

したがって、外貿としての環境に合致する産業、すなわち大量の原料や製品の搬出・入を伴うような製鉄、セメント等の重工業や、石炭、石油等の荷扱い、さらに造船等の関連産業がカルナフリ河に沿って発達してきている。

今後、この傾向は継続するものと考えられ、バングラデシュ政府も力を入れているところから、港湾として、さらに一大工業地帯として、地域の発展が大きく期待されている。

このような発展動向の中で、チッタゴン空港開発に直接影響を及ぼすと考えられるのは、北側に隣接する港湾地帯である。チッタゴン港湾局は、現在、この地帯を通過して一般供用されている道路を閉鎖し、まとまった面積としたうえで、大規模な再整備を計画していると伝えられる。(図5-3参照)

この結果、空港へのアクセスは現在のカルナフリ河寄りからベンガル湾に沿った道路を経由することとなる。また、港湾整備の結果、現在、沖待ちしている船舶等を含めて、カルナフリ河の船舶航行量が増加するものと予想されている。

#### 5-5 空港整備に関する留意点

##### 1) 滑走路

- (1) 滑走路の移設については、ILSの設置の是非と配置、あるいはALSの設置と配置、さらに障害物件(移動物件)の取扱い等を総合的に検討して決定する必要がある。
- (2) 表面排水を改善するため、嵩上げに併せて、縦横断勾配を適切に設定すること、及びgroovingの設置を検討する必要がある。
- (3) なお当空港の工事に伴う休港は考えられないとのことで、夜間工事となることから、展開及び工事の進め方についても留意する必要がある。
- (4) ショルダーについては滑走路工事に併せて整備を図る必要がある。

##### 2) 平行タクシーウェイ

軍民の共同利用空港であることから、平行誘導路を検討する必要がある。

##### 3) 航空保安システム

チッタゴン空港の現状及び今後のバングラデシュ国内での空港の位置づけを考慮すれば、現状の設備機能に加えてASR(Airport Surveillance Radar=空港監視レーダー)の設置、ILS(Instrument Landing System=計器着陸装置)の設置も可能であるならば、今後の航空交通の需要増に応じた航空の安全と発展に寄与することができる。

注：バングラデシュ当局には、現行の滑走路230°側に設置したい旨の希望があるが、同側は大規模な港湾と兼用した河川があり、航行する船舶のマストに進入表面が抵触しているため、ILSを設置すれば、さらにその進入表面が低くなるために、この問題の解決が先決であり、最も重要な問題である。

#### 4) 排水

現空港の地理的・地形的条件から、排水を根本的に改善するには強制排水しかないと考えられるが、現地の状況を考慮して決定する必要がある。既設施設（滑走路・着陸帯）をいじることはほとんど不可能であるが、新しく設ける施設（ターミナル地区）については路床排水等、十分な配慮が必要である。

#### 5) その他

- ① 場周道路の設置は必要である。
- ② 住民・家畜の横断及び耕作については安全上避ける必要があり、バングラデシュ国側と協議のうえ、対策について配慮する必要がある。



附 属 资 料





From: Mr. Ayub Quadri  
Joint Secretary

Ministry of Planning  
External Resources Division  
Sher-e-Bangla Nagar  
Dhaka-7

1. বাংলাদেশ সরকার থেকে

D.O. No. ERD/JAP-II/13/86/219

Date 3-1-1988

Excellency,

Kindly refer to your letter No. 699-GL(5)/13/87 Dated December 24, 1987 addressed to the former Finance Minister on the implementation of the project entitled "Drawing up of Master Plan for the development of Chittagong Airport". In this context we would like to mention that first we had requested the Govt of Japan for undertaking this project during FY 1986, but the request was subsequently withdrawn vide our letter No. ERD/JAP-II/13/86/36 dated 3-6-1986.

2. On a review the GOB has now decided to request the Govt of Japan for grant assistance for preparation of the Master Plan for development of Chittagong Airport and also for the implementation of the resultant investment project at a later stage after the Master Plan is finalised. We would appreciate if our request is processed expeditiously.

3. You may kindly forward our request for kind consideration of your Govt. We would request early despatch of survey mission for undertaking the preparation of the Master Plan. We would be glad to furnish any information on the project in case you need the same.

4. Accept, Excellency, assurances of our highest consideration.

With kind regards,

Yours sincerely,

*Ayub Quadri*  
Ayub Quadri 3/1/87

H.E. Mr. Y. Tanaka,  
Ambassador of Japan in Bangladesh,  
Embassy of Japan,  
Banani, Dhaka.

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH  
MINISTRY OF PLANNING  
PLANNING COMMISSION  
RAILWAY TRAINING CRT UNIT

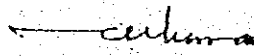
No. FC/TS/Gen-198/64/470

Dated : 10-4-1986

Sub : Projects proposed for Japanese grant assistance during FY - 1986.

Ref : KRD's O.S. No. KRD/JAP-II/22/85/785 dated 7-4-1986.

The undersigned is directed to refer to the above and to say that we do not have any objection for lining up Japanese grant assistance for the project "Consultancy Services for preparation of a Master Plan for Development of Chittagong Airport" During FY-1986. Regarding project 4 of the letter under reference thorough examination is required and our comments will follow.


  
( Mahmudul Hasan )  
Deputy Chief(cc)  
Tel : 32 62 02

Secretary,  
External Resources Division,  
Ministry of Finance,  
Sher-e-Bangla Nagar, Dhaka.

( Atten : Mr. Kamaluddin Ahmed,  
Research Officer )

Copy for information to:

1. P.A. to Division Chief,  
Physical Infrastructure Division,  
Planning Commission,  
Sher-e-Bangla Nagar,  
Dhaka.

  
( Mahmudul Hasan )  
Deputy Chief(cc)

2. বাংলাদেশ 国の TAPP

( TECHNICAL ASSISTANCE PROJECT PROPOSAL )

APPROVED ON .....

VIDE: .....

CIVIL AVIATION AUTHORITY OF BANGLADESH  
HEADQUARTERS, KURMITOLA, DHAKA-6.

T A P P F O R  
CONSULTANCY SERVICES FOR DEVELOPMENT OF CHITTAGONG AIRPORT.

No. CAB/PLN/B-1/PP-Ctg.

Dated:- 23 - 03 - 1986.

K. A. MATIN  
19031986.



PROFORMA FOR SUBMISSION OF T.A. PROJECT PROPOSAL(TAPP)

P A R T - 'A'

- |   |    |   |
|---|----|---|
| 1. Project title                                | 1- | CONSULTANCY SERVICES FOR DEVELOPMENT OF CHITTAGONG AIRPORT. |
| 2. (i) Sponsoring Organisation                  | 1- | Civil Aviation & Tourism Division, Ministry of Defence.     |
| (ii) Administrative Ministry                    | 1- | Civil Aviation & Tourism Division, Ministry of Defence.     |
| (iii) Executing Agency                          | 1- | Civil Aviation Authority & ICAO.                            |
| 3. Estimated Cost(In lakh) with annual phasing. |    |   |
| (i) Total                                       | 1- | Tk. 65.33 lakh  |
| (ii) Foreign Exchange                           | 1- | Tk. 65.33 lakh  |
| (iii) Project Aid                               | 1- | Tk. 65.33 lakh  |
| (iv) R P A                                      | 1- | N/A   |
| (v) C D S T                                     | 1- | N/A   |
- US\$ 2,07,400  
Currency conversion rate used:-  
Tk. 31.50 for one US\$.
- |                           |    |                 |
|---------------------------|----|-----------------|
| 4. Implementation period: |    |                 |
| (i) Commencement          | 1- | July 1986       |
| (ii) Completion           | 1- | December, 1986. |

P A R T - 'B'

5. Project Objectives and Justification:-

Chittagong Airport was constructed in the mid 1940's as a military airfield. Initially it comprised of two runways of 6000' x 150' & 5000' x 150' and support facilities. Over the years piecemeal development has built the airport into Bangladesh's second largest, and there are plans that it should be the nominated alternate to Zia International Airport at Dhaka. The Airport now comprises of one 10,000' x 150' runway, a complex of old buildings and an old terminal building.

