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(Investiagtion of the Ecological
Environ,ent Index from Observation
of the Regional Vegetation cover
and Their Growing Condition)

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Investigation of the Ecological Environment
Index from Observation of the Regional Vegetation
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Abstruct

1. Determination of the forest boundary on LANDSAT data.

  a.  Correspondence method of LANDSAT data on earth surface.
      That is necessary to correspond LANDSAT data on earth surface in each
      pixel unit at the area of complicated natural features also forest
      vegetation types. We investigated the most effective corresponding
      method in nallow forest area as follow diagramme in Table 1.
      As the results on this work the correlation coefficient of total pixels
      in a compartment of CCT out put and compertment area was r=0.93.
      Then the real correspondence accuracy in earch surface was limited inner
      1 plixel replacement.

  b.  The relation ships between MSS data response and forest cover types.
      The results of the investigations of MSS response and forest type
      recognition shows the good identication effect on forest, field,
      construction and bare land in band 4 and 5. But the band 6 and 7 data
      have the good information for natural features.
      2 kinds of artificial conifer forests, 2 types of natural conifer
      forest types and hard wood types are recognized by the influenced
      light values changes by natural feature must be make more study.

2. The application of LANDAST data from regional forest conservation plan.
   The landcover information by LANDSAT data was combined with census data,
   topographic data or regional planning data for analysis the forest
   functions on social lifes and evaluate each faculties such as timber
   production, water shade potensialicy, elosion or flood control and
   recreation purposes of habitants of regional area. Then the regiondl
   forest conservation plan was prepared in north Kanto area of about
   1500 km2.
   Every forest faculties was qualified in each 2 x 2 km quadrate unit. The
   land use zoneing work have been down very effectively by ADP opperation.
   The working system shows in follow diagramme Table 2.
   As the results of this work the LANDAST data show very efficient
   utilization faculties for analyse the land cover condition with social life
   of the regional habitants as the foundamental informations of basic
   environmental conservation and development of the wide area.

**Table 1**

LANDSAT MSS CCT

LANDSAT Color Composit _____ Topographic Map (1:50,000)
    1:1,000,000                                Base map (1:10,000)

B. and W. picture of each _____→
band 1:100,000

1. Selection of the Pre-working Area
   and reformat on CCT of subjective
   forest area

2. Divide the forest area on MSS Picture
   (1:100,000)

3. Selection of _ _____→
   significant point

4. Selection of _____→
   control point

5. Transfer the control points and
   forest boundary on Air photos.

6. Correspondence the boundary on Air
   photos and MSS Picture.

7. Selection of working area and new
   MT fileing on CCT.

8. Emphasised natural feature degital map
   print out on working area by using
   two dimentional sliceing method of Band
   5 and 7.

9. Determination of Forest boundary and
   divide the forest compertment boundary
   on CCT coordinate.

10. Correction of forest boundary by area
    check.

11. Correspond base file of CCT. and Bse map.