

# **BHUTAN AIR NAVIGATION REGULATIONS**

## **SECTION 1 - General**

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### **Chapter 1. Applicability**

1.1.1 The Bhutan Air Navigation Regulations (BANRs) shall apply to aircraft engaged in flight operations in Bhutan and to aircraft registered in Bhutan and engaged in flight operations elsewhere. For the purpose of these Regulations, an aircraft which is registered in another State and operated by the holder of an Air Operator Certificate issued in Bhutan (a Bhutan Operator) shall be deemed to be registered in Bhutan, except that regulations relating to the maintenance of airworthiness shall not apply to such an aircraft if there is in existence a current agreement between Bhutan and the State of Registry of the aircraft which includes a provision that supervision of the maintenance of airworthiness of the aircraft will be the responsibility of the State of Registry.

1.1.2 For the purpose of these Regulations a Bhutan operator is one whose principal place of business is located in Bhutan or if there is no such place of business, whose permanent residence is in Bhutan.

1.1.3 These Regulations shall apply to persons acting as crew members of aircraft which are registered in Bhutan. The provisions of JAR-FCL 1 (Aeroplanes) and JAR-FCL 2 (Helicopters) shall apply to all flight crew licences issued in Bhutan. For the purpose of these Regulations, an aircraft registered in another State and operated by the holder of an Air Operator Certificate issued in Bhutan shall be deemed to be registered in Bhutan except that the regulations relating to aircraft crew licensing and qualifications shall not apply to the crew of such an aircraft if there is in existence an agreement between Bhutan and the State of Registry of the aircraft which includes a specification that aircraft crew licensing and qualification will be the responsibility of the State of Registry.

1.1.4 These Regulations shall also apply to a person employed as a Flight Operations Officer by the holder of an Air Operator Certificate issued in Bhutan.

1.1.5 The Joint Aviation Requirements (JARs) of the Joint Airworthiness Authorities have been adopted as the basis for aviation regulation in Bhutan and, where referred to in these Regulations, the content and provisions of the JARs are to be considered to form part of these Regulations. Where reference is made to a JAR, e.g. JAR-OPS 1, then the reference is to Section 1 of that JAR and where, within a JAR, reference is made to a "JAR Member State" then that reference is applicable to Bhutan.

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### Chapter 2. Terminology

1.2.1 In addition to the Definitions and Abbreviations in JAR-1 the terms described in this chapter shall have the following meaning whenever they appear in these Regulations:

**Acrobatic flight.** Manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

**Advisory airspace.** An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

**Advisory route.** A designated route along which air traffic advisory service is available.

**Aerodrome.** A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

**Aerodrome control service.** Air traffic control service for aerodrome traffic.

**Aerodrome control tower.** A unit established to provide air traffic control service to aerodrome traffic.

**Aerodrome operating minima.** The limits of usability of an aerodrome for either take-off or landing, usually expressed in terms of visibility or runway visual range, decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) and cloud conditions.

**Aerodrome traffic zone.** An airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

**Aeronautical Information Publication.** A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

**Aeronautical station.** A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

**Aeroplane.** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

**Air-ground control radio station.** An aeronautical telecommunication station having primary responsibility for handling communication pertaining to the operation and control of aircraft in a given area.

**Air Operator Certificate.** A certificate issued by the Director authorising an operator to carry out specified air transport operations.

**Airship.** A power-driven lighter-than-air aircraft.

**Air-taxiing.** Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).

**Air traffic.** All aircraft in flight or operating on the manoeuvring area of an aerodrome.

**Air traffic advisory service.** A service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans.

**Air traffic control clearance.** Authorisation for an aircraft to proceed under conditions specified by an air traffic control unit.

**Air traffic control service.** A service provided for the purpose of:

- a. preventing collisions;
  1. between aircraft, and
  2. on the manoeuvring area between aircraft and obstructions, and
- b. expediting and maintaining an orderly flow of air traffic.

**Air traffic control unit.** A generic term meaning variously, area control centre, approach control office or aerodrome control tower.