The area of Chittagong is closely confined within the Hill Tracts to one side and the Bay of Bengal to the other, which has imposed severe limitations on the location of the airport. The main runway is positioned between the Karnaphuly River leading to the docks and the Bay of Bengal. These physical restrictions, coupled with the conflicting port Authority expansion plans cause to development of Chittagong Airport to be a complex problem.

K. J. MATIN  
19031986

Cont'd.....P/2.

In order that a fully comprehensive Master Plan for the present and future development of Chittagong Airport be compiled, a Technical Assistance Project is to be funded to field a team of consultants. Detailed studies over many fields are required to be carried out and in-depth knowledge based on extensive experience of Airport development is essential to successfully produce a professional Master Plan that will guide development activities.

Chittagong Airport has an important role to play in national development and economic growth. With its many problems related to land restriction, port development, difficult coastal weather, close proximity shipping movement etc. a Master Plan becomes essential to ensure that all aspects are co-ordinated to optimise the use of the airport and land from operational, commercial, safety and environmental points of view. Traffic statistics and airport economics are studied to minimise development investment for maximum benefit.

The project objectives will include the study and analysis of :-

- a) Traffic forecast.
- b) Evaluation of the existing runway pavement strength and proposals for strengthening of the runway to cater for the anticipated traffic.
- c) Layout plan and preliminary design for runway, taxiways, aprons, holding areas.
- d) Location and layout plan for passenger terminal, control tower, operations buildings, cargo buildings, fire station, maintenance buildings, and other buildings and residential quarters for the airport staff envisaged under phase-I development, with sketch plans for the buildings indicating the areas and the essential requirements.
- e) Preliminary design and specifications for the drainage system of the airport.
- f) Access road from the city road to the proposed passenger terminal area, air side roads, land roads and car park.
- g) Lighting aids including approach lighting system, PAPI, runway lighting, taxiway lighting, apron flood lighting etc. Existing facilities should be reviewed, new requirements identified and indicated in the master plan.
- h) Radio navigational aids including ILS category I, DVOR, DME, NDBs. Existing facilities should be reviewed, requirements identified and the location of proposed facilities indicated in master plan.
- i) Existing communication facilities required should be identified and indicated in the master plan.
- j) Rescue and Fire Fighting Services.

K. A. MARTIN  
19031986

Cont'd...P/3.

- k) Preliminary design for services such as water supply, sewerage system, power supply including stand by generators, power house and distribution system.
- l) Location for fuel farm.
- m) Location for meteorological farm.
- n) Security fencing around the airport works including emergency roads.
- o) Rough cost estimate for various works indicated above based on 1986 unit costs.
- p) Cost benefit analysis.
- q) To determine whether the airport will be able to cater for traffic beyond the year 2000 or whether it would need relocation to meet the forecast traffic.

CONSULTANTS:

One ICAO Aerodrome engineering consultant will be required for one month to assist the CAAB evaluate the submitted draft Master Plan before final approval.

SUB-CONTRACT:

It is anticipated that the Master Plan will be undertaken as a sub-contract to a reputable consulting company who will field various consultants to conduct the above studies and complete the Master Plan.

TRAINING:

In order to obtain full benefit from the project it is intended that four officers of the CAAB shall undergo fellowship training abroad in 1986, one each on the following courses:

- i) Airport Master planning at the FAA Academy USA, ICAO Code No. 101, local code No. 06022, duration one week. Followed by System Planning, at the FAA Academy USA, ICAO code No. 101, local code No. 06023, duration - One week.
- ii) Airfield Pavements, Design and Major construction, at the RTCC Cardington RAF Conference Centre UK, ICAO Code No. 103, duration- One week, followed by two weeks attachment to the UK BAA for OJT at selected airports.
- iii) Airport Engineering, at the CATC, Singapore ICAO Code No. 101, local code No. AE/9 duration - 12 weeks.
- iv) CAA Management of Air Nav. facilities, at the Eurocontrol Institute Luxemburg, ICAO Code No. 221, local code No. MGT3 duration - six weeks.

It is also planned that group study tours will be undertaken by CAAB Officers to evaluate tenders and participate in the Master Planning process. Study tours would be as follows:-

- (i) 2 Senior Officers of the CAAB to proceed to ICAO Montreal to assist and participate in the tender evaluation of the submitted sub-contract offers. Duration - One week.
- (ii) 3 Officers of the CAAB to proceed to the Head Office of the selected consulting company to participate and study the evaluation of collected data. The Officers will acquire an understanding of the airport Master Planning Process. Duration- Two weeks.

K. A. MARTIN/  
9031986.

Cont'd.....P/4.

6. Provision in:
- (i) Five Year Plan 1- NIL
- (ii) A.D.P. 1- NIL
7. Financing arrangement: (Amount Source(In lakh))
- (a) Local cost 1- NIL
- (b) Foreign Exchange 1- \$2,07,400 UNDP/JAPAN/FRANCE/U.K.

8. Project components: Estimated Cost  
(In lakh Taka/U.S. Dollar).

Name of Components	F. E.	TAKA	TOTAL
(a) Consultants	Tk. 2.65 \$ 8,400	-	Tk. 2.65 \$ 8,400
(b) Sub-Contract	Tk. 56.76 \$ 1,80,000	-	Tk. 56.76 \$ 1,80,000
(c) Training	Tk. 5.35 \$ 17,000	-	Tk. 5.35 \$ 17,000
(d) Others	Tk. 0.63 \$ 2,000	-	Tk. 0.63 \$ 2,000
Total:-	Tk. 65.33 \$ 2,07,400	-	Tk. 65.33 \$ 2,07,400

9. FIELDS :

Consultants	Duration	Rate	Total
(a) Expatriate (Aerodrome Engineer)	1 m/m	\$ 8,400	\$ 8,400
(b) Sub-Contract Various Expatriate Consultants.	18 m/m	\$ 10,000	\$ 180,000

PART (C)

10. Whether existing manpower of the executing agency will execute the project or additional manpower will be required. In case of additional manpower requirement, indicate details with cost.
- No additional manpower will be required.

11. OUTCOME OF THE PROJECT:

A Chittagong Airport Master Plan for development will be produced for guidance of the CAA in present & future works.

12. (a) What other preliminary work on T.A. programmes in the same subject area had been implemented in the past.

NONE

- (b) If T.A. preliminary work on programme already implemented in the past, give justification for the present project (Enclose copies of relevant report/document for above 11(a) and 11(b)).

N/A.

K. A. MARTIN  
19031986.

Cont'd....P/5:

13. How the outcome (Report, design etc.) of the Project is to be translated into future action programme/Plan ?

Using the details and data of the Master Plan a phased programme through the Annual and Five Year development Planning Process will be implemented.

APPENDIX- 'B'

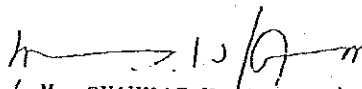
Heads of Budgeting for Annual Technical Assistance Programme.

( In lakh Taka )

Sector	Name of the Project.	Total Cost.	Total allo- cation.	Taka allo- cation.	CDST	Foreign Exchange		Source
						P.A.	RPA	
TRANS- PORT.	Consultancy Services for Development of Chittagong Airport.	65.33	Not known	Nil	Nil	65.33	-	UNDP/JAPAN/ FRANCE/U.K.

