



Instructions and Information for filling Environmental Authorization Form (Under Antarctic Treaty System and Environmental Protocol)

For executing those activities which requires Environmental Evaluation



Version: 3.0 August 3, 2021

Protection of Antarctica

India's accession to Instrument of Antarctica Treaty executed in 1983, thereafter, signing Madrid Protocol also known as Environmental Protocol (Protocol on Environmental Protection to Antarctica Treaty) in the year 1998 (adopted in 1991, enforced in 1998), affirms comprehensive protection of Antarctic Environment and its dependent and associated ecosystems.

Environmental Authorization and Permits required under *Protocol on Environmental Protection to the Antarctica Treaty (Madrid Protocol)* for commencing activities south of 60 degrees south and marine area under the *Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR)*.

The form is required for: Proponent/s willing to execute any activity which requires environmental evaluation within Antarctica Treaty Area including CCAMLR area.

Applicable to:

- Indian Antarctic Expedition Member/s as well as other organization/s or any person who is citizen of India, undertaking activities in the Antarctic Treaty Area through Indian Antarctic Expedition or part of it, including scientists and logistical personnel.
- Citizens and organizations of State Party other than India, if their activity is part of the Indian Antarctic Expedition.

GUIDELINES FOR FILLING THE APPLICATION FORM

ABOUT FORM AND ITS PARTS

Please do not withhold any potentially relevant information when filling up the form. Failure to provide sufficient information may cause a delay in the processing of your application.

Authorization Application (FORM, PED-003)

All applicants intending to execute any potential environmentally sensitive activity must complete all parts (A, B, C and D) of this application form.

ANTARCTIC SPECIALLY PROTECTED AREA, ANTARCTIC SPECIALLY MANAGED AREA (ASMA) AND HISTORIC SITE AND MONUMENT

Visits to ASPA's are prohibited, except in accordance with an issued permit. It is prohibited to damage, remove or destroy an Antarctic Historic Site and Monument (HSM) or any part of it. If require to enter ASPA, please fill Form PED001.

Each ASPA has its own Management Plan, which should be studied before travelling to, and carried while within, the specific ASPA. Information is asked to ensure that visitors understand the correct procedures and are aware of the appropriate standards of conduct when visiting each site. When answering this question, you should summarise how you will ensure you adhere to the provisions described in the Management Plan for the ASPA(s) you intend to visit.

Any activity to be carried out within the ASMA, should be informed in advance to all the research station/s located within ASMA or their administrative office through NCPOR or Station Leader.

ASPA, ASMA AND HSM LOCATED AROUND MAITRI STATION, CENTRAL DRONNING MAUD LAND (cDML)

AREAS	No	Particular	Location	Managed By
ASPA	142	Svarthamaren	71°54'40"S 05°11'E	Norway
ASPA	163	Dakshin Gangotri	70°45'15"S 11°38'30"E	India
HSM	44	Dakshin Gangotri Plaque	70°45"S 11°38'E	India
HSM	78	Ninth Indian Expedition Plaque	71°45'08"S 11°12'30"E	India

ASPA, ASMA AND HSM LOCATED AROUND BHARATI STATION, PRYTZ BAY AREA

AREAS	No	Particular	Location	Managed By
ASMA	6	Larsemann Hills	69°30'S 76°19'58"E	Australia, China, India, Romania, Russian Federation
ASPA	143	Marine Plain, Mule Peninsula, Vestfold Hills, Princess Elizabeth Land	68°37'50.2"S 78°07'55.2"E	Australia
ASPA	167	Hawker Island, Princess Elizabeth Land	68°35"S 77°50'E	Australia
ASPA	169	Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica	69°15"S 76°49' 59.9"E	Australia, China
ASPA	174	Stornes Peninsula	69° 25"S 76°6'E	Australia, China, India, Russian Federation

AREAs	No	Particular	Location	Managed By
HSM	6	Rock cairn at Walkabout Rocks, Vestfold Hills, Princess Elizabeth Land	68°22'S 78°33'E	Australia
HSM	72	Mikkelsen Cairn, Tryne Islands, Vestfold Hills	68°22'S 78°24'E	Australia and Norway

- For the complete list of ASPA/ASMA refer https://documents.ats.aq/ATCM42/WW/atcm42_ww006_e.pdf
- For the complete list of HSM refer https://www.ats.aq/documents/recatt/att580_e.pdf

Road Map of Application Approval

After obtaining the clearance of the Environmental Review process of the scientific proposal from NCPOR and after that approval from the National Committee on Polar Programme (NCPP), this application form may be submitted three months before commencing of activity in Antarctica.

