



## **Guidance Material on Developing Corrective Action Plans (CAPs)**

**2024**



**Bhutan Civil Aviation Authority**

*Advisory Circular No.  
BCAA/AGA/AC-GM/24*

## **Forward**

This guidance material on Corrective Action Plans (CAP) is designed to assist aerodrome operator (DoAT) in creating precise CAPs to address and rectify non-compliance issues identified by BCAA during audits and inspections conducted in accordance with Section 14 of the current Bhutan Air Navigation Regulations and the Bhutan Aerodrome Standards.

It provides a structured approach to identifying issues, proposing actionable solutions, and outlining clear timelines for design and implementation of the CAP.

The preparation and submission of a Corrective Action Plan (CAP) by DoAT are integral to addressing discrepancies, enhancing safety measures, and ensuring compliance with BCAA standards.

The guidance material encompasses best practices, regulatory requirements, and practical instructions to assist DoAT to develop CAPs that are not only compliant but also conducive to the continuous improvement of aerodrome operations.

This guidance aims to better equip DoAT to submit Corrective Action Plans that not only meet regulatory requirements but also contribute to the overall improvement of aerodrome operations.

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Director



	<b>Bhutan Civil Aviation Authority</b>	<i>Advisory Circular No. BCAA/AGA/AC-GM/24</i>
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### ***1. What is Corrective Action Plan (CAP)?***

In the context of the Civil Aviation Authority (CAA), a Corrective Action Plan (CAP) is a comprehensive plan developed by an Aerodrome Operator to address and correct deficiencies identified during a CAA audit or inspection.

It is a step-by-step plan that is put in place by the aerodrome operator to address specific finding or shortcoming within a given time frame.

The CAP is an essential part of the regulatory requirements designed to ensure aviation safety at airports or aerodromes.

### **2. The objective to implement corrective action plan is to:-**

- Address regulatory requirement
- streamline workflow within the aerodrome operator's organization
- Identify cost-effective routes to correct errors
- Improve processes or methods
- Control or eliminate deficient practices

### **2. Understanding Corrective Action Plans**

BCAA aerodrome section provides 30 days of submission deadlines with the surveillance report to the operator. For each finding, the operator is given the opportunity to submit a completed corrective action plan to BCAA aerodrome. **Appendix A** is a sample Corrective Action Plan Form (CAP Form) to be used by operator as internal document to complete root cause analysis (RCA) and corrective action process to address BCAA aerodrome findings of non-compliance. **Appendix A** shows sample CAP Form with cross- references to the guidance below for completing it.

#### **➤ Completing the Corrective Action Form**

- a. The purpose of the 'Factual Review of the Finding' section of the CAP Form is not to repeat the finding, but to define the scope of the problem in the aerodrome operator's system. BCAA aerodrome expects the operator to:
  - I. Identify the policies, processes, procedures, and practices involved (*that allowed the non-*

	<b>Bhutan Civil Aviation Authority</b>	<b>Advisory Circular No. BCAA/AGA/AC-GM/24</b>
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*compliance to occur*). Processes and procedures are usually established through documentation; however, also consider undocumented practices, attitudes and tolerances that may have developed. Any or all of these factors may be involved.

- II. Define the problem (see sub-section 3.3 of this document)
- III. State how widespread/far-reaching the non-compliance is in the aerodrome operator's system. This means the level to which the non-compliance affects that system-
  - Is it isolated to one area/organizational level? Or
  - Does it spread or reach into other areas/organizational levels?

*Note: In explaining how widespread the problem is, don't use an output of a risk management system (e.g. a risk rating), or repeat BCAA aerodrome's classification of the finding severity (e.g. Minor, Moderate, Major or level 1, 2 and 3).*

- b. The purpose of the '**Root Cause Analysis**' section of the CAP Form is to clearly show the process the operator used and the factors it considered, to determine what caused the finding to occur. BCAA expects the operator to:
  - I. Name the process used for the root cause analysis
  - II. Provide the root cause analysis (operator may summarize the root cause analysis on the corrective action form, as long as the full root cause analysis is attached)
  - III. Identify the root cause(s) and all contributing causes (see sub-section 3.3 this document).

*Note: BCAA does not prescribe or recommend any specific method to conduct root cause analysis on findings. Operator should use root cause analysis methods suitable for the size and complexity of their organization. BCAA expects operator to use the root cause analysis process defined in their SMS documentation.*

- c. BCAA will accept simpler methods of RCA (e.g. a handwritten diagram on a sheet of paper, or a digital photo of a diagram drawn on a whiteboard or brainstormed using peel and stick notes on a flipchart) as long as the information is legible and clearly shows the logical flow of the analysis.

