was sold to the USA, Mexico and Canada. Some special beef products were being sold to South Korea and Japan. Apart from making the best possible use of the carcasses, demand for this mix also made it possible to increase the rate of slaughter of the Uruguayan stock, which climbed to near 20 percent in the year 2000 compared to less than 15 percent in the early 1990s. Leaner animals could now be slaughtered thanks to the possibility of shipping that kind of beef to the North American market.

3. The immediate consequence of FMD disease outbreak is twofold. On the one hand, the loss of premium markets and, on the other, the end of exports of a product mix that maximized the value of the animals, with the consequent reduction in livestock producers' incomes. Under these circumstances, the country has to embark on an aggressive campaign to regain credibility in the world market, by explaining clearly to actual and potential clients the effectiveness of the actions adopted by Government to eradicate the decease, but also to reestablish commercial contacts and open marketing channels again in those countries that do not demand a FMD-free origin of their beef imports. These markets had been abandoned by Uruguay when its access to more lucrative markets, as a result of its FMD-free status, made them unattractive. The opening of these export possibilities would be essential to compensate, partially at least, for the loss in income that livestock producers will experience during the next 4-5 years before Uruguay is declared free of FMD disease again.
4. The second line of action is to embark on a campaign to create awareness among authorities and producers in neighboring countries about the need to make a joint effort to both eradicate FMD disease and improve border controls to prevent the disease from spreading to other countries. The project would finance a series of workshops and visits for government authorities and producers in the MERCOSUR areas most affected by the disease, with the objective to create such an awareness and eventually reactivate the existing joint program for the eradication of the FMD disease in the MERCOSUR countries.

5. The third line of action is to create awareness among local producers, particularly small livestock and dairy producers, about the importance of buying animals from “safe” suppliers and the need for early warning of any suspicion of infected animals in the case of any future outbreak, as a way of minimizing the risk of new FMD outbreaks in the future or at least minimize their potential impact. To that end the project would finance a training, education and awareness program, with special emphasis on small livestock producers. The program would take mostly the form of a series of field days in the areas with the highest concentration of small producers, although some formal talks are also envisaged. Therefore, the project would finance the cost of printed material required for those field days, transport of participants and meals, and rental of lecture halls.

Description of the Component

External Awareness

6. With that objective in mind, the project would promote the visit of 12 missions, including Government officials and local producers, to the main potential markets to promote exports of Uruguayan beef and to the current markets to explain the effectiveness of the measures adopted to bring the M&F outbreak under control and, therefore, the temporary nature of the country’s present status in the world market.

7. These missions would be complemented with visits to Uruguay of 15 delegations of importers from the main markets for Uruguayan beef. The criteria for the selection of countries and importers to be invited will be defined prior to project effectiveness.

8. The project would finance the cost of the airline tickets and the daily allowance (at the prevailing UN rates) of both the Uruguayan delegations traveling abroad and the delegation of importers visiting Uruguay.

MERCOSUR Workshops

9. The project would finance 15 visits of government authorities and producers to visit neighboring countries and participate in one-day workshops with local counterparts in the MERCOSUR areas most affected by the disease. These workshops, apart from creating awareness about the problem, are expected to set the base for the preparation of an eventual joint program for the eradication of the FMD disease in the MERCOSUR.
10. The project would finance the cost of the airline tickets and the daily allowance (at the prevailing UN rates) of the Uruguayan delegations traveling to the MERCOSUR countries plus the costs involved in the preparation of printed material and the organization of the workshops.

**Internal Awareness**

11. Under this component, the project would finance a series of field days in the areas with the highest concentration of small producers and some formal talks to create local awareness among producers about the risks and prevention measures of the FMD disease. The project would finance the cost of printed material required for the field days, transport of participants and meals, and rental of halls for the formal lectures.

**Cost Estimates**

12. As the countries to be visited and the delegations to be invited have not been defined yet, the average cost of the activities to be financed under has been estimated at US$7,500 per Uruguayan delegation traveling abroad for about one week, assuming a delegation of 3 people flying economy class. In the case of importers visiting Uruguay it has been assumed also a delegation of 3 people visiting the country for about one week, but flying business class; about 5 percent of the funds have been earmarked for government hospitality expenditure on these delegations. In the case of the MERCOSUR visits and workshops, the assumptions are as follows: a delegation of three people flying economy class, UN daily allowance rates and a total stay of about a week. About 30 percent of the cost has been assumed to be the rental of the venue and hospitality expenditures for the workshops. Additionally, the project would finance the preparation of printed materials for both types of delegation, at an estimated cost of US$105,000.

