

CHAPTER 6 PROJECT EVALUATION AND CONCLUSION

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(1) Project Evaluation

The implementation of this project is expected to produce the following effects.

1) Reinforcement of the country's plant quarantine system

In Sri Lanka, plant quarantine services are conducted under the Seed Certification and Plant Protection Division of the Department of Agriculture, Ministry of Agricultural Research and Development. The precise inspection is now carried out mainly by the former Plant Quarantine Division of the Central Agricultural Research Institute (CARI) and plant quarantine administration is conducted by the Department of Agriculture. However, the facilities of both the former Plant Quarantine Division and the Department of Agriculture are located in Peradenia, which is about 120km or about a three hours' car ride from Colombo City where Colombo Seaport and Katunayake Airport plant quarantine stations are located. At the two plant quarantine stations, more than 90 percent of the plants exported from and imported into Sri Lanka are handled. Furthermore, the equipment installed in the Plant Quarantine Division, CARI and the two plant quarantine stations are not satisfactory, qualitatively or quantitatively, which has been hindering the country's plant quarantine operations.

One of the objectives of this project is to establish the new plant quarantine facilities on the premises of the Katunayake Airport and

concentrate the following three main functions of the country's plant quarantine system in one place.

1. centralized plant quarantine administration,
2. precise inspection of export and import plants,
3. quarantine operation and treatment

To reinforce the equipment used at Colombo Seaport and Katuyanake Airport plant quarantine stations is the other objective of the project. Therefore, this project is expected to contribute to the reinforcement of the country's plant quarantine system and, at the same time, efficiency in individual plant quarantine operation will be enhanced.

2) Improvement of quarantine ability of inspector by training

The training for inspectors who are working at airport and seaport quarantine stations and for newcomers shall be done at this planned facility. Though the number of trainees are small, the equipment and information related to plant quarantine will be concentrated in this facility, so trainees can effectively acquire the practical knowledge and technology needed for their work. Therefore, the ability of quarantine inspectors as well as the accuracy of primary quarantine will be expected to be improved.

When plant quarantine is efficiently implemented after the implementation of the project, not only the above direct effects, but also the following secondary effects can be expected.

① Promotion of stable agricultural production by prevention of pests

In the past, pests/pathogens invaded Sri Lanka a number of times. As seen in the case of invasion of "coffee rust fungus", such invasions

caused a lot of damage to the country's agricultural production. In the light of the bitter experiences in the past, the Government of Sri Lanka is now actively implementing policy measures to reinforce the country's plant quarantine system by means of designating certain pests/pathogens which have a high possibility of invasion. However, the fact is that the capacity of the country's plant quarantine stations lags behind the recent increase in imports of agricultural products. Consequently, it can not be said that sufficient quarantine services are well enforced.

If this project is implemented and subsequently the country's plant quarantine system is considerably reinforced, it will greatly help prevent invasion of pests/pathogens, which in turn will promote stable agricultural production.

② Promotion of exports of agricultural products

Efficient quarantine of export agricultural products will result in further increases in exports of agricultural products. Equipment for use in disinfestation of export agricultural products is included in this project. If the use of the equipment results in an improvement in the treatment techniques of the country, it will become possible for the country to export new kinds of agricultural products. Furthermore, the use of the equipment will make it possible to maintain a certain level of exports of agricultural products.

As is clear from the above, this project will greatly contribute to the promotion of exports of agricultural products in Sri Lanka, as well as to the acquisition of foreign exchange.

③ Contribution to safe imports of superior seeds and seedlings

In Sri Lanka, seeds and seedlings of potatoes, vegetables, etc. are in short supply, and therefore considerable quantities are imported. As for such agricultural products as rubber, coconut, sugar cane and rice, whose production Sri Lanka can expect to increase, it is necessary to import superior seeds, seedlings and germ cells from foreign countries for the purpose of improving their productivity. However, imports of these seeds and seedlings is accompanied by a great risk of pests/pathogens being imported into the country. In this connection, if implementation of the project enables an efficient quarantine of imported seeds and seedlings, it will result in safe introduction of superior seeds and seedlings.

