

Document of  
The International Development Association  
Acting as Administrator of the Interim Trust Fund

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Report No. P-7005-KH

MEMORANDUM AND RECOMMENDATION  
OF THE  
MANAGING DIRECTOR  
TO THE  
PRESIDENT OF THE  
INTERNATIONAL DEVELOPMENT ASSOCIATION  
ON A  
PROPOSED INTERIM FUND CREDIT  
IN THE AMOUNT OF SDR 18.8 MILLION  
TO  
THE KINGDOM OF CAMBODIA  
FOR AN  
AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT

January 31, 1997

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## CURRENCY EQUIVALENT

(as of December 1996)

Currency Unit = Cambodian Riels

US\$1 = 2720 Riels

## **ACRONYMS**

APIP	Agriculture Productivity Improvement Project
ASM	Agriculture Sector Memorandum
AUSAID	Australian Aid
CARD	Council for Agriculture and Rural Development
CIRAD	Centre de cooperation internationale en recherche agronomique pour le developpement (France)
DANIDA	Danish International Development Assistance
DAHP	Department of Animal Production and Health
DGPH	Direction Generale des Plantations d'Heveas
DOA	Department of Agronomy
DOF	Department of Fisheries
DPSIC	Department of Planning, Statistics & International Cooperation
FAO	Food and Agriculture Organization
GDIHM	General Directorate of Irrigation and Hydro-Meteorology
GDP	Gross Domestic Product
IDRC	International Development Research Center (Canada)
IFAD	International Fund for Agricultural Development
IPM	integrated pest management
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MRD	Ministry of Rural Development
UNDP	United Nations Development Program

## GOVERNMENT FISCAL YEAR

January 1 to December 31

Vice President (Acting.):	Javad Khalilzadeh-Shirazi
Director:	Javad Khalilzadeh-Shirazi
Division Chief/Manager:	Jeffrey Gutman
Staff Member:	Christopher Redfern

CAMBODIA

AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT

Credit and Project Summary

Borrower : Kingdom of Cambodia

Implementing Agency: Ministry of Agriculture, Forestry and Fisheries

Beneficiary : N/A

Poverty : Program of Targeted Interventions.

Amount : SDR 18.8 million (about US\$27.0 million equivalent)

Terms : Standard IDA (ITF) terms with 40 years' maturity

Commitment Fee : 0.50% on undisbursed credit balances, beginning 60 days after signing.

Onlending Terms : N/A

Financing Plan : See Schedule A

ERR : ERR of 38% (improved seed production), 36% (animal health and production), 26% (IPM) and 11% (agricultural hydraulics)

Staff Appraisal Report: Report No. 15984-KH

Map : IBRD No. 27954

Project Identification : 4033

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**MEMORANDUM AND RECOMMENDATION OF THE MANAGING DIRECTOR TO  
THE PRESIDENT OF THE INTERNATIONAL DEVELOPMENT ASSOCIATION  
(THE ASSOCIATION ACTING AS ADMINISTRATOR OF  
THE INTERIM TRUST FUND)  
TO THE KINGDOM OF CAMBODIA  
FOR AN AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT**

1. I submit for your approval the following Memorandum and Recommendation on a proposed Interim Trust Fund Credit to the Kingdom of Cambodia for SDR 18.8 million (US\$27.0 million equivalent), on standard IDA (ITF) terms, with 40 years' maturity and 10 years of grace, to help finance an Agriculture Productivity Improvement Project (APIP).

**Country Background**

2. With a 1995 population of about 10.25 million and an estimated GNP per capita of US\$260, Cambodia is one of the world's poorest nations. In contrast to some of its neighbors with dynamic and fast growing economies, the country is still recovering from 25 years of war and isolation, during which much of its physical, social and economic infrastructure was destroyed.

3. The Cambodian Government elected in 1993 has embarked, with the support of the international community, on a comprehensive program of economic stabilization and rehabilitation that would help the country pursue its transition to a market-based economy. Major policy interventions have been directed at bringing down the budget deficit and rate of inflation, at raising tax revenues and improving tax administration, and reforming the monetary sector. The tighter financial policies have started to yield results, notably with a marked reduction in the rate of inflation and an increase in the rate of fixed investment. The stabilization program has been accompanied by a rapid growth in investment and economic activity, with GDP growth averaging 6 percent over the last three years. However, growth has been unbalanced, being concentrated in the urban construction and service sectors, and the rural economy has not yet experienced commensurate benefit. The task of helping Cambodia's rural poor to improve their incomes and standard of living remains huge. In consequence, the Government is concerned to accelerate efforts to develop smallholder agriculture and to establish the necessary capacity in its various agencies and training institutions responsible for agricultural development.

4. In fact, successful long-term development of agriculture will be crucial in helping Cambodia to meet the numerous challenges that it faces. Amongst these are the need to feed a population that, at its present growth rate of about 3% p.a., will double in 25 years, and to contain unsupportable urban migration by creating opportunities of productive employment in the rural economy for a young and growing population (about half are under 15 years of age). A critical challenge is therefore to rebuild the Government's capacity to plan, formulate and execute agriculture and rural development programs.

## **Sector Background**

5. The vast majority of Cambodian households depend on agriculture and its related subsectors of livestock rearing, fisheries and forest exploitation for their living, and may continue to do so for many years. Raising productivity in agriculture is therefore central to the country's development prospects. There are estimated to be about one million farming households, of which a substantial minority, perhaps as high as 35 percent, are headed by women without access to adult male labor. Agriculture constitutes about half of GDP and involves about 80% of the labor force. Crops, grown both for food and for other products such as rubber, account for roughly 30% of GDP, livestock raising for another 15%, fishing for an estimated 4 to 5%, and forestry for 1 to 2%. Rice is the most important crop, accounting for one-third of the total estimated value of agricultural production; rice, vegetables, fish and some meat are the staples of the Cambodian diet. Rubber and timber are the country's most important export commodities, recently comprising 75% of total recorded exports; but small quantities of other agricultural products, including live cattle, rice, fruits and fish, are also traded to neighboring countries, which represent important markets for future development of the sector.