**Implementation Arrangements**

13. The implementation of this component will be the responsibility of DGSG/MGAP, with the assistance of the Project Coordinating Unit. Criteria for the selection of countries and participants will be defined prior to project effectiveness.

**Implementation Schedule**

14. These missions would start soon after project effectiveness and are expected to take place over a period of 20 months, between September 2001 and April 2002. The selection of countries to be visited and the delegations to be invited during 2001 would be completed in August 2001, to enable the first missions to take place in September 2001.

15. The field days for the training and internal awareness program would start during the last quarter of 2001 and would be completed by the end of 2002.
THE REPUBLIC OF URUGUAY
FOOT AND MOUTH DISEASE EMERGENCY RECOVERY PROJECT
(FMD-ERP)

APPENDIX 4: PROJECT COST

Estimated Costs and Financing Plan
(US$ million)

<table>
<thead>
<tr>
<th>Components</th>
<th>Local</th>
<th>Foreign</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Project Cost /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epidemiological Containment</td>
<td>3.7</td>
<td>15.4</td>
<td>19.1</td>
</tr>
<tr>
<td>Monitoring and Surveillance</td>
<td>0.6</td>
<td>2.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Training, Education and Awareness</td>
<td>0.6</td>
<td>0.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Project Coordination and Management</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Base Cost</strong></td>
<td>5.0</td>
<td>18.1</td>
<td>23.1</td>
</tr>
<tr>
<td>Physical contingencies</td>
<td>0.1</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Price contingencies</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total Project Cost</strong></td>
<td>5.1</td>
<td>18.8</td>
<td>24.0</td>
</tr>
<tr>
<td><strong>Total Financing Required</strong></td>
<td>5.1</td>
<td>18.8</td>
<td>24.0</td>
</tr>
</tbody>
</table>

| Financing Plan                    |       |         |        |
| Government 1/                      | 4.5   | 1.0     | 5.5    |
| World Bank                        | 0.6   | 17.9    | 18.5   |
| **Total**                         | 5.1   | 18.8    | 24.0   |

1/ Including taxes and duties equivalent to US$0.6 million.
THE REPUBLIC OF URUGUAY
FOOT AND MOUTH DISEASE EMERGENCY RECOVERY PROJECT
(FMD-ERP)

APPENDIX 5: FINANCIAL MANAGEMENT ASSESSMENT

1. An assessment of the project’s financial management system was carried out by an accredited Financial Management Specialist (FMS). The review, which included visits from the project implementing agency, was based on the Bank's guidelines for "Review of Financial Management System", and focused on the assessment of the project's accounting system, internal control, planning, budgeting, financial reporting system, selection of an auditor, reviewed its equipment and staffing and strengths and weaknesses as required by the Bank under OP/BP 10.02.

2. The assessment confirms that the project satisfies the Bank's minimum financial management requirements. The project does not have yet in place an adequate project financial management system that can provide, with reasonable assurance, accurate and timely information on the status of the project (PMR) as required by the Bank for PMR-Based Disbursements. An action plan to address the situation was agreed with the borrower.

Executive Summary

3. The existing Project Coordination Unit (UEP) has adequate Financial Management capacity for the implementation of the proposed project. The UEP is currently fully staffed and operational and meets the requirements for a 4-B Certificate, however an Action Plan has been agreed upon by both PRENADER and the Appraisal Team during the mission of June 18 to 20, 2001, to finalize the PMRs (see below).

4. The FMS found that the UEP is actively working to establish a sound Financial Management System which would surpass the minimum requirements of the Bank (i.e., be eligible for a certificate 4-A for PMR-based disbursements), however, at the present time the new system is not fully implemented, and therefore a Certificate 4-B is issued along with this assessment. By the time of project effectiveness, it is expected that the new financial management system will be able to produce appropriate project management reports (PMRs).

