



Plate 1 A loaded jincker passing the Base Camp.

This photo illustrates that fully laden jinkers are able to negotiate the narrow roads that lead to and from the Watut West TRP area.



Plate 2 Sump oil drainage at the Resource Camp.

One of the few breaches of the Logging Code of Practice observed by the review team during the field visit to Watut West.

The sump oil could easily have been contained and disposed of properly.



Plate 3 Annual Logging plan and Set-up Maps.

The photo illustrates the poor standard of maps provided by Bulolo Forest Products Ltd. They were very difficult to interpret.



Plate 4 Breach of Key Standard 15.

This photo shows a merchantable tree that is located along a snig track. The tree is merchantable but has not been marked for felling nor have the vines been cut as required under Key Standard 5.



Plate 5 Excess soil and debris pushed into stream.

←The excess soil and debris pushed into this Class 2 watercourse. This has resulted in ponding.



Plate 6 A large garden area in a logged set-up.

This is a cause for serious concern. There are large garden areas established both prior to and post logging in the set-ups inspected by the Review Team.

These garden areas will seriously affect the regeneration capacity of the forest.



Plate 7 A snig track with good regeneration cover.



Plate 8 A mixture of species regenerating after logging. Species noted included *Eleaocarpus* spp..

These photos illustrate that although there is good potential for regeneration of the forest after logging, provided that gardens are kept out, the species mix is dominated by non-commercial species and the area requires tending to assist the commercial species to compete and form the canopy.

The damage caused during logging to the residual stand is also very clearly illustrated and supports the need for marking of desirable residuals prior to felling.



Plate 9 A bower located along a snig track.

The Review Team observed four active and one abandoned Macgregor's Bowerbird (*Amblyornis macgregorii*) bower along the snig track in Set-up 1 Block B.

Unfortunately these bowers will be destroyed during logging but if the forest is regenerated successfully the area should be recolonised by these birds.



Plate 10 Fire maintained grasslands of Watut Valley.

Watut valley and Local Level Government Headquarters as seen from the Watut West TRP area.

Grassland is maintained by annual burn offs, which often destroy valuable forest plantations.



Plate 11 Fires encroaching the Watut West TRP area.

This photo shows the Watut West TRP area as seen from the Watut Local Level Government Headquarters.

Gardening and fires are destroying the edges of the forest.

Remnant pine trees indicate that forest plantations have also been destroyed by fire.



Plate 12 The Watut West forest is not immune to fire.

This photo shows fires and gardening creeping up the slopes towards the remaining forest of Watut West TRP area.

An area of forest was destroyed by fire during the "el nino" event that occurred in 2000.



Plate 13 Pupae of the second largest butterfly in the world, *Ornithoptera Goliath*. These specimens were sent in from Gumi, a village in the Watut West TRP area.

Insect trading has been shown to successfully link habitat conservation with economic development. Regeneration of the logged over forest is essential for this trade to continue.

The Insect Farming and Trading Agency, now part of the Unitech Development Consultancy Ltd, has recently reduced its price for Goliath pupae from K50 per pupae to K2 per pupae.



Plate 14 Female *O. meridionalis* are purchased for K50 per pupae by IFTA.



Plate 15 Display of adult male Goliath Butterfly.



Plate 16 Regenerated forest near Bulolo.

This area of forest was logged in 1973 and allowed to regenerate. Fires have been excluded and the result is a mixed species forest dominated by *Araucaria cunninghamii* and *A. hungsteinii*. The area has been proposed as a Wild Life Management Area by the Manager of the Bulolo-Wau Forest Plantations.

If protected, the area of approximately 345 Ha would serve as a demonstration area for all stakeholders as well as students, in addition providing a fauna and flora refuge.



Plate 17 Dead trees indicate several losses from fire.

The Bulolo-Wau Forest Plantations are critical to the successful operation of the processing plants of Bulolo Forest Products Ltd, contributing to more than 60% of current log input.

This plantation has been destroyed by fire on two occasions and has recently been replanted.