Table 6-1 Expected Effect of the Project

Item	Present State & Problems	Measures to be taken under the Project	Expected Effects and Improvements
Direct Effects	Since organizations involved in the plant quarantine services are scattered in Colombo and Peradeniya, smooth implementation of plant quarantine operations are prevented.	Under the project, all plant quarantine-related facilities except for those of plant quarantine administration are to be constructed in one place.	The country's plant quarantine system will be strengthened and the plant quarantine operations will become more efficient as a direct result of the improvement in the facilities and equipment of the country's organizations responsible for plant quarantine operations. In the area of export plant quarantine, it is expected that the following target will be attained.
	Plant quarantine facilities and equipment owned by the plant quarantine stations at Colombo Seaport, Katunayake Airport and Central Agriculture Research Institute are not sufficient in terms of both quality and quantity, which constitutes a major obstacle to the efficient implementation of plant quarantine operations in the country.	Necessary facilities and equipment are to be procured through the implementation of the project. Equipment for use in primary quarantine will also be installed in the plant quarantine stations at Colombo Seaport and Katunayake Airport.	Ornamental plants 50,000,000 nos Cut flowers ... 5,000,000 nos Tea 200,000 tons Coconut 100,000 tons Fruits and Vegetables 300,000 kg

Item	Present State & Problems	Measures to be taken under the Project	Expected Effects and Improvements
Direct Effects	No systematic measures have been taken to enhance the capabilities of the quarantine officers working at other airports and seaports.	Facilities and equipment for use in plant quarantine are to be concentrated in the projected plant quarantine station, which will also include training facilities.	Quarantine officers will be able to efficiently acquire practical knowledge and techniques at the projected plant quarantine station.
In-direct Effects	Existing plant quarantine stations have been unable to effectively cope with the rapid increase in imports of agricultural products in recent years, which has led to an increased danger of invasion of pests and pathogens.	The capabilities of the country's plant quarantine stations, particularly in terms of the quality of facilities and equipment and plant quarantine techniques, will be greatly improved.	It will become easier to prevent the invasion of pests and pathogens, which in turn will stabilize agricultural production in the country.
	Although a wide variety of policy measures to promote the export of agricultural products are being implemented in Sri Lanka, treatment techniques used in export plant quarantine at the country's plant quarantine station still remain at a rudimentary level.	Under the project, treatment equipment as well as equipment necessary for the development of advanced treatment techniques, is to be procured.	It will become possible to treat certain quantities of agricultural products, which will contribute to the promotion of the export of agricultural products and to expand of export of new agricultural products.

(2) Appropriateness of the Implementation of the Project

1) Operation system

The facilities are to be operated with a total staff number of 46; 23 technical staff for the quarantine and inspection divisions and 23 staff for the administration division. Technical staff will consist mainly of experts from the former Plant Quarantine Division of CARI, experts from the Department of Agriculture and inspectors from airport and seaport plant quarantine stations. This 46 staff number has been judged to be appropriate as a result of its review conducted in accordance with the World Bank's "Recommendations on Reducation of the Government's Size" and the personnel assignment plan has already been prepared in the Department of Agriculture. This means that the

quarantine and inspection divisions are to be provided with technical staff having basic knowledge, so that the facilities and equipment will be managed smoothly.

2) Budgetary appropriations

As the procedure for the Sri Lankan side, the implementation of the project will be approved in a Cabinet Meeting in 1992, and the budgetary appropriations for this project will be included in the annual budgets of the Ministry of Agricultural Research and Development in the fiscal 1993 and after. The land reclamation and preparation work for the project site which Airport & Aviation Services Ltd. contracted with 10 million Rs (which was disbursed from the fiscal 1990~1992 budget of the Ministry) has already been completed.

The budgeted total facility/equipment maintenance and management cost for the first year is 4,375,000 Rs, of which 1,845,000 Rs is for personnel expenses and 2,530,000 Rs is for facility/equipment operation and maintenance expenses. There will be no problem with the personnel expenses because they will be budgeted after the project is approved in a Cabinet meeting. As for the operation and maintenance expenses, which represent 0.6 percent of the Department of Agriculture's annual budget, it will be possible to include them in the department's annual budget judging from those for other similar facilities which operate under the jurisdiction of the Department.