5. The mission carried out a comprehensive Financial Management assessment of PRENADER’s UEP. The purpose of the assessment was to: i) perform a Financial Management (FM) Assessment of the project, including an evaluation of all major components of project financial management; ii) provide guidance and technical assistance to the UEP to assist it in reviewing a financial management system toward strengthening for project implementation; and iii) agree with the Borrower
to an Action Plan for establishing an FM system prior to the implementation of the project.

6. During the mission, the UEP had been provided with copies of the (i) Project Financial Management Manual; and (ii) the Guidelines and Terms of Reference for Audits of Projects with Financing by the World Bank in Latin America and Caribbean Region; which includes model Terms of Reference for the independent audit of the project. The mission also provided the UEP with a copy of the Financial Management Appraisal Checklist, which was reviewed during the mission.

**Financial Management System**

7. MGAP had established a UEP to execute the IBRD-3697-Loan (PRENADER) and at the time of the assessment, the Unit was fully operational.

8. The UEP has eight qualified personnel on staff, one certified accountant, two clerk/assistant, one IT specialist, one treasury assistant, one economist and two administrative staff. The team has been worked with Bank projects since 1993 and they are very familiar with the Bank’s requirements and procedures and understand the complexities of the PMR system. The mission was very satisfied that the accountant and the team assistant are fully capable to execute the financial management activities of the project.

9. The project would utilize a project accounting software named FLEXLINE, while PRENADER evaluates the development of planning and control module, that will be fully implemented six months after project effectiveness, it will be able to produce the PMRs for Bank management review. The Project will disburse under Traditional Method (SOEs). The project accounting system is adequate and can produce a number of traditional financial statements, some of which are included with the assessment package. The system has been in use since January 1994.

10. The UEP is finalizing a fully documented financial systems operational manual, which details the policies, procedures and regulations for the financial staff, it was agreed with UEP a due date on July 30, 2001.

**Accounting System**

11. The mission tested the project accounting system and found it to be adequate to manage the activities of the UEP. The accounting system follows International Accounting Standards, and the accountant is well versed in these standards. The accounting system is an accrual-based system, that allows expenses (and revenues) to be recognized during the period in which they occur, notwithstanding the flow of cash during the period.
Project Management Reports (PMR)

12. The UEP will produce quarterly PMRs six month after effectiveness, however the Project will disburse under Traditional Method (SOEs). The UEP would submit quarterly PMRs to the Bank within forty-five (45) days after the end of quarter (e.g. Jan. 1 - Mar. 31, due no later than May 15).

Internal Control

13. The UEP has an adequate system of internal controls. The duties of the financial staff are clearly segregated and there is a clear chain of authority. The accountant reviews payment orders only after they are verified and prepared by the clerk.

14. The UEP has an established fixed asset register, one that is updated only by the accountant and verified by the director (in the case of the purchase of new equipment, or disposal of old equipment). The mission tested this system and was satisfied with the level of security for fixed assets. The room where the financial staff (with the project’s files) is based is also secured to deny unauthorized personnel from entering without the appropriate electronic pass.

15. The mission evaluated and was satisfied with the levels of security in the information systems of the project. The accounting software is designed to restrict non-authorized users from manipulating, deleting or changing any of the financial information. Furthermore, there are user registers that monitor activity by user and by actions performed by the user within the system.

Flow of Funds

16. The mission discussed with the UEP the need to establish a Special Account, in the Central Bank of Uruguay Republic, where the funds from the loan will be deposited for project expenses. The mission also discussed the need to establish a project account for the counterpart funds from the government. UEP will be able to determine the level of counterpart funding at any given time.

Audit Coverage and Quality

17. The mission reviewed the current Terms of Reference for the Tribunal de Cuentas external audit, and found that the TOR was satisfactory following the model Terms of Reference in the handbook, ‘Guías y Términos de Referencia para Auditorías de Proyectos con Financiamiento del Banco Mundial en la Región de Latinoamérica y el Caribe”. The UEP has contracted Tribunal de Cuentas de la Republica del Uruguay to perform the Audit review.

18. The Mission has reviewed the Audit Report from PRENADER for 1999 and found the report to be well prepared, with the report issuing an Unqualified (clean) opinion on all the financial statements. The auditors are familiar with the Bank’s guidelines and requirements, have performed a satisfactory job in the most
recent audit. The audit report for the year ending December 31, 2000 was submitted by June 20, 2001 with no major observations.
THE REPUBLIC OF URUGUAY
FOOT AND MOUTH DISEASE EMERGENCY RECOVERY ASSISTANCE
PROJECT (FMD-ERP)

APPENDIX 6: PROCUREMENT CAPACITY ASSESSMENT AND ARRANGEMENTS


2. The methods to be used for procurement are described below and the estimated amounts for each method are summarized in Table A. The thresholds contract values for the use of each method are established in Table B.

