



DEPARTMENT OF CIVIL AVIATION, MYANMAR

MYANMAR ACCIDENT INVESTIGATION BUREAU

ACCIDENT INVESTIGATION
POLICY MANUAL

First Issue-January 2010

SECTION 0	: MANUAL ADMINISTRATION
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1 This Policy Manual is an internal document of the Accident Investigation Bureau. It contains policies relating to the responsibilities and functions of the Myanmar Accident Investigation Bureau (MAIB) for the purpose of guiding the operations and professional development of the MAIB.

2 Except for material which has been approved for public distribution, the contents of this Manual are not intended to be communicated to persons outside the MAIB without the consent of the MAIB.

3 The Manual will be revised when necessary.

Thein Swe
MINISTER
MINISTRY OF TRANSPORT

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SECTION 1	: ORGANISATION OF INVESTIGATION IN MYANMAR
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CHAPTER 1	: THE ACCIDENT INVESTIGATION BUREAU
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1 Accident Investigation Unit

- 1.1 Aircraft accident and incident investigation in Myanmar is carried out by the Myanmar Accident Investigation Bureau (MAIB).
- 1.2 The MAIB is responsible to [DG of DCA] for the management of the MAIB.
- 1.3 The MAIB is independent of the regulatory and judicial authorities as well as of the aviation service providers in Myanmar.
- 1.4 The key functions of the MAIB are:
 - To implement the Standards and Recommended Practices contained in Annex 13 to the Convention on International Civil Aviation (Chicago Convention).
 - To conduct independent and objective investigation of accidents and incidents in accordance with the Myanmar law and International best practices. Have unrestricted authority, shall gathering, recording, examining analysing determining recommending and reporting. If possible, visit to the scene of accident, examine wreckage and statement taking from witnesses.
 - To promote aviation safety through the investigation of accidents and incidents and the identification of safety deficiencies so that accidents may be avoided in future.

2 Investigation of accidents and incidents

- 2.1 The MAIB will investigate accidents pursuant to Article 26¹ of the Chicago Convention.
- 2.2 While Article 26 of the Chicago Convention refers to investigation of accident, Annex 13 goes beyond investigation of accidents and prescribes Standards and Recommended Practices for the investigation of incidents as well, in particular serious incidents.
- 2.3 Thus, the MAIB will also investigate serious incidents as recommended by Annex 13 and, where there will be safety lessons to be drawn, incidents that are not classified as serious incidents.

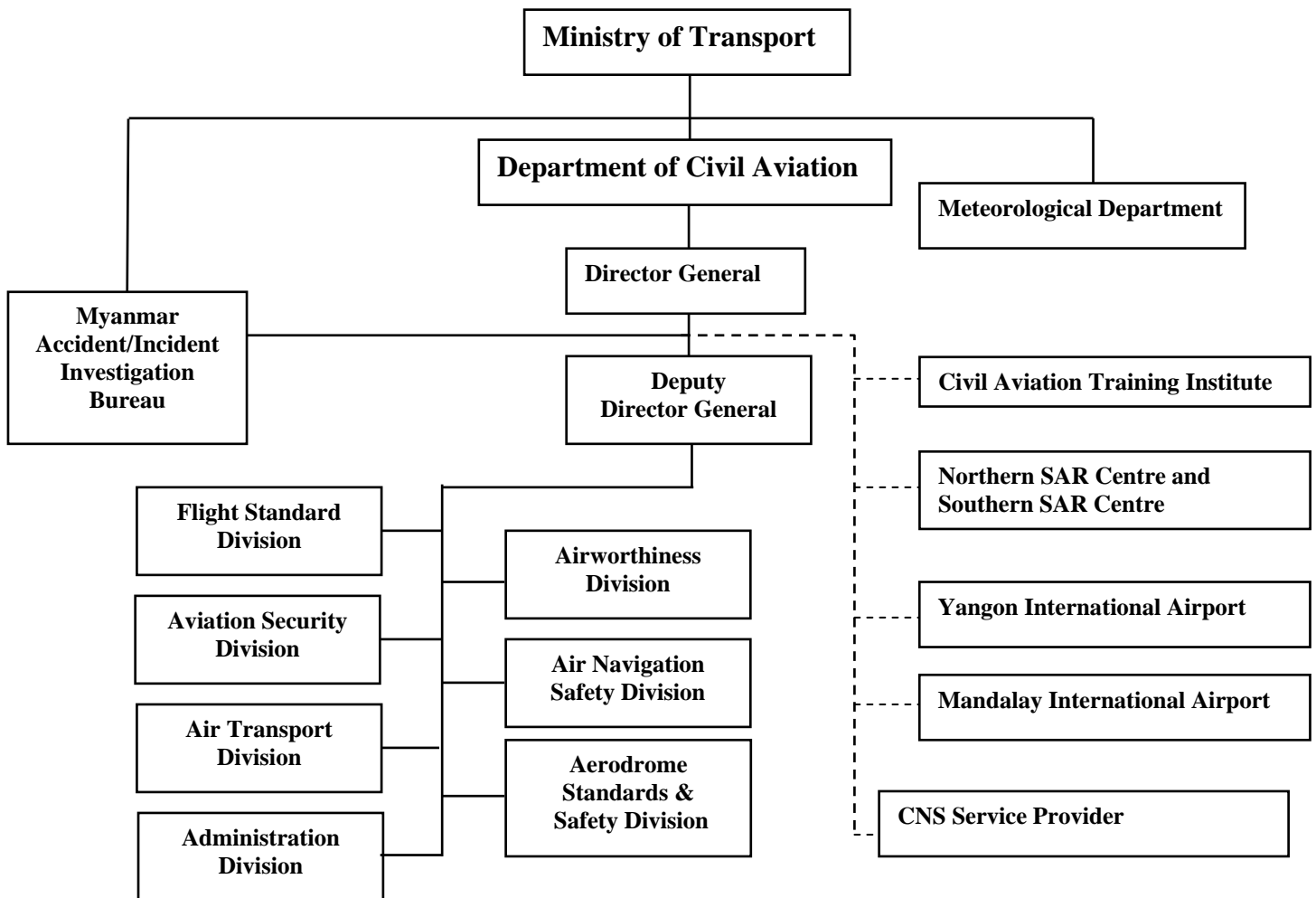
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1 MAIB staff and investigators

