Executive Summary

Strategic Plan

This Forest Management Plan (FMP) is prepared for the Northern Gunung Rara Sustainable Forest Management Project Area – herewith known as the Project Area, which comprises of (i) Mount Magdalena FR - Class I (55,555 ha), (ii) part of Gunung Rara Wildlife Corridor Class 1 (3,754.36 Ha) and part of Maliau Buffer Zone (Ext) Class 1 (1,637 Ha) both of these Forest Reserve are newly gazetted to Class 1 Forest Reserve formerly a part of the Gunung Rara Forest Reserve (Class 2) and (iii), two VJRs - Class VI, that is, Batu Timbang VJR (261 ha) and Imbok VJR (127 ha) with total of 61,334.36 Hectares. Recently, Gunung Rara FR (Class 2) is newly re-gazetted to (Class 1) FR, which is known as Northern Gunung Rara FR with a total of 8,443 Ha. This additional area is now included in the NGR-SFM Project. The new total area for NGR - SFM Project is 69,777.36 Hectares, in which the certified area total of 61,334.36 Ha are still remained the same. The Project Area (69,777.36 ha) is located in the south-eastern part of Sabah and falls within the Forest Management Units (FMU) No. 23 and No. 24. The Project Area is a fascinating, unique parcel of Mixed Dipterocarp Forests that have been heavily influenced by human activities in the past. The forests were examined and analysed by the Forest Management Plan Team in terms of plants, soils, topography and hydrology and wildlife habitats in order to formulate the FMP strategy that recognizes the full scope of values offered by the forests from both the biodiversity, ecological and human context.

The key features, which contribute to the management strategies in the Project Area, are:

- Valuable treasure of genes, species and representative ecosystems;
- Key habitat and connectivity for endangered Orang-Utans, Bornean clouded leopards, Sumatran rhinos and pygmy elephants;
- An ecological and crucial wildlife corridor of global significance linking the world-renowned Danum Valley FR, Imbak Canyon FR and the Maliau Basin FR, which are commonly known as Conservation Areas;
- Watershed for the Kuamut River;
- Source of scientific information;
- Ecosystems well adapted to natural impacts;
- Natural reference to managed forests; and
- Critical to local communities' traditional cultural identity.

Besides, the Project Area is favourable as a conservation/protected area because of:

- Its natural range and the area it covers within that range is stable;
- The specific structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future; and
- The conservation status of species particularly species found in the Lowland Mixed Dipterocarp Forest is favourable. This is because:

    - The population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
    - The natural range of the species will not be reduced in the foreseeable future; and

- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Because of the above significant importance of the Project Area and as part of the strategic planning effort, the Sabah Forestry Department (SFD) adopted a vision statement and policy statements, which articulate the SFD's commitment to manage the Project Area using the principles of ecosystem management. The SFD's management objectives are:

i. To conserve and protect the biodiversity, watershed (quality, quantity and the ecological integrity of streams and Kuamut River and their associated flora and fauna) and other environmentally sensitive areas in the Project Area;
ii. To maintain the stability and to enhance and restore the biodiversity, ecological, and environmental conditions of the Project Area;
iii. To promote conservation education and awareness for local populations and decision makers regarding the roles and importance of the Project Area.
iv. To conduct research and development (R & D) and monitoring activities;
v. To explore the mechanisms for compensation and rewards from environmental/ecosystem services; and
vi. The Sabah Forestry Department is committed to managing the Project Area in accordance with the principles of sustainable and responsible management as prescribed by the Forest Stewardship Council (FSC) and the Malaysian Criteria and Indicators (MC&I) of the Malaysian Timber Certification Council (MTCC), and in conformity with all existing State forest policies, environmental policies, legislation and regulations.
vii. The Sabah Forestry Department will ensure to protect the Project Area from fire, illegal felling, and encroachment, and to safeguard the resource security under responsible management.