6. Agricultural production recovered quite well over the last decade but productivity levels are still low compared with those in other countries in the region, indicating substantial opportunities for raising them through improved technology and other means. However, there are constraints on how quickly this can be achieved, relating to technical, economic and socio-political factors. Yield of main crops, especially rice, is low and unpredictable from one season to the next, dependent on climatic events. In both 1994 and 1996, extensive flooding resulted in considerable crop damage, amounting to about 15% of the normal expected crop. Above-average rice production in 1995/96, which permitted limited rice exports to be resumed, was attributable to favorable rainfall, an increase in the use of fertilizers and a restoration of natural soil fertility as a result of flooding of the central plains the previous year. Consequently, year-to-year fluctuations in rice supply are likely to recur.

7. The low and variable level of rice yields is the result of several factors, including a low proportion of cropped area under irrigation, difficulties in achieving satisfactory water control, poorly planned and designed irrigation schemes, variable soil conditions, and restricted availability of technology and inputs that could increase yields and reduce crop losses. Three decades of civil war have destroyed vital data and the technical knowledge needed to use them, depleted knowledge and management skills at community and household levels, and left many women with the responsibility of farm as well as household management. In parallel with urgent efforts to improve transport and social infrastructure that can help to improve villagers' access to markets, information and basic services, there is an equal need for investments to be made in rebuilding the knowledge base needed for sustainable long term development of agriculture.

8. Agricultural research, planning and development, including that of the economically important livestock, forestry and fishery subsectors, as well as management of water resources for agricultural uses, is under the responsibility of the Ministry of Agriculture, Forestry & Fisheries (MAFF), organized on the basis of seven technical departments which control their own staff in the provinces, with a total of about 12,000 employees. Although many of these staff

have useful training and work experience from earlier years, MAFF does not presently have the budget or the capacity for implementing major development projects. All agricultural research is presently being done under externally funded projects, for rice by IRRI under a project funded by Australia. France has discussed possible support for the re-establishment of a Cambodian research institute for rubber. Responsibility for coordinating rural development activities lies with the Ministry of Rural Development, which has about 1,200 employees and is involved in organizing rural water supply, rural roads, rural credit, village health and community development programs, often in conjunction with projects started by NGOs and international organizations. Important decisions by the Government affecting the relative roles and responsibilities of these and other agencies operating in the rural sector are taken by a Council for Agriculture & Rural Development (CARD) on which all agencies concerned are represented. The CARD is the Government's policy coordinating body for agriculture and rural development. Coordination of activities at provincial level is being decentralized to Provincial Rural Development Committees (PRDC), chaired by the Provincial Governors, and progressively to lower levels including elected Village Development Committees (VDC).

### **Country Assistance Strategy and Rationale for IDA Involvement**

9. In its presentations to the CG meeting held in July 1996, the Cambodian Government has made clear the top priority given in its development strategy to achieving early and sustainable improvements in agricultural production and poverty reduction in the rural areas. Furthermore, in the context of its efforts to reinforce the political basis for national reconciliation, the two Prime Ministers have repeatedly stressed the urgency of formulating and implementing sound projects for agriculture and rural development, as the principal means to bring about peace and security in the countryside. The Bank's assistance program fully reflects this priority, and the design of the proposed project responds to the strategic objectives set out in the Country Assistance Strategy dated January 28, 1997 and scheduled for Board discussion on February 20, 1997. Specifically the project supports the strategic objectives of "*enhancing rural development and natural resource management*" and "*improving the human resource base and reducing poverty*" (draft CAS, paras 39 and 42). Complementing the proposed project, identification has taken place of a possible IDA-financed Rural Development Project for FY98/99, with components for rural transport and water supply improvement, agricultural and other income-generating activities, and institutional strengthening at local levels in four northeastern provinces, which would build upon the agricultural field development programs to be started under APIP.<sup>1</sup>

### **Project Objectives**

10. The project's overall objective, in line with the major goals of government policy in the sector, is *the sustainable and broad-based improvement of smallholder agricultural productivity as a means to improved food security and increased rural incomes*. In the longer term, the agricultural sector is also expected to earn needed foreign exchange through exported surpluses,

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<sup>1</sup> Clarification of the policy and institutional framework for both of these projects has been assisted by preparation and discussion with Government and other agencies of an Agriculture Sector Memorandum.

save foreign exchange through import substitution, and contribute government revenue to cover investment and recurrent costs of providing public services to the sector. This goal recognises: (i) Cambodia's commitment to a market-based economic development strategy; (ii) that aggregate agricultural production is a function of decisions made by individual farmers, who already invest their own resources in agricultural production at high risk and for low returns (crop losses, crop failure, livestock disease/mortality, civil insecurity, unknown markets); and (iii) that reduced risks and increased returns could be assisted through improved farmer access to information, appropriate technology, inputs and markets.

11. The project's underlying premise is that MAFF has, and will continue to have, an important responsibility to the 80% of Cambodia's population who derive their livelihood from agriculture, which at present MAFF does not have the capacity to fulfil. As defined in MAFF's draft mission statement, its role is "to support the economic growth of Cambodia by providing high quality services which result in a secure food supply, increased agricultural output and add value on a sustainable and cost effective basis to the agricultural, fishing and forest based sectors". The project would help to build the necessary institutional capacity in MAFF, in part by implementing pilot field programs as a means of (i) gaining experience in the planning, organization and management of agricultural development programs; (ii) adapting, testing and demonstrating improved agricultural technology under field conditions; and (iii) more generally developing MAFF's understanding of and responsiveness to the needs of its client base.

