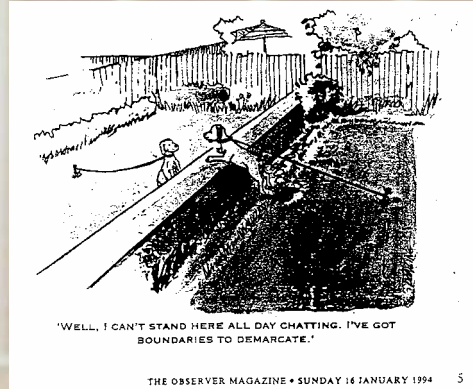


Land Boundaries: Demarcation

Available online at <http://madeandi.staff.ugm.ac.id> (see downloads)



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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.



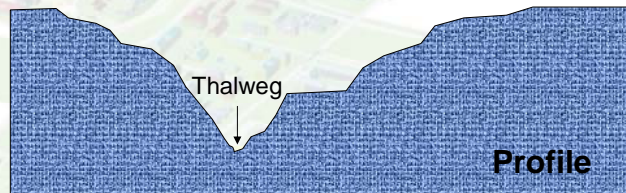
Definition of demarcation

- **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 (Permendagri No. 1 / 2006)



- **Demarcation methods**

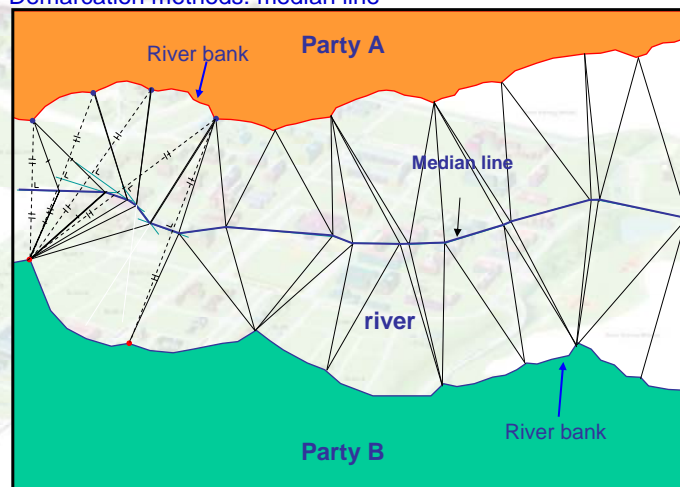
- River and thalweg



- 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

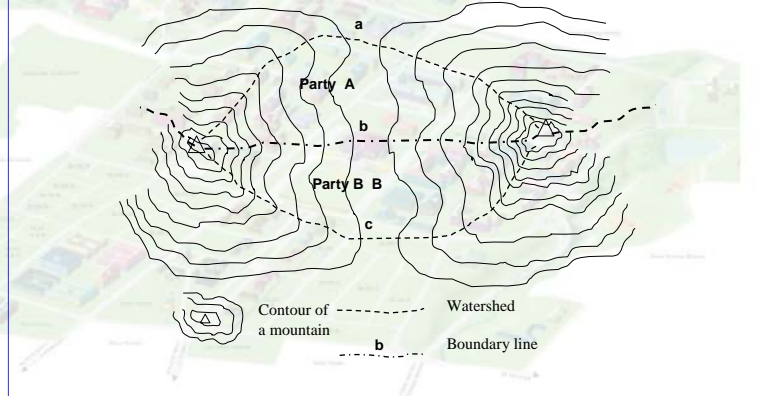


- **Demarcation methods: median line**



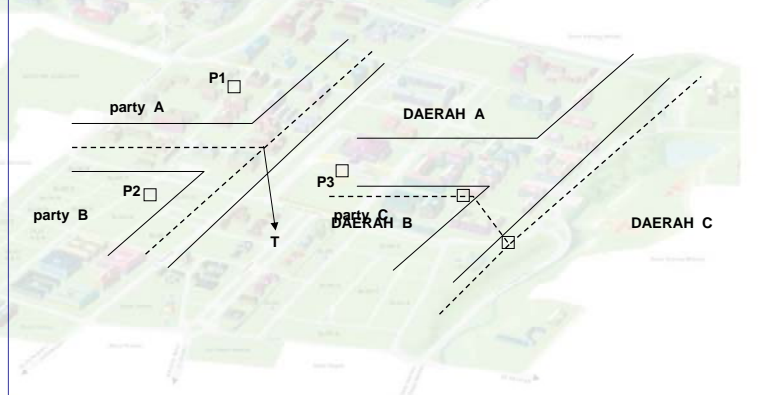
- **Demarcation methods**

- **Watershed**



- **Demarcation methods**

- **Roads, train tracks, irrigation, etc.**



- **Concept of a position**
 - Polar coordinate
 - Cartesian coordinate
 - Relative position (descriptive)
- **Positioning methods**
 - Terrestrial survey
 - GPS
 - Tachymetry
 - TS
 - Image interpretation (coordinate on a geo-referenced image)



- **Standard Operational Procedure (SOP)**
 - Permendagri No. 1/2006 for national boundary
 - International is based on agreement
 - Technical committee



Demarcation method & definition of geodetic datum

- **Technical specification**

- Tools/equipment
- Position **Accuracy** and **Precision**
- Monument specification
- Etc

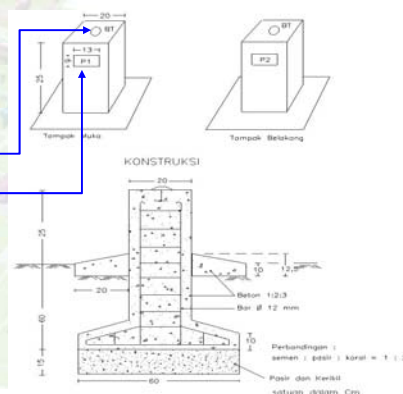
- Have to be agreed by two technical committees of parties in question



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



Institutions of boundary demarcation

- 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
 - The United Nations Convention on the Law of the Sea (LOSC)
- Prepare for student presentation