14. Name and designation of the Officer responsible for preparation of the TAPP.

( KAMAL AHMED )  
Superintending Engineer,  
CIVIL AVIATION AUTHORITY OF BANGLADESH

  
( M. SHUKAT-UL ISLAM ) psc  
Group Captain (Retd.)  
CHAIRMAN,  
CIVIL AVIATION AUTHORITY.

Signature & Designation of the  
Officer of the Executing Agency.

Signature and Designation of the  
Officer of the sponsoring Authority.

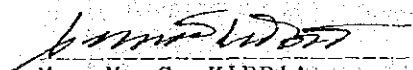
K. A. MATIN  
19031986.

3. SCOPE OF WORK

SCOPE OF WORK  
FOR  
THE STUDY ON THE DEVELOPMENT  
OF  
CHITTAGONG AIRPORT  
IN  
THE PEOPLE'S REPUBLIC OF BANGLADESH

AGREED UPON BETWEEN  
MINISTRY OF CIVIL AVIATION AND TOURISM  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

DHAKA, 20th AUGUST 1988

  
-----  
Mr. M. G. KIBRIA,  
JOINT SECRETARY,  
MINISTRY OF CIVIL AVIATION  
AND TOURISM.

田村真人  
-----  
Mr. Masato TAMURA,  
LEADER OF THE JAPANESE  
PRELIMINARY STUDY TEAM,  
THE JAPAN INTERNATIONAL  
COOPERATION AGENCY

## I. INTRODUCTION

In response to the request of the Government of the People's Republic of Bangladesh (hereinafter referred to as "the Government of Bangladesh"), the Government of Japan decided to conduct the Study on the Development of Chittagong Airport (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study, in close cooperation with the authorities concerned of the Government of Bangladesh.

The present document sets forth the scope of work with regard to the Study.

## II. OBJECTIVES

1. To formulate a master plan and also 1st phase development plan of Chittagong Airport.
2. To study feasibility of the 1st phase development plan.

## III. SCOPE OF STUDY

In order to achieve the above-mentioned objectives, the Study shall include the following items:

1. Evaluation of Chittagong Airport
  - (1) Review of available data and information related to the Study.
  - (2) Field survey to Chittagong Airport.
  - (3) Evaluation of facilities and utilization of existing Chittagong Airport.
2. Demand forecast of Chittagong Airport
  - (1) Analysis and forecasting of air transport demand considering the nationwide trend and also the role of each airport in Bangladesh.
  - (2) Estimation of diversion from Zia International Airport.
3. Formulation of a master plan of Chittagong Airport.

A master plan shall be prepared for the period up to the year 2010. Other development plans for the surrounding area of Chittagong Airport should be taken into consideration.

  - (1) Airport layout plan.
  - (2) Airport facilities plan.
  - (3) Formulation of 1st phase development plan.
4. Feasibility study on the 1st phase development plan
  - (1) Preliminary design.
  - (2) Preliminary cost estimation.
  - (3) Economic analysis.
  - (4) Financial analysis.

#### IV. WORK SCHEDULE

The whole work will be carried out in accordance with the attached tentative schedule.

#### V. REPORTS

JICA shall prepare and submit the following reports in English to the Government of Bangladesh.

1. Inception Report

Twenty (20) copies

At the beginning of first field survey.

This report is to describe the overall approach and implementation programme of the Study.

2. Progress Report

Twenty (20) copies

At the end of the first field survey.

This report is to describe provisional out-comes of the first field survey.

3. Draft Final Report

Twenty (20) copies

Within three (3) months after submission of the Progress Report.

This report is to describe all the essential results of the Study and the Government of Bangladesh will provide JICA with its comments within one (1) month after the receipt of the Draft Final Report.

4. Final Report

Fifty (50) copies

Within two (2) months after receipt of the comments on the Draft Final Report.

This report is to be finalized taking into consideration the comments from the Government of Bangladesh.

#### VI. UNDERTAKING OF THE GOVERNMENT OF BANGLADESH

1. To facilitate smooth conduct of the Study, the Government of Bangladesh shall take necessary measures;

(1) to secure the safety of the Japanese study Team for the Study (hereinafter referred to as "the Team").

(2) to permit the members of the Team to enter, leave and sojourn in Bangladesh for the duration of their assignment therein, and exempt them from alien registration requirements and consular fee.

(3) to exempt the members of the Team from taxes, duties and other charges on equipment, machinery and other materials brought into and out of Bangladesh for the implementation of the Study.

(4) to exempt the members of the Team from income tax and charges



- of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study.
- (5) to provide necessary facilities to the Team for remittances as well as utilization of the funds introduced into Bangladesh from Japan in connection with the implementation of the Study.
  - (6) to secure permission for entry into private properties or restricted areas for the conduct of the Study.
  - (7) to secure permission for the Team to take all data and documents (including photographs) related to the Study out of Bangladesh to Japan.
  - (8) to provide medical services as needed and its expenses will be chargeable on the members of the Team.
2. The Government of Bangladesh shall bear claims, if any arises against members of the Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or wilful misconduct on the part of the members of the Team.
  3. Civil Aviation Authority of Bangladesh (hereinafter referred to as "CAAB"), on behalf of the Ministry of Civil Aviation and Tourism, shall act as the counterpart agency to the Team and also as the coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
  4. CAAB shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned;
    - (1) available data and information, including photographs, related to the Study.
    - (2) counterpart personnel.
    - (3) suitable office space with necessary equipment in Dhaka.
    - (4) credentials or identification cards.
    - (5) to arrange the vehicles with drivers necessary to the implementation of the Study.

#### VII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures;

1. to dispatch, at its own expense, the Team to Bangladesh.
2. to pursue technology transfer to the Bangladesh counterpart personnel in the course of the Study.

#### VIII. OTHERS

JICA and CAAB shall consult with each other in respect of any matter that is not agreed upon in this document and may arise from or in connection with the Study.

ANNEX

TENTATIVE STUDY SCHEDULE

MONTH	1	2	3	4	5	6	7	8	9	10
WORK IN BANGLADESH		████████████████					████████			
WORK IN JAPAN	██████			████████████████				████████████████		
SUBMISSION OF REPORT	△ IC/R		△ P/R			△ DF/R			△ F/R	

IC/R: INCEPTION REPORT    P/R: PROGRESS REPORT    DF/R: DRAFT FINAL REPORT    F/R: FINAL REPORT

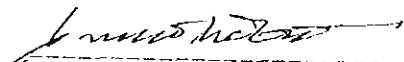
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9.

4. MINUTES OF MEETING

MINUTES OF MEETING  
ON  
THE SCOPE OF WORK  
FOR  
THE STUDY ON THE DEVELOPMENT  
OF  
CHITTAGONG AIRPORT  
IN  
THE PEOPLE'S REPUBLIC OF BANGLADESH

DHAKA, 20th AUGUST 1988

  
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Mr. M. G. KIBRIA,  
JOINT SECRETARY,  
MINISTRY OF CIVIL AVIATION  
AND TOURISM.

田村 真人  
-----  
Mr. Masato TAMURA,  
LEADER OF THE JAPANESE  
PRELIMINARY STUDY TEAM,  
JAPAN INTERNATIONAL  
COOPERATION AGENCY

A Japanese Preliminary Study Team (the Team) organized by Japan International Cooperation Agency (JICA) and headed by Mr. Masato TAMURA, Director, Environmental Improvement Project Office, Civil Aviation Bureau, Ministry of Transport, visited the People's Republic of Bangladesh from 10th August to 22nd August, 1988, in connection with the Study on the Development of Chittagong Airport (the Study). The Team made a site survey to Chittagong Airport and held a series of discussions with authorities concerned of the Government of Bangladesh. Main issues agreed are followings and the attendants of meetings are listed at Appendix.