3) Maintenance and Management

This project is designed to make it easy to maintain and manage the facilities. Highly durable building materials will be used in the

construction of the facilities and priority will be given to the use of locally available materials. On the other hand, utmost emphasis is placed on the availability of manufacturers' local maintenance services in the selection and procurement of the equipment. In addition, the facilities are designed to make effective use of natural lighting and ventilation to save energy costs. Thus, it is concluded that maintenance and management of both the facilities and the equipment will be easy.

Furthermore, the Sri Lankan side intends to secure one staff member for building maintenance and one for maintenance of equipment within the administration division. Thus, there will be no problem with the planned facility/equipment maintenance system.

As is clear from the above, there will be no problem with the operation, budget and maintenance/management of the facilities.

(3) Conclusion

If Sri Lanka's plant quarantine system is reinforced and the plant quarantine operations in the country become more effective and efficient through the implementation of the project, pests/pathogens will be prevented from invading the country and the agricultural production will become stabilized, which in turn will result in expansion in the exports of agricultural products as well as to the growth of its agriculture-led economy. In particular, increases in exports of agricultural products will greatly contribute to the expansion in employment, promotion of local industries and acquisition of foreign exchange.

As this project is expected to have far-reaching positive effects and at the same time contribute to the socio-economic development in the country, it is considered reasonable to implement this project with grant aid from the Government of Japan. Furthermore, it can be said that there will be no problem for operation and management of the facilities in terms of personnel recruitment and funding which the Sri Lankan side will implement.

(4) Recommendations

The following recommendations are made to ensure quick implementation of the project and smooth and effective operation of the facilities, which are the most important preconditions for the realization of the expected effects of the project.

1) Implementation of the Project

- ① As this project is to be implemented within the framework of the grant aid program of the Government of Japan, there are time limitations in implementation of the project. It must be completed before the expiration of the term shown on the Exchange of Notes or the end of the fiscal year of the Government of Japan. For this reason, prompt action is required in certain necessary procedures, such as conclusion of contracts for consultant services, and for construction and equipment procurement work.
- ② It will be necessary for the Government of Sri Lanka to secure the funds necessary for the procedures, such as customs clearance, tax exemption and transportation for the smooth implementation of the construction and equipment work.

③ In the case of this project, the Department of Agriculture, which will be the implementing organization of the project, is located in Peradeniya, while the project site is located in Colombo City. It is desirable to provide an project office of the Sri Lankan side for the project in Colombo City through the period of the design stage and the construction stage.

2) Operation, Maintenance and Management

① In order to operate the facilities effectively, it will be essential for the Sri Lankan side to secure the necessary number of staff as set forth in the personnel plan. It will also be necessary to enlarge the staff numbers as the workload increases.

② Shortage of the maintenance and management expenses would greatly affect not only the operation of the facilities and equipment but also the plant quarantine operations at the facilities. Budgetary appropriations for the maintenance and management of the facilities and equipment should be planned carefully.

3) Technical Cooperation of the Government of Japan

① The Government of Sri Lanka is in need of a transfer of technology and experience from Japan through the implementation of project, and they hope to obtain technical cooperation from the Government of Japan. In order to support the promotion of the plant quarantine technology in Sri Lanka, it is strongly desired to implement project-type technical cooperation by the Government of Japan in conjunction with this project.

② The Government of Sri Lanka is desirous of dispatching personnel to Japan, who will be involved in the facilities, for education

and training purposes. In this connection, it is desirable that the Government of Japan promptly implement training programs for them to support the Government of Sri Lanka in developing human resources who will serve as the Sri Lankan counterparts in the project.

