ENVIRONMENTAL MONITORING PLAN

1. VULNERABLE SOIL AND STEEP AREA MONITORING PLAN

The vulnerable soil and steep areas in ARSB HS Petuang concession will be monitored through:

i. Topography map

- Satellite image and digital topography map will be used to check on the topography and land condition of the areas.
- Before harvesting operations, forest manager will check the forest areas on the map and ensure the sensitive and steep areas of elevation 1,000 m above sea level (a.s.l.) are avoided for any forest road construction and harvesting activities.

ii. **Field examination**

- Forest manager will always monitor the forest road construction and harvesting activities and makes sure all the forest activities will not be conducted at the steep areas especially areas at elevations 1,000 m a.s.l.
- ARSB will also cooperate with Terengganu State Forestry Department (TSFD) in conducting field examination and ground observations of the vulnerable soil and steep areas.

iii. Remote sensing applications

- ARSB will cooperate with TSFD to monitor the condition of these areas using remote sensing application such as Forest Monitoring Using Remote Sensing.

2. LOGGING CAMP AND LOGGING WORKSHOP MONITORING PLAN

- Forest manager and forest supervisor will always monitor the cleanness of the logging camp and logging workshop to ensure they are well maintained.
- Forest manager and forest supervisor will always monitor and ensure the forest workers will follow the standard of procedure (SOP) for handling, storage and disposal used hazardous substances for timber harvesting operations.
- Forest supervisor and forest supervisor will always monitor, control and record the conditions and usage of fuel tank and lubricant oil.
- Forest manager and forest supervisor will also monitor and ensure all the waste and schedule wastes will be taken out from concession to be disposed.

3. WATERCOURSE MONITORING

- Forest manager will always monitor the buffer zones of watercourse and identified watercourses which needed for protection. Forest manager will regular check on the field to ensure the trees located along the border of buffer zones are not harvested.
- Forest manager and forest supervisor will monitor and ensure all the buffer zones of watercourse are established in accordance with the Forestry Department Peninsular Malaysia (FDPM) standard and Garis Panduan Jalan Hutan 2010 (pindaan 2013).
- ARSB will conduct regular monitoring of the water quality of the watercourses (Sungai Petuang) in ARSB HS Petuang concession.
- ARSB will also collaborate with FDPM and Forest Research Institute Malaysia (FRIM) in conducting water quality analysis to monitor the quality and health status of the watercourse.

4. PLANT MONITORING PLAN

- ARSB will collaborate with Universti Putra Malyasia (UPM) or any expert team in conducting plant survey in ARSB HS Petuang concession.
- Forest manager will always conduct monitoring of plants / trees and make sure all the protected tree species, rare and endangered tree species, seed trees are not harvested.
- The permanent sample plot (PSP) which is used to analyse frequency distribution of key dipterocarp species will be conducted and monitored annually.

5. WILDLIFE MONITORING PLAN

- ARSB will regular monitor ARSB HS Petuang concession from encroachment, illegal activities and hunting.
- ARSB will engaged with local community of Kg. Petuang and TSFD for helping in monitoring ARSB HS Petuang concession from encroachment and hunting.
- ARSB will also conduct periodic monitoring of wildlife.
    - Monitor the occurrence of animals through camera trapping.
    - Monitor the occurrence of animals through opportunistic sightings.
- ARSB will also collaborate with Malaysian National Society (MNS) Terengganu or any expert team to conduct wildlife survey.