1. Examination for the air force facilities should be excluded from the Study.
2. Soil condition and topographical survey should be carried out as a part of field survey to Chittagong Airport.
3. Civil Aviation Authority of Bangladesh (CAAB) will assign counterparts for the full-scale study.
4. With respect to III-3 of the Scope of Work, following facilities shall be included in the masterplan of Chittagong Airport.
  - (1) Runway, apron and taxiways, including drainage system.
  - (2) Passenger terminal building, cargo handling facilities.
  - (3) Control tower and administration building.
  - (4) Air navigation systems and general lighting system.
  - (5) Fire station and rescue station.
  - (6) Access road from the existing one.
  - (7) Car parking area.
  - (8) Location of residential area for the airport staff.
  - (9) Power supply system in the airport.
  - (10) Location of service area.
5. CAAB requested that the full-scale Study should be implemented as soon as possible after the proper steps taken in Japan.
6. CAAB requested that any additional land to be procured for the development of Chittagong Airport should be reported to CAAB at an earliest possible time after the start of Study.
7. The Study should be carried out in the line of International Civil Aviation Organization standard.

## APPENDIX

LIST OF ATTENDANTS

## I. JAPANESE SIDE

- a) Contact Mission Team  
 Mr. Masato TAMURA (Leader) Director, Environmental Improvement Project Office, Civil Aviation Bureau, Ministry of Transport (MOT)  
 Mr. Kiyoshi HOJI Deputy Director, Kansai International Airport Division, Civil Aviation Bureau, MOT  
 Mr. Takafumi TAMURA Chief of Administration, International Air Transport Division, International Transport and Tourism Bureau, MOT  
 Mr. Masaru SUZUKI Staff, 1st Development Survey Division, Social Development Cooperation Department, Japan International Cooperation Agency (JICA)  
 Mr. Akihiko HIROTANI Oriental Consultants Co., Ltd.  
 b) Embassy of Japan  
 Mr. Katsuo IWATA First Secretary  
 c) JICA Bangladesh  
 Mr. Norio MATSUZAWA Resident Representative

## II. BANGLADESH SIDE

- a) External Resources Division (ERD), Ministry of Finance (MOF)  
 Mr. Md. Nasim Deputy Secretary, ERD, MOF  
 Mr. KamalUddin Ahmed Research Officer, ERD, MOF  
 b) Planning Commission, Ministry of Planning (MOP)  
 Mr. Nurul Haq Chief of Transport and Infrastructure, Planning Commission, MOP  
 c) Ministry of Civil Aviation and Tourism (MCAT)  
 Mr. M.G. Kibria Joint Secretary, MCAT  
 Mr. M.A. Samad Deputy Secretary (Planning), MCAT  
 Mr. MHA. Chowdhury Senior Asst. Secretary (Planning), MCAT  
 d) Civil Aviation Authority of Bangladesh (CAAB)  
 Air Commodore Moinul Islam (Retd.) Chairman, CAAB  
 Mr. W.D. Ahmed Member (Operation), CAAB  
 Mr. Mahtabuddin Ahmed Chief Engineer, CAAB  
 Mr. Kamal Ahmed Director Planning, CAAB  
 Mr. M. Fazle Ali Deputy Director (Planning), CAAB  
 Mr. A. Quddus Sarker Executive Engineer, Planning, CAAB  
 Mr. Md. Aatur Rahman Executive Engineer, Planning, CAAB  
 Mr. Abdul Haque Economist, CAAB  
 Mr. Aminul Islam Chowdhury : Station Air Traffic Official, Zia International Airport, Dhaka, CAAB  
 Mr. Mir Kamaluddin Airport Manager, Chittagong Airport (Clg. A/P)  
 Mr. Abdur Rhaman Station Communication Officer, Clg. A/P  
 Mr. Paritosh Kumar Halder : Station Air Traffic Officer, Clg. A/P  
 Mr. Md. Rafiqullah Bhyr : St. Sub-Asst. Eng. (Civil), Clg. A/P  
 Mr. Dhabesh Chandra Sarkar : St. Sub-Asst. Eng. (E/M), Clg. A/P

5. 事前調査団のDISCUSSION PAPER

DEVELOPMENT SURVEY PROJECT  
JAPANESE TECHNICAL COOPERATION PROGRAMME

DISCUSSION PAPER  
ON  
THE STUDY  
ON  
THE DEVELOPMENT  
OF  
CHITTAGONG AIRPORT  
IN  
THE PEOPLE'S REPUBLIC OF BANGLADESH

This paper is prepared for the discussion on the above study between JICA Contact Mission and the representatives of the Government of The People's Republic of Bangladesh.

August 1988

JAPAN INTERNATIONAL COOPERATION AGENCY  
(JICA)

## I. PURPOSES OF THE CONTACT MISSION

1. To discuss and confirm with the representatives of the Government of The People's Republic of Bangladesh on the request and its background detail of the technical cooperation for the Study on the Development of Chittagong Airport in The People's Republic of Bangladesh (the Study).
2. To discuss the Scope of Work on the Study.
3. To conduct field surveys for Chittagong Airport and Dhaka International Airport.
4. To discuss and confirm the arrangement for implementation of the Study.

The agreed subjects and items shall be recorded in the Minutes of Meeting which shall be signed by the leader of the Contact Mission and the representative of the Government of The People's Republic of Bangladesh.

## II. SCOPE OF WORK

The Contact Mission could suggest the attached Scope of Work on the Study (draft) for the discussion with the Bangladesh side.

The Scope of Work (draft) suggested here is of tentative nature since it is prepared with limited informations obtained through the Terms of Reference for the Study and based upon the preliminary analysis of the Japanese side.

The Outline of the Study is, therefore, expected to be finalized and confirmed between both sides through discussion either with this Contact Mission or following Preliminary Study Mission prior to the commencement of the full-scale study team.

(DRAFT)

SCOPE OF WORK

FOR

THE STUDY ON THE DEVELOPMENT

OF

CHITTAGONG AIRPORT

IN

THE PEOPLE'S REPUBLIC OF BANLADESH

AGREED UPON BETWEEN

MINISTRY OF CIVIL AVIATION AND TOURISM

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

DHAKA, 19th AUGUST 1988

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LEADER OF THE JAPANESE  
PRELIMINARY STUDY TEAM,  
THE JAPAN INTERNATIONAL  
COOPERATION AGENCY.



## I. INTRODUCTION

In response to the request of the Government of the People's Republic of Bangladesh (hereinafter referred to as "the Government of Bangladesh"), the Government of Japan decided to conduct the Study on the Development of Chittagong Airport (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study, in close cooperation with the authorities concerned of the Government of Bangladesh.

The present document sets forth the scope of work with regard to the Study.

## II. OBJECTIVES

1. To formulate the development plan of Chittagong Airport.
2. To estimate feasibility of the development plan.

## III. SCOPE OF STUDY

In order to achieve the above-mentioned objectives, the Study shall include the following items:

1. Evaluation of Chittagong Airport
  - (1) Review and examination of available data and information related to the Study
  - (2) Field survey to Chittagong Airport
  - (3) Evaluation of facilities and utilization of existing Chittagong Airport
2. Demand forecast
  - (1) Analysis and forecasting of air transport demand
  - (2) Examination of alternative utilization for Dhaka International Airport
3. Formulation of the development plan of Chittagong Airport.

The development plan shall be prepared for the period up to the year 2000. Other development plans for the surrounding area of Chittagong Airport should be taken into consideration.

  - (1) Airport layout plan
  - (2) Airport facilities plan
  - (3) Preliminary design
  - (4) Preliminary cost estimation
  - (5) Implementation schedule
4. Estimation of feasibility of the development plan
  - (1) Economic analysis
  - (2) Financial analysis

#### IV. WORK SCHEDULE

The whole work will be carried out in accordance with the attached tentative schedule.