12. The project would promote sustainable agricultural development by creating a MAFF that is enabling, responsive, accountable and cost effective. MAFF's evolving role and responsibility within a market-based economy will be to:

- (a) create an environment wherein smallholder farmers, who are predominantly poor and largely excluded from the market economy, can gain access to basic agricultural services and the opportunity to use new technology;
- (b) adapt, test, and demonstrate new technology appropriate to the country's different agro-ecological zones, which responds to local priorities and is economically beneficial to farmers;
- (c) regulate farming practices so as to ensure sustainability of natural resources and to protect the health and welfare of the rural population;
- (d) provide public, and some private, goods and services used by the agricultural sector (e.g. annual stocks of rice foundation seed) on a cost recovery basis;
- (e) license and regulate the provision of private goods and services (such as crop inputs, veterinary services and water) so that consumer and farmer interests are appropriately safeguarded.

13. Recognizing the above, the proposed project would consist of a coordinated five-year program to improve the quantity and quality of the technical, human and physical resources of MAFF needed to promote sustainable agricultural development. This would be achieved through

carrying out (i) programs in each of the main agricultural subsectors comprising essential knowledge acquisition, technology testing and adaptation, field development activities, priority rehabilitation investments, and (ii) a major effort in MAFF human resource development. The sum total of these activities should lead by project completion to the building of substantial capacity in MAFF to plan, coordinate and implement successful agricultural development programs for the benefit of and with the participation of the rural populations concerned, and to substantial benefits for farmers in the areas of the pilot field programs in terms of increased crop and livestock production. The project design is sufficiently flexible and comprehensive to provide a framework capable of absorbing technical assistance and other interventions for institutional strengthening of MAFF which may be provided by other donor agencies.

### **Project Description**

14. The project would comprise nine components addressing priority development needs of the MAFF. Five components would be carried out by MAFF technical departments, and three would be implemented from the Ministry level -- for strengthening agricultural planning and statistics, for establishing a human resource management capability, and for strengthening of provincial agriculture services. The other component would be the establishment of a project management unit within the Ministry to manage the project. Organization of the components by responsible department was adopted to facilitate preparation and management of the project; there would, however, be substantial collaboration fostered between the departments, both at headquarters and especially in the field, in implementing the project. The individual components are described below.

### **Agronomy, Seeds and Plant Protection**

15. This is the largest component, accounting for 29% of total costs. It aims at strengthening the capacity of the Department of Agronomy (DOA) to develop appropriate technologies and formulate technical recommendations to farmers for improving rice and other annual crop production, with a view to achieving greater food security and increased farmer incomes while ensuring sustainability of farming practices. The component does not seek to develop DOA's capacity to undertake research *per se*, but rather to fill the critical gap between research and extension. It aims to provide DOA with the capacity to: (i) coordinate agricultural research effectively, to ensure that research programs on crop technology are formulated in accordance with the country's priorities; (ii) collect and analyze regional and local data on the main factors of production, with a view to identifying constraints and improving the base of technical knowledge that supports agricultural policy making; (iii) test technologies developed by research with a view to formulating suitable recommendations to farmers; (iv) lay the basis for a modern seed industry in Cambodia capable of supplying farmers with higher yielding and better quality seed for rice and other food crops; (v) promote appropriate farming practices to ensure the sustainability of natural resources and protect the natural environment and the health of farming families from the increasing use of dangerous pesticides by educating them in IPM and other safer methods of pest control; and (vi) provide technical support to agricultural extension workers and other staff of the provincial agriculture services.

16. The DOA component would consist of: (a) a Technical Coordination and Capacity Building sub-component (US\$1.5m) and five technical sub-components: (b) Soil Fertility Management and Conservation (US\$1.0 m); (c) Farming Systems and Crop Diversification (US\$0.9 m); (d) Seed Production Program (US\$3.5m); (e) Plant Protection Service Establishment (US\$1.1m); and (f) Integrated Pest Management (US\$1.5 m). Each sub-component would receive technical assistance support and the necessary funding for training national staff, supplying equipment, construction or rehabilitation of selected infrastructure and incremental operating expenditures. Long term TA (one expert each for up to five years) for subcomponents (c) and (f) would be provided respectively by CIRAD (France) and the FAO regional IPM unit based in Manila; their salary costs are not included in the project.

### **Animal Health and Production.**

17. All types of livestock in Cambodia suffer from very high morbidity and mortality rates, due to the inability of Government or the private sector to deliver basic animal health services, for which there exists cost-effective technology and demand from farmers. This component of the project, to be implemented by the Department of Animal Health and Production (DAHP) and financed by IFAD, would build on the experience of successful NGO livestock programs and a pilot scheme started under the Bank's Emergency Rehabilitation Project (ERP). There would be three subcomponents: (a) Disease Control and Management (\$2.5 m) which would improve the DAHP's central support services for animal disease diagnosis and vaccine production; (b) a program for improving Basic Animal Health in four provinces where livestock raising is important for the local economy (\$2.2 m); and (c) Promotion of Animal Production through a pilot extension program for further raising productivity through improved animal husbandry and nutrition (\$0.2 m). Because subcomponent (b) involves the introduction of a system of privatized "village vets" to provide vaccinations and basic animal health services on payment by farmers, with training and start-up support from DAHP, it was agreed during negotiations that by December 31, 1997 the Government would adopt a national plan for training, registration and licensing of village vets satisfactory to IFAD and the Association. The base cost of the component as a whole, which would be financed in parallel by IFAD, is \$4.9 million.

### **Agricultural Hydraulics**

18. The agricultural hydraulics component of the project is intended to provide the General Department of Irrigation, Hydrology & Meteorology (GDIHM) with the basic skills, knowledge and equipment to function effectively not only as the MAFF department with the responsibility for managing water for all agricultural uses but also as the only government agency currently with the mandate to plan the use of water resources across sectoral and local boundaries. The component would consist of four subcomponents: (a) GDIHM Capacity Building (\$0.7m); (b) Hydrology Information System Development (\$1.0m); (c) Small Scale Agricultural Hydraulics (\$2.7m); and (d) Medium Scale Agricultural Hydraulics (\$0.9m). The four subcomponents are designed with two complementary objectives in mind: to help strengthen the technical, human and physical resources of the GDIHM; and to improve farmer incomes and food security in

selected pilot provinces through provision of water for supplementary irrigation as well as fishing, livestock and domestic use.