Relative to other FMUs in the area, the Project Area is managed based on the ecological/ecosystem approach. Therefore, the Project Area is zoned based on certain criteria as depicted below:

No.	Landscape Zoning*	Criteria	Total Compartments Affected*	Approx. Gross Area (Ha)
1.	Watershed	Where soil conservation and watershed values are dominant.	67	17,615.41 (31.5%)
2.	Wildlife Conservation	Where forest forms an important habitat for specific animals. It may be linked to biological diversity and watershed conservation zones.	29	9,042.33 (16.2 %)
3.	Biological Diversity	Where forest is ecologically important because it contains unusual and possibly endangered plants and/or animals. It may be linked to wildlife and watershed conservation zones.	110	28,899.87 (51.7%)
4.	Scientific Studies	Where forest is used, or might be used, for specific forest research studies. It may be linked to wildlife, biological diversity and watershed conservation zones.	2	385.00 (0.7 %)

Note: * They can be overlapping, that is, they can link with other zones

Biodiversity conservation, forest protection and security and watershed management are the key focus of management planning. Habitat protection and enhancement strategies are also significant management issues. In addition to this, are the maintenance and enhancement of the existing biodiversity sites through silvicultural treatments and forest restoration programmes, which are to be carried out throughout the Plan period.

Plan Organization

The Forest Management Plan is organized into 6 core Chapters in order to address the importance, uses and values of the Project Area. The Chapters are:

- Chapter 1.0. Introduction;
- Chapter 2.0. General Information of the Project Area;
- Chapter 3.0 High Conservation Value Forests;
- Chapter 4.0 Landscape Zoning and Management Prescriptions;
- Chapter 5.0 Implementation Mechanism and Monitoring; and
- Chapter 6.0 EIA and Forest Management Standards.
- Chapter 7.0 Social Impact Assessment

The tenure of this FMP is 10 years, that is, 1st January 2013 – 31st December 2022. However, change is the normal course for ecological systems. It is almost inevitable that management actions on the Project Area will result in some level of dissatisfaction among one or more interest groups, or conflict among groups and/or the management team. Thus, the Plan is scheduled to be reviewed in 2016.

Plan Highlights

Public and internal inputs gathered from a variety of sources, including meetings, written comments, and discussions amongst the experts of the FMP Team, provided the latter with many recommendations and viewpoints to consider in the planning process. By far, the largest number of comments centred on biodiversity management and protection. These comments were considered, and subsequently, the SFD's policy statements and management objectives were modified as listed above and explained in detail in Chapter 1.0 of this Plan.

Prior to the preparation of this Plan, the FMP Team undertook a detailed review of current management issues and threats, which are gathered information from a wide variety of sources and based on knowledge about historical aspects of plants, animals, and the associated causes of changes in their populations and/or distributions. These are described in detail in Chapter 2.0 and Chapter 3.0 of this Plan. This serves to guide the planning process from start to finish; assuring that the Plan is solidly founded on the best scientific understanding.

The HCV management prescription emphasizes the maintenance and even enhancement consistent with the precautionary approach to minimize the risk or threats of irreversible loss of the identified critical environmental and social values. The management regime consists of management restrictions and/or requirements during implementation of infrastructure development, restoration, community engagement, nature recreation and biodiversity monitoring activities. The main options for management are as follows:

1. *Protection of critical values:*
    - All designated HCV areas are managed under natural forest management and no conversion of forest is permitted.
    - Conduct periodic patrolling and surveillance in all accessible HCV areas to curb illegal activities such as encroachment and poaching.
    - Demarcation of HCV boundaries on the ground for all designated HCVs within the TPAs is not required since the elements 100 % overlap with each other.
    - In the event that any salt licks and potential nesting sites are found within the project area in the future, management measures for HCV 1.4 element to be applied.
    - If the management team discover high conservation value plant species (IUCN red list, prohibited species under Sabah Forestry Department, CITES and Sabah Wildlife Enactment) as listed in Appendix II, in permanent sample plots and nature trails in NGR project area, they should be clearly marked on the ground and on the maps.
    - Establish a long-term biodiversity monitoring system for critical forest ecosystem, flora and fauna (HCV 1.2, 1.3, 2, 3 & 6).
    - Migratory pathway of key wildlife species, i.e. Bornean pygmy elephant, tembadau and other keystone species on accessible roads, along streams or wildlife trails in the project area should be marked on the map. In addition, clear signage should be installed on strategic location to inform road, trail and river users to ensure wildlife are able to use them for movement within and between forest reserves (HCV 1.2, 1.3 & 2).
    - No major infrastructure development on erosion risk area (HCV 4.2).
    - The Forest Fire Management Plan has to be updated periodically (HCV 4.3). Identification of low vegetation structure that is susceptible to catch fire, i.e. grasslands and shrubs along the 50 m band inside the FMU boundaries is crucial. The identified vegetation will be planned for restoration activities (see section 5.1.4 below).
    - NGR management team is to constantly conduct meeting with the village representatives to mitigate any potential issues pertaining to the management of NGR area and made aware of the designated HCV elements in the FMU, though no HCV 5 element is indicated.
    - NGR management team are to constantly conduct meeting with the village representatives to mitigate any potential issues pertaining to the management of HCV 6.