#### V. REPORTS

JICA shall prepare and submit the following reports in English to the Government of Bangladesh.

1. Inception Report  
Twenty (20) copies  
At the beginning of first field survey.  
This report is to describe the overall approach and implementation programme of the Study.
2. Progress Report  
Twenty (20) copies  
At the end of the first field survey.  
This report is to describe provisional outcomes of the first field survey.
3. Draft Final Report  
Twenty (20) copies  
Within three (3) months after submission of the Progress Report.  
This report is to describe all the essential results of the Study and the Government of Bangladesh will provide JICA with its comments within one (1) month after the receipt of the Draft Final Report.
4. Final Report  
Fifty (50) copies  
Within two (2) months after receipt of the comments on the Draft Final Report.  
This report is to be finalized taking into consideration the comments from the Government of Bangladesh.

#### VI. UNDERTAKING OF THE GOVERNMENT OF BANGLADESH

1. To facilitate smooth conduct of the Study, the Government of Bangladesh shall take necessary measures;
  - (1) to secure the safety of the Japanese study team for the study (hereinafter referred to as "the team").
  - (2) to permit the members of the team to enter, leave and sojourn in Bangladesh for the duration of their assignment therein, and exempt them from alien registration requirements and consular fee.
  - (3) to exempt the members of the team from taxes, duties and other charges on equipment, machinery and other materials brought into and out of Bangladesh for the implementation of the study.
  - (4) to exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or

- allowances paid to the members of the Team for their services in connection with the implementation of the Study,
- (5) to provide necessary facilities to the Team for remittances as well as utilization of the funds introduced into Bangladesh from Japan in connection with the implementation of the Study.
  - (6) to secure permission for entry into private properties or restricted areas for the conduct of the Study.
  - (7) to secure permission for the Team to take all data and documents (including photographs) related to the Study out of Bangladesh to Japan.
  - (8) to provide medical services as needed and its expenses will be chargeable on the members of the Team.
2. The Government of Bangladesh shall bear claims, if any arises against members of the Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or wilful misconduct on the part of the members of the Team.
  3. Ministry of Civil Aviation and Tourism (hereinafter referred to as "MCAT") shall act as the counterpart agency to the Team and also as the coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
  4. MCAT shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned;
    - (1) available data and information, including photographs, related to the Study
    - (2) counterpart personnel
    - (3) suitable office space with necessary equipment
    - (4) credentials or identification cards
    - (5) to arrange the vehicles with drivers necessary to the implementation of the Study

#### VII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures;

1. to dispatch, at its own expense, the Team to Bangladesh.
2. to pursue technology transfer to the Bangladesh counterpart personnel in the course of the Study.

#### VIII. OTHERS

JICA and MCAT shall consult with each other in respect of any matter that is not agreed upon in this document and may arise from or in connection with the Study.

ANNEX

TENTATIVE STUDY SCHEDULE

MONTH	1	2	3	4	5	6	7	8	9	10
WORK IN BANGLADESH	■	■	■				■			
WORK IN JAPAN	■			■	■	■	■	■	■	
SUBMISSION OF REPORT	△ IC/R			△ P/R		△ DF/R	△ DF/R		△ F/R	

IC/R: INCEPTION REPORT    P/R: PROGRESS REPORT    DF/R: DRAFT FINAL REPORT    F/R: FINAL REPORT

6. クエスチョンネアー及び回答

Q U E S T I O N N A I R E

AUGUST 1988

JAPANESE CONTACT MISSION  
OF  
THE STUDY ON THE DEVELOPMENT  
OF  
CHITTAGONG AIRPORT  
IN  
THE PEOPLE'S REPUBLIC OF BANGLADESH

JAPAN INTERNATIONAL COOPERATION AGENCY

(JICA)

This questionnaire is prepared by the Japanese Contact Mission for the Study on the Development of Chittagong Airport in the People's Republic of Bangladesh (the Study) to get informations and data for the Study. Please answer to all questions in written English and also attach materials requested in this questionnaire. Answers need not be too much in detail but should be brief and precise.

However, it should be recognized that because of its preliminary characteristic of this questionnaire, the Contact Mission would like to ask for additional data/information on the occasion of discussion with the Bangladesh side.

Thank you for your cooperation.

## I. GENERAL

1. The Contact Mission would like to obtain general explanation and related information, if any, on the followings;
  - (1) Background and necessity of this Study.
  - (2) Possible action to be undertaken by the Bangladesh side based upon the output of this Study.
  - (3) Present nationwide and regional development plans and other plans which possibly have influences upon airport development.
  - (4) Present policies which possibly have influences upon airport development.
  - (5) Present budget allocation for aviation-related administration.
  - (6) Present problems of airport development. (specially Dhaka and Chittagong Airports)
  - (7) Present plans of airport development. (specially Dhaka and Chittagong Airports)
  - (8) Relations between Bangladesh Air Force and CAAB. (specially at the Chittagong Airport)

## II. INSTITUTIONAL FRAMEWORK FOR AVIATION-RELATED ADMINISTRATION

1. The Contact Mission would like to grasp institutional framework of Chittagong Airport. (i.e. planning, financing, construction and operation aspects) Since main items are listed in the attached Table-1, please fill in each column.

### NOTE

"organization in charge of";

The ministry, other public organization or private bodies, which are mainly responsible for planning, financing, construction and operation of Chittagong Airport facilities.

2. The Contact Mission would like to obtain informations concerning to the government organization concerned with this Study. Please provide the organization chart with jurisdictional responsibility and background for setting-up of each department, division, section, and office etc. for (1) and (2), and brief explanation for (3) and (4), if relevant.
  - (1) Ministry of Civil Aviation and Tourism
  - (2) Civil Aviation Authority of Bangladesh

- (3) Ministry of Planning
- (4) Ministry of Finance

III. NECESSARY DATA

Contact Mission would like to collect documents or maps listed in the attached Table-2, during its stay in Bangladesh. Also, please fill in each column of Table-2.

Table-1 INSTITUTIONAL FRAMEWORK OF AVIATION-RELATED ADMINISTRATION  
 (Planning./Financing./Construction./Operation aspects of the airport by facilities)  
 If organization concerned is ministry or other public organization, please write down the name of the organization. If private body is so, please write "P.B."

I T E M	ORGANIZATION IN CHARGE OF:				*** OPERATION
	* PLANNING	FINANCING NATIONAL GOVT./CAAB	** CONSTRUCTION	CAAB	
1. Runway, Taxiway, Apron, Holding Area	CAAB		CAAB	CAAB	CAAB
2. Passenger Terminal Building	Do	Do	Do	Do	Do
3. Cargo Handling Facilities	Do	Do	Do	Do	BY LEASEE OPERATOR
4. Residential Quater for the Airport Staff	Do	Do	Do	Do	CAAB
5. Control Tower	Do	Do	Do	Do	Do
6. Administration Building	Do	Do	Do	Do	Do
7. Air Navigational Aids and Lighting Facilities	Do	Do	Do	Do	Do
8. Communication	Do	Do	Do	Do	Do
9. Customs	Do	Do	Do	Do	NSR GOVT & PRB
10. Immigration	Do	Do	Do	Do	POLICE DEPTT.
11. Quarantine	Do	Do	Do	Do	HEALTH DEPTT.
12. Fire Station	Do	Do	Do	Do	CAAB
13. Rescue Station	Do	Do	Do	Do	Do
14. Car Parking	Do	Do	Do	Do	BY LEASEE
15. fuel Supply	Do	BY LEASEE	BY LEASEE	BY LEASEE	Do
16. Drainage	Do	CAAB	CAAB	CAAB	Do
17. Water Supply	Do	Do	Do	Do	Do
18. Sewage	Do	Do	Do	Do	Do
19. Electric Power Supply	PDB	PDB	Do	Do	PDB STAND BY CAAB
20. Meteorology	CAAB	CAAB	Do	Do	MET. DEPTT.
21. Access Road	Do	Do	Do	Do	CAAB

\* PLANNING IS PROCESSED BY PLANNING DIVISION OF CAAB, WHO ARRANGES FINANCE.  
 \*\* CONSTRUCTION IS DONE BY CONTRACTORS UNDER SUPERVISION OF ENGR. WORKS DIVISION OF CAAB.  
 \*\*\* OPERATION IS DIRECTLY SUPERVISED BY THE MANAGEMENT OF THE AIRPORT WHERE THESE ARE LOCATED, CARGO HANDLING FACILITIES ARE OPERATED BY LEASEE: BANGLADESH BIXAN.



