KEY HABITATS AND CORRIDORS FOR FAUNA OF NORTH-EAST NSW
LIMITATIONS AND DECISION RULES INHERENT WITHIN THE MAPPING

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The mapped outputs of the Key Habitats and Corridors (KHC) Project provide an indicative, but state of the art, representation and consolidation of areas of potential high conservation value for priority forest fauna, and habitat corridors that link these areas across landscapes. The intent of developing these maps has been to inform NSW Government land and water reform programs (Catchment Management Boards, Regional Vegetation and Water Management Committees) which are planning and assessing conservation values at the regional scale. The contextual nature of the key habitat and corridor maps provides a conservation planning framework for these reform programs that is also applicable in prioritizing areas for conservation, management, restoration and planting at more localized scales. Application of the mapped key habitats and corridors on the ground should always be cognizant of the constraints and limitations imposed by a regional mapping exercise.

A number of over-riding facts should be borne in mind when applying and assessing the KHC Project mapping for north-east NSW:

1. The mapping is based on fauna models developed specifically for the Regional Forest Agreement process in Upper and Lower North-east NSW; these models, and the key habitats and corridors derived from them, are regional scale representations of potential habitat or linking habitat for species or species assemblages;

2. Although subject of numerous presentations, seminars and other forums, as of this date (February, 2001), the GIS tools, project methods, decision rules and overall approach of the KHC Project are yet to be peer reviewed (a scientific publication is planned for submission in mid-2001);

3. Outside of some preliminary site assessment, the mapped key habitats and corridors are yet to be evaluated in the field;

4. At numerous stages of the KHC Project value judgements have been required to move the process forward or to finalize an output. Any qualitative decisions made have been based on the KHC Project manager's ecological expertise and knowledge of the data sets and environments being considered; the precautionary principle (REF?) has been invoked in finalizing most value judgements. These judgements have been documented as "decision rules", in a pending KHC Project report, to provide for assessment and review. These are listed below to inform the process of applying the mapped KHC Project outputs prior to the final report and peer review through journal submission.

List of KHC Project Decision Rules.

- Only priority fauna models that had been assessed and approved for the Upper and Lower North East (UNE and LNE) Regional Forest Agreements, and extended across all tenures, were included in the KHC Project;
- Species predicted to occur within a KHC Project study area but considered unlikely to occur were excluded from further analyses for that area;
- Minimal adjustment of system-derived species groupings was required to finalize fauna assemblages;
- Continuous probability surfaces depicting fauna assemblage distributions were categorized and habitat impedance levels applied to finalize assemblage map layers;
- Core habitats and hot spot habitats were finalized by designation of thresholds;
- Fauna key habitat map layers were finalized by consolidation of core and hot spots with centres of endemism for vertebrates and invertebrates, as mapped for the UNE and LNE RFAs.
- Least Cost Pathways variables were designated to guide the determination of landscape links most appropriate to each fauna assemblage;
- A potential corridor hierarchy was determined reflecting regional characteristics of the system-generated corridor links;
- Final corridor polygons were mapped by editing of system-derived potential corridors, in light of available fine scale environmental mapping, and consolidation with non-system generated corridors delineated from previous programs (e.g. koala corridors, coastal corridor) to maximize overall regional landscape connectivity.