ANNEX

1. MEMBERS OF THE SUPPLEMENTARY BASIC DESIGN TEAM

- Mr. Sannosuke TSUCHIYA Leader
Director for International Plant Quarantine Affairs, Plant Protection
Division, Agricultural Production Bureau,
Ministry of Agriculture, Forestry and Fisheries
- Mr. Akira NISHIMOTO Grant Aid Cooperation
Staff, Planning Division, Grant Aid Management Department,
Japan International Cooperation Agency (JICA)
- Mr. Masayoshi INUZUKA Technical Cooperation
Staff, Agricultural Technical Cooperation Division, Agricultural
Development Cooperation Department,
Japan International Cooperation Agency (JICA)
- Mr. Noboru KAWAMOTO Disinfestation Technique
Ex-Director, Research Division, Yokohama Plant Protection Station,
Ministry of Agriculture, Forestry and Fisheries
- Mr. Kenji TSURUTA Entomologist
Chief of Information Administration, Planning and Coordination Section,
First Inspection Division, Agricultural Chemical Inspection Station,
Ministry of Agriculture, Forestry and Fisheries
- Mr. Takanori TANAKA Project Manager / Architect
Yamashita Sekkei Inc.
- Mr. Toru INOUE Plant Quarantine
Yamashita Sekkei Inc.
(Japan Fumigation Technology Association)
- Mr. Yukinori SHIMAMOTO Equipment Planner
Yamashita Sekkei Inc.
(Overseas Merchandise Inspection Co., Ltd.)

2. SURVEY SCHEDULE

Supplementary Basic Design Study (June 14 ~ July 2, 1992)

No.	Date	Schedule
1	Jun. 14 (Sun)	Survey of Plant Quarantine Station at Narita Airport Lv. Tokyo, Ar. Colombo (Messrs. Inuzuka, Kawamoto, Tsuruta, Tanaka, Inoue, Shimamoto)
2	15 (Mon)	Meeting at Embassy of Japan, JICA office, DOER, and MOADR Survey of Plant Quarantine Station at Colombo Seaport/Katunayake Airport Survey of proposed construction site
3	16 (Tue)	Meeting at JICA office Lv. Colombo Ar. Kandy Meeting at DOA (on inspection report)
4	17 (Wed)	Meeting at DOA Team meeting
5	18 (Thu)	Meeting at DOA Survey of PGRC, CARI
6	19 (Fri)	Meeting at DOA Lv. Kandy, Ar. Colombo (Messrs. Inuzuka, Tanaka) Report to JICA office (Inuzuka)
7	20 (Sat)	Survey of construction cost (Tanaka) Arrangement of survey data / Team meeting
8	21 (Sun)	Lv. Tokyo, Ar. Colombo (Messrs. Tsuchiya, Nishimoto) Team Meeting
9	22 (Mon)	Meeting at Embassy of Japan, JICA office, DOER and MOADR Survey of Plant Quarantine Station at Colombo Seaport/Katunayake Airport Meeting at DOA (Messrs. Kawamoto, Tsuruta, Inoue, Shimamoto)
10	23 (Tue)	Meeting at Mahaweli Development Authority Lv. Colombo Ar. Kandy (Messrs. Tsuchiya, Nishimoto, Inuzuka, Tanaka) Team meeting
11	24 (Wed)	Meeting at DOA on equipment plan and Minutes of Discussions (Draft)
12	25 (Thu)	Meeting at DOA Meeting with Director of DOA
13	26 (Fri)	Survey of PGRC, CARI Meeting at DOA on building plan
14	27 (Sat)	Lv. Kandy Ar. Colombo (all team members) Team meeting
15	28 (Sun)	Arrangement of survey data Survey of construction conditions (Tanaka)
16	29 (Mon)	Signing on Minutes of Discussions at MOADR Survey of construction cost

No.	Date	Schedule
17	Jun. 30 (Tue)	Survey of related facilities Arrangement of survey data/Team meeting
18	July 1 (Wed)	Report to Embassy of Japan, JICA office Lv. Colombo (all team members)
19	2 (Thu)	Ar. Tokyo (All team members)

MOADR : Ministry of Agricultural Development and Research

DOA : Department of Agriculture

DOER : Department of External Resources

CARI : Central Agricultural Research Institute

PGRC : Plant Genetic Resources Centre

3. MEMBER LIST OF CONCERNING PARTY IN SRI LANKA

Ministry of Agricultural Development and Research

Mr. Dixon Nilaweera	Secretary
Mr. D. Wijayawardena	Director of Agricultural Development
Mr. C. H. de A. Jayasinghe	Director of Project