### **Fisheries**

19. The objectives of this component, to be implemented by the Department of Fisheries (DOF), are to improve the conservation and management of the capture fisheries, with a focus on freshwater fisheries; to improve the supply of fingerlings for low-intensity aquaculture of indigenous fish species; and to strengthen the Department of Fisheries in order to carry out its mandate. There would be three corresponding subcomponents: (a) fisheries conservation and management (\$1.5 m), comprising demarcation of fish sanctuaries in the Tonle Sap and some habitat improvement in the sanctuaries, equipping DOF fisheries inspection units for more effective fishery regulation enforcement, and related information and training activities; (b) rehabilitation of a freshwater fisheries research station at Chriang Chamres on the Tonle Sap River in order to improve methods for the breeding of indigenous fish species (\$1.0 m); and (c) DOF capacity building, in fishery management policy, staff training curricula, fisheries law and statistics, and departmental administration (\$0.5 m).<sup>2</sup>

### **Smallholder Rubber Research**

20. The component, to be implemented by the Department of Rubber Production (DGPH), is designed to obtain the technical data needed to determine the technical, social and economic feasibility of smallholder rubber development in Cambodia, through formulation and implementation of a smallholder rubber research program and training of national research scientists and technicians. The project would comprise technical assistance of a senior rubber research specialist for five years (expected to be provided and funded by CIRAD, France), vehicles, office and laboratory equipment, and related incremental operating expenses. Total costs are estimated at \$1.7 million.

### **MAFF Strengthening Component**

21. Three subcomponents are situated organizationally at Ministry level:

- (a) Human Resource Management (HRM): technical assistance would be provided to establish and train a Human Resource Management Unit attached to the Department of Personnel which would establish a MAFF personnel data base, train HRD managers in the MAFF and departmental personnel departments, carry out organizational and job analyses, carry out training needs assessments, and prepare training plans for each department and unit of the Ministry involved in the project. It was agreed during negotiations that the Government would prepare and

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<sup>2</sup> It is expected that technical assistance to the DOF to assist it in carrying out subcomponent (a) will be provided under an extension of an ongoing DANIDA/MRC project for management of the freshwater capture fisheries of Cambodia.

send for IDA's comments the annual training programs to be carried out under the Project. This work would provide the information and in-house skills needed to support the ongoing reorganization of the Ministry as well as an expansion and more effective use of training. The cost is estimated at \$1.7 million;

- (b) Support to Provincial Departments of Agriculture: the component would provide for rehabilitation of buildings, office equipment, training, workshops and incremental operating expenses for five MAFF provincial offices to support the project's field activities. The cost is estimated at \$0.4 million; and
- (c) Strengthening of Planning and Statistics: this component, to be implemented by the Ministry's Department of Planning, Statistics & International Cooperation (DPSIC) would provide technical assistance, staff training, vehicles, equipment and incremental operating budgets needed to raise the capacity of DPSIC to a level where it is able to carry out project and program level public investment planning and to better meet the country's needs for basic agricultural statistics, including crop production estimates at district, provincial and national level and monitoring and analysis of producer prices. Total costs are estimated at \$2.9 million

### **Project Implementation**

22. Project Management Unit: To assist in implementation of the project and training of local staff a Project Management Unit (PMU) would be established within MAFF, reporting to the Secretary of State for Agriculture, who would chair a Project Steering Committee (PSC). The PMU would be headed by a senior official, of the level of Under Secretary of State, and be staffed by a full-time Deputy Chief and other staff, supported by long and short term technical assistance, including a Project Management Advisor, who would be the chief technical advisor for the Project; a Procurement Specialist; a Finance & Administration Specialist; and short term consultants for establishment of monitoring and evaluation systems and supervision of buildings and civil works. The PMU would coordinate the budgets and implementation plans of all the components of the project, and ensure their appropriate auditing, monitoring, evaluation and progress reporting. The estimated cost of the PMU, including costs for a staff retraining program, is \$3.0 million over five years, or about 9% of the base cost estimate.

### **Project Cost and Financing**

23. Total project cost is estimated at US\$35.1 million equivalent with a foreign exchange component of 72 percent. The proposed Interim Fund Credit of SDR 18.8 million (US\$27.0 million equivalent) would finance 77 percent of total project costs, including 54 percent of local costs. Parallel financing by IFAD would be used to finance the animal health and production component with a Loan of SDR 3.3 million (US\$ 4.75 million equivalent), to be administered by IDA, and covering about 14 percent of project cost. The remainder would be financed by the Government's budgetary contribution of US\$ 3.4 million equivalent, covering about 10 percent of project cost, including an estimated US\$ 0.5 million of taxes. A summary of project costs by

component and the proposed financing plan are shown in Schedule A. Amounts and methods of procurement and an estimated schedule of disbursement are shown in Schedule B. A timetable of the project's key processing steps and the status of Bank Group operations in Cambodia are shown in Schedules C and D, respectively. "Cambodia at a Glance" tables are provided in Schedule E. The Staff Appraisal Report (SAR No. 15984-KH, dated January 31, 1997) is being distributed separately.

### **Agreed Actions**

24. During negotiations, a number of agreements were reached with Government regarding project implementation and the related policy framework. Some of the more important agreements reached are: (a) Government would establish the PSC and the PMU, with terms of reference satisfactory to IDA, and appoint their key personnel as a condition of effectiveness; (b) by the end of the second year of the project, the Government would prepare and submit to IDA for comments national strategies for seeds improvement, animal health and production, and water resources; each of these strategies to include specific measures for cost recovery from beneficiaries and for operation and maintenance, and a proposed action plan for implementation. Technical assistance for the preparation of these strategies is included under the project; (c) during the third year of the project the Government and IDA would carry out a mid-term review to assess the progress achieved in implementing the Project, and the Government would thereafter take the necessary measures for its future implementation such as to achieve the agreed objectives; and (d) the Government would provide semi-annual progress reports, annual accounts and independent audit reports, and a final evaluation report on the project.