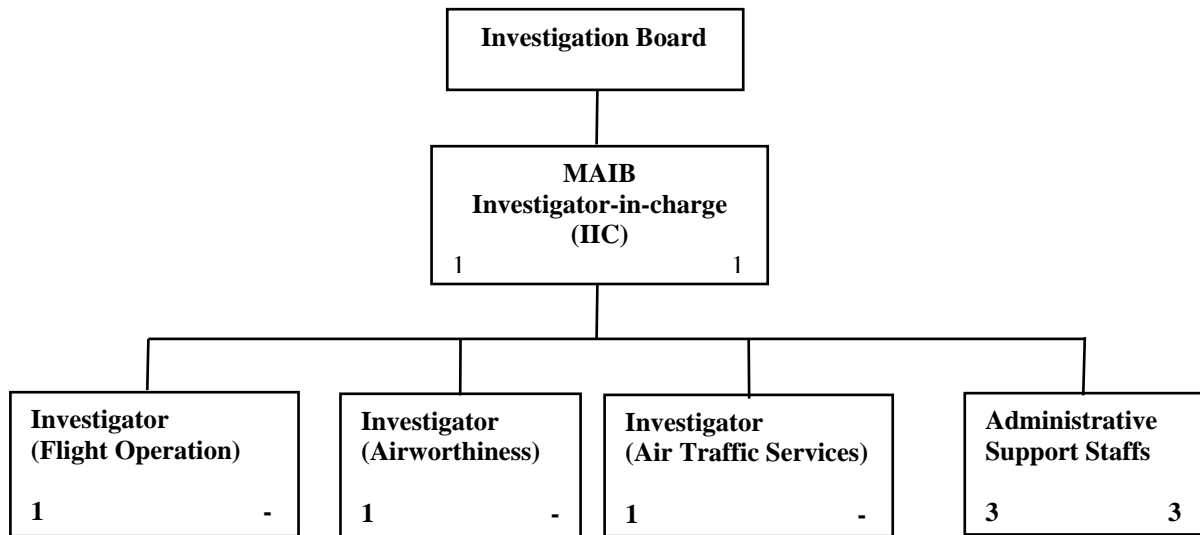
1.1 The MAIB has planned for a full-time staff strength of 1 investigators and 2 administrative support staff in the medium term.

2 Organization chart

2.1 Below is the organisation chart of the MAIB:



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SECTION 1	: ORGANISATION OF INVESTIGATION IN MYANMAR
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CHAPTER 2	: OBJECTIVE OF MAIB INVESTIGATION
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1 In accordance with paragraph 3.1 of Annex 13, **the sole objective of an aircraft accident or incident investigation is to prevent future accidents and incidents. The purpose of an investigation is not to apportion blame or liability.**

2 The emphasis of ICAO's objective statement is on remedial action. Any judicial or administrative proceedings to apportion blame or liability should be separate from any investigation conducted under the provisions of Annex 13.