Procurement Responsibilities and Capacity

3. MGAP will be responsible for day-to-day project implementation and will have the overall responsibility for project direction. MGAP has a many years of experience in implementing projects financed by the World Bank and the Inter-American Development Bank. In particular, procurement will be the responsibility of the UEP established within MGAP which has been implementing the Bank's “Natural Resources Management and Irrigation Development Project” since 1994. The UEP has gained substantial experience on Bank procurement policies and procedures, is well staffed, and has good organization and controls. Project implementation has been satisfactory and there has been no major procurement delays or other procurement-related problems. The UEP's procurement capacity was assessed by the Team's Procurement Specialist during appraisal and found to be adequate to plan and carry out procurement under the present emergency operation. The “Overall Procurement Risk” was assessed by the team's Procurement Specialist as “LOW”.
Procurement Arrangements

Procurement of Goods

4. Direct Contracting. The purchase of vaccines is the key element of the eradication strategy supported by the project. All vaccines purchased for the initial campaign of May/June 2001, were procured on a direct contracting basis from several international suppliers, based on availability. These vaccines would be financed by the Bank on a retroactive basis (up to US$7.03 million or 38 percent of the proposed loan). In addition, procurement lead times would not allow to follow competitive procedures to procure the doses urgently required to vaccinate newborn calves in September 2001. The justification provided for the direct contracting of both set of vaccines, as well as the process followed to procure the vaccines for May/June campaign were found to be consistent with Bank policy, as applicable to similar exceptional cases in response to natural disasters. The total amount of such direct contracting financed by the Project is US$8.3 million.

5. International Competitive Bidding. The second batch of vaccines required for the 2002 campaign will be procured following ICB procedures. In addition, ICB procedures would be utilized to procure office equipment packages estimated to cost more than US$250.000. The total estimated amount of such ICB procurement is US$9.8 million.

6. Shopping. Contract packages for disinfectants, sprayers, portable livestock handling equipment, office furniture and equipment for the UEP and the project implementation agencies estimated to cost less than US$50.000 would be procured following shopping procedures in accordance with paragraphs 3.5 and 3.6 of the Guidelines, up to an aggregate amount of US$1.5 million.

Consulting services

7. Quality and Cost Based Selection (QCBS). The project would finance consulting services procured following QCBS procedures to assist in the design and supervision of the improvement of the DICOSE monitoring, surveillance and control component, estimated to cost a total amount of US$0.4 million.
## Table A: Project Costs by Procurement Arrangements
(including taxes, duties and contingencies)

(US$ thousand)

<table>
<thead>
<tr>
<th>Procurement Method</th>
<th>International Competitive Bidding</th>
<th>Other a/</th>
<th>N.B.F.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Goods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaccines</td>
<td>7,719.0</td>
<td>8,161.1</td>
<td>-</td>
<td>15,880.1</td>
</tr>
<tr>
<td></td>
<td>(7,719.0)</td>
<td>(8,161.1)</td>
<td></td>
<td>(15,880.1)</td>
</tr>
<tr>
<td>Computer Equipment</td>
<td>2,052.3</td>
<td>-</td>
<td></td>
<td>2,052.3</td>
</tr>
<tr>
<td></td>
<td>(1,026.1)</td>
<td></td>
<td></td>
<td>(1,026.1)</td>
</tr>
<tr>
<td>Other Goods and Equipment</td>
<td>-</td>
<td>759.2</td>
<td>3,236.9</td>
<td>3,996.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(379.6)</td>
<td></td>
<td>(379.6)</td>
</tr>
<tr>
<td><strong>B. Consulting Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consulting Firms</td>
<td>-</td>
<td>422.0</td>
<td>-</td>
<td>422.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(325.0)</td>
<td></td>
<td>(325.0)</td>
</tr>
<tr>
<td><strong>C. Training</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>907.0</td>
<td>-</td>
<td></td>
<td>907.0</td>
</tr>
<tr>
<td></td>
<td>(753.0)</td>
<td></td>
<td></td>
<td>(753.0)</td>
</tr>
<tr>
<td><strong>D. Operating Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>176.9</td>
<td>530.4</td>
<td>707.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(136.2)</td>
<td></td>
<td>(136.3)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9,771.3</td>
<td>10,426.2</td>
<td>3,767.3</td>
<td>23,964.8</td>
</tr>
<tr>
<td></td>
<td>(8,745.1)</td>
<td>(9,754.9)</td>
<td>-</td>
<td>(18,500.0)</td>
</tr>
</tbody>
</table>

a/ Direct Contracting, international and national shopping, and consultant services