➤ **Initial proposed CAPs and subsequent CAP updates should meet the following six criteria:**

- I. *Relevant* — CAPs should address the issues and requirements related to the finding
- II. *Comprehensive* — CAPs should be complete; including all elements or aspects associated with the finding.
- III. *Detailed* — CAPs should be laid out in a step-by-step approach, as required, to outline the implementation process.
- IV. *Specific* — CAPs should identify who will do what, when, in coordination with the responsible office or entity.
- V. *Realistic* — CAPs should be realistic in terms of contents and implementation timelines.
- VI. *Consistent* — CAPs should be consistent in relation to other CAPs and with the State self-assessment.

**3. Achieving effective corrective action**

- a. **Appendix B** uses an example problem to compare an effective and ineffective corrective action process.
- b. The key steps in achieving effective corrective action are:



The corrective action plan defined by the operator should address the **effects** of the non-compliance, as well as its **root cause**.



**3.1 Define the Problem**

Corrective action begins by clearly defining the real problem. Recurring findings often happen because an organization:

- Solved the wrong problem
- Fixed the outcome only
- Fixed the symptoms only

	<b>Bhutan Civil Aviation Authority</b>	<i>Advisory Circular No. BCAA/AGA/AC-GM/24</i>
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- Corrected only one problem, when two or more problems exist.

To define the problem, the first step is to clearly understand it and the processes involved. Gather facts about what did or did not happen. Don't jump to conclusions. Remember, assumptions, consensus or opinion are not evidence.

The more you define a problem, the easier it becomes to identify the cause(s) and the solution(s). Define the problem by answering:

- a. What?**
  - i. What changed (from when your system/process was compliant before)?
  - ii. What happened that shouldn't have?
  - iii. What didn't happen that should have?
- b. When?**
  - i. When did the problem begin (date/time)?
  - ii. How often did the problem occur?
- c. Where?**
  - i. Where did the problem physically occur (location)?
  - ii. Where did the problem occur in your process/system (what work was being done)?
- d. How does the problem impact your organization?**
  - i. How big is the problem?
  - ii. How much bigger can it get?
  - iii. How does the problem affect your safety performance?

### 3.2 Identify the Cause(s)

- Without knowing the root cause(s) of a problem, effective solutions to prevent recurrence are unlikely. Experience shows that identifying the wrong cause(s) leads to taking the wrong corrective action.
- Root cause analysis builds a clear causal chain by answering:
  - I. How and Why?
  - II. What conditions existed?
  - III. What actions/inactions brought these conditions together to cause the problem?

	<b>Bhutan Civil Aviation Authority</b>	<i>Advisory Circular No. BCAA/AGA/AC-GM/24</i>
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- Focus on cause-and-effect relationships to determine what was required for each effect to occur. Consider human factors, the environment, organizational factors and supervision (**Appendix C**).
- Focus on how people work within your organization’s system, not on individuals. The way to solve problems effectively is to connect the cause-and-effect analysis to your work processes. Simply put:
  - a. Processes are how your organization gets work done;
  - b. People carry out the steps of each process;
  - c. Processes should give people the information and tools they need to do the job effectively;
  - d. Problems result when a process breaks down; and
  - e. Since cause(s) exist upstream from where the problem appeared, solutions must change work processes where the cause(s) originated.
  
- Work processes often fail when:
  - a. The process is not clearly documented;
  - b. The process and its intended outcome are not clearly understood;
  - c. The defined process is incorrect;
  - d. The defined process is not followed.
  
- The root cause of each causal chain is reached when:
  - a. You cannot identify any other cause; or
  - b. The cause would be completely outside your organization’s control.
  
- Root causes are those for which your organization:
  - a. Has control to fix; and
  - b. Can adopt effective solutions to prevent recurrence.
  
- Appendix D lists some techniques to analyze problems, identify causes, and/or find solutions. Examples of three techniques are shown in Appendix E, Appendix F, and Appendix G. These examples show that most system problems do not have a single cause, so do not have a single solution.

	<b>Bhutan Civil Aviation Authority</b>	<i>Advisory Circular No. BCAA/AGA/AC-GM/24</i>
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### 3.3 Develop Corrective Action

Effective corrective actions break the causal chain by fixing the contributing causes and the root cause. Ignoring a contributing cause, could produce a future root cause.

#### Corrective actions should:

- a. Correct each root cause and contributing cause
- b. Be specific actions to eliminate or control causes (i.e. adopt, begin, install, conduct, amend, disable etc, rather than review, analyze, investigate, consider, assess, etc.);
- c. Prevent recurrence of the problem statement with reasonable certainty; and Not cause unintended consequences or introduce new problems.

### 3.4 Take Corrective Action

The operator is expected to implement their CAP when it is accepted by BCAA. Taking corrective action includes:

- a. Get resources (e.g. personnel, capital, equipment, tools, supplies) to carry out the CAP;
- b. Organize and perform CAP activities; and
- c. Determine evaluation activities.

