

# Challenges for Surveying in the Establishment of International Borders

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## Importance of International Boundaries

- The 'crème del a crème' of cadastral surveying
- Relevant to the determination of property and human rights at the highest level
- The precise determination of international boundaries a continuing requirement
- Accepted boundaries critical to social stability and resource and economic development
- Surveying is in a legal and political context

## Sound Survey Support Critical

- Analysis of relevant maps and documents
- Geo referencing of relevant material of features
- Preliminary and final mapping
- Field assessment
- Survey fixing of pillars or boundary positions

## Major Challenges

- Where the sovereign Parties are not in agreement
- Sensitivity then needed in implementing the demarcation
- Judicial and political framework constraining
- Limitations to access to material and the field locations
- Security difficulties may apply

## Peace Agreement Parameters

- Where the demarcation follows a war or serious dispute the peace agreement will set parameters
- The demarcation is likely to be subject to carefully negotiated mandate & conditions
- Determinations may have been made by the ICJ or a boundary commission
- Adherence to historic treaties may be mandatory
- Varying levels of interpretation may be required
- Legal constraints common

## Technical Demarcation Challenges I

- Capability for relocation or reinstatement to prescribed survey standards
- An independent boundary datum of survey integrity
- Reproducing old map or survey details to modern standards
- Requirement for legal coordinates
- Post survey auditing



## Technical Demarcation Challenges II

- Demarcating rivers
- Difficulty of access for pillar emplacement
- Consensus on ambiguous physical features
- Working to judicial rules of boundary tribunals or commissions
- Minefields

## Political Challenges

- Unwillingness of a Party to accept boundary
- Limited jurisdiction of boundary commission i.e. demarcation
- Ambiguity on Maritime boundaries
- Earlier boundary decisions unsatisfactory to one or both Parties
- Perceptions of imbalance
- Presence of oil or other valuable resources
- Historic features or significance

## Delimitation and Demarcation

- Delimitation is the legal establishment of the limits of a boundary of territorial sovereignty often in general terms
- Demarcation the marking of a boundary usually in a form that can be readily determined on the ground

## Delimitation Challenges

- Lack of specificity of delimitation
- Changes between old and modern toponomy
- Changes in size and position of populated places
- Differences in the references to physical features in the treaties
- Vagueness of early treaty references

## Demarcation Challenges

- Location of features which have gaps or difficulties of traceability
- Unsuspected errors in otherwise good maps or reference material
- High levels of precision to meet predetermined boundary positions
- Unidentifiable physical features
- Delineating the edges of towns or cities

## Maritime Boundary Challenges

- Applying the UNCLOS requirements
- Old Charts without a horizontal datum
- Determining the thalweg boundary
- Joining and leaving the thalweg
- Ambiguous court coordinates



## Confidence Building

- Clarity of the boundary on the ground
- Coordinates as a first stage demarcation
- Populations are clear about the territorial administration
- The way is clear for collaborative resource exploitation and management.

## Discussion

- Sound Surveying important for disputed and agreed borders
- Surveying involves a wide range of process and techniques to a high standard
- Good understanding needed of the political/legal context applying to the boundary
- Surveying professionalism, integrity and objectivity of critical importance