### **Poverty Category**

25. The project is intended to improve the capacity of the Ministry of Agriculture to serve the needs of Cambodian smallholder farmers, almost all of whom are poor, with income-earning opportunities no more than the equivalent of US\$1 per day. Because of Cambodia's recent history, many poor farming households are headed by women without access to adult male labor: their needs will be given special attention in the agronomy, livestock and small-scale hydraulics components of the project.

### **Project Benefits**

26. The project would build capacity within MAFF and the main development impact would thus be institutional. MAFF staff would benefit from intensive training, and experience of the implementation of well-resourced, well-designed work programs which contribute to a coherent integrated sectoral program. The ultimate beneficiaries are rural communities who depend on agriculture and fishing for their livelihoods, for assisting whom MAFF is responsible.

27. The project would benefit farmers economically and financially through the adoption of appropriate, sustainable and financially profitable crop technology and effective, affordable measures for protecting animal health. Additional benefits would be obtained from improved

surface water storage and drainage for increased production of rice and other crops, and from higher and sustained levels of production from freshwater fish capture and aquaculture, and eventually from profitable investment in smallholder rubber plantations.

### **Environmental Aspects**

28. Environmental benefits are expected to be achieved in the medium to long term through the improved sustainability of rice-based farming systems. These would ensue as farmers adopt recommended practices with respect to soil fertility management, integrated pest management (IPM), water management and conservation, and crop diversification. Strengthened fisheries conservation, management and research would help ensure that important freshwater capture fisheries are not over-exploited and that better knowledge is acquired in order to minimize possible negative environmental impacts of future aquaculture development.

### **Project Sustainability**

29. Features to ensure project sustainability, notably through monitoring and evaluation, are built into the project design. However, the sustained execution of project sub-programs will mainly depend on whether capacity built in MAFF will continue in post and in operation, serving the needs of agricultural communities in the medium- to long-term. This will in part depend on factors outside the management control of the project, such as the planned reform of the civil service and public sector pay scales, maintenance of political commitment and stability, and funding constraints on government operating budgets. Therefore, the sustainability and development impact of this and future agricultural development programs implemented through MAFF will depend upon the extent to which these wider objectives are met.

### **Risks**

30. The shortage of well-qualified and experienced staff in the Ministry is both a reason for the project and a risk to its successful implementation. Formal training amounts to 11% of project base costs and establishing a human resource management capacity in MAFF is given particular importance. Long-term overseas training has been kept to a minimum so as to ensure that able staff mostly remain in Cambodia, working as counterparts alongside international specialists, and gain experience and intensive on-the-job training through the project. Funds for language training have been included where required so as to facilitate communication and collaboration between local and international project staff. For the same reason, long term international project staff would be expected to become conversant in the local language within six months.

31. Implementation performance indicators, with a focus on indicators of project impact on the smallholder farming community such as quantities of improved rice seed produced and sold, would be monitored throughout the project. Problems would be identified, their causes analysed and possible solutions fed back to the PMU and managers of the responsible technical departments. This would ensure that workplans and targets are appropriately readjusted.

32. It will take time to build analytical, managerial, and technical skills in MAFF and the project includes a substantial amount of technical assistance. There is a risk inherent in the potential trade-off between meeting implementation targets and building local capacities. Project targets have been deliberately set so that the potential for conflict between objectives is minimised. In evaluating bids for provision of technical assistance, the MAFF needs to be aware of this risk and give high weighting to both technical/analytical and management/human skills.

33. The only risk that cannot be reduced through project design is that of continuing insecurity in rural areas. Over the past year, there have been major political developments as a result of which the zone of high insecurity has contracted, but risks of banditry and sporadic lawlessness remain. Project design has taken the security risk into account by excluding or reducing project activities in provinces still considered insecure. In addition, the pilot field components could be relocated to other provinces if necessary.

### **Recommendation**

34. I am satisfied that the proposed Credit would comply with the Articles of Agreement of the Association and recommend that the President approve it.

Gautam S. Kaji  
Managing Director

Washington, D.C.  
January 31, 1997

Attachments



CAMBODIA

AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT

Estimated Costs and Financing Plan  
(US\$ million)

Project Costs a/ b/

	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Agronomy, Seeds and Plant Protection	2.7	6.7	9.4
Animal Health and Production	1.5	3.4	4.9
Agricultural Hydraulics	1.4	3.9	5.3
Fisheries Management and Research	0.7	2.2	2.9
Smallholder Rubber Research	0.5	1.2	1.7
Planning and Statistics	0.9	2.0	2.9
MAFF Institutional Strengthening	0.9	4.3	5.2
Total Base Cost	8.6	23.6	32.2
Physical contingencies	0.2	0.7	0.9
Price contingencies	1.0	1.0	2.0
Total project cost	9.8	25.3	35.1

Financing Plan

Government	3.4	-	3.4
IFAD	1.1	3.6	4.7
IDA (ITF)	5.3	21.7	27.0
Total financing	9.8	25.3	35.1

a/ Including identified taxes and duties of US\$0.5 million.

b/ Figures may not add due to rounding.

Schedule B

CAMBODIA

AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT

Summary of Proposed Procurement Arrangements (US\$ million)

	<u>International</u> <u>Competitive</u> <u>Bidding</u>	<u>National</u> <u>Competitive</u> <u>Bidding</u>	<u>Other</u>	<u>NBF</u>	<u>Total</u>
Buildings & Civil Works	0.7 (0.6)	1.4 (1.1)	2.3 (1.8)	0.5 (0.0)	4.8 (3.5)
Vehicles	2.8 (2.8)			0.3 (0.0)	3.0 (2.8)
Equipment	2.3 (2.1)	1.2 (1.1)	1.0 (0.9)	0.4 (0.0)	4.9 (4.0)
Agricultural & Lab. Materials			1.1 (0.7)	0.7 (0.0)	1.7 (0.7)
Consulting Services & Studies			7.7 (7.7)	1.0 (0.0)	8.7 (7.7)
Overseas Training			0.8 (0.8)	0.1 (0.0)	0.9 (0.8)
Local Training			5.3 (5.3)	1.3 (0.0)	6.6 (5.3)
Incremental Operating Expenses			3.4 (2.3)	1.1 (0.0)	4.5 (2.3)
TOTAL	5.8	2.6	21.4	5.4	35.1
IDA (ITF) financing:	(5.4)	(2.2)	(19.4)	(0.0)	(27.1)

Totals may not add exactly due to rounding.