Table-2 THE LIST OF NECESSARY DATA / INFORMATION

No.	ITEM OF NECESSARY DATA	AVAILABILITY		THE NAME OF MATERIALS
		AVAILABLE OR NOT	PLACE OF AVAILABLE DATA	
1	1. Nationwide Socio Economic Data (1) Annual report/yearbook/statistics on national and regional economy and economic indicators (since independence until latest)	Y	Bureau of Statistics	(Name when obtained, None if not) Year Book
2	a) GDP			
3	b) Population (by region)			
4	c) Industrial products (by main sort)			
5	(2) Materials of latest national economic development	Y	M/O planning	-
6	a) Authorized development plans of economics, industry, agriculture and tourism.			
7	b) Development plans of transportation	Y	Do	-
8	c) Long term forecast of economic indicators (GDP : if revised, other indicator: if any)	Y	Do	-
9	(3) Annual budget (national total and by sector)			
10	(4) Public investment by sector (results and plan)			
11	2. Regional Socio Economic Data (Chittagong)	Y	M/O,	-
12	(1) Indicator/Statistics and Development Plan (since independence until latest)			
13	a) Industries		M/Industry	
14	b) Tourism		Tourism Coop.	
15	c) Transportation (other than air)		Planning Comn.	
16	d) Chittagong Port		Port Authority	
17	e) Chittagong City			
18	(2) Maps	Y	Chittagong	-
19	a) Chittagong City (including airport)			

No.	ITEM OF NECESSARY DATA	AVAILABILITY		THE NAME OF MATERIALS
		AVAILABLE OR NOT	PLACE OF AVAILABLE DATA	
15	b) Aerial photograph		Land Record & Survey Division	
16	c) Geographic map			
	3. Air Transport			
	(1) Major Agency Related to Air Transport			
17	a) Name of each agency	Y	Biman	Provided by CAAB (Partly)
18	b) Role of each agency			
19	c) Related laws and regulations for establishment			
	(2) Air Route Network			
20	a) International	Y	Biman	Air Route Network Map
21	b) Domestic (scheduled and non-scheduled, if possible)			
22	c) Future plan/policy for air route network	Y	CAAB	(No Future Plan) Same Map & AIP
	(3) Airport			
23	a) Geographical distribution of airport			
24	b) Major facilities of each airport			
25	c) Function of each airport			
26	d) Future development plan			
27	e) Design and planning criteria			
	(4) Airport related budget (since independence until latest)	Y	CAAB	(No future plan except Zia) (ICAO)
28	a) Airport construction budget			
29	b) Airport maintenance budget	Y	CAAB	(Not available) Provided by CAAB
	(5) Statistics (since independence until latest) (total and by airport)	Y	CAAB	Provided by CAAB
30	a) International and domestic passenger			
31	b) International and domestic cargo/mail			
32	c) Military aircraft activities			
33	d) Number of takeoff and landings (including general aviation)			

No.	ITEM OF NECESSARY DATA	AVAILABILITY		THE NAME OF MATERIALS
		AVAILABLE OR NOT	PLACE OF AVAILABLE DATA	
34	e) Annual Report of CAAB	Y	Biman	Biman Annual Report
35	(6) Airline Company			
36	a) Name of airline companies in Bangladesh			
37	b) Annual report of Biman			
38	c) International and domestic route map and timetable (by airline)			
39	d) Air fleet (actual and future plan)			
40	e) Foreign airline companies desiring to serve the airport in Bangladesh			
41	f) Major airline maintenance facilities in Bangladesh			
42	(7) General Aviation	Y	CAAB	Provided by CAAB
43	a) Statistics of activities (total and by airport)	N	-	-
44	(8) Demand Forecasting of Air Transportation (total and by airport)	Y	CAAB	AIP
45	(9) Air Traffic Control			
46	a) AIP (latest)			
47	4. Chittagong Airport			
48	(1) Airport Facilities	Y	CAAB	Provided by CAAB
49	a) Airport layout map (1:5,000)			
50	b) Plan of terminal building			
51	c) Inventory of facilities			
52	d) Construction history of airport			
53	e) Cross section of runways			
54	f) Actual strength of runway, taxiway and apron pavement			
55	g) Actual supply/disposal volume of following facilities			
56	- Water supply			
57	- Electric power supply			
58	- Sewage and drainage			
59	- Fuel supply			

No.	ITEMS OF NECESSARY DATA	AVAILABILITY		THE NAMED MATERIALS
		AVAILABLE OR NOT	PLACE OF AVAILABLE DATA	
51	(2) Natural Conditions	Y (Partly)	CAAB	Provided by CAAB (Partly)
52	a) Meteorological data			
53	b) Flood data			
54	c) Topographical map			
55	d) Underground conditions			
56	e) High tide			
57	f) Boring data			
58	g) Soil data			
59	(3) Airport Operation			
60	a) Operational organization chart (including airline)			
61	b) Role of each organization	Y	CAAB (Airport management, Chittagong)	Provided by CAAB (Chittagong A/P)
62	c) Staff assignment of each organization			
63	(4) Utilization			
64	a) Apron operation	Y	CAAB	Provided by CAAB (Partly)
65	b) Map of obstacle limitation surface			
66	c) Report of obstacles for limitation surface			
67	d) Maximum mast height of ships passing Karnafuli River			
68	e) Activities of Military			
69	f) Weight restriction of aircraft			
70	g) Access Transportation volume from Chittagong City			
71	h) Location of residential quarter for airport staff and number of residence			
72	(5) Existing airport development plan	N	-	-

No.	ITEMS OF NECESSARY DATA	AVAILABILITY		THE NAME OF MATERIALS
		AVAILABLE OR NOT	PLACE OF AVAILABLE DATA	
70	5. Dhaka International Airport	Y	CAAB	Provided by CAAB
71	(1) Number and reason of diversion to other airport			
72	(2) Type of aircraft diverted from Dhaka			
73	(3) Airport layout map			
74	(4) Meteorological data			
75	(5) Operational data	Y	CAAB, ICAO	Provided by CAAB
76	6. Laws and Regulations			
77	(1) Civil aviation law and related regulations			
78	(2) Tariff structure			
79	(3) Agreement on the use of airport with the Military	Y	CAAB	Provided by CAAB
80	(4) Environmental policy and regulations			
	7. Other Informations			
	(1) Unit cost of soil and topographic survey			
	(2) Availability of local survey company			

チッタゴン空港開発計画関連資料リスト

7. 収集資料リスト

区分	資料名	作成機関	概要	要
A. 国家・経済 社会・データ	1. 1987 Statistical Yearbook of Bangladesh	Bangladesh Bureau of Statistics	統計年報	

チッタゴン空港開発計画関連資料リスト

区分	資料名	作成年月	作成機関	概要
B. 地域 社会・経済 データ (チッタゴン)				