3 An aircraft accident suggests hazards or deficiencies in the aviation system. The investigation should identify all immediate and underlying systemic causes of an accident. The investigation should also determine the facts, conditions and circumstances pertaining to the survival or non-survival of the occupants of the aircraft.

4 At the end or even in the course of the investigation, appropriate safety actions may be recommended, aiming at avoiding the hazards and eliminating the deficiencies in the aviation system, as well as improving the crashworthiness of the aircraft (thus preventing or minimising injuries to aircraft occupants in future accidents).

SECTION 1	: ORGANISATION OF INVESTIGATION IN MYANMAR
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CHAPTER 3	: INVESTIGATION BY OTHER AUTHORITIES IN MYANMAR
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1 Investigation by the MAIB for the purposes of fulfilling Myanmar's obligation under Article 26 of the Chicago Convention and Annex 13 to the Chicago Convention does not preclude other competent authorities in Myanmar (e.g. **DCA**, Police, Coroner) from carrying out their own investigations separately for their own purposes as required and in accordance with the relevant legislation.

2 To the greatest extent possible, the MAIB will coordinate and cooperate with the competent authorities that conduct a parallel investigation. For example, the MAIB may need information derived from the identification of victims by the Police or from the pathological examination of the victims by the Coroner, and the other investigating authorities may need information derived by the MAIB from the flight data recorder data.

3 MAIB shall recognize the need for coordination between the investigator- in-charge and the judicial authorities. Particular attention shall be given to evidence with require prompt recording and analysis for the investigation to be successful, such as the examination and identification of victims and read-outs of flight recorder recording.

SECTION 1	: ORGANISATION OF INVESTIGATION IN MYANMAR
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CHAPTER 4	: SCOPE OF MAIB INVESTIGATION
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1 The MAIB will be involved in a civil aircraft accident or serious incident investigation in the following circumstances:

- (a) where the accident or serious incident occurs in Myanmar (irrespective of the nationality of the aircraft);
- (b) where the accident or serious incident occurs in another Contracting State or non-Contracting State and involves a Myanmar's aircraft or an aircraft operated by a Myanmar's operator, and the State involved is conducting an investigation of the accident or serious incident and Myanmar is participating in the investigation. By providing with all information and elements required through the investigation process and appointment of an accredited representative and advisers. If Myanmar having suffered fatalities or serious injuries to it citizens to send an expert.
- (c) where the accident or serious incident occurs in any non-Contracting State and involves a Myanmar's aircraft or an aircraft operated by a Myanmar's operator, and the non-Contracting State involved does not intend to carry out an investigation of the accident or serious incident in accordance with Annex 13 and Myanmar is instituting an investigation;
- (d) where the accident or serious incident involves a Myanmar aircraft or an aircraft operated by a Myanmar operator and the investigation has been delegated to Myanmar by another State by mutual arrangement and consent;
- (e) where the accident or serious incident occurs in a location which cannot be definitely established as being in the territory of any State and involves a Myanmar's aircraft, and therefore Myanmar is instituting an investigation;

2 [DG of DCA] may, with the approval of [Ministry], delegate the investigation of an accident or serious incident to another State by mutual arrangement and consent. In such a case, the MAIB will facilitate to the best of its ability the investigation carried out by that State.

3 If Myanmar is state of Occurrence, a request is received from the States of Registry, Operator, Design or Manufacture that the aircraft, its contents and any other evidence remain undisturbed pending inspection by an accredited representative undisturbed pending inspection by an accident representative of the requesting State MAIB shall take all necessary steps to comply with such request provided the aircraft to prevent destruction by persons, animals, fire or other causes.

4 When neither the State of registry nor the State of Operator appointed accredited representative neither the State of Design nor the State of Manufacture appointed accredited representative & advisers, Myanmar should invite these States to participate.

SECTION 1 : ORGANISATION OF INVESTIGATION IN MYANMAR

CHAPTER 5 : INVESTIGATION RESOURCES
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1 Investigation resources

- 1.1 As the air transport industry and the aircraft itself have become more sophisticated, the investigation of a major aircraft accident can be expected to be very complex and may need the investigation team of significant size.
- 1.2 The MAIB will make use of external investigation expertise as and when needed, e.g. metallurgists from the academia and research institutes, human factors consultants, investigators from foreign investigation authorities and, are relieve their regular duties, during the investigation. MAIB must established then to avoid possible conflicts of interest is likely, experts from the aviation regulatory authority and service providers.