Following procedure will be adopted for application assessment and permit allocation process for those willing to undertake specialist activities in Antarctica.

1. The proponent shall download the application form from the Treaty and Environment section of the Antarctic Expedition from the website:
<https://ncpor.res.in/antarcticas/display/414-environmental-authorization-and-permit>
2. The proponent shall contact the Environmental Officer, NCPOR, mainly if your proposed activity is unusual or complicated, as soon as possible
3. The proponent shall, if necessary, complete an Initial Environmental Evaluation (IEE) or Comprehensive Environmental Evaluation (CEE) of the proposed activity likely to commence in Antarctica
4. The proponent shall complete and submit your application form at least three months before you expect to commence the activity in Antarctica

The proponent must complete all sections of the application form then a duly signed and scanned copy shall be submitted to:

Email: director@ncpor.res.in or mravi@ncpor.res.in
With cc to: anooptiwari@ncpor.res.in or anooptiwari.ncpor@nic.in

As well as duly filled and signed hard copy should be sent to:

*The Director
National Centre for Polar and Ocean Research
ESMO-Ministry of Earth Sciences, Government of India
Headland Sada, Vasco da Gama,
Goa, 403 804,
India*

5. The application shall be assessed then if required, the proponent will be asked to provide clarification, further information and documentation, as needed, or maybe requested to attend a meeting at NCPOR
6. If the proposed activity is commensurate with a particular activity's environmental impact assessment process, the Permit shall be issued, otherwise denied.

MANDATORY REQUIREMENT

- The complete scanned application should only be sent to the email addresses mentioned at point 4,
- Email CC to other IDs (except those prescribed in the form) of NCPOR must be avoided.
- Complete and send the Post Activity Completion Report (FORM PED-004) to the Polar Environment Division-NCPOR within 30 days of completing the activity (if winter-over participation) or returning from Antarctic Expedition (if austral summer participation).

GENERAL INFORMATION PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY (1991)

ARTICLE 3 ENVIRONMENTAL PRINCIPLES

1. The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty Area.

2. To this end:

(a) activities in the Antarctic Treaty Area shall be planned and conducted so as to limit adverse impacts on the Antarctic environment and dependent and associated ecosystems;

(b) activities in the Antarctic Treaty Area shall be planned and conducted so as to avoid:

- (i) adverse effects on climate or weather patterns;
- (ii) significant adverse effects on air or water quality;
- (iii) significant changes in the atmospheric, terrestrial (including aquatic), glacial or marine environments;
- (iv) detrimental changes in the distribution, abundance or productivity of species or populations of species of fauna and flora;
- (v) further jeopardy to endangered or threatened species or populations of such species; or
- (vi) degradation of, or substantial risk to, areas of biological, scientific, historic, aesthetic or wilderness significance;

(c) activities in the Antarctic Treaty Area shall be planned and conducted on the basis of information sufficient to allow prior assessments of, and informed judgements about, their possible impacts on the Antarctic environment and dependent and associated ecosystems and on the value of Antarctic for the conduct of scientific research; such judgements shall take full account of:

- (i) the scope of the activity, including its area, duration and intensity;
- (ii) the cumulative impacts of the activity, both by itself and in combination with other activities in the Antarctic Treaty Area;
- (iii) whether the activity will detrimentally affect any other activity in the Antarctic Treaty Area;
- (iv) whether technology and procedures are available to provide for environmentally safe operations;
- (v) whether there exists the capacity to monitor key environmental parameters and ecosystem components so as to identify and provide early warning of any adverse effects of the activity and to provide for such modification of operating procedures as may be necessary in the light of the results of monitoring or increased knowledge of the Antarctic environment and dependent and associated ecosystems; and
- (vi) whether there exists the capacity to respond promptly and effectively to accidents, particularly those with potential environmental effects;

(d) regular and effective monitoring shall take place to allow assessment of the impacts of ongoing activities, including the verification of predicted impacts;

(e) regular and effective monitoring shall take place to facilitate early detection of the possible unforeseen effects of activities carried on both within and outside the Antarctic Treaty Area on the Antarctic environment and dependent and associated ecosystems.

3. Activities shall be planned and conducted in the Antarctic Treaty Area so as to accord priority to scientific research and to preserve the value of Antarctica as an area for the conduct of such research, including research essential to understanding the global environment.