チッタゴン空港開発計画関連資料リスト

区分	資料名	作成年月	作成機関	概要	要
C. 航空データ					
1.	Aeronautical Information Publication Bangladesh	010383 170383 010284 190285 181286 160787	CAAB		AIP
2.	A Review	031185	CAAB		CAAB年報
3.	The Civil Aviation Rules, 1984 First Edition	230884	Civil Aviation and Tourism Division, M. of Defense		航空関係法規集
4.	Bangladesh International and Domestic ATS Routes				ATS ルート図
5.	Summer Schedule 1988, W.E.F. 27th March 1988 to 29th October 1988				ビーマン運行スケジュール (国際線)
6.	Biman-Bangladesh Airlines Central & Operations Control	090388	Biman		ビーマン運行スケジュール (国内線)
7.	Airport Related Budget for FY-88-89	160888	CAAB		単年度維持管理予算配分
8.	Traffic Statistics Passenger, Cargo, A/C	160888	CAAB		1983~1987, 年間輸送量
9.	Passenger Movement	160888	CAAB		1980~1987, 年間空港別乗客数



チッタゴン空港開発計画関連資料リスト

区分	資料名	作成年月	作成機関	概要
10.	Cargo/Mail Movement	1988	CAAB	1980～1987, 年間空港別貨物量
11.	Number of Aircraft Movement	1988	CAAB	1987, ZiaとChittagong航空機の動き
12.	Aircraft Movement	1988	CAAB	1981～1987, 年間空港別の航空機の動き
13.	Foreign Airline Companies desiring to Serve the Airport in Bangladesh	1988	CAAB	7社の航空会社名
14.	Extraordinary Published by Authority (Tariff schedules revised)	1988	MOU, Civil Aviation and Tourism Division	法規改訂通知書
15.	Summer Schedule Effective 27th March 1988		Biman	運行スケジュール

チャッタゴン空港開発計画関連資料リスト

区分	資料名	作成年月	作成機関	概	要
D. チャッタゴン 空港					
1.	Report on: Sub-soil Investigation for Installation of A Deep Tube-Well at Chittagong Airport	June 83	Client: CAAB Contractor: M/S Seed	深井戸用試掘結果 (2本)	
2.	Masterplan of Chittagong Airport	080777	Airports Development Agency	1977承認の図面	
3.	Location Map			資料コピーの一部	
4.	Lay Out Plan of Chittagong International Airport	240188	CAAB	全体図、消走路断面図	
5.	Plan of Existing Terminal Buildings & Fire Station at Chittagong Airport	020883	Airport Development Agency Ltd. Aviation Division Chittagong	建物伏せ図	
6.	Brief History of Development of Chittagong Airport	230984	CAAB	開発経緯 (9ページ)	
7.	Chittagong Airport, PCN of the runway pavement	070484	CAAB	PCN決定計算書	

チッタゴン空港用発着計画図関連資料リスト

区分	資料名	作成年月	作成機関	概要
E. ダッカ空港	1. Master Plan Phase 1990, Dhaka		(CAAB)	マスタープラン図面
2.	Diversion record from Zia International Airport	160888	CAAB	1987年のダッカ空港からの代替記録
3.	Layout Plan of Zia International Airport, Dhaka	050284	CAAB	現況図面

チャータゴン空港開発計画関連資料リスト

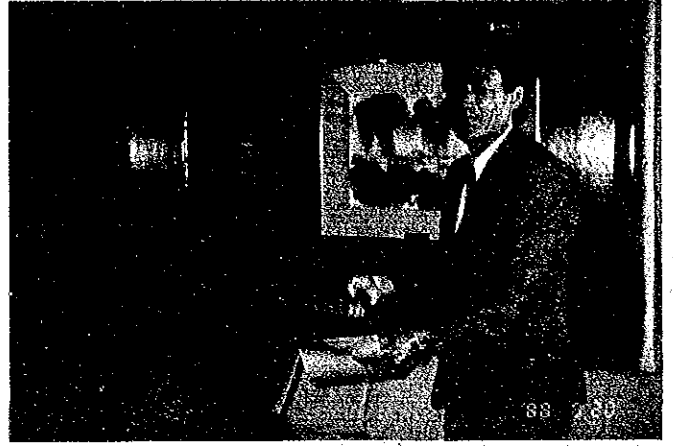
区分	資料名	作成年月	作成機関	概要	要
F. その他	1. Answer to Questionnaire in general	180888	CAAB	コンタクトミッション質問状の回答 コンタクトミッション質問状表-1, 2 の回答 資料 旅行案内 ビーマン年報 現況と将来予想 月別気温、降雨の最大/最小平均値	
	2. Answer to Questionnaire for Table-1 and Table-2	180888	CAAB		
	3. Application for Technical Assistance and Grant Aid	Feb. 88	CAAB		
	4. Bangladesh A Travel Survival Kit	Nov. 85	Loncly Planet		
	5. Biman Bangladesh Airline	Sep. 85	Biman		
	6. Biman Fleet (Present Fleet, Future Plan)	200888	Biman		
	7. Met. Data on Temperature and Rainfall				



## 8. 現地写真



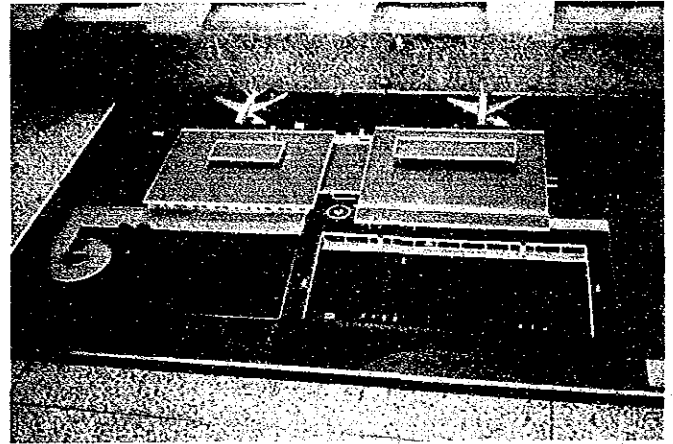
▲写真-1 S/W、M/Mの締結-1



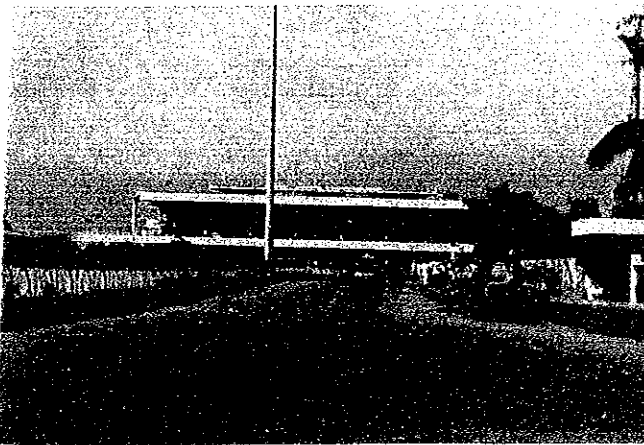
▲写真-2 S/W、M/Mの締結-2



▲写真-3 S/W、M/Mの締結-3



▲写真4 Zia 国際空港将来計画



▲写真-5 Zia 国際空港正面現況



▲写真-6 Zia 国際空港ターミナル  
(エプロン側)