2 Support from other agencies

- 2.1 The MAIB also needs other external agencies to provide engineering and logistics support to its investigation, e.g. Police to secure accident site, aircraft maintenance companies to help remove flight recorders and collect fuel/oil samples, ATC to provide communication transcripts and radar and meteorological data.

3 Mandatory and voluntary incident reporting system

- 3.1 DCA shall establish a mandatory incident reporting system to facilitate collection of information on actual or potential safety deficiencies and a voluntary incident reporting system that may not be captured by a mandatory incident reporting system.
- 3.2 It also establish that its voluntary occurrence reporting system is non-punitive and for ensuring protection to the source of information.
- 3.3 MAIB have related for guidance to both mandatory and voluntary incident reporting systems in according with Safety Management Manual (Doc.9859)

SECTION 1	: ORGANISATION OF INVESTIGATION IN MYANMAR
CHAPTER 6	: PROCEDURES ESTABLISHED FOR THE INVESTIGATION

- 1 MAIB have established to receive the up-to-date contact information of the aircraft accident investigation authorities of other states and made available to the relevant personnel. (Amendments are based on the contact list on ICAO FSIX web site)
- 2 MAIB have provided to ICAO with current contact information of Myanmar accident investigation authority and renewed it.
- 3 MAIB has provided Duty Officer to deal with notification of accident and incident (forward within the state or forwarded by other states) during office hours as well as out of office hours.
4. In the event of an accident or serious incident, all air traffic services communication recording and document associated with the flight are secured and placed in safe keeping. Recording media shall only be released to a designated Accident and Investigation Board. (Ref with CNS Advisory Circular AC.CNS.002, 1st June 2010)

SECTION 2	: COMPLIANCE WITH ANNEX 13 STANDARDS
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CHAPTER 1	: IMPLEMENTATION OF ANNEX 13 STANDARDS
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1 The specifications in Annex 13 apply to investigation activities in respect of accidents and incidents wherever they occurred. It is the MAIB's policy to adhere, as far as possible in its investigation of accidents and incidents, to all investigation related Standards contained in Annex 13. The MAIB will also endeavour to comply with the Recommended Practices spelt out in Annex 13.

2 Implementation of the Annex 13 Standards and Recommended Practices will be through legislation and/or MAIB policies and procedures.

3 If any Annex 13 Standard cannot be complied with, the MAIB will highlight it to [DCA] and arrange for a notification of difference to ICAO.

4 When aircraft is leased, chartered or interchanged Myanmar is State of Operator (is not State of Registry) the specifications in Annex 13 are concerned and if it discharges, in respect of the Annex 13, in part or in whole the functions and obligations of the State of Registry.

SECTION 2	: COMPLIANCE WITH THE ANNEXES
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CHAPTER 2	: REVIEW OF AMENDMENTS TO THE ANNEXES
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1 **Annex 13**

- 1.1 [DCA] is the state organization in Myanmar designated to communicate with ICAO on official matters on behalf of Myanmar. As such, the MAIB will receive through [DCA] the official ICAO communications concerning Annex 13 amendment.
- 1.2 On receipt of any ICAO communications concerning Annex 13 amendment, [IIC] in the MAIB will evaluate the information in the organization.
- 1.3 Where necessary, the MAIB will discuss internally with relevant authority to the Myanmar's position on the Annex 13 amendment.
- 1.4 The MAIB will communicate Myanmar's response to any Annex 13 amendment proposal to ICAO.

2 **Notifying ICAO of differences with Annex 13 Standards**

- 2.1 When an amendment to Annex 13 has been adopted by ICAO and there are standards that Myanmar cannot comply with, the MAIB will notify ICAO of the differences between Myanmar's regulations and practices and Annex 13.

3 **Amendment to legislation, policies or procedures**

- 3.1 For Annex 13 amendment that is adopted by ICAO and with which Myanmar can comply, the MAIB will amend the MAIB Policy Manual accordingly or initiate appropriate action for the amendment of Myanmar's aviation legislation.