**Air traffic service.** A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

**Air traffic services airspaces.** Airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

**Air traffic services reporting office.** A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

**Air traffic services unit.** A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

**Airborne collision avoidance system (ACAS).** A aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

**Airway.** A control area or portion thereof established in the form of a corridor equipped with radio navigation aids.

**Alerting service.** A service provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required.

**Alternate aerodrome.** An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing. Alternated aerodromes include the following:

*Take-off alternate.* An alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

*En-route alternate.* An aerodrome at which an aircraft would be able to land after experiencing an abnormal emergency condition while en route.

*Destination alternate.* An alternate aerodrome to which an aircraft may proceed should it become impossible or inadvisable to land at the aerodrome of intended landing.

**Altitude.** The vertical distance of a level, a point, or an object considered as a point, measured from mean sea level (MSL).

**Anti-collision light.:**

- a) in relation to rotorcraft; a flashing red light;
- b) in relation to any other aircraft; a flashing red or flashing white light;

and in either case showing in all directions for the purpose of enabling the aircraft to be more readily detected by the pilots of distant aircraft.

**Approach control office.** A unit established to provide air traffic control service to controlled flights arriving at or departing from, one or more aerodromes.

**Approach control service.** Air traffic control service for arriving or departing controlled flights.

**Appropriate ATS authority.** The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned.

**Appropriate authority.**

- a. Regarding flight over the high seas: The relevant authority of the State of Registry.
- b. Regarding flight other than over the high seas: The relevant authority of the State having sovereignty over the territory being overflown.

**Apron.** A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

**Area control service.** Air traffic control service for controlled flights in control areas.

**ATS route.** A specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services.

**Balloon.** A non-power-driven lighter-than-air aircraft.

**Ceiling.** The height above the ground or water of the base of the lowest layer of cloud below 6,000 metres (20,000 feet) covering more than half the sky.

**Change-over point.** The point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omnidirectional radio ranges is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft.

**Clearance limit.** The point to which an aircraft is granted an air traffic control clearance.

**Control area.** A controlled airspace extending upwards from a specified limit above the earth.

**Controlled aerodrome.** An aerodrome at which air traffic control service is provided to aerodrome traffic.

**Controlled airspace.** An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with airspace classification.

**Controlled flight.** Any flight which is subject to an air traffic control clearance.

**Controller-pilot data link communication (CPDLC).** A means of communication between controller and pilot, using data link for ATC communications.

**Control zone.** A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

**Co-pilot.** A licensed pilot serving in any piloting capacity other than as pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

**Crewmember.** A person assigned to perform duty in an aircraft during flight time.

**Cruise climb.** An aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases.

**Cruising level.** A level maintained during a significant portion of a flight.

**Current flight plan.** The flight plan, including changes, if any, brought about by subsequent clearances.

**Danger area.** An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

**Estimated off-block time.** The estimated time at which the aircraft will commence movement associated with departure.

**Estimated time of arrival.** For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

**Flight level (FL).** A surface of constant atmospheric pressure which is related to a specific pressure datum, 1013.2 hPa, and is separated from other such surfaces by specific pressure intervals.

**Glider.** A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

**Ground visibility.** The horizontal visibility at the ground level.

**Hang glider.** A glider capable of being:

- a) carried,
- b) foot launched, and
- c) landed solely by the energy and use of pilots legs.

**Height.** The vertical distance of a level, a point, or an object considered as a point, measured from a specified datum.

**Helicopter.** A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

**IFR flight.** A flight conducted in accordance with Instrument Flight Rules.

**Instrument approach procedure.** A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route, to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance apply.

**Instrument meteorological conditions (IMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

**Manoeuvring area.** The part of the aerodrome provided for the take-off and landing of aircraft, and for the movement of aircraft on surface, excluding the apron and any part of the aerodrome provided for the maintenance of the aircraft.

**Maintenance release.** A certificate that maintenance work has been completed on the aircraft to which it refers and that the aircraft is in all respects fit to fly.

**Microlight (Ultralight).** Defined as very low-energy aeroplanes as some of their main characteristics are strictly limited. The following criteria are often used (alone or in combination): stalling speed, weight to surface ratio, maximum take-off weight, maximum empty weight, fuel quantity, number of seats.

**Minimum descent altitude/height (MDA/H)** A specified altitude or height in a non-precision approach or circling approach below which descent may not be made without visual reference.