4. Activities undertaken in the Antarctic Treaty Area pursuant to scientific research programmes, tourism and all other governmental and non-governmental activities in the Antarctic Treaty Area for which advance notice is required in accordance with Article VII (5) of the Antarctic Treaty, including associated logistic support activities, shall:

- (a) take place in a manner consistent with the principles in this Article; and
- (b) be modified, suspended or cancelled if they result in or threaten to result in impacts upon

ARTICLE 7 PROHIBITION OF MINERAL RESOURCE ACTIVITIES

Any activity relating to mineral resources, other than scientific research, shall be prohibited.

ARTICLE 13 COMPLIANCE WITH THIS PROTOCOL

1. Each Party shall take appropriate measures within its competence, including the adoption of laws and regulations, administrative actions and enforcement measures, to ensure compliance with this Protocol.
2. Each Party shall exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any activity contrary to this Protocol.
3. Each Party shall notify all other Parties of the measures it takes pursuant to paragraphs 1 and 2 above.
4. Each Party shall draw the attention of all other Parties to any activity which in its opinion affects the implementation of the objectives and principles of this Protocol.
5. The Antarctic Treaty Consultative Meetings shall draw the attention of any State which is not a Party to this Protocol to any activity undertaken by that State, its agencies, instrumentalities, natural or juridical persons, ships, aircraft or other means of transport which affects the implementation of the objectives and principles of this Protocol.

Environmental Impact Assessment

(Refer to Annex I to the Protocol on Environmental Protection to the Antarctic Treaty)

Environmental Impact Assessment (EIA) is a process of evaluating the potential environmental impacts of a proposed project or development, taking into consideration inter-related socio-economic, cultural and human-health impacts, both advantageous and adverse. An EIA is needed for activities that are proposed to be undertaken in any area located at south of 60 degrees south, including all water, land and ice shelves. It must be authorized (under part 3 of the ATEP Act) before the activity is implemented. It is not possible to retrospectively authorize an activity.

The EIA process requires the applicants to recognize and minimize the adverse environmental impacts of their activities and suggest alternative.

At Preliminary stage, the environmental impacts of proposed activities (referred to in Article 8 of The Protocol on Environmental Protection to the Antarctic treaty) shall, before their commencement, be considered in accordance with appropriate national procedures. If an activity is determined as having less than a minor or transitory impact, the activity may proceed forthwith. (Refer Article I)

At Initial Environmental Evaluation (IEE) stage, the proposed activity shall be assessed to analyse whether it has more than a minor or transitory impact and it shall include a description of the proposed activity, including its purpose, location, duration, intensity. Furthermore, it shall consider alternatives to the proposed activity and any impacts that the activity may have, including consideration of cumulative impacts in the light of existing and known planned activities. (Refer Article II)

At Comprehensive Environmental Evaluation (CEE) stage, an evaluation shall be prepared if it is determined that a proposed activity is likely to have more than a minor or transitory impact. It involves a description of the proposed activity and possible alternatives to the activity, including the alternative of not proceeding, and the consequences of those alternatives. Draft CEEs are subjected to a wide public consideration process and they are tabled at annual meetings of the Committee for Environment Protection. This process may take up to two years to finish. (Refer Article III)

The answers provided in the application form comprise the Preliminary Stage and will be relied upon to ascertain the scope of your activity to be approved and the likely effects of that activity. Henceforth, it is important that your activity shall be described very accurately. It should include detailed information such as impacts on flora, fauna, ice, water, air, topography, aesthetic values of the area, waste generation, emissions, heritage, etc.

CONSERVATION OF ANTARCTIC FAUNA AND FLORA

(Refer to Annex II to the Protocol on Environmental Protection to the Antarctic Treaty)

Protection of Native Species: (refer Article III)

Harmful interference shall be prohibited, except in accordance with a permit. Such permits shall specify the authorized activity, including when, where and by whom it is to be conducted and shall be issued only in the following circumstances:

- (a) To provide specimens for scientific study or scientific information;
- (b) To provide specimens for museums, herbaria and botanical gardens, or other educational institutions or uses;
- (c) To provide specimens for zoological gardens but, in respect of native mammals or birds, only if such specimens cannot be obtained from existing captive collections elsewhere, or if there is a compelling conservation requirement; and
- (d) To provide for unavoidable consequences of scientific activities not otherwise authorized under sub-paragraphs (a), (b) or (c) above, or of the construction and operation of scientific support facilities.

Introduction of non-native species and diseases: (refer article IV)

No species of living organisms not native to the Antarctic Treaty area shall be introduced onto land or ice shelves, or into water, in the Antarctic Treaty area except in accordance with a permit which shall:

- (a) be issued to allow the importation only of cultivated plants and their reproductive propagules for controlled use, and species of living organisms for controlled experimental use; and
- (b) specify the species numbers and, if appropriate, age and sex of the species to be introduced, along with a rationale, justifying the introduction and precautions to be taken to prevent escape or contact with fauna or flora.