SECTION 2	: COMPLIANCE WITH THE ANNEXES
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CHAPTER 2	: ACCIDENT PREVENTION MEASURES
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- 1 With a view to facilitate the collection of information on actual or potential safety deficiencies, Union of Myanmar must establish and implemented a mandatory incident reporting system.
- 2 The Union of Myanmar shall take appropriate measures for ensuring that regulatory provisions and procedures established for;
 - (a) voluntary occurrence reporting system to be non-punitive and
 - (b) ensuring protection to the sources of the information.
- 3 MAIB shall establish an accident and incident database exchange with standard format to facilitate the systematically analyse of information contained in its accident / incident reports and to determine preventive action required.

SECTION 3	: STAFFING AND TRAINING
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CHAPTER 1	: RECRUITMENT OF MAIB INVESTIGATORS
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1 MAIB investigators is responsible for carrying out accident/incident investigations. The investigation tasks include gathering, recording and analyzing all available information on accidents and incidents, identifying safety issues, making safety recommendations, determining the causes or contributing factors, and completion of investigation reports. The investigators' work scope will also include formulation and implementation of investigation related policies and updating of investigation legislation.

2 The MAIB normally looks for investigators from the pool of people who possess a degree from a recognised university or professional qualifications in an appropriate discipline (e.g. a degree in aeronautical/mechanical/electrical/electronic engineering, a pilot or licensed aircraft maintenance engineer qualification) and who have aviation related experience. Preference will be given to those with relevant experience at management or supervisory level and in particular with aircraft accident/incident investigation experience.

3 The desired qualities of an investigator are: inquisitiveness, logical mind, objectivity, dedication, diligence, patience, perseverance, good interpersonal and communications skills, and commitment to excellence.

SECTION 3	: STAFFING AND TRAINING
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CHAPTER 2	: IMMUNISATION FOR INVESTIGATORS
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1 As there are always potential biological hazards at an accident site, all investigators should be appropriately immunised.

2 All investigators, full-time or part-time, will be asked to immunise themselves against the following:

- Tetanus
- Hepatitis A
- Hepatitis B
- Influenza

3 MAIB also arrange following occupational health and safety for investigators.

- (a) Malaria - use of Mosquito repellent, coil, and net
- (b) Diarrhoea d/s - water and food sanitation
- (c) Pneumonia - bad weather prevention
- (d) Prevent from poisoning producing animals such as snake, spider etc..

SECTION 3	: STAFFING AND TRAINING
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CHAPTER 3	: TRAINING OF INVESTIGATORS
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1 The MAIB objective is to train its investigators to acquire the following abilities and knowledge:

- An understanding of aircraft operations and the relevant technical areas of aviation.
- Knowledge of aircraft accident investigation techniques.
- The ability to manage the various aspects of an investigation
- The ability to appreciate the depth of investigation that is necessary in order to fulfil the investigation obligation and requirements.
- The ability to obtain and manage the relevant technical assistance and resources required to support the investigation.
- The ability to collect, document and preserve evidence.
- The ability to identify and analyse pertinent evidence in order to determine the causes and make safety recommendation.
- The ability to write reports in a succinct, clear, unambiguous and well organised manner.
- Safety precaution

2 Training of the investigators may take the following forms:

- In-house indoctrination training
- On-the-job training
- Formal courses
- Participation in crash exercises
- Attachment to overseas investigation
- Attendance of safety and investigation conferences, seminars, workshops, etc.
- Reading material (including investigation reports)
- In-house discussions

3 The training provided to the investigators will commensurate with their responsibilities as a member of an accident team, group leader, investigator-in-charge, accredited representative, advisor or expert/specialist.

4 The MAIB uses ICAO Circular 298 “Training Guidelines for Aircraft Accident Investigators” as a reference in planning for the training.

SECTION 4	: MAIB OPERATIONS
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CHAPTER 1	: INVESTIGATION OF ACCIDENTS AND INCIDENTS
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- 1 One of the key functions of the MAIB is the investigation of accidents and incidents.
- 2 The MAIB has drawn up a Myanmar Accident Investigation Procedure Manual which provides guidelines for our investigators in their investigation of accidents and incidents. The Manual is not intended to be an encyclopaedic reference for the investigators. Further reference material is included in the Myanmar Accident Investigation Procedure Manual (Hand Book).
3. Ministry of Transport guide line which (departments or airlines) must be bear expenses of investigation and supplementary fund when required.
 - Sufficient funds
 - Provisions for supplementary budgets when required (eg. Major Accident)
4. MAIB must arranged following communication and transportation means to enable the conduct of investigation.
 - (a) Fax, phone, email and walkie-talkie.
 - (b) Department's vehicle, Myanmar Rail, Myanmar Airway.
5. No person is allowed to disclose or make available to any person any of following records for any purpose other than an investigation,
 - (a) statements taken from persons in the course of an investigation;
 - (b) communications between persons having been involved in the operation of the aircraft;
 - (c) medical or private information regarding persons involved in the accident or incident;
 - (d) cockpit voice recordings and transcripts from such recordings;
 - (e) recordings from air traffic control units and transcripts from such recordings; and
 - (f) opinion expressed in the analysis of information, including flight recorder information.
6. If after the investigation has been closed, new and significant evidence becomes available, the investigation establishes authorizes shall re-open it. However when the State which conducted the investigation didn't institute it, that State first obtain the consent of the State which instituted the investigation.