"Other" includes international and national shopping, simplified procurement for small works, force account, consulting services and training. "NBF" not Bank financed

Figures in parenthesis indicate IDA (ITF) financing.

Estimated Disbursement for IDA Credit (US\$ million):

	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Annual	2.3	5.7	6.9	5.8	4.3	2.0
Cumulative	2.3	8.0	14.9	20.7	25.0	27.0

CAMBODIA

AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT

Timetable of Key Project Processing Events

- a. Time taken to prepare: 18 months
- b. Prepared by: individual consultants funded under a Japan PHRD Grant
- c. First Bank Mission: November 1994 (identification)
- d. Appraisal Mission Departure: May 30, 1996
- e. Negotiations: July 1-3, 1996
- f. Planned Date of Effectiveness: April 15, 1997
- g. List of Relevant PCRs/ICRs and PPARs: none

This report is based on the findings of IDA pre-appraisal and appraisal missions that visited Cambodia in February and June 1996, respectively. The missions comprised Christopher Redfern (task manager), Philippe Boyer (agronomist), Charles Maguire (agricultural training specialist), Susan Tamondong-Helin (sociologist), David Sislen (project analyst) and Mostafa El-Erian (lawyer). Youqiong Wang (project controller), Louise Bevan (agricultural economist) and Harry Franks (agricultural institutions specialist) participated for IFAD. The contributions of the following consultants funded under French, Japanese and Swedish grants for project preparation are acknowledged: Jacques Arrivets (agronomist), Ian Hancock (agronomist), Jeffrey Himel (water resources engineer), Mogens Lemonijs (seeds specialist), Ken MacKay (fisheries) and Murray Maclean (veterinarian). The component for planning and statistics strengthening was prepared with the assistance of David Marshall and Jack Corwell (FAO) and Baden Cameron (AusAid consultant). Document clearance was provided by Jeffrey Gutman (Division Chief, EA1AE), Walter Schwermer (Project Adviser, EA1) and Javad Khalilzadeh-Shirazi (Director, EA1). Assistance in preparing the documents was provided by Saraswathi Sundaram.

**STATUS OF BANK GROUP OPERATIONS IN CAMBODIA**

**A. STATEMENT OF BANK LOANS AND IDA CREDITS /a**  
(As of December 31, 1996)

Loan or Credit	Fiscal	Borrower	Purpose	Amount (US\$ million)/b (less cancellations)	
				IDA	Undisbursed
1 Credit Closed				62.70	.55
2664	1995	Cambodia	Technical Assistance	17.00	12.38
2739	1995	Cambodia	Social Fund	20.00	15.44
2781(S)	1996	Cambodia	Economic Rehabilitation Credit	40.00	2.73
2782	1996	Cambodia	Phnom Pehn Power Rehabilitation	40.00	35.44
N005*	1997	Cambodia	Disease Control & Health	<u>30.40</u>	<u>30.40</u>
	Total**			210.10	96.94
	of which has been repaid			0.00	
	Total Now Held By Bank and IDA			<u>210.10</u>	
	Amount sold	0.00			
	of which repaid	<u>0.00</u>			
	Total Undisbursed			<u>96.94</u>	<u>96.94</u>

/a The status of the projects listed in Part A is described in a separate report on all IBRD/IDA-financed projects in execution, which is updated twice yearly and circulated to the Executive Directors on April 30 and October 31.

/b Principal amounts in US\$ equivalent at date of negotiations, and undisbursed amounts in equivalent are valued at exchange rate applicable on the date of this statement.

\* Not yet signed.

\*\* Total Approved, Repayments and Outstanding balance represent both active and inactive Loans and Credits.

(S) Indicates SAL/SECAL DRL's and RIL's Loans and Credits.

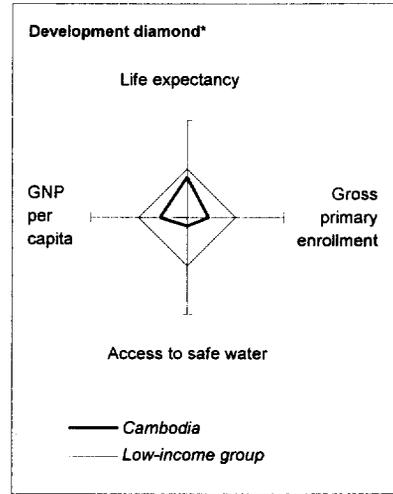
**B. STATEMENT OF IFC INVESTMENTS**

None

# Cambodia at a glance

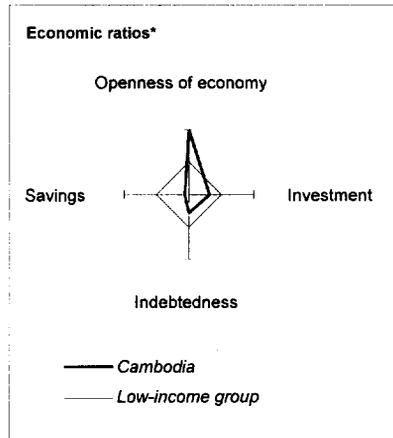
## POVERTY and SOCIAL

	Cambodia	East Asia	Low-income
Population mid-1995 (millions)	10.2	1,709	3,188
GNP per capita 1995 (US\$)	260	830	460
GNP 1995 (billions US\$)	2.7	1,418	1,466
<b>Average annual growth, 1990-95</b>			
Population (%)	2.9	1.3	1.8
Labor force (%)	2.6	1.4	1.9
<b>Most recent estimate (latest year available since 1989)</b>			
Poverty: headcount index (% of population)	..	..	..
Urban population (% of total population)	21	31	29
Life expectancy at birth (years)	53	68	63
Infant mortality (per 1,000 live births)	108	36	58
Child malnutrition (% of children under 5)	..	17	38
Access to safe water (% of population)	13	77	75
Illiteracy (% of population age 15+)	35	17	34
Gross primary enrollment (% of school-age population)	47	117	105
Male	48	120	112
Female	46	116	98



