Lecture 3 – Land Boundaries: Demarcation

Lecture outline

- Steps in boundary determination
- Definition of demarcation
- Demarcation method and definition of geodetic datum
  - Positioning methods
  - Field survey
  - Standard Operational Procedure (SOP)
  - Technical specification
- Field demarcation (monuments, pillars)
- Institutions of boundary demarcation
### Steps in boundary determination

- **Allocation of territory** – the parties agree on a broad division of territory, thus establishing 'spheres of influence'. Political decisions taken.

- **Delimitation/Delineation of a line** – political, legal and technical experts decide on a precise alignment of the boundary, illustrated on maps. Treaty drawn up.

- **Demarcation on the ground** – the agreed line is transferred from the map to the ground where it is physically marked with pillars, posts, fences, etc.

- **Administration and Management** – the demarcated line is maintained and routinely managed by the neighbouring states.

### Definition of demarcation

- **Demarcation**
  - The agreed line is transferred from the map to the ground where it is physically marked with pillars, posts, fences, etc.

  - Penegasan batas daerah adalah kegiatan penentuan batas secara pasti di Lapangan (Permendagi No. 1 / 2006)
Lecture 3 – Land Boundaries: Demarcation

Demarcation method & definition of geodetic datum

• Demarcation methods
  – River and thalweg

  Thalweg

  Thalweg is a German term meaning navigation path for boats in a river following strong current.
  – Main channel of river
  – Path with maximum speed of water flow
  – Best navigation channel, etc

• Demarcation methods: median line

  River bank
  Party A
  Median line
  Party B
  River bank
Lecture 3 – Land Boundaries: Demarcation

Demarcation method & definition of geodetic datum

• Demarcation methods
  – Watershed

  ![Watershed Diagram]

  - Contour of a mountain
  - Watershed
  - Boundary line

• Demarcation methods
  – Roads, train tracks, irrigation, etc.

  ![Roads Diagram]

  - DAERAH A
  - DAERAH B
  - DAERAH C
Demarcation method & definition of geodetic datum

• Concept of a position
  – Polar coordinate
  – Cartesian coordinate
  – Relative position (descriptive)

• Positioning methods
  – Terrestrial survey
    • GPS
    • Tachymetry
    • TS
  – Image interpretation (coordinate on a georeferenced image)

• Standard Operational Procedure (SOP)
  – Permendagri No. 1/2006 for national boundary
  – International is based on agreement
    • Technical committee
Lecture 3 – Land Boundaries: Demarcation

Demarcation method & definition of geodetic datum

• Technical specification
  – Tools/equipment
  – Position **Accuracy** and **Precision**
  – Monument specification
  – Etc

  – Have to be agreed by two technical committees of parties in question

Field demarcation

• Monuments, pillars
  – Reference pillars
  – Boundary pillars
  – Identity (marking)
    • Brass tablet
    • Placard
Institutions of boundary demarcation

- Indonesia (international)
  - Bakosurtanal
  - Dishidros
  - DKP
  - Depdagri
  - Deplu
  - Siapa lagi?
- Indonesia (national)
  - See Permendagri No. 1/2006

Rais (2002: 55) says that in order to effectively address the challenge of the delimitation of international boundaries, a state should appoint both a technical and non-technical (political/diplomatic) committee. In the Indonesian context, the technical committee is usually called the National Border Survey Committee, while the non-technical one is the National Border Committee. Rais (2002: 55-57) further argues that ideally, the chief of the technical committee should be the head of the national mapping agency with the chief of the non-technical committee as the minister responsible for home affairs.

- Technical Team
- Non technical team
What to do next?

• Make a group of 2
• Next week materials
  – Evolution of the law of the sea
  – Rights of coastal states vs. freedom of the sea
  – Codification efforts
• Prepare for student presentation