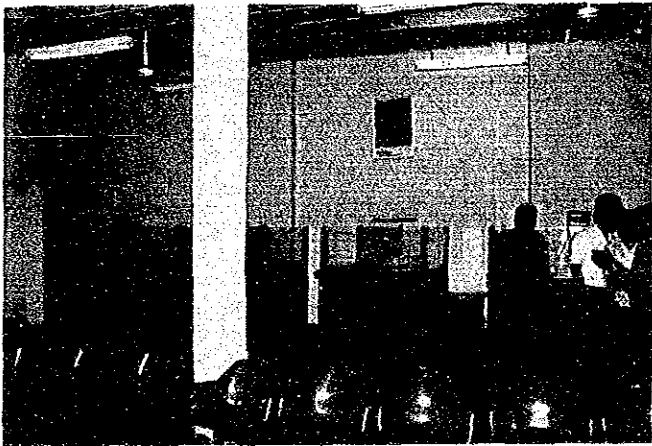




▲写真-7 チッタゴン空港ターミナル



▲写真-8 チッタゴン空港コントロールタワー



▲写真-9 チッタゴン空港入国審査、検疫



▲写真-10 チッタゴン空港税関



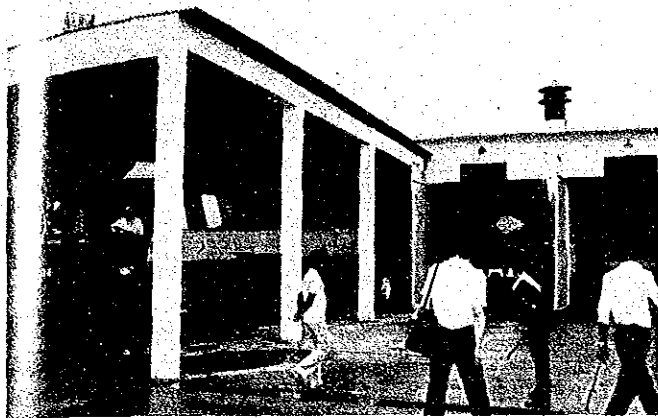
▲写真-11 チッタゴン空港入口、駐車場



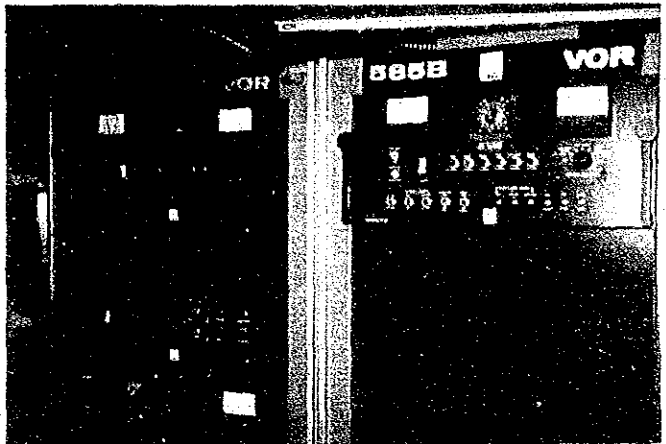
▲写真-12 チッタゴン空港利用状況







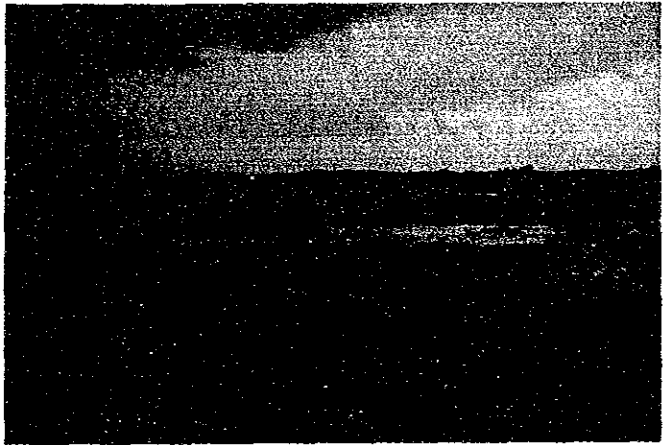
▲写真-13 チッタゴン空港消防施設



▲写真-14 チッタゴン空港VOR



▲写真-15 チッタゴン空港滑走路23側端  
(川を向く)



▲写真-16 チッタゴン空港滑走路23側端の外  
(川を向く)

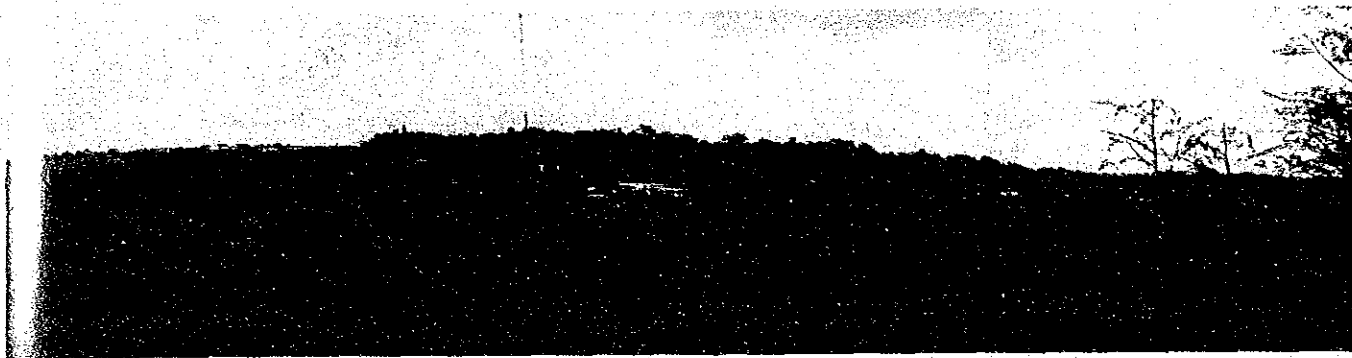


▲写真-17 チッタゴン空港滑走路05側端  
(海を向く)



▲写真-18 チッタゴン空港滑走路05側に海から望む





▲写真-19 チッタゴン空港南側境界の外付近（新ターミナル候補地付近）



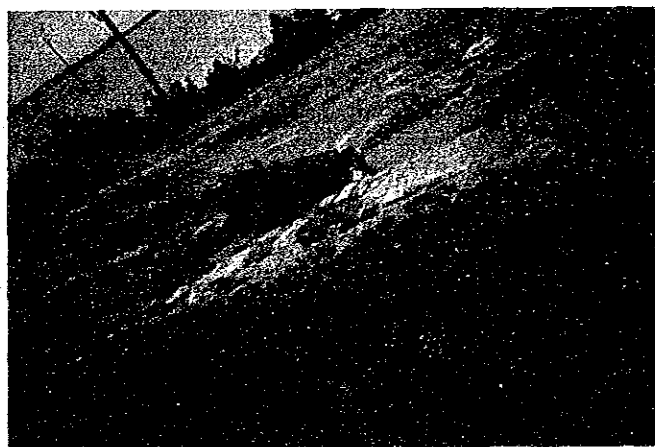
▲写真-20 チッタゴン港遠望（北を向く）



▲写真-21 チッタゴン空港南側遠望



▲写真-22 チッタゴン空港東端付近（南を向く）

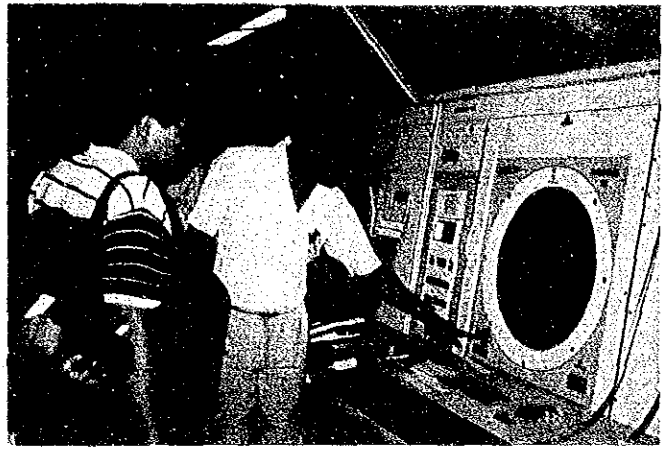


▲写真-23 道路舗装のレンガ敷例





▲写真-24 チッタゴン空港管理組織



▲写真-25 Zia 国際空港 Arts







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