

Environmental Code of Practice (ECOP)

Telecommunications Facilities

Republic of Kiribati

Intent of the ECOP

This Environmental Code of Practice (ECOP) has been prepared to define methods and/or procedures to be followed by consultants, designers and contractors for the avoidance or mitigation of adverse environmental effects that may arise out of infrastructure development projects or maintenance work in relations to the development of the Telecommunications infrastructure of the Republic of Kiribati. This ECOP recognizes the need to additionally comply with the provisions of the Environment Act 1999 (amended in 2007) to ensure the environmental protection from constructional, operational and post-constructional impacts of the project.

Authority of the ECOP

The following specific laws and regulations of the Republic of Kiribati support the use of instruments like the ECOP to mitigate negative impacts of projects

- The Environment Act 1999 (amended in 2007)
- Environment (General) Regulations 2008
- Phoenix Island Protected Area (PIPA) Regulation
- Wildlife Conservation Ordinance

Code Format

This code sets out its objective and contains a description of minimum practices that are to be applied to the planning, design, construction and maintenance phases of the development and maintenance of Telecommunications projects.

The ECOP also presents sample design directives for inclusion in terms of reference for planning and design and suggested specification clauses for insertion in project construction specifications.

Objectives and Targets

The objectives and targets of this ECOP are to ensure that all people and communities involved in the development, project planning, design, construction and maintenance of Telecommunications Facilities are aware of the need for the ECOP, and implement the systems for the prevention or mitigation of adverse environmental effects of these projects. The ECOP shall be followed for the planning, design and construction of all Telecommunication development works.

In the case where a telecommunications infrastructure project is awarded to a Contractor, the Contractor and its employees shall adhere to the minimum mitigation measures and guidelines set down in this ECOP to prevent harm and nuisances to local communities, and to minimize the impacts in construction and operation on the environment.

ECOP Development and Implementation

Development and refinement of ECOP, specifically for conditions in Kiribati, is an on-going process. This ECOP will be introduced to the Government Ministries, infrastructure providers and the construction industry through a series of training workshops.

There are three implementation mechanisms for the ECOP:

- 1) Use of the ECOP is specified in the Terms of Reference for the design of works. The relevant design directives stated in the ECOP should also be incorporated in the Terms of Reference;
- 2) Use of the ECOP is specified in the specifications for the construction of physical works. The relevant suggested specifications stated in the ECOP should also be incorporated in the specifications.
- 3) Environmental approvals are granted with the condition that works proceed under the provisions of the ECOP.

Monitoring of Implementation

MCTTD personnel will monitor the implementation of these ECOP. MELAD will ensure compliance with the environment licence under the provisions of the Environment Act 1999 (as amended in 2007) when required. All other authorities will monitor the implementation of the ECOP through normal contract administration procedures e.g. MCTTD or the private telecoms firms through administration of the contract agreement with contractors.

Background

An increasing volume of modern telecommunications is undertaken using radio waves. These facilities require no fixed connections between sending and receiving points but they do require elevated antennae to provide line of sight communications. In the case of Kiribati, connecting islands over hundreds of kilometers apart will require satellite stations with satellite dishes and control rooms. Generally a network will have a number of individual linked sites, each with one or several antennae/satellite dish either fixed to a tower or pole structure, mounted on an existing building or free standing structures. These structures typically do not occupy a large area. Cellular communications technology has the ability to provide high quality low cost telecommunications and not having fixed wire connections has certain positive advantages in situations where damage to fixed installations can disable a network. There is the need however, to ensure the cellular communication network is planned and constructed with due consideration to a range of effects upon the environment. This ECOP sets out those matters which MELAD will take into account when undertaking an environmental assessment.

Assessment Criteria

The following matters will generally be taken into consideration in the assessment:

1. Health effects
2. Construction related impacts
3. Visual amenity considerations
4. Proximity to sensitive land uses and natural habitats
5. Location relative to identified risk and hazard zones

6. Applicable standards
7. Positive effects

Health Effects

There has been extensive international investigation into the potential adverse health effects from radiofrequency fields. The general conclusion is that provided exposure guidelines published in 1998 by the International Commission on Non-Ionising Radiation Protection (ICNIRP) are complied with, risks to health cannot be identified. The ICNIRP guidelines have been incorporated into the Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields — 3 kHz to 300 GHz (2002) published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

Construction Related Impacts

The following information is intended solely as broad guidance to be used in conjunction with national regulations of Kiribati. Before initiation of construction activities, the Project Proponent shall present the MCTTD with a Construction Plan which explicitly states how he plans to abide by these specifications. After approval of such Plan by the MCTTD, construction activities can proceed.

Prohibitions

The following activities are prohibited on or near a Telecommunications project site:

1. Use of regulated or unapproved¹ toxic materials, including lead-based paints, asbestos, etc;; The Contractor shall secure permit or clearance from the MELAD if these materials will be used or generated during the construction of Telecommunications Facilities.
2. Disturbance to anything with architectural or historical value;
3. Building of fires;
4. Use of firearms (except authorized security guards);
5. Drinking of alcoholic beverages and/or use of illegal drugs by workers and personnel.
6. Use of the compound as a playground.
7. Removal of protected vegetation and species (species or communities). The Contractor shall secure permit or clearance from the MELAD if disturbance to such vegetation and protected species is required.