2. *Modifications or constraints on operations:*
    - Any threats to the HCVs, especially related to HCV 1.2 & 1.3, which may be posed by operations or other activities in the forest will need to be identified and documented. Furthermore, the operations constraints in managing HCV areas and also addressing potential threats to the HCVs should also be examined.
    - The decision to adopt any particular operation must be made based on the precautionary approach whereby sufficient data and analyses should be carried out to maintain critical values.

3. *Enhancement efficiency and effectiveness:*
    - Field staffs are required to attend training courses on plants and wildlife to further enhance their botanical and wildlife knowledge on species that are currently listed in

the threatened, endemic and forestry prohibited lists to ensure they do not harvest or damage and also for monitoring purposes (HCV 1.2 & HCV 1.3).
- Update current biodiversity conservation status to the FMUs team of the upgrade or downgrading of threat status locally and globally (HCV 1.2 & HCV 1.3).

4. *Restoration:*
   - Forest restoration of indigenous tree species as part of the remedial action to increase forest structural diversity and mitigate any forest fire incidence spreading into the FMUs core area (HCV 4.3).

5. *Monitoring:*
   - Periodic monitoring and control should be carried out to prevent encroachment in all accessible HCV attributes. Any signs of encroachment should be reported and dealt with immediate actions.
   - Periodic monitoring of forest ecosystem health once every three years by conducting re-enumeration of all the trees in the permanent sample plots and to obtain indication of changes in tree structure and species assemblages (HCV 1.2, 1.3, 2, 3 & 6).
   - Periodic monitoring of endangered and endemic fauna species will be practiced using appropriate methodology. Any changes in terms of population count or migratory pathways observed by researchers or ground staffs, the management team must be alerted. Similarly, this monitoring prescription also applies to endangered and endemic plants that are recorded in the PSPs or nature trails (HCV 1.2, 1.3 & 2).
   - Long term monitoring of the FMUs landscape using remote sensing technology and produce forest quality map to be conducted once every five years to detect changes within the reserve and also vicinity areas. If threats are detected, precautionary approached will be taken and potential mitigation measures will be incorporated in the management plan (HCV 2).
   - Ensure no major infrastructure to be developed in high erosion risk area (HCV 4.2).
   - Ensure that all fire prevention procedures (monitoring, fire drills, public awareness campaign and etc) to be practiced on a regular basis (at least once a year) especially during the drought season (HCV 4.3).
   - The designated HCV 6 should be jointly monitored and maintained by the NGR management team and the nine *teriti* of the edible bird's nest collection.
   - Twice yearly progress reports in reporting of the progress of activities as prescribed in the approved Annual Work Plan (AWP), encompassing reporting of monitoring results of known HCV attributes.

With the understanding, by design, we can avoid the undesirable conditions; and through management prescriptions, we can achieve the conditions envisioned as desirable in natural settings valued today by our society. In Chapter 4.0, there are ten (10) main activities that have been identified and to be implemented. Amongst them include: forest protection and security; soil and water management conservation; biodiversity, ecological and environmental management; awareness building and dissemination/outreach programs; Research and Development; and green certification.

The SFD approaches this task with great humility. We recognize that while we have vast amount of data and experience in managing forests, we are still humans and are unable to forecast with absolute certainty the responses of dynamic ecosystems over the span of a century. Thus, adaptive management is used to make adjustments and corrections as operations are carried out. Taken together, the entire process becomes a management scheme that develops and holds the qualities of the landscape characteristics that we envision as desirable and valuable. Certainly, the management actions bring changes, but these changes occur within limits as prescribed in the Plan. Therefore, a key element will be the monitoring and modification of the Plan as time and the ecosystem dictate. Equally important are the resources – human resources and financial sustainability. In this case, Chapter 5.0 of the Plan sets out our implementation mechanism, monitoring strategies and staff and financial requirements, while Chapter 6.0 prescribes the environmental issues in the Project Area, which will be addressed in an integrated and holistic manner in accordance with the requirements of an EIA mandated by the ***Conservation of Environment (Prescribed Activities) Order 1999***