Department of Agriculture

Dr. S. P. R. Weerasinghe	Director
Dr. M. H. J. P. Fernando	Deputy Director (Seed Certification & Plant Protection)
Dr. N. Ranaweera	Deputy Director (Economics & Planning)
Mr. H. Senerath	Asst. Director (Plant Protection)
Mr. A. M. Abeyratne	Chief Accountant
Mr. R. S. V. de Silva	Research Officer

Department of External Resources

Mr. S. Weerapana	Deputy Director of External Resources
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Mahaweli Authority of Sri Lanka

Mr. K. H. S. Gunatilaka	Chairman & Director General
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Plant Genetic Resources Centre

Dr. P. Ganashan	Head
Dr. Shinji Watanabe	Team Leader

Embassy of Japan in Sri Lanka

Mr. Kunihiro Doi	First Secretary
Mr. Hiroyuki Kinomoto	Third Secretary

JICA Sri Lanka Office

Mr. Yoshiaki Sakamaki	Director/Resident Representative
Mr. Mitsuyoshi Kawasaki	Assistant Resident Representative
Mr. Jiro Iida	Assistant Resident Representative

4. MINUTES OF DISCUSSION

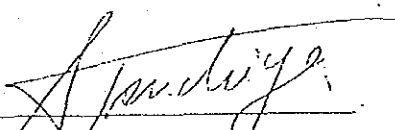
MINUTES OF DISCUSSION
ON THE SUPPLEMENTARY BASIC DESIGN STUDY
ON THE PROJECT FOR ESTABLISHMENT
OF THE NATIONAL PLANT QUARANTINE SERVICES
IN THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

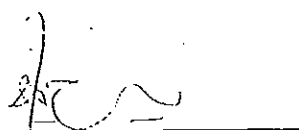
Based on the result of the Basic Design Study which was conducted from October, 1989 to August, 1990, the Japan International Cooperation Agency (hereinafter referred to as "JICA") decided to conduct a Supplementary Basic Design Study on the Project for Establishment of the National Plant Quarantine Services (hereinafter referred to as "the Project") and sent to the Democratic Socialist Republic of Sri Lanka a study team headed by Mr. Sannosuke Tsuchiya, Director for International Plant Quarantine Affairs, Plant Protection Division, Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries, from June 14 to July 2, 1992.

The team had a series of discussions with the authorities concerned of the Government of Sri Lanka and conducted a field survey in the proposed project area.

As a result of the discussions and field survey, both parties confirmed the main issues described in the attached document. The team will further proceed with the works and prepare the Basic Design Study Report (Supplementary) on the Project based on the issues.

Colombo, June 29, 1992


Mr. Sannosuke Tsuchiya
Leader,
Supplementary Basic
Design Study Team, JICA


Mr. Dixon Nilaweera
Secretary,
Ministry of Agricultural
Development and Research

ATTACHED DOCUMENT

1. The Objective of the Project

The objective of the Project is to strengthen the Plant Quarantine System through the establishment of the National Plant Quarantine Services, and thus contributing to safe import of plants and plant materials free from harmful pests, and also for the promotion of the export of agricultural products.

2. The Responsible Ministry and Implementation Agency

1) The responsible ministry is the Ministry of Agricultural Development and Research.

2) The implementation agency is the Department of Agriculture.

3. Organization, Function and Staff Allocation Plan of the Project

1) Organization, function and staff allocation plan of the project is shown in Annex I

2) The Government of Sri Lanka confirmed appropriate budget would be allocated for the project implementation.

4. Review of Basic Design

Based on revised plan of the project shown in Annex I, previous Basic Design will be modified. The major points of modification are listed in Annex II

5. Grant Aid Programme Explained by the Team

1) The Government of Sri Lanka has understood the system of Japanese Grant Aid explained by the Team.

2) The Government of Sri Lanka will take the necessary measures described in Annex III for smooth implementation of the Project on condition that the Grant Aid Assistance by the Government of Japan is extended to the Project.

6. Technical Cooperation

The Sri Lankan side requested the technical cooperation for the improvement of Plant Quarantine Services, especially in the field of treatment, entomological inspection and pathological inspection.