## Table A1: Consultant Selection Arrangements (optional)
(US$ million equivalent)

<table>
<thead>
<tr>
<th>Consultant Services Expenditure Category</th>
<th>QCBS</th>
<th>QBS</th>
<th>SFB</th>
<th>Selection LCS</th>
<th>Method CQ</th>
<th>Other a/</th>
<th>N.B.F.</th>
<th>Total Cost b</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Firms</td>
<td>0.422</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.422</td>
</tr>
<tr>
<td></td>
<td>(0.325)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.325)</td>
</tr>
<tr>
<td>Total</td>
<td>0.422</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.422</td>
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<tr>
<td></td>
<td>(0.3265)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.325)</td>
</tr>
</tbody>
</table>

a/ Include direct contracting of Project Implementing Unit
b/ Including contingencies

Note:
- QCBS = Quality- and Cost-Based Selection
- QBS = Quality-based Selection
- SFB = Selection under a Fixed Budget
- LCS = Least-Cost Selection
- CQ = Selection Based on Consultants' Qualifications
- Other a = Selection of individual consultants (per Section V of Consultants Guidelines), Commercial Practices, etc.
- N.B.F. = Not Bank financed

Figures in parenthesis are the amounts to be financed by the Bank Loan.
Table B: Thresholds for Procurement Methods and Prior Review

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Contract Value (Threshold) (US$)</th>
<th>Procurement Method</th>
<th>Contracts Subject to Prior Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Goods</td>
<td>≥ 250,000</td>
<td>ICB</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>50 – 250,000</td>
<td>NCB&lt;sup&gt;9&lt;/sup&gt;</td>
<td>First</td>
</tr>
<tr>
<td></td>
<td>&lt; 50,000</td>
<td>IS or NS</td>
<td>None</td>
</tr>
<tr>
<td>2. Consultant Services and Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuals</td>
<td>&gt;50,000</td>
<td>Individual Consultants</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>&lt;50,000</td>
<td>Individual Consultants</td>
<td>Only TORs</td>
</tr>
<tr>
<td>Firms</td>
<td>&gt; 100,000</td>
<td>QCBS</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>&lt; 100,000</td>
<td>QCBS</td>
<td>Only TORs</td>
</tr>
<tr>
<td>4. Operating Costs</td>
<td>N/A</td>
<td>N/A</td>
<td>None</td>
</tr>
</tbody>
</table>

Overall Procurement Risk Assessment:

LOW

Frequency of procurement supervision missions proposed: Once a year

<sup>9</sup> No NCB package is anticipated at this time.
### Table C: Allocation of Loan Proceeds

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Amount (US$)</th>
<th>Disbursement %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaccines</td>
<td>15,400,000</td>
<td>100% of foreign expenditures</td>
</tr>
<tr>
<td>2. Goods</td>
<td>1,340,000</td>
<td>100% of foreign expenditures, 100% of local expenditures (excluding factory cost), and 50% of other local expenditures</td>
</tr>
<tr>
<td>Computer equipment and other goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Consultant Services</td>
<td>300,000</td>
<td>97% of local expenditures for services of consultants domiciled within the territory of the Borrower and 100% of foreign expenditures for services of other consultants</td>
</tr>
<tr>
<td>4. Training, Education Programs and Workshops</td>
<td>700,000</td>
<td>78%</td>
</tr>
<tr>
<td>5. Operating Expenditures</td>
<td>100,000</td>
<td>50%</td>
</tr>
<tr>
<td>6. Front end Fee</td>
<td>185,000</td>
<td></td>
</tr>
<tr>
<td>6. Unallocated</td>
<td>515,000</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>18,500,000</td>
<td></td>
</tr>
</tbody>
</table>