Transport of non-sterile soil and insects, spores, seeds, eggs and other propagules by visitors can be minimised by careful checking of imported fresh foods and cleaning of clothing, footwear, scientific equipment, cargo and vehicles used in Antarctica. The Committee for Environmental Protection (CEP) has produced information on preventing non-native species introductions, the Council of Managers of National Antarctic Programs (COMNAP) has produced biosecurity guidelines for supply chain managers and the International Association of Antarctica Tour Operators (IAATO) has produced guidelines for boat, clothing and equipment decontamination appropriate for small boat landing operations.

Rats are one of the most widespread and invasive introduced species worldwide, and are present at all departure points for Antarctica. Special care must be taken to avoid their introduction to Antarctica and other rat-free areas in the region. Where applicable, vessels must have valid Ship Sanitation Certificates. Other recommended measures may include rat guards on mooring lines, deployment of bait stations and regular ship inspections.

No live animals, other than registered assistance dogs, should be intentionally carried on any vessel visiting Antarctica. Dogs are not permitted to land within the Antarctic Treaty area.

WASTE DISPOSAL AND WASTE MANAGEMENT

(Refer to Annex III to the Protocol on Environmental Protection to the Antarctic Treaty)

This annexure deals with regulating production and disposal of waste in Antarctic regions. It includes the following points:

The amount of wastes produced or disposed of in the Antarctic Treaty area shall be reduced as far as practicable so as to minimize impact on the Antarctic environment and to minimize interference with the natural values of Antarctica, with scientific research and with other uses of Antarctica which are consistent with the Antarctic Treaty. (refer Article I). The following wastes, if generated after entry into force of this Annex, shall be removed from the Antarctic Treaty area by the generator of such wastes: (refer Article II)

- (a) Radio-active materials
- (b) Electrical batteries
- (c) Fuel, both liquid and solid

- (d) Wastes containing harmful levels of heavy metals or acutely toxic or harmful persistent compounds
- (e) Poly-vinyl chloride (PVC), polyurethane foam, polystyrene foam, rubber and lubricating oils, treated timbers and other products which contain additives that could produce harmful emissions if incinerated
- (f) All other plastic wastes, except low density polyethylene containers (such as bags for storing wastes), provided that such containers shall be incinerated in accordance with Article 3 (1)
- (g) Fuel drums
- (h) Other solid, non-combustible wastes

Liquid wastes which are not covered above and sewage and domestic liquid wastes, shall, to the maximum extent practicable, be removed from the Antarctic Treaty area by the generator of such wastes.

The following wastes shall be removed from the Antarctic Treaty area by the generator of such wastes, unless incinerated, autoclaved or otherwise treated to be made sterile:

- (a) Residues of carcasses of imported animals;
- (b) Laboratory culture of micro-organisms and plant pathogens; and
- (c) Introduced avian products

Waste Disposal by Incineration: Combustible wastes, other than those referred to above, which are not removed from Antarctica, must be burnt in incinerators that, to the maximum extent practicable, reduce harmful emissions. The solid residues of such incinerations must be removed from Antarctica. (refer Article III)

Other Waste Disposal on Land: Wastes not removed or disposed of in accordance with the processes described above must not be disposed of onto ice-free areas or into fresh-water systems. Sewage, domestic liquid wastes and other liquid wastes not removed in accordance with the processes described above, must, to the maximum extent practicable, not be disposed of onto sea ice, ice shelves or the grounded ice-sheet. Wastes generated at field camps must, to the maximum extent practicable, be removed to supporting stations or ships for disposal. (refer Article IV)

Disposal of Waste in Sea: The product of sewage treatment processes may be disposed of into the sea provided that such disposal does not adversely affect the local environment, and provided that any such disposal at sea is in accordance with Annex IV to the Protocol. (refer Article V)

Storage of Waste: All wastes to be removed from Antarctica, or otherwise disposed of, must be stored in such a way as to prevent their dispersal into the environment. (refer Article VI)

Prohibited Products: No polychlorinated biphenyls (PCBs), non-sterile soil, polystyrene beads, chips or similar forms of packaging, or pesticides (other than those required for scientific, medical or hygiene purposes) must be introduced onto land or ice shelves or into water in Antarctica. (refer Article VII)

PREVENTION OF MARINE POLLUTION

(Refer to Annex IV to the Protocol on Environmental Protection to the Antarctic Treaty)