SECTION 4	: MAIB OPERATIONS
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CHAPTER 2	: RELEASE OF INVESTIGATION REPORTS
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1 The release of Final Report is subject to the approval of the Ministry of Transport. The MAIB will endeavour to obtain Ministry of Transport's approval as soon as possible.

2 After the approval by Ministry of Transport for the release of the Final Report and before the Final Report is released, the Final Report will be sent out to the States and various parties concerned.

SECTION 4	: MAIB OPERATIONS
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CHAPTER 3	: MAKING SAFETY RECOMMENDATIONS
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1 The investigator-in-charge or the MAIB may make safety recommendations at any stage during the course of an investigation. They do not need to wait till the completion of an investigation to make any recommendations.

2 The MAIB may also make safety recommendations arising from safety studies or other fact-finding and analysis exercises.

3 MAIB addresses to accident investigation authorizes in other states when any safety recommendations arising from it investigation. When ICAO document involved, to ICAO.

4 A safety recommendation shall in no case create a presumption of liability for an accident or incident. MAIB recommends to the appropriate authorities including those in other States, any preventive action which it considers necessary to be taken promptly to enhance aviation safety.

5 The MAIB does not have the power to enforce safety recommendations. However, in respect of the safety recommendations issued to a person or authority in Myanmar arising from an investigation conducted by the MAIB, or issued to a person or authority in Myanmar by a foreign investigation authority and made known to the MAIB, the MAIB has the power to require and will require such persons or authorities in Myanmar to:

- take those recommendation into consideration and, where appropriate, act upon them;
- provide the MAIB with the full details of the measures, if any, that they have taken or propose to take to implement the recommendations (including the schedule of implementation); or
- provide a full explanation as to why no measures will be taken to implement the recommendations.

6 For safety recommendations issued to a person or authority in Myanmar by a foreign investigation authority and made known to the MAIB, the MAIB shall notify the foreign investigation authority of the preventive action taken or under consideration or the reasons why no action will be taken.

7 The MAIB will review from time to time the closure status of the recommendations made by the MAIB.

SECTION 4 : MAIB OPERATIONS

CHAPTER 4 : FACILITATE DATABASE EXCHANGE

- 1 MAIB has established an accident and incident database for facilitating the effective analysis of information obtained including that from its ACCID and INCID reporting system.
- 2 Database system created in a standardized format to facilitate data exchange.
- 3 MAIB have analyzed the information contained in its accidents/incidents reports and the database to determine any preventive actions required.
- 4 If MAIB analysis the information contained and database, identifies safety matters considered to other states, forward such information to then as soon as.
- 5 In addition to safety recommendations arising from investigation, it may result from diverse sources, including safety studies. If safety recommendations are addressed to an organization in Myanmar.
- 6 MAIB should promote the establishment of safety information sharing networks among all users of the aviation system and should facilities free exchange of information on actual and potential safety deficiencies.

SECTION 5	: REFERENCES
CHAPTER 1	: REFERENCE MATERIAL

Listed below are useful materials that all MAIB investigators should familiarize themselves with:

- ICAO Annex 13, 9th Edition, July 2001, Amendment 11 (applicable November 2006)
- ICAO Convention on International Civil Aviation (Doc 7300)
- ICAO Manual of Aircraft Accident and Incident Investigation (Doc 9756)
- ICAO Manual of Aircraft Accident Investigation (Doc 6920, which will be progressively replaced by Doc 9756)
- ICAO Accident Prevention Manual (Doc 9422)
- ICAO Accident/Incident Reporting Manual (ADREP Manual)
- ICAO Safety Management Manual (Doc 9859)
- ICAO Guidance on Assistance to Aircraft Accident Victims and Their Families (Circular No. 285)
- ICAO Training Guidelines for Aircraft Accident Investigators (Circular No. 298)
- ICAO Hazards at Aircraft Accident Sites (Cir 314-AN/179)