Transport

The Contractor shall be held responsible for any damages/inconveniences caused due to the transportation of construction materials and damage shall be addressed by the Contractor. As much as possible, they shall avoid using routes that will affect the pristine environment of the outlying islands.

The Contractor shall not use any vehicles, either on or off-road with grossly excessive exhaust or noise emissions. Damage to the physical environment due to construction related transport activities is to be avoided or minimized.

Workforce and Temporary Bunkhouse

The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate health and safety training as necessary.

The Contractor shall install and maintain temporary sanitation facilities for any bunkhouse or workers camp and without causing foul odors and pollution of nearby watercourses and coastal waters. If not possible, the project proponent shall utilize the sanitation facilities of existing establishments in the vicinity.

The Contractor shall establish a method and system for storing and disposing of all solid wastes generated by the labor camp and/or base camp. Storage, collection and disposal of wastes generated during construction phase shall be in conformity with the local regulations.

The Contractor shall ensure that temporary site offices and workshops are located in appropriate areas and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain.

Acquiring aggregates for construction

The contractor shall comply with the provisions of the Environment Act 1999 (amended in 2007) prior obtaining aggregates for construction.

Disposal of Construction Waste

The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate storage area/facilities for construction debris.

Debris generated due to the construction of telecommunications structures shall be suitably reused, to the extent feasible, in the proposed construction (e.g. as fill materials). The disposal of remaining debris shall be carried out only at approved disposal facility by the government regulatory agency i.e. MELAD. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas. Any hazardous wastes shall be removed from the island should there be any.

In the event any debris or silt from the site is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the MCTTD.

All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris, where necessary, will be considered incidental to the work and should be planned and implemented by the contractor as approved and directed by the MCTTD.

Community Relations

To enhance adequate community relations the Contractor shall:

1. Inform the population about construction and work schedules, interruption of services, traffic routes, as appropriate.
2. Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.

3. At least five days in advance of any service interruption (including water, electricity, telephone, the community must be advised through postings at the project site, and in affected homes/businesses.
4. Take reasonable measures to investigate and if required address issues raised in complaints.

Visual Amenity Considerations

These effects vary according to the scale, height and design of the facility and the immediate environment within which they are located. Generally the following principles should be applied:

Co-location (sharing) of any existing masts, poles or towers is to be encouraged

Co-siting on existing sites is preferred to the proliferation of new sites

In urban locations mounting antennae on buildings is preferred to new mast, pole or tower installations wherever possible

Sites with access from existing roads or tracks are preferred over sites requiring new roads or tracks to be constructed with extensive vegetation clearance

Vegetation removal should be the minimum required for installation and replanting around installations is required

Mast, pole and tower heights should be the minimum to achieve a balance between network coverage and the number of sites. Generally, heights up to lower than 150m (ICAO standards Annex 14 chapter 4.3.2) will be permitted.

Additional justification will be required for heights in excess of this. Obtaining clearance above surrounding vegetation/trees will be considered as a reasonable justification.

Masts, poles, towers and antennae shall be constructed in recessive coloured materials designed to blend in with surrounding vegetation or development.

Equipment cabinets shall be similar recessive colours and shall be sited as close to the mast, pole or tower base as reasonably practical

Electricity supply to sites should be underground whenever possible

Proximity to Sensitive Land uses

Installations shall generally be sited at least the stated minimum distances from sensitive land uses as follows:

Schools - 30m

Residential uses- 20m

Hospitals/clinics - 30m

Churches - 20m

Archaeological sites/historically important cultural sites - 30m

Coastline (other than that identified as a hazard zone) - 30m

Groundwater well - 30m Excavations for foundations must not be so deep as to impact the freshwater lens in the immediate vicinity nor cause salinity to increase in the freshwater lens.

Permissions will not normally be granted for proposed sites in:

National parks

Nature reserves

Wildlife sanctuaries/closed areas/PIPA (Phoenix Islands Protected Area)

Wetlands

Any other sites identified as having particularly sensitive characteristics by MELAD.

Location Relative to Identified Risk and Hazard Zones

MELAD has identified a range of hazard zones affecting both the coasts of Kiribati and certain inland locations. These include coastal erosion zones, coastal flooding/inundation zones, coastal and inland land instability zones.

No installations shall be approved in any identified risk or hazard zones. On request, MELAD will provide applicants with advice as to the locations of risk and hazard zones in the localities being considered for installations. The actual cost of production of any mapping information may be charged for this service.

Applicable Standards and other Useful References

Installations shall be designed such that radiation field strength in the coverage area of antennas is less than the limits specified in Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields — 3 kHz to 300 GHz (2002) as amended. However, the Regulator will advise telecommunications providers once the Office has set the local Kiribati standard that providers will be required to comply with.

Other useful information/references can be found at the following websites:

www.odpm.gov.uk/index.asp?id=1143965

www.mfe.govt.nz

Positive Effects

Access to new and improved telecommunications technologies is essential to Kiribati's continued economic and social development. Improved communications with the outlying islands will greatly improve the ability for the Government to provide necessary services. The benefits arising from these new facilities need to be carefully balanced against any potential adverse effects on the environment. With careful design and selection of appropriate technology and materials the full benefits of the new facilities can be realized in a sustainable manner.