**Munitions of war.** Weapons, or parts thereof, and ammunitions or constituents thereof, which are designed for use in warfare against persons.

**Operational flight plan.** The operator's plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned.

**Operator.** A person, organisation or enterprise engaged in or offering to engage in an aircraft operation.

**Pilot-in-command.** The pilot responsible for the operation and safety of the aircraft during flight time.

**Regulations.** The Bhutan Air Navigation Regulations.

**Runway.** An area, whether or not paved, which is provided for the take-off or landing run of aircraft.

**Runway visual range.** The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

**Seaplane.** An aeroplane equipped with floats or other devices enabling it to land and take off from the surface of water.

**Special VFR flight.** A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

**State aircraft.** An aircraft used in military, customs and police services.

**State of Registry.** The State on whose register an aircraft is entered.

**Unmanned free balloon.** A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

**VFR flight.** A flight conducted in accordance with Visual Flight Rules.

**Visual meteorological conditions (VMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

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### **Chapter 3. Classification of Aircraft and Flight Operations**

1.3.1 For the purpose of these regulations, flight operations shall be divided into the following classes:

- a) commercial air transport operations;
- b) aerial work operations; and
- c) general aviation operations.

1.3.2 Commercial air transport operations shall be regulated according to the provisions of JAR-OPS 1 (Fixed Wing) and JAR-OPS 3 (Helicopters). They are defined as scheduled air services and non-scheduled air transport operations involving:

- a) the carriage of passengers or cargo in an aircraft in return for payment or the promise of payment to the operator of the aircraft in respect of that flight; and
- b) the carriage of persons, other than persons employed by the operator as aircraft crew members, whose payment or promise of payment is made to the operator or the owner of the aircraft in respect of that flight, except that if the purpose of the flight is flight instruction and the payment or promise of payment is made in respect of that instruction, the flight shall be regarded as a general aviation operation.

1.3.3 An aerial work operation shall be a specialised aviation operation, other than an air transport operation, in which an aircraft is flown by the operator or owner of that aircraft so as to provide a service for purposes such as agriculture, construction, photography, surveying, observation and patrol, aerial ambulance and rescue. Aerial work operations shall be regulated under JAR-OPS 1 (Fixed Wing) or JAR-OPS 3 (Helicopters) except where otherwise approved by the Director.

1.3.4 A general aviation operation shall be any type of aviation operation other than commercial air transport operations and aerial work operations.

1.3.5 When an aircraft is being used for commercial air transport operations, it shall be classified as a commercial air transport aircraft; when it is being used for aerial work operations, it shall be classified as an aerial work aircraft; when it is being used for general aviation operations it shall be classified as a general aviation aircraft. When an aircraft is being operated by, or solely on behalf of the State, it shall be classified as a State aircraft.

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### **Chapter 4. Registration and Marking**

#### **1.4.1 Aircraft registration**

1.4.1.1 An aircraft other than a State aircraft shall not fly in Bhutan unless it has been included in the Register of Aircraft in Bhutan, or has been registered in another state with which there is in force an agreement between Bhutan and that State which makes provision for the flight over Bhutan of aircraft registered in that State.

1.4.1.2 Any transfer of ownership of an aircraft registered in Bhutan shall be notified to the Director.

1.4.1.3 The owner of an aircraft registered in Bhutan shall inform the Director of the destruction of the aircraft, or its permanent withdrawal from use, or of its transfer to the Register of Aircraft of another State.

#### **1.4.2 Markings of aircraft registered in Bhutan**

1.4.2.1 An aircraft registered in Bhutan shall have the nationality mark and the registration mark allocated to that aircraft painted on its structure, or affixed by any other means giving a similar degree of permanence. The marks shall be kept clean and visible at all times.

1.4.2.2 The nationality mark for aircraft registered in Bhutan shall be A5. The registration mark shall be a three-letter group separated from the nationality mark by a hyphen. The nationality and registration marks which form a separate group on an aircraft shall have letters and numbers of equal height.

1.4.2.3 The nationality and registration marks on any aircraft registered in Bhutan shall be painted and located as prescribed in **Annex 7 to the Convention on International Civil Aviation - AIRCRAFT NATIONALITY AND REGISTRATION MARKS.**