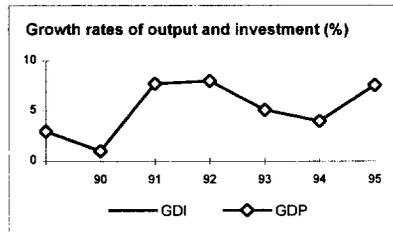
## KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1975	1985	1994	1995
GDP (billions US\$)	..	..	2.4	2.7
Gross domestic investment/GDP	..	..	19.5	19.2
Exports of goods and non-factor services/GDP	..	..	21.5	32.5
Gross domestic savings/GDP	..	..	5.1	4.0
Gross national savings/GDP	..	..	5.8	4.4
Current account balance/GDP	..	..	-13.9	-16.2
Interest payments/GDP	..	..	0.0	0.0
Total debt/GDP	..	..	84.8	71.0
Total debt service/exports	..	..	0.4	3.1
Present value of debt/GDP	..	..	19.8	..
Present value of debt/exports	..	..	91.5	..
<b>(average annual growth)</b>				
GDP	..	..	4.0	7.6
GNP per capita	..	..	1.5	4.6
Exports of goods and nfs	..	..	..	3.9



## STRUCTURE of the ECONOMY

	1975	1985	1994	1995
<b>(% of GDP)</b>				
Agriculture	..	..	45.2	44.6
Industry	..	..	18.3	18.7
Manufacturing	..	..	7.3	7.4
Services	..	..	36.5	36.7
Private consumption	..	..	83.7	86.3
General government consumption	..	..	11.1	9.7
Imports of goods and non-factor services	..	..	35.8	47.7
<b>(average annual growth)</b>				
Agriculture	..	..	0.0	6.9
Industry	..	..	7.7	9.4
Manufacturing	..	..	7.8	9.0
Services	..	..	7.4	7.5
Private consumption	..	..	..	..
General government consumption	..	..	..	..
Gross domestic investment	..	..	..	..
Imports of goods and non-factor services	..	..	..	..
Gross national product	..	..	4.0	7.6



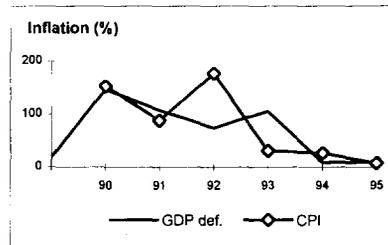
Note: 1995 data are preliminary estimates.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

Cambodia

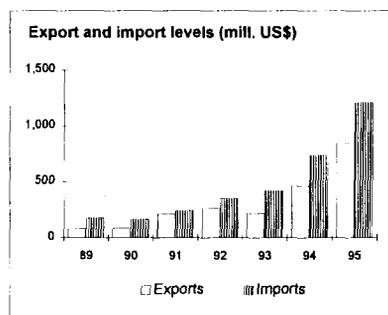
PRICES and GOVERNMENT FINANCE

	1975	1985	1994	1995
<b>Domestic prices</b>				
(% change)				
Consumer prices	..	..	26.1	7.8
Implicit GDP deflator	..	..	8.9	9.1
<b>Government finance</b>				
(% of GDP)				
Current revenue	..	..	9.6	8.9
Current budget balance	..	..	-1.5	-1.3
Overall surplus/deficit	..	..	-7.0	-8.0



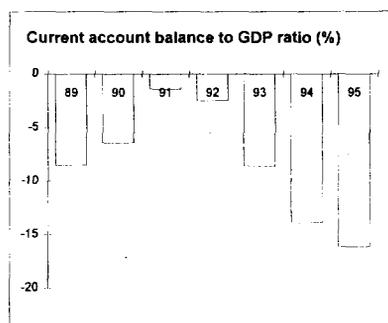
TRADE

	1975	1985	1994	1995
(millions US\$)				
Total exports (fob) a/	..	..	463	847
Rubber	..	..	26	38
Logs and sawn timbers	..	..	198	184
Manufactures	..	..	11	41
Total imports (cif)	..	..	737	1,213
Food	..	..	..	..
Fuel and energy	..	..	..	..
Capital goods	..	..	..	..
Export price index (1987=100)	..	..	..	..
Import price index (1987=100)	..	..	..	..
Terms of trade (1987=100)	..	..	..	..