This Annex applies, with respect to each Party, to ships entitled to fly its flag and to any other ship engaged in or supporting its Antarctic operations, while operating in the Antarctic Treaty area. It comprises of following points:

Discharge of Oil: Any discharge into the sea of oil or oily mixture shall be prohibited, except in cases permitted under Annex I of MARPOL 73/78. While operating in the Antarctic Treaty area, ships shall retain on board all sludge, dirty ballast, tank washing waters and other oily residues and mixtures which may not be discharged into the sea. Ships shall discharge these residues only outside the Antarctic Treaty area, at reception facilities or as otherwise permitted under Annex I of MARPOL 73/78. (refer Article III)

Disposal of Noxious Liquid Waste: The discharge into the sea of any noxious liquid substance, and any other chemical or other substances, in quantities or concentrations that are harmful to the marine environment, shall be prohibited. (refer Article IV)

Disposal of Garbage: The disposal into the sea of all plastics and other garbage, including but not limited to synthetic ropes, synthetic fishing nets, and plastic garbage bags, paper products, rags, glass, metal, bottles, crockery, incineration ash, dunnage, lining and packing materials, shall be prohibited. (refer Article V)

Discharge of Sewage: (refer Article VI)

Except where it would unduly impair Antarctic operations:

- (a) Each Party shall eliminate all discharge into the sea of untreated sewage ("sewage" being defined in Annex IV of MARPOL 73/78) within 12 nautical miles of land or ice shelves;
- (b) Beyond such distance, sewage stored in a holding tank shall not be discharged instantaneously but at a moderate rate and, where practicable, while the ship is en route at a speed of no less than 4 knots.

This paragraph does not apply to ships certified to carry not more than 10 persons

AREA PROTECTION AND MANAGEMENT

(Refer to Annex V to the protocol on Environmental Protection to the Antarctic Treaty)

The act highlights following major points:

Any area, including any marine area, may be designated as an Antarctic Specially Protected Area to protect outstanding environmental, scientific, historic, aesthetic or wilderness values, any combination of those values, or ongoing or planned scientific research. (refer Article III)

Entry into an Antarctic Specially Protected Area shall be prohibited except in accordance with a permit issued under Article 7 of the act. (refer Article III)

Any Party, the Committee, the Scientific Committee for Antarctic Research or the Commission for the Conservation of Antarctic Marine Living Resources may propose an area for designation as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area by submitting a proposed Management Plan to the Antarctic Treaty Consultative Meeting. (refer Article V)

Each Party shall appoint an appropriate authority to issue permits to enter and engage in activities within an Antarctic Specially Protected Area in accordance with the requirements of the Management Plan relating to that Area. The Permit shall be accompanied by the relevant sections of the Management Plan and shall specify the extent and location of the Area, the authorized activities and when, where and by whom the activities are authorized and any other conditions imposed by the Management Plan. (refer Article VII)

Sites or monuments of recognized historic value which have been designated as Antarctic Specially Protected Areas or Antarctic Specially Managed Areas, or which are located within such Areas, shall be listed as Historic Sites and Monuments. (refer article VIII)

.Non-native species

Fundamental to the protection of the Antarctic environment are measures to prevent the inadvertent introduction of non-native species. Introduced species and diseases could significantly damage Antarctic ecosystems. Transport of non-sterile soil and insects, spores, seeds, eggs and other propagules by visitors can be minimised by careful checking of imported fresh foods and cleaning of clothing, footwear, scientific equipment, cargo and vehicles used in Antarctica. The Committee for Environmental Protection (CEP) has produced information on preventing non-native species introductions (see: http://www.ats.aq/documents/atcm34/ww/atcm34_ww004_e.pdf), the Council of Managers of National Antarctic Programs (COMNAP) has produced biosecurity guidelines for supply chain managers (see: <https://www.comnap.aq/Shared%20Documents/nnschecklists.pdf>) and the International Association of Antarctica Tour Operators (IAATO) has produced guidelines for boat, clothing and equipment decontamination appropriate for small boat landing operations (see: <http://iaato.org/decontamination-guidelines>)

Rats are one of the most widespread and invasive introduced species worldwide, and are present at all departure points for Antarctica. Special care must be taken to avoid their introduction to Antarctica and other rat-free areas in the region. Where applicable, vessels must have valid Ship Sanitation Certificates. Other recommended measures may include rat guards on mooring lines, deployment of bait stations and regular ship inspections.

No live animals, other than registered assistance dogs, should be intentionally carried on any vessel visiting Antarctica. Dogs are not permitted to land within the Antarctic Treaty area.