7. Schedule of the Study

JICA will complete the final report on the Project and send it to the Government of Sri Lanka by the end of October, 1992.

Annex I . Organization, Function and Staff Allocation Plan

Section	Organization / Function	Staff allocation	
		Quali- fication	Number
1. Director	General Management		1
2. Administration Division	① Quarantine Management (Planning) ② Personnel Management (Training) ③ Research & Survey	R.O. or A.O. (1) A.O. (1) and others	22
3. Inspection Tech- nology Division			17
(1) Pathology In- spection Section	① Microscopic observation ② Antiserum inspection ③ Electrophoretic inspection ④ Bacteriophage inspection ⑤ Inoculation inspection ⑥ Isolated cultivation ins- pection (tissue culture)	R.O. (2) R.A. (2) A.I. (1)	(5)
(2) Entomological In- spection Section	① Morphology examination ② Physiological & ecological examination ③ Mass production of insects ④ Separation of nematodes	R.O. (2) R.A. (2) A.I. (2)	(6)
(3) Treatment Tech- nology Section	① Fumigation ② Vapor Heat ③ Low Temperature	A.O. or R.O. (2) A.I. (3) R.A. (1)	(6)
4. Plant Quarantine Division	① Inspection & phytosanitary certificates ② Isolated cultivation inspe- ction (field) ③ Incineration ④ Growing plant inspection for export	A.O. (2) A.I. (4)	6
Grand Total			46

R.O.: Research Officer(Graduated)

A.O.: Agricultural Officer(Graduated or 2 year diplomate with more than 15 year job experience)

A.I.: Agricultural Instructor(2 year diplomate)

R.A.: Research Assistant(highschool completed with 1 year training)

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Annex II . Modification of Basic Design Study.

1. The plant inspection division is integrated from 6 sections in Basic Design into 3 sections; Pathological Inspection Section, Entomological Inspection Section and Treatment Technology Section.
2. Based on the above integration, the facilities and equipment in each section are modified as follows:
 - (1) For the promotion of export of agricultural products, the function for the development of treatment technology is strengthened.
 - *to install low temperature treatment equipment
 - *to improve the capacity of other treatment equipment
 - (2) The function for the preparation of antiserum is excluded.
 - *to omit purification room and its equipment
 - (3) Facilities and equipment in each section are rearranged.
 - *to integrate tissue culture rooms into 1 room
 - *to relocate fruit fly mass production room
3. For the smooth operation in export plant quarantine activities, export cargo inspection terminal is arranged.
4. Other necessary modifications are made based on the review shown in Annex I . 2/

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Annex III . UNDERTAKINGS BY THE GOVERNMENT OF SRI LANKA

1. To secure the site for the project at the west end of the premises of Katunayake Airport.
2. To clear, level and reclaim the site as needed prior to the commencement of the construction.
3. To construct the access roads to the site and to supply temporary power, water and telephone service necessary for the construction prior to the commencement of the construction.
4. To undertake incidental external works such as planting, fencing and making gates in and around the site.
5. To connect distributing line of electricity to the site.
6. To connect city water distribution main to the site.
7. To connect the city drainage main (for storm, sewer and others) to the site.
8. To connect the telephone trunk line to the main distribution frame / panel to be equipped inside the building.
9. To provide general furniture for daily activities.
10. To obtain the building permit prior to the commencement of the construction.
11. To bear commissions to the Japanese foreign exchange bank for the banking services based on the Banking Arrangement.
12. To ensure the necessary budget and personnel for the proper and effective operation and maintenance of the facilities and the equipment provided under the Grant Aid.
13. To ensure prompt unloading, tax exemption, custom clearance at the port of disembarkation in Sri Lanka and prompt internal transportation of the products provided under the Grant Aid.

14. To exempt Japanese nationals involved in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Sri Lanka with respect to the supply of the products and the services under the verified contracts.
15. To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contracts such facilities as may be necessary for their entry into Sri Lanka and stay therein for the execution of the Project.
16. To maintain and use properly and effectively the facilities constructed and the equipment provided under the Grant Aid.
17. To bear all the expenses, other than those to be borne by the Grant necessary for construction of the facilities as well as for the transportation and installation of the equipment.

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