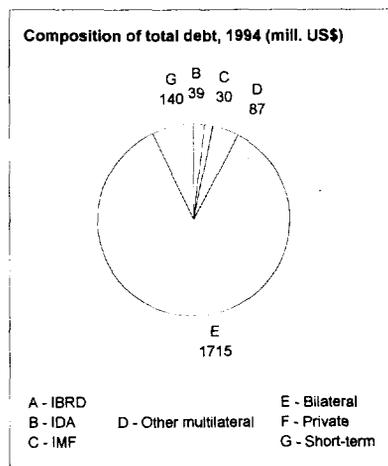
BALANCE of PAYMENTS

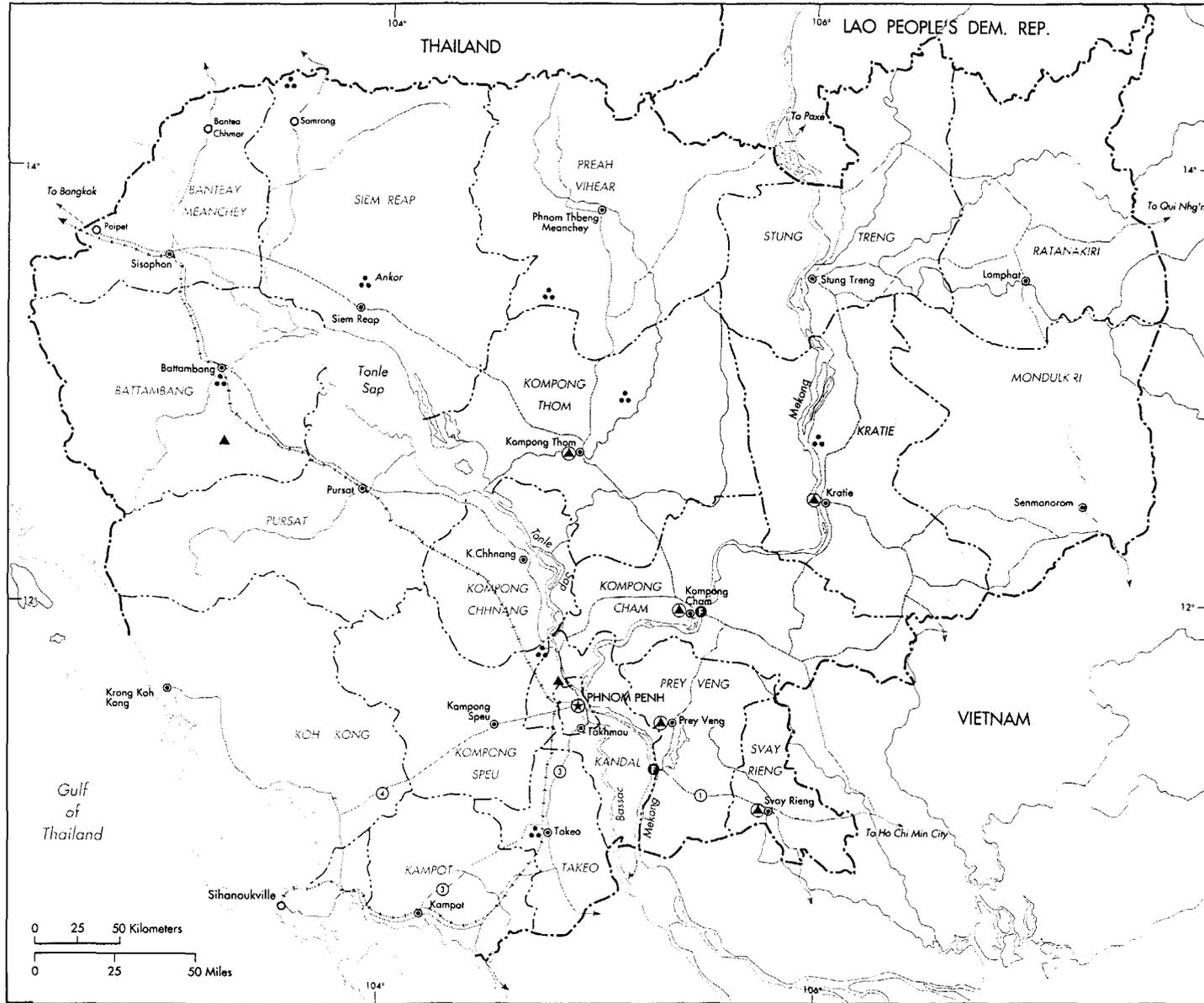
	1975	1985	1994	1995
(millions US\$)				
Exports of goods and non-factor services	..	..	518	949
Imports of goods and non-factor services	..	..	864	1,394
Resource balance	..	..	-346	-445
Net factor income	..	..	1	-9
Net current transfers	..	..	15	20
Current account balance, before official transfers	..	..	-330	-434
Financing items (net)	..	..	300	348
Changes in net reserves	..	..	30	86
<b>Memo:</b>				
Reserves including gold (mill. US\$)	..	..	100	186
Conversion rate (local/US\$)	..	..	2,543.0	2,463.0



EXTERNAL DEBT and RESOURCE FLOWS

	1975	1985	1994	1995
(millions US\$)				
Total debt outstanding and disbursed	1	7	2,011	1,900
IBRD	0	0	0	0
IDA	0	0	39	65
Total debt service	0	0	9	25
IBRD	0	0	0	0
IDA	0	0	0	0
Composition of net resource flows				
Official grants	4	6	235	270
Official creditors	0	0	54	82
Private creditors	0	0	0	0
Foreign direct investment	0	0	10	100
Portfolio equity	0	0	0	0
World Bank program				
Commitments	0	0	17	100
Disbursements	0	0	29	25
Principal repayments	0	0	0	0
Net flows	0	0	29	25
Interest payments	0	0	0	0
Net transfers	0	0	28	24

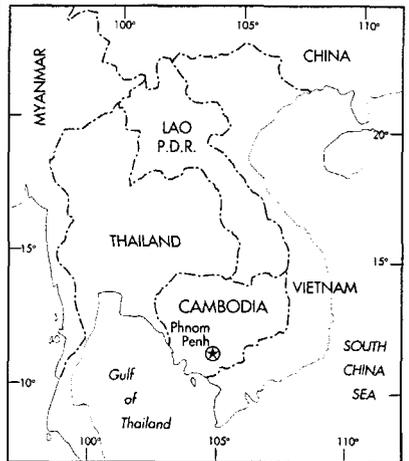




### CAMBODIA AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT 1997-2001

- PROVINCES WITH PROJECT FIELD ACTIVITIES
- SEED PRODUCTION CENTERS
- PROVINCIAL AGRICULTURE OFFICES
- SELECTED CITIES
- PROVINCE CAPITALS
- NATIONAL CAPITAL
- RUINS
- MAIN ROADS
- RAILROADS
- RIVERS
- FERRY CROSSINGS
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES

*The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.*







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