### 3.5 Evaluate Corrective Action

➤ Monitoring corrective actions is important so aerodrome operator know if the changes were adopted and if they worked as intended. Follow-up includes two steps:

- a. **Verify CAP activities** – To ensure the CAP was completed by aerodrome operator, verify that they:
  - i. Amended all relevant documents, system requirements, and record-keeping requirements to reflect process and system changes;
  - ii. Used effective communications and training methods to make sure that employees know about the changes and understand the reasons;
  - iii. Is consistently applying the changes;
  - iv. Has done everything set out in the CAP; and
  - v. Adopted all corrective actions within the approved timeline.



- b. Validate effectiveness** - To determine if corrective actions are effective, validate that:
- i. The solutions work as planned and deliver the expected results;
  - ii. Corrective actions are truly eliminating or controlling causes, not simply reducing the likelihood of their recurrence;
  - iii. The changes did not cause unintended consequences or introduce new problems; and
  - iv. The problem has not recurred.

*Note: Depending on the complexity of the CAP, it may take a reasonable period of time before the organization sees the effectiveness of its corrective actions.*

➤ Analyse any discrepancy to identify the reasons for it. Return to the appropriate step of the corrective action process and take further action as necessary.

- (a) **Preventive action** is the action to **eliminate the cause of a potential non-compliance** or other undesirable **potential** situation.
- (b) **Corrective action** is the action to **eliminate or mitigate the root cause(s)** and **prevent recurrence** of an existing detected non-compliance or other undesirable condition or situation.  
**Proper determination of the root cause is crucial for defining effective corrective actions to prevent reoccurrence.**
- (c) **Correction** is the action to eliminate a detected non-compliance.

<b>Corrective action</b>
• <i>cure the disease and prevent reoccurrence</i>
<b>Correction</b>
• <i>treat the symptoms</i>

#### 4. Operator Comments

If the aerodrome operator disagrees with a finding issued by regulator and does not submit a CAP for the finding, the operator must provide a clear and detailed reason in the “Operator Comment”.

➤ **General**

- Ensure that the required information for each part of the CAP are entered in the correct field of the finding form – Appendix “A”

	<b>Bhutan Civil Aviation Authority</b>	<i>Advisory Circular No. BCAA/AGA/AC-GM/24</i>
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➤ **Steps and proposed actions while developing a CAP**

- Ensure that the proposed actions in a CAP directly and fully address the finding and regulatory provisions as stated in the finding form.
- Break down large action items into smaller, more manageable elements.
- Describe each proposed action in a clear and detailed manner.
- List the step-by-step corrective actions in the correct sequential order (e.g. establishing a requirement, elaborating supporting procedure(s), generating associated checklists, and providing training before implementing it).
- Provide a good and clear working plan and adequate detail for the implementation of each step of the proposed corrective actions.

➤ **Accountable manager/officer or Action office**

- Ensure that the responsible accountable manager/ action office is indicated for each one of the corrective action plan(s)
- If more than one organization/deptt/agency or individuals are involved in each step, identify and record each one clearly Or detail as additional attachment and ensure that identified organization/individual have the authority to complete and implement the action(s)

➤ **Evidence reference**

- Indicate or attach the document/photo/minutes of meeting/approvals etc containing the evidence in a clear manner.
- Provide a specific and clear reference of the evidence that contains the information that regulator needs to review and validate.

➤ **Estimated implementation date**

- Ensure that realistic estimated implementation date for each CAP is provided by the operator.
- Ensure that the implementation date is appropriate for the level of risk associated with the finding.
- The implementation date should be the date of completion for the CAP.

	<b>Bhutan Civil Aviation Authority</b>	<i>Advisory Circular No. BCAA/AGA/AC-GM/24</i>
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➤ **Responding to regulator's CAP assessment**

- If regulator initially assesses a CAP as not appropriate or not addressing finding, revise the CAP and ensure that it addresses the shortcomings indicated by regulator within the give time.

➤ **Updating CAPs**

- The operator should ensure continuous updating of CAPs by indicating progress level (in percentage %) for each CAP.
- If the initial estimated implementation date of the CAP has passed and the action has not been completed (or not fully implemented yet), provide a revised implementation date.

	<b>Bhutan Civil Aviation Authority</b>	<i>Advisory Circular No. BCAA/AGA/AC-GM/24</i>
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**APPENDIX A — CORRECTIVE ACTION FORM**

Name of Operator:	Date:
<p><b>Factual Review of the Findings</b></p> <p>Identify what happened, how widespread it is, where it occurred within your operations/work and what type of problem it is</p>	
<p><b>Root cause Analysis</b></p> <p>Identify what type of analysis was used, how it was used to derive root causes resulted from the analysis</p>	
<p><b>Proposed Corrective Action</b></p> <p>1. Short Term Corrective Action</p>	
<p>2. Long Term Corrective Actions(Including an assessment of any induced hazards or risks associated to the implementation of the corrective action(s))</p>	
<p><b>Timeline for implementation of all Corrective Actions</b></p>	
<p><b>Signature of person who designed CAP and RCA</b> _____</p> <p><b>Signature of accountable manager/chief/engineer</b> _____</p> <p><b>Note: attach additional pages with this form (if required